



2017 **AHFE** International

8th International Conference on Applied Human Factors and Ergonomics

jointly with

- 1st International Conference on Human Factors and Wearable Technologies
- 1st International Conference on Human Error, Reliability, Resilience, and Performance
- 1st International Conference on Human Factors in Communication of Design
- 1st International Conference on Human Factors and Medical Devices
- 1st International Conference on Human Factors and Game Design
- 2nd International Conference on Design for Inclusion
- 2nd International Conference on Cognitive Computing and Internet of Things
- 2nd International Conference on Human Factors and Simulation
- 2nd International Conference on Human Factors in Management and Leadership
- 3rd International Conference on Human Factors in Cybersecurity
- 3rd International Conference on Human Factors and Systems Interaction
- 3rd International Conference on Human Factors in Robots and Unmanned Systems
- 3rd International Conference on Human Factors in Sports, Injury Prevention and Outdoor Recreation
- 3rd International Conference on Human Factors, Business Management and Society
- 3rd International Conference on Human Factors in Energy: Oil, Gas and Nuclear Power Industries
- 3rd International Conference on Human Factors in Training, Education, and Learning Sciences
- 4th International Conference on Human Factors, Software, and Systems Engineering
- 4th International Conference on Human Factors, Sustainable Urban Planning and Infrastructure
- 4th International Conference on Safety Management and Human Factors
- 5th International Conference on The Human Side of Service Engineering
- 5th International Conference on Affective and Pleasurable Design
- 5th International Conference on Human Factors in Transportation
- 5th International Conference on Ergonomics in Design
- 6th International Conference on Cross-Cultural Decision Making
- 6th International Conference on Human Factors and Ergonomics in Healthcare
- 6th International Conference on Digital Human Modeling and Applied Optimization
- 8th International Conference on Physical Ergonomics and Human Factors
- 8th International Conference on Usability & User Experience
- 8th International Conference on Neuroergonomics and Cognitive Engineering
- 8th International Conference on Social & Occupational Ergonomics
- 18th International Conference on Ergonomics of Manufacturing:
Managing the Enterprise of the Future

Final Program

Under the auspices of 33 distinguished international boards consisting of 675 members from 60 countries

July 17-21, 2017

**The Westin Bonaventure Hotel
Los Angeles, California, USA**

www.ahfe2017.org

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DETAILED TECHNICAL PROGRAM

WEDNESDAY, JULY 19

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16:00 - 18:00	34

THURSDAY, JULY 20

8:00 - 10:00	41
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POSTER/DEMONSTRATION SESSIONS

WEDNESDAY, JULY 19

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THURSDAY, JULY 20

10:30-12:30	105
13:30-15:30	108

FRIDAY, JULY 21

10:30-12:30	110
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Opening Plenary Session and Keynote Address

Date: Tuesday, 18 July • 17:00 - 19:00

Room: California Ballroom

Chair: Dylan Schmorrow

INTRODUCTORY REMARKS

Waldemar Karwowski - General Conference Chair

FUTURE WAYS OF WORKING – HUMAN FACTORS ENGINEERING IN SOCIOTECHNICAL SYSTEMS DESIGN AND EVALUATION

Professor Neville A Stanton, PhD, DSc.

Chair in Human Factors Engineering

Transportation Research Group

University of Southampton, United Kingdom



About the speaker

Professor Neville Stanton, PhD, DSc, is a Chartered Psychologist, Chartered Ergonomist and Chartered Engineer. He holds the Chair in Human Factors Engineering in the Faculty of Engineering and the Environment at the University of Southampton in the UK. He has degrees in Occupational Psychology, Applied Psychology and Human Factors Engineering and has worked at the Universities of Aston, Brunel, Cornell and MIT. His research interests include modelling, predicting, analyzing and evaluating human performance in systems as well as designing the interfaces and interaction between humans and technology. Professor Stanton has worked on design of automobiles, aircraft, ships and control rooms over the past 30 years, on a variety of automation projects. He has published 35 books and over 270 journal papers on Ergonomics and Human Factors. In 1998 he was presented with the Institution of Electrical Engineers Informatics Divisional Premium Award for research into System Safety.

The Institute of Ergonomics and Human Factors in the UK awarded him The Otto Edholm Medal in 2001, The President's Medal in 2008 and The Sir Frederic Bartlett Medal in 2012 for his contributions to basic and applied ergonomics research. The Royal Aeronautical Society awarded him and his colleagues the Hodgson Prize in 2006 for research on design-induced, flight-deck, error published in The Aeronautical Journal. The University of Southampton has awarded him a Doctor of Science in 2014 for his sustained contribution to the development and validation of Human Factors methods.

CONFERENCE RECEPTION/BANQUET: TUESDAY, JULY 18 • 19:00

POOL DECK - FOURTH LEVEL AT THE WESTIN BONAVENTURE HOTEL

(AHFE 2017 BADGE REQUIRED)

Dress is business casual

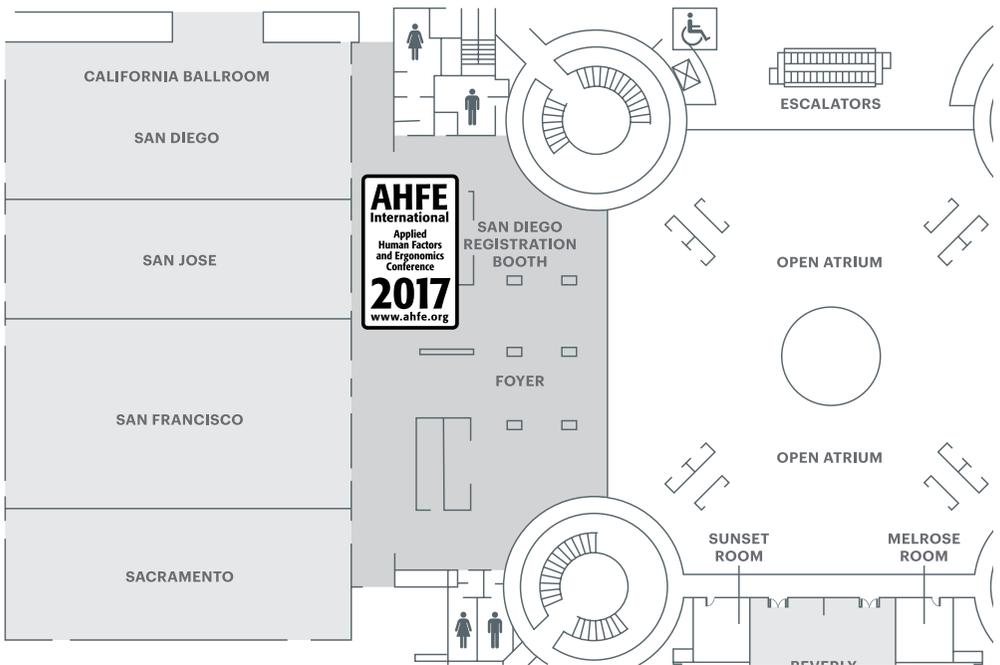
Conference at a Glance

AHFE 2017 REGISTRATION DESK LOCATED AT SAN DIEGO BOOTH (SECOND LEVEL)

**CONFERENCE
RECEPTION/BANQUET
TUESDAY, JULY 18 • 19:00
POOL DECK - FOURTH LEVEL AT THE
WESTIN BONAVENTURE HOTEL
(AHFE 2017 BADGE REQUIRED)
Dress is business casual**

REGISTRATION DESK OPEN:

Sunday, July 16.....13:00 - 18:00
Monday, July 17.....7:00 - 18:00
Tuesday, July 18.....7:00 - 18:00
Wednesday, July 19.....7:00 - 18:00
Thursday, July 20.....7:30 - 16:00
Friday, July 21.....7:30 - 14:00



	ROOM	CONFERENCE/TRACK
SCIENTIFIC ADVISORY BOARD MEETING THURSDAY, JULY 20, 13:00-13:30 (SIMULTANEOUS)	SAN FERNANDO	Human Side of Service Engineering
	LOS CERRITOS	Human Factors and Ergonomics in Healthcare
	LA BREA	Human Factors, Sustainable Urban Planning and Infrastructure
	LOS FELIZ	Human Factors and Systems Interaction
	LA CIENEGA	Human Factors, Business Management and Society
	SANTA ANITA A	Human Factors in Robots and Unmanned Systems
	SANTA ANITA B	Human Factors in Management and Leadership
	SANTA ANITA C	Human Error, Reliability, Resilience, and Performance

Tutorials

PRE-CONFERENCE TUTORIALS

All Tutorials will be held on Monday, July 17 and Tuesday, July 18, 2017
(Third Level at The Westin Bonaventure Hotel) Tutorial registration is required.

MONDAY, JULY 17

8:00 - 12:00 • BREAK: 10:30 - ROOM: HOLLYWOOD BALLROOM		ROOM
T-1	An Introduction to Cognitive Work Analysis Presenter: Neville Stanton	Santa Monica A

13:00 - 17:00 • BREAK: 15:30 - ROOM: HOLLYWOOD BALLROOM		ROOM
T-4	Neuroergonomics: The Human Brain At Work Presenter: Carryl Baldwin	Santa Monica C
T-5	Smart Human Centered Service System Design: Recent Trends and Advances 2014-2017 Presenter: Vincent Duffy	Santa Monica D
T-6	Digital Human Models (DHMs) in Today's and Future Product and Production Design Presenter: Thomas Alexander	Emerald Bay

TUESDAY, JULY 18

8:00 - 12:00 • BREAK: 10:30 - ROOM: HOLLYWOOD BALLROOM		ROOM
T-7	Cognitive Neuroscience for the Human Factors Practitioner: fNIRS Principles and Applications Presenter: Hasan Ayaz	Santa Monica A
T-10	A Practical Guide to Doing Task Analysis Presenter: Neville Stanton	Santa Monica B
T-16	3D Ergonomic Product Development and Assessment Presenter: Denis Coelho	Santa Monica C

13:00 - 17:00 • BREAK: 15:30 - ROOM: HOLLYWOOD BALLROOM		ROOM
T-11	Design, User Experience and Usability (DUXU) Presenter: Javed Sheikh	Santa Monica A
T-12	Effective Design Reviews: How to Give and Receive Meaningful, Actionable Design Feedback Presenter: Everett McKay	Santa Monica B
T-13	Design of User-Friendly Dashboards Presenter: Abbas Moallem	Santa Monica C
T-14	Prototyping Human Machine Interfaces (HMI) for Partially and Highly Automated Vehicles: From Human Centered Design Towards Balanced Human Systems Integration Presenters: Marcel Baltzer, Nikhil Gowda and Eugen Altendorf	Santa Monica D

#	SESSION TITLE	ROOM	TRACK
Session Time: 8:00 - 10:00 (page 11 - 17)			
1	Plenary: Experience, perception and effort in service production and consumption	Beaudry A	HSSE
2	Plenary: EEG-engagement index and auditory alarm misperception: An in-attentional deafness study in actual flight condition	Beaudry B	CN
3	Plenary: From Reason and Rasmussen to Kahneman and Thaler: Styles of thinking and human reliability in high hazard industries Panel: What's next for human error?	Sacramento	HERRP
4	Plenary: Designing and building soft wearable robotic systems	Beverly	HFSIM
5	Assistive Technology I	Santa Anita B	ED
6	Prospective Ergonomics I	Santa Anita C	ED
7	Stress Reduction Techniques	San Gabriel A	HC
8	Emotional Engineering I	San Gabriel B	APD
9	Human Factors Safety in Aviation and Aerospace I	San Gabriel C	AVI
10	Ergonomics Design for Metal Works	Santa Barbara A	MFG
11	Accident Analysis and Prevention I	Santa Barbara B	SMHF
12	Applied Ergonomics in Fashion Design and Sports Technology	Santa Barbara C	PEHF/DHMAO
13	Public Transport	Avalon	RR
14	Driver Safety I	Emerald Bay	RR
15	Social and Occupational Ergonomics I	San Pedro	SOE
16	Ergonomics in Building and Architecture	Santa Monica A	SUPI
17	Ergonomic Evaluation and Design for Sustainability	Santa Monica B	UUE
18	Advanced Unmanned Systems: Requirements and Groundwork for the Next Generation of Robotics Systems	Santa Monica C	HFRUS
19	Healthcare and Medical Devices I	Santa Monica D	HFMD
20	Recent Advances in Inclusive Product and Service Design I	San Francisco	DI
21	Advances in Unmanned Aerial Vehicles (UAV) and Drones Research	San Bernardino	HFSSE/HFRUS
22	Human Factors and Wearable Technologies I	Palos Verdes	HFWT
23	Applied Digital Human Modeling and Simulation I	Santa Anita A	DHMAO/PEHF
10:00 - 10:30 Refreshments will be provided in California Ballroom			
Session Time: 10:30 - 12:30 (page 18 - 26)			
24	Affective Value and Kawaii Engineering	Santa Anita A	APD
25	Human-Machine Interactions and Tools	Santa Anita B	CCDM
26	Applied Digital Human Modeling and Simulation II	Santa Anita C	DHMAO/HFSIM
27	Ergonomics in Clothing, Fashion and Footwear Design I	San Gabriel A	ED
28	Human Factors in Medical and Surgical Settings	San Gabriel B	HC
29	Maritime I	San Gabriel C	MAR
30	Human Factors Engineering in Composite Manufacturing and Application	Santa Barbara A	MFG
31	Accident Analysis and Prevention II	Santa Barbara B	SMHF
32	Virtualization in Physical Ergonomics	Santa Barbara C	PEHF
33	Driver Safety II	Hollywood Ballroom	RR
34	Social and Occupational Ergonomics II	Palos Verdes	SOE
35	Ergonomics and Design for All	San Pedro	UUE
36	Human Factors in Energy: Policy, Implementation and Achieving Successful Outcomes	Santa Monica A	ENERGY
37	Systems Thinking in Sports and Outdoor Recreation	Santa Monica B	SIPOR
38	Systems Usability and Device Assessment	Santa Monica C	SYSI
39	Organizational Learning and Performance	Santa Monica D	TELS
40	Gamification in Service Engineering	Beaudry A	HSSE
41	Control Using Multimodal Input	Beaudry B	HFRUS
42	Recent Advances in Design for Ageing Population	Sacramento	DI
43	Organization and Leadership	Emerald Bay	HFML
44	Human Factors, Software and Systems Engineering I	Avalon	HFSSE
45	Human Reliability and Human Factors Research in China	Beverly	HERRP
46	Human Factors in Communication of Design I	San Francisco	HFCO
47	Emotional Engineering II	San Bernardino	APD

#	SESSION TITLE	ROOM	TRACK
Session Time: 13:30 - 15:30 (page 26 - 33)			
48	Kansei Engineering and AI-VR	Santa Anita A	APD
49	General and Systemic Structural Activity Theory	Santa Anita B	CN
50	Assistive Technology II	Santa Anita C	ED
51	Prospective Ergonomics II	San Gabriel A	ED
52	Human Factors in Medical Devices Design	San Gabriel B	HC
53	Applications in Cognitive and Internet of Things	San Gabriel C	CClot
54	Safety Culture and Training	Santa Barbara A	SMHF
55	Ergonomics Methods and Outcomes in Physical Product Design	Santa Barbara B	PEHF
56	Driver Safety III	Sacramento	RR
57	Human-Machine Interaction I	Beverly	RR
58	Social and Occupational Ergonomics III	Palos Verdes	SOE
59	User Experience and Social Networking	San Pedro	UUE
60	Human Factors on Crises Management	Santa Monica A	SYSI
61	Novel Approaches for Learning and Instruction II	Santa Monica B	TELS
62	Advances in Simulation Based Training for Providers Interacting with Health Information Technology (HIT)	Santa Monica C	HSSE/HC
63	Training for Human-Machine Teams	Santa Monica D	HFRUS
64	Inclusive and Universal Design in Clothing, Footwear and Accessories	Hollywood Ballroom	DI
65	Leadership Style and Safety Management	Beaudry B	HFML
66	Human Factors, Software and Systems Engineering II	Avalon	HFSSE
67	Advances in Computational Social Sciences	Emerald Bay	HFSIM
68	Human Factors and Game Design I	Santa Barbara C	HFGD/ED
69	Human Performance in Healthcare and Medicine	San Bernardino	HERRP/ HFMD
70	Usability and User Experience I	San Francisco	UUE
71	Panel: Human-Computer Symbiosis	Beaudry A	CN
15:30 - 16:00 Refreshments will be provided in California Ballroom			
Session Time: 16:00 - 18:00 (page 34 - 41)			
72	Design For Touch: Emotionally and Physically	Santa Anita A	APD
73	Ergonomics in Clothing, Fashion and Footwear Design II	Santa Anita C	ED
74	Cognitive Ergonomics in Design	San Gabriel A	ED
75	Human Factors and Employee Health	San Gabriel B	HC
76	Ergonomics for People with Disabilities: Social and Occupational Integration	San Gabriel C	MFG
77	Human Factors and Safety	Santa Barbara A	SMHF
78	Ergonomic Performance of Work Systems	Santa Barbara B	PEHF
79	Human-Machine Interaction II	Sacramento	RR
80	Driving Simulation and Test Track	Santa Anita B	RR
81	Macroergonomics Solutions of Engineering Management Challenges I	Palos Verdes	SOE
82	Ergonomics and Material Environment Design	San Pedro	SUPI
83	Usability and User Experience II	Santa Monica A	UUE
84	System Interaction in Mixed Reality Environments and Emergency Management	Santa Monica B	SYSI
85	Human Factors, Business Management and Society I	Santa Monica C	HFBMS
86	Multimedia and Virtual Reality in Learning Applications	Santa Monica D	TELS
87	Designing Better Healthcare Facilities: Integrating Lean Thinking into Architectural Design Process	Beaudry A	HSSE
88	HFRUS in Maritime and Expeditionary Environments	Beaudry B	HFRUS
89	Cybersecurity Tools and Analytics I	Avalon	CYBER
90	Methodology and Training in Design for Inclusion	Hollywood Ballroom	DI
91	Human Factors, Software and Systems Engineering III	Santa Barbara C	HFSSE
92	Bridging Human Factors and Human Error	San Bernardino	HERRP
93	Cross-Cultural Design and Team Decision Making	San Francisco	CCDM
94	Human Factors Safety in Aviation and Aerospace II	Emerald Bay	AVI

#	SESSION TITLE	ROOM	TRACK
Session Time: 8:00 - 10:00 (page 41 - 48)			
95	Designing Affective and Pleasurable Design Interactions	Santa Anita A	APD/UUE
96	Social Media and Social Change	Santa Anita B	CCDM
97	Human-Autonomy Teaming	Santa Anita C	CN
98	Physical Ergonomics and Human Factors	San Gabriel A	PEHF
99	Building Design	San Gabriel B	ED
100	Human Factors in the Healthcare Environment	San Gabriel C	HC
101	Human Factors and Ergonomics in Textile Manufacturing	Santa Barbara A	MFG
102	Risk Prevention and Assessment I	Santa Barbara B	SMHF
103	Anthropometric Measurement and Ergonomic Modeling	Santa Barbara C	PEHF
104	Human-Machine Interaction III	Santa Monica A	RR
105	Macroergonomics Solutions of Engineering Management Challenges II	Palos Verdes	SOE
106	User-Centered Design and Human Computer Interaction	San Pedro	UUE
107	Injury Prevention and Analysis of Individual and Team Sports	Santa Monica B	SIPOR
108	System Interaction in Industry	Santa Monica C	SYSI
109	Training Applications in Military and Operational Environments	Santa Monica D	TELS
110	Innovations in Quality and Safety Practices in Health Care Systems	Beaudry A	HSSE
111	Human Factors and Cultural Considerations for Wearable Robotics	Beaudry B	HFRUS
112	Privacy and Cultural Factors in Cybersecurity	Avalon	CYBER
113	Human Dimension and Visualization for Cybersecurity	San Bernardino	HFSIM/CYBER
114	Human Factors and Game Design II	Emerald Bay	HFGD/ED
115	Safety Management and Loss Prevention I	San Francisco	SMHF
116	Ergonomics Design and Evaluation II	Hollywood Ballroom	ED
10:00 - 10:30 Refreshments will be provided in California Ballroom			
Session Time: 10:30 - 12:30 (page 48 - 56)			
117	Product Development and Design Process	Santa Anita A	APD
118	Aviation and Aerospace: Situational Awareness and Communications	Santa Anita B	AVI
119	Modeling and Simulation: Optimization, Analysis and Scheduling	Santa Anita C	DHMAO/HFSIM
120	Assistive Technology III	San Gabriel A	ED
121	Interaction and Interface Design	San Gabriel B	ED
122	Human Factors and Ergonomics in Healthcare Systems Design	San Gabriel C	HC
123	Human Factors in Contemporary Technology Systems I	Santa Barbara A	MFG
124	Risk Prevention and Assessment II	Santa Barbara B	SMHF
125	Human Factors and Ergonomics in Japanese Sewing Scissors	Santa Barbara C	PEHF
126	Eco-Driving	Sacramento	RR
127	Automation I	Beverly	RR
128	Human Aspects of Change Management and Implementation	San Pedro	SOE
129	User Experience and Assistive Technology in Healthcare and Medical Devices	Santa Monica A	UUE
130	Systems Interaction: Societal Impact Perspectives	Santa Monica B	SYSI
131	Education Research and Applications I	Santa Monica C	TELS
132	Shaping the Human Side of T-Shaped Professionals I	Santa Monica D	HSSE
133	Panel: Tactile Applications for Enhanced Performance in Naturalistic Settings	Beaudry A	HFRUS
134	Design Driven Social Innovation: Interdisciplinary Weltanschauung for All by All	Beaudry B	DI
135	Leadership and Skill Development I	Avalon	HFML
136	Occupational Safety Simulators	Emerald Bay	HFSIM
137	Human Factors and Wearable Technologies II	San Bernardino	HFWT
138	Ergonomics Design and Evaluation I	Palos Verdes	ED
139	Infrastructure Planning and Learning for Sustainable Future	San Francisco	SUPI
140	Healthcare and Medical Devices II	Hollywood Ballroom	HFMD

#	SESSION TITLE	ROOM	TRACK
Session Time: 13:30 - 15:30 (page 56 - 64)			
141	Integrated Design	Santa Anita A	APD
142	Intelligent Systems and Applications	Santa Anita B	CCDM
143	Assistive Technology IV	Santa Anita C	ED
144	Design for High Performance and Comfort	San Gabriel A	ED
145	Human Factors in Patient IT Tools	San Gabriel B	HC
146	Maritime II	San Gabriel C	MAR
147	Safety Analysis Approaches	Santa Barbara A	SMHF
148	Making a Difference	Avalon	PEHF
149	Automation II	Sacramento	RR
150	Automation III	Beverly	RR
151	Ergonomics in Public Building Design	Palos Verdes	SUPI
152	Interface Design and Usability Evaluation	San Pedro	UUE
153	Assistive Technologies and Natural User Interaction	Santa Monica A	SYSI
154	Human Factors, Business Management and Society II	Santa Monica B	HFBMS
155	Education Research and Applications II	Santa Monica C	TELS
156	Shaping the Human Side of T-Shaped Professionals II	Santa Monica D	HSSE
157	Understanding the Key Drivers of Human-Machine Trust: Lessons Learned and Future Directions	Beaudry A	HFRUS
158	Cybersecurity Training and Education	Beaudry B	CYBER
159	Recent Advances in Design for Disability I	Hollywood Ballroom	DI
160	Transportation Modeling and Simulation	Emerald Bay	HFSIM
161	Human Factors in Communication of Design II	Santa Barbara C	HFCDD/DI
162	Human Error and Resilience in Safety-Critical Domains	San Bernardino	HERRP/ENERGY
163	Human-Machine Interaction IV	Santa Barbara B	RR
15:30 - 16:00 Refreshments will be provided in California Ballroom			
Session Time: 16:00 - 18:00 (page 64 - 71)			
164	Implication of User Behavior in Design Process	Santa Anita A	APD
165	Aviation and Aerospace: Operational Effectiveness	Santa Anita B	AVI
166	Neuroergonomics Theory and Design I	Santa Anita C	CN
167	Design and Assistive Technology	San Gabriel A	ED
168	Human Factors in Patient Care Tools	San Gabriel B	HC
169	Human Factors in Contemporary Technology Systems II	San Gabriel C	MFG
170	Safety and Ergonomics I	Santa Barbara A	SMHF
171	Risk Assessment and Management	Santa Barbara B	PEHF
172	Automation IV	Sacramento	RR
173	Rail Safety and Design	Beverly	RR
174	Ergonomics in Urban Design	Palos Verdes	SUPI
175	Accessibility and Ergonomics Modeling in Industry	San Pedro	UUE
176	Human Factors in Energy: Applications in Energy Generation, Transmission and Consumption	Santa Monica A	ENERGY
177	System Interactions in Aviation and Space Missions	Santa Monica B	SYSI
178	Human Factors, Business Management and Society III	Santa Monica C	HFBMS
179	Novel Approaches for Learning and Instruction I	Santa Monica D	TELS
180	Industry 4.0 and Smart Service World	Beaudry A	HSSE
181	Virtual Reality Technologies for Training Applications and C2 of Unmanned Systems	Beaudry B	HFRUS
182	Recent Advances in Design for Disability II	San Francisco	DI
183	Recent Advances in Inclusive Product and Service Design II	Hollywood Ballroom	DI
184	Medical Simulation: Filling the Training Gap	Santa Barbara C	HFSIM
185	Evaluating Expert Performance	San Bernardino	HERRP
186	Human Factors and Wearable Technologies III	Avalon	HFMT
187	Applied Digital Human Modeling and Simulation III	Emerald Bay	DHMAO

#	SESSION TITLE	ROOM	TRACK
Session Time: 8:00 - 10:00 (page 71 - 78)			
188	Exploring Aesthetics in Emotional Aspects of Information Design	Santa Anita A	APD
189	Vision and Memory	Santa Anita B	CN
190	Industrial Design in Developing Countries: Ergonomics Perspective	Santa Anita C	ED
191	Human Factors in Healthcare Process Task Analysis	San Gabriel A	HC
192	Information Management: Techniques and Applications	San Gabriel B	CClot
193	Human Factors in World Class Management Systems I	San Gabriel C	MFG
194	Safety and Ergonomics II	Santa Barbara A	SMHF
195	Biomechanics	Santa Barbara B	PEHF
196	Automation V	Sacramento	RR
197	Rail Passengers	Beverly	RR
198	Social and Occupational Ergonomics in Industry	Palos Verdes	SOE
199	Ergonomics in Sustainable Architecture	San Pedro	SUPI
200	Ergonomics and Usability Evaluation I	Santa Monica A	UUE
201	Physical Fitness and Exercise	Santa Monica B	SIPOR
202	Understanding and Transforming Human-System Interactions: Practical Applications	Santa Monica C	SYSI
203	Human Factors, Business Management and Society IV	Santa Monica D	HFBMS
204	Tacit Knowledge Education Using Traditional Wisdom	Beaudry A	TELS
205	Service Science and UX Design	Beaudry B	HSSE
206	Smart Tech, Web and Media for All I	Hollywood Ballroom	DI
207	Cognitive Modeling	Santa Barbara C	HFSIM
208	Advanced Analysis Techniques for Human Error	San Bernardino	HERRP
209	Ergonomics Design and Evaluation III	San Francisco	ED
210	Cybersecurity Tools and Analytics II	Avalon	CYBER
10:00 - 10:30 Refreshments will be provided in California Ballroom			
Session Time: 10:30 - 12:30 (page 79 - 86)			
211	Emotion and the Qualitative Side of Experience	Santa Anita A	APD
212	Gray Zone Challenges	Santa Anita B	CCDM
213	Human Work Interactions: Design Beyond Human Factors	Santa Anita C	ED
214	Product Design	San Gabriel A	ED
215	Human Factors in Patient Safety	San Gabriel B	HC
216	Human Factors in World Class Management Systems II	San Gabriel C	MFG
217	Safety Management and Loss Prevention II	Santa Barbara A	SMHF
218	Ergonomic Evaluations	Santa Barbara B	PEHF
219	Vulnerable Road Users	Hollywood Ballroom	RR
220	Human Factors, Sustainable Urban Planning and Infrastructure	San Bernardino	SUPI
221	Smart Design and User Experience I	Palos Verdes	UUE
222	Panel: Human Factors in Cybersecurity	San Pedro	CYBER
223	Human Factors, Business Management and Society V	Santa Monica A	HFBMS
224	Military Undergraduate and Graduate Education in Human Factors and Human Systems Integration	Santa Monica B	TELS
225	Human Side of Service Engineering I	Santa Monica C	HSSE
226	Human-Robot Teaming	Santa Monica D	HFRUS
227	Cybersecurity Interface and Metrics	Beaudry A	CYBER
228	Smart Tech, Web and Media for All II	Beaudry B	DI
229	Human Factors and Organizations	Avalon	HFML
230	Modeling and Simulation for the Extreme Environment	Emerald Bay	HFSIM
231	Healthcare and Medical Devices III	Sacramento	HFMD
232	New Methods for Human Reliability Analysis	Beverly	HERRP
233	Fatigue and Performance	San Francisco	SMHF
234	Neuroergonomics Theory and Design II	Santa Barbara C	CN

#	SESSION TITLE	ROOM	TRACK
Session Time: 13:30 - 15:30 (page 86 - 92)			
235	Material and Texture Exploration	Santa Anita A	APD
236	Audition and Workload	Santa Anita B	CN
237	Applied Digital Human Modeling and Simulation IV	Santa Anita C	DHMAO/ HFSIM
238	Virtual Reality Challenges in Design	San Gabriel A	ED
239	Simulation and Evaluation	San Gabriel B	ED
240	Human Factors in Healthcare	San Gabriel C	HC
241	Safety Culture and Organizational Aspects	Santa Barbara B	SMHF
242	Movement and Balance	Santa Barbara C	PEHF
243	Infrastructure and Road Safety I	Santa Barbara A	RR
244	Usability and User Experience III	Santa Monica A	UUE
245	Human Factors in Energy: Applications in Infrastructure Safety and Design	Santa Monica B	ENERGY
246	Leadership and Skill Development II	San Pedro	HFML
247	Teaching Methods and Applications	Santa Monica D	TELS
248	Human Side of Service Engineering II	Beaudry A	HSSE
249	Teleoperations in Healthcare and Other Domains	Santa Monica C	HFRUS
250	Design for Inclusion in the Living Environment I	San Francisco	DI
251	Human Factors and Simulated Agents	Emerald Bay	HFSIM
252	Human Factors in Communication of Design III	San Bernardino	HFCD/DI
253	New Applications of Human Reliability in Aviation, Finance, Nuclear, Transportation, Cybersecurity and Manufacturing	Palos Verdes	HERRP
254	Safety Management and Loss Prevention III	Avalon	SMHF
15:30 - 16:00 Refreshments will be provided in California Ballroom			
Session Time: 16:00 - 18:00 (page 93 - 98)			
255	Methodology in Textile and Furniture Design	Santa Anita A	APD
256	Smart Design and User Experience II	Santa Anita B	UUE
257	Spatial Perception	Santa Anita C	CN
258	Comfort and Methodology Issues in Design	San Gabriel B	ED
259	Human Factors in Digital and Collaborative Technology	San Gabriel C	MFG
260	Safety Management in Industry	Santa Barbara A	SMHF
261	Ergonomics Interventions	Santa Barbara C	PEHF
262	Driving Automation and Human Factors Issues	San Gabriel A	RR
263	Musculoskeletal Aspects of Social and Occupational Ergonomics	San Pedro	SOE
264	Heuristic Evaluation, Software and Service Design	Santa Monica A	UUE
265	Tools and Methods in Education and Training	Santa Monica B	TELS
266	Advanced Displays and Intuitive Interfaces	Santa Monica C	HFRUS
267	Human Factors in Cyber-Warfare	Santa Monica D	CYBER
268	Design for Inclusion in the Living Environment II	Palos Verdes	DI
269	Altered Reality	Beaudry B	HFSIM
270	Human Factors and Wearable Technologies IV	Avalon	HFWT
271	Citizen Engagement, HSSE Best Paper Award and 2018 HSSE Planning	Sacramento	HSSE
272	Causal Analysis in Complex Environments	Emerald Bay	CCDM
273	Human Factors, Business Management and Society VI	Santa Barbara B	HFBMS
274	Infrastructure and Road Safety II	San Bernardino	RR

Conference at a Glance

ACRONYM	TRACK
APD	Affective and Pleasurable Design
CN	Neuroergonomics and Cognitive Engineering
CCIoT	Cognitive Computing and Internet of Things (IoT)
CCDM	Cross-Cultural Decision Making
DI	Design for Inclusion
DHMAO	Digital Human Modeling and Applied Optimization
ED	Ergonomics in Design
HERRP	Human Error, Reliability, Resilience, and Performance
HC	Human Factors and Ergonomics in Healthcare
HFGD	Human Factors and Game Design
HFMD	Human Factors and Medical Devices
HFSIM	Human Factors and Simulation
SYSI	Human Factors and Systems Interaction
HFWT	Human Factors and Wearable Technologies
HFGD	Human Factors in Communication of Design
CYBER	Human Factors in Cybersecurity
ENERGY	Human Factors in Energy: Oil, Gas, Nuclear and Electric Power Industries
HFML	Human Factors in Management and Leadership
HFRUS	Human Factors in Robots and Unmanned Systems
SIPOR	Human Factors in Sports, Injury Prevention and Outdoor Recreation
TELS	Human Factors in Training, Education, and Learning Sciences
HFBSM	Human Factors, Business Management and Society
HFSSE	Human Factors, Software, and Systems Engineering
SUPI	Human Factors, Sustainable Urban Planning and Infrastructure
HSSE	Human Side of Service Engineering
MFG	Ergonomics of Manufacturing: Managing the Enterprise of the Future
PEHF	Physical Ergonomics & Human Factors
SMHF	Safety Management and Human Factors
SOE	Social & Occupational Ergonomics
AVI	Human Factors in Transportation - Aviation
MAR	Human Factors in Transportation - Maritime
RR	Human Factors in Transportation - Road & Rail
UUE	Usability and User Experience

Detailed Technical Program

1	<p>Plenary: Experience, perception and effort in service production and consumption Speaker: Uday Karmarker, USA</p>	HSSE
8:00-10:00 BEAUDRY A		
2	<p>Plenary: EEG-engagement index and auditory alarm misperception: An in-attentional deafness study in actual flight condition Speakers: Frederic Dehais, Raphaele Roy, Gautier Durantin, Thibault Gateau and Daniel Callan, France</p>	CN
8:00-10:00 BEAUDRY B		
3	<p>Plenary: From Reason and Rasmussen to Kahneman and Thaler: Styles of thinking and human reliability in high hazard industries Speaker: Ron McLeod, Scotland</p> <p>Panel: What's next for human error? Ronald Boring, Julie Bell, Harold Blackman, Ron McLeod, Jinkyun Park, Neville Stanton, Oliver Straeter and Matthew Weinger, UK/USA/Korea/Scotland/Germany Panel Chair: Ronald Boring, USA</p>	HERRP
8:00-10:00 SACRAMENTO		
4	<p>Plenary: Designing and building soft wearable robotic systems Speaker: Danielle Ryan, USA</p>	HFSIM
8:00-10:00 BEVERLY		
5	<p>Assistive Technology I Chair: Maria Lucia Okimoto, Brazil</p>	ED
8:00-10:00 SANTA ANITA B	<p>External breast prostheses: Brazilian performance parameters Lucia Branco and José Foggiatto, Brazil</p> <p>Design management contributions in the diagnosis of a psychiatric hospital in Brazil: Identifying opportunities in assistive technology Giselle Schmidt A. Merino, Renata Hinnig, Arina Blum, Susana Domenech and Eugenio Andres Merino, Brazil</p> <p>Design and development of bionic hand prosthesis Marcelo Stoppa, Guilherme Neto, Stéfany Mayara Rezende and José Foggiatto, Brazil</p> <p>Industrial manufacturing workstations suitability for people with disabilities: The perception of workers Edson Teixeira and Maria Lucia Okimoto, Brazil</p> <p>Collaborative experience: Network research and development in assistive technology in Brazil Maria Lucia Okimoto, Eugenio Andres Merino, José Foggiatto, Luis Paschoarelli and Marcelo Gomes Ferreira, Brazil</p> <p>Design of assistive devices and occupational therapy: Case study in a Brazilian psychiatric hospital Giselle Schmidt A. Merino, Rosimeri Pichler, Susana Domenech, Zelita Rech and Eugenio Andres Merino, Brazil</p> <p>Requirements' literature review for the development of furniture for people with motor impairments Raffaella Tanure and Maria Lucia Okimoto, Brazil</p>	

6	Prospective Ergonomics I Co-Chairs: Eric Brangier and Leonor Ferrão, France/Portugal	ED
8:00-10:00 - SANTA ANITA C	<p>How to design the future hydrogen users' needs: A contribution of prospective ergonomics Robin Vivian, Eric Brangier and Corinne Bornet, France</p> <p>Color on glossolalia: White in western culture Leonor Ferrão, Portugal</p> <p>Dream and reality in the film storytelling and their boundaries: Viewer inner self-centered cognitive and ergonomic consciousness Carlos Figueiredo and Inês Coimbra, Portugal</p> <p>Inspædia report: An inspired research itinerary Paulo Maldonado, José Duarte, António Câmara, Nuno Correia, Leonor Ferrão and Pablo Ermida, Portugal</p> <p>White space in editorial design Elisabete Rolo, Portugal</p> <p>Strategic design and branding: Enhancing experiences and developing local products Pablo Felipe Bezerra, Amilton José Arruda, Isabela Maria Moroni and Theska Laila Freitas, Brazil</p>	
7	Stress Reduction Techniques Co-Chairs: Shyh-Yueh Cheng and Olga Chernavskaya, Taiwan/Russia	HC
8:00-10:00 - SAN GABRIEL A	<p>Characteristics of U. S. military personnel and veterans who complete mindfulness training Baoxia Liu and Valerie Rice, USA</p> <p>Evidence of a symptom cluster: The impact of mindfulness meditation on self-reported stress, fatigue, pain, and sleep among U. S. military service members and veterans Valerie Rice and Paul Schroeder, USA</p> <p>Evaluation of effect on cognition response to time pressure by using EEG Shyh-Yueh Cheng, Taiwan</p> <p>On modeling the stress/shock effect in an artificial cognitive system Olga Chernavskaya, Yaroslav Rozhylo and Aleksandr Skakun, Russia</p>	
8	Emotional Engineering I Chair: Shuichi Fukuda, Japan	APD
8:00-10:00 - SAN GABRIEL B	<p>Semantic influence of the radiator grille on vehicle front design in the course of current EV-design Daniel Holder, Tobias Benz and Thomas Maier, Germany</p> <p>A Mahalanobis Taguchi approach to human motion control Shuichi Fukuda, Japan</p> <p>Eye-tracking analysis of user behavior with an active display interface Teruaki Ito and Tomio Watanabe, Japan</p> <p>Experimental study on color preference and visual fatigue against LED lighting Keiichi Muramatsu, Kazunori Kaede, Eiichiro Tanaka and Keiichi Watanuki, Japan</p> <p>Emotional responses of the disabled towards wheelchairs Mohamed Mokdad, Bouhafs Mebarki, Lahcene Bouabdellah and Ibrahim Mokdad, Bahrain/Algeria</p>	

9	Human Factors Safety in Aviation and Aerospace I Chair: Katie Plant, UK	AVI
8:00-10:00 - SAN GABRIEL C	<p>Influencing factors on error reporting in aviation: A scenario-based approach Sebastian Sieberichs and Annette Kluge, Germany</p> <p>Quantifying pilot contribution to flight safety during hydraulic systems failure Lynda Kramer, Tim Etherington, Randall Bailey and Kellie Kennedy, USA</p> <p>Perceptions and affective responses in alternative risk-based airport security Kenneth Nguyen and Richard John, USA</p> <p>Autonomous stall recovery dynamics as a prevention tool for general aviation loss of control Tiziano Bernard, USA</p> <p>What the pilots see is what I get: How pilot's gaze can increase the human performance envelope to improve safety Marcus Biella and Matthias Wies, Germany</p>	
10	Ergonomics Design for Metal Works Co-Chairs: Hiroyuki Hamada and Hidehito Kito, Japan	MFG
8:00-10:00 - SANTA BARBARA A	<p>The analysis of repeatability of polishing work motion for a cold forging die with simple axial symmetric form Hidehito Kito, Hiroyuki Nishimoto, Yuka Takai, Akihiko Goto and Hiroyuki Hamada, Japan</p> <p>The analysis of removal efficiency of polishing work motion for cold forging die with simple axial symmetric form Hidehito Kito, Akihiko Goto, Yuka Takai, Hiroyuki Hamada and Hiroyuki Nishimoto, Japan</p> <p>Difference of motion between experienced and non-experienced engineer in sheet metal repair Shigeru Ikemoto, Yuka Takai and Hiroyuki Hamada, Japan</p> <p>Characteristic of hammering procedure by experienced engineer in sheet metal repair Shigeru Ikemoto, Yuka Takai and Hiroyuki Hamada, Japan</p> <p>Process analysis during edge preparation for steel plate between expert and non-expert Masaki Imamura, Ryo Marui, Takayuki Sakai, Akira Mizobuchi and Hiroyuki Hamada, Japan</p> <p>A comparison of transition of tool gripping force between expert and non-expert during deburring processes Mitsunori Mori, Tatsuro Nagasuna and Hiroyuki Hamada, Japan</p> <p>A comparison of deburring processes between expert and non-expert when deburring materials with different properties Mitsunori Mori, Japan</p>	
11	Accident Analysis and Prevention I Co-Chairs: Pedro Arezes and Roger Jensen, Portugal/USA	SMHF
8:00-10:00 - SANTA BARBARA B	<p>Human element as the contributing factor towards construction accidents from the perspective of Malaysian residential construction industry Mohd Hafidz Jaafar, Kadir Arifin, Kadaruddin Aiyub, Muhammad Rizal Razman and Mohamad Anuar Kamaruddin, Malaysia</p> <p>Two-hand actuator placement for power press operation: A reexamination of after-reach speeds Roger Jensen, USA</p> <p>Blame culture in workplace accidents investigation: Current model discussion and shift requirements for a collaborative model Cristiane Fragoso, Salvador Avila Filho, Ricardo Sousa, Caroline Massolino, René Pimentel and Ivone Cerqueira, Brazil</p> <p>Assessment of human factors analysis and classification system in construction accident prevention Zakari Mustapha, Clinton Aigbavboa and Wellington Thwala, South Africa</p>	

12	Applied Ergonomics in Fashion Design and Sports Technology Chair: Ameersing Luximon, Hong Kong	PEHF/ DHMAO
8:00-10:00 - SANTA BARBARA C	<p>Women's clothing choices are being inhibited by poor fit Tanya Dove, Hong Kong</p> <p>Reading task investigation of the kindle App in three mediums Kimberly Sheen, Yan Luximon and Jiaxin Zhang, Hong Kong</p> <p>Fashion education innovations based on ergonomic design Hong Wu, Huang Chao and Ameersing Luximon, China</p> <p>An explorative study of elderly fashion Huang Chao, Ameersing Luximon, Chit Sin Cheung and Yan Mo, Hong Kong</p> <p>Old fashion to new fashion: The creative fashion design concepts from nail cover of Qing dynasty Yan Mo, Huang Chao and Zhimei Kan, China</p> <p>Investigation on human body movements and the resulting body measurement variations Ningrong Xie and Pik-yin Mok, China</p>	
13	Public Transport Co-Chairs: Denis Miglianico and Dong Yoon Song, France/USA	RR
8:00-10:00 - AVALON	<p>A comparison of auditory and visual in-vehicle stop signals in Philippine public road-based transportation Josiel Catherine Almeda, Majella Cayley Domingo and Alyannah Bianca Saringan, Philippines</p> <p>Designing mobility and transport services: Results from the METPEX project Andree Woodcock and Michael Tovey, UK</p> <p>Analyzing traveler satisfaction under real-time travel information provision: Placebo effects of information Srinivas Peeta and Dong Yoon Song, USA</p> <p>From task analysis to innovation Denis Miglianico, Mathieu Mouchel and Luc Moyart, France</p> <p>Collective cars in cities: Optimal management in real time through DES approach Jennie Lioris, France</p> <p>Human factors in the design of automated transport logistics Matthias Neubauer and Oliver Schauer, Austria</p>	
14	Driver Safety I Co-Chairs: David Gilkey and Nuria Parera, USA/Spain	RR
8:00-10:00 - EMERALD BAY	<p>ATV safety in agriculture: Injury, illness, analysis and interventions David Gilkey, John Rosecrance, Elise Lagerstrom and Hali Neves, USA</p> <p>Study of Spain's vehicle fleet safety level based on the results of euro NCAP tests Oriol Vaquer, Núria Parera and Alba Fornells, Spain</p> <p>Effects of acti-graphically acquired sleep quality on driving outcomes in obstructive sleep apnea patients and control drivers: A naturalistic driving study Nazan Aksan, Robert Marini, Jeffrey Dawson, Jon Tippin and Matthew Rizzo, USA</p> <p>Integrating traffic safety in vehicle routing solution Iyad Sahnoun, Mohamed Shawky and Abdulla Al-Ghafli, UAE/Egypt</p> <p>How do passengers influence drivers according to questionnaire survey data in China? Quan Yuan, Shuai Jing and Kunzhu Zhang, China</p>	

15	Social and Occupational Ergonomics I Chair: Jürgen Glaser, Austria	SOE
8:00-10:00 - SAN PEDRO	<p>Self-actualization in modern workplaces – time-lagged effects of new job demands and job resources on motivation, meaning and self-efficacy at work Jürgen Glaser, Severin Hornung, Thomas Höge and Christian Seubert, Austria</p> <p>Evaluation of posture, self-efficacy, comfort and discomfort in guitarists while using auxiliary implements for instrument positioning Sergio Alberto Valenzuela Gomez, John Rey Galindo and Carlos Aceves González, Mexico</p> <p>Contractors’ organizational culture towards health and safety compliance in Ghana Zakari Mustapha, Clinton Aigbavboa and Wellington Thwala, South Africa</p> <p>Ergonomic and safety risks among small scale gold miners in the Philippines Jinky Leilanie Lu and Ana Marie Leung, Philippines</p> <p>Meta-analysis in the field of construction with panelized walls: Reference guide for research in occupational ergonomics applied to the assembly of booths for exhibitions Román Eduardo Méndez, Pamela Quiñones and Enrique Herrera Lugo, Mexico</p>	
16	Ergonomics in Building and Architecture Co-Chairs: Jerzy Charytonowicz and Anna Jaglarz, Poland	SUPI
8:00-10:00 - SANTA MONICA A	<p>Beauty - aesthetics - senses. Research of attractiveness and magic of the built environment Katarzyna Ujma-Wasowicz and Klaudiusz Fross, Poland</p> <p>Accessibility, ease and comfort of using sanitary devices by preschool children: Pre-design studies Anna Jaglarz, Poland</p> <p>Kitchen chores ergonomics – research and its application Przemyslaw Nowakowski, Poland</p> <p>Genius loci: Examples of changes of the image of post-industrial areas in Poland in the region of the Upper Silesian conurbation Katarzyna Ujma-Wasowicz and Anna Sulimowska-Ociepka, Poland</p> <p>Ergonomic formation of hygienic-sanitary spaces in consideration of health, safety and well-being of children Jerzy Charytonowicz and Anna Jaglarz, Poland</p> <p>“Student zone” as a new dimension of learning space. Case study in polish conditions Klaudiusz Fross, Dorota Winnicka-Jaslowska and Agata Sempruch, Poland</p> <p>Causes-effects relationship of construction project delays in Ghana: Focusing on local government projects Simon Ofori Ametepey, William Gyadu-Asiedu and Millicent Assah-Kissiedu, Ghana</p>	
17	Ergonomic Evaluation and Design for Sustainability Co-Chairs: Karthik Raj Kumar Yesodha and Andrés Solano, USA/ Costa Rica	UUE
8:00-10:00 SANTA MONICA B	<p>Ergonomic evaluation of different videogame controllers Karthik Kalyan Raj Kumar Yesodha, Veeraghavan Narasimhan and Yueqing Li, USA</p> <p>Is Uber “wild”? A study of a car sharing product-service system (PSS) under the perspective of cognition in the wild Manuela Gortz, Décio do Nascimento, Luiz Merkle, Marília Amaral and Leonelo Almeida, Brazil</p> <p>Ergonomic travel pillow Sravya Rao and Yueqing Li, USA</p>	

18	Advanced Unmanned Systems: Requirements and Groundwork for the Next Generation of Robotics Systems Co-Chairs: Troy Kelley and Jeffrey Krichmar, USA	HRFUS
8:00-10:00 - SANTA MONICA C	<p>Wearable robotics, industrial robots and construction worker's safety and health Rita Yi Man Li, Daniel Ping Lung Ng and Herru Ching Yu Li, Hong Kong/UK</p> <p>A model for temperament and emotions on robots Lyle Long, USA</p> <p>Adaptive robot path planning using a spiking neuron algorithm with axonal delays Jeffrey Krichmar, USA</p> <p>A cybernetic approach to characterization of complex sensory environments: Implications for human robot interaction Kelly Dickerson, Jeremy Gaston and Kelvin Oie, USA</p> <p>Spatial understanding as a common basis for human-robot collaboration D. Paul Benjamin, Damian Lyons, Tianyu Li, Peiyi Shen, Hong Yue and Zhenkang Zhao, USA</p> <p>A socially assistive robot that interacts with people through tactile and bi-directional learning Ting-Shuo Chou and Jeffrey Krichmar, Taiwan/USA</p> <p>Using episodic memory in a goal structured system for long term learning in autonomous systems Troy Kelley, USA</p>	
19	Healthcare and Medical Devices I Chair: Vince Duffy, USA	HFMD
8:00-10:00 - SANTA MONICA D	<p>Potential and influence of industrie 4.0 in oral implantology products and their production for patient, dentist and dental laboratory Yuebo Wang, Oliver Sandig, Christian Steinmetz, Christof Ellerbrock and Reiner Anderl, Germany</p> <p>Privacy and security of cardiovascular implantable electronic devices: Applying a contextual integrity analysis Beth Strickland Bloch and Masooda Bashir, USA</p> <p>Hazard and safety analysis of the Integra™ UltraVS™ neonate valve Amber Torrez, USA</p> <p>Investigation of human factors engineering methods used in medical device procurement process Kelly Carla Lobato, Carlos Henrique Mello, Ana Paula Almeida and Rodrigo M. Almeida, Brazil</p> <p>Usefulness of skin punch tools for corneal biopsy Lore Veelaert, Iris Boons, Anton Carmen, Julie Engelen, Nick Janssens, Nadia Zakaria, Guido De Bruyne and Clara Devriendt, Belgium</p> <p>Method of ergonomics assessment of technical systems and its influence on operators health on basis of hybrid fuzzy models Riad Taha Al-Kasasbeh, Nikolay Korenevskiy, Mahdi Salman Alshamasin and Ilyash Maksim, Jordan/Russia</p>	
20	Recent Advances in Inclusive Product and Service Design I Co-Chairs: Gustavo Sevilla-Cadavid and Patrick Langdon, Colombia/UK	DI
8:00-10:00 - SAN FRANCISCO	<p>Analysis of design of washbasin for use by the elderly Yoshiaki Goto, Satoshi Kose, Shinji Tanaka, Yasunari Nakajima and Takayuki Nakamura, Japan</p> <p>Diversity functionalities project. Development of inclusive wearable products Gustavo Sevilla-Cadavid, Angela Echeverri-Jaramillo, Alexander Cardona-Galeano and Luz M Sáenz, Colombia</p> <p>Designing autonomy in cars: A survey and two focus groups on driving habits of an inclusive user group, and group attitudes towards autonomous cars Ioannis Politis, Patrick Langdon, Mike Bradley, Lee Skrypchuk, Alex Mouzakis and P. John Clarkson, UK</p> <p>Study on the control device layout of truck cockpit based on user experience Yanlong Yao, Yinxia Li, Ai-ping Yang, Xin Zhang, Huimin Hu and Yahui Bai, China</p> <p>The effect of display-control compatibility design of intelligent electric rice cooker on different user groups' operating performance and emotion Yunhong Zhang, Mengqian Zhang, Hong Chen and Na Lin, China</p> <p>Experimental study on comfort of cushion in soft seat Maybelle Yu, Maria Isabella Leuterio and Sabrina Mae Follosco, Philippines</p>	

21	<p>Advances in Unmanned Aerial Vehicles (UAV) and Drones Research Co-Chairs: Gino Lim and Azad Madni, USA</p>	HFSSE/HFRUS
8:00-10:00 - SAN BERNARDINO	<p>Systematic tradeoff analysis among resilience approaches for multi-UAV system-of-systems Edwin Ordoukhanian and Azad Madni, USA</p> <p>Drone relay stations for supporting wireless communication in military operations Seon Jin Kim, Gino Lim and Jaeyoung Cho, USA</p> <p>Human-systems integration challenges in resilient multi-UAV operation Edwin Ordoukhanian and Azad Madni, USA</p> <p>Using the Soundpainting language to fly a swarm of drones Nadine Couture, Sébastien Bottecchia, Serge Chaumette, Mateo Ceconello, Josu Rekalde and Myriam Desainte-Catherine, France</p>	
22	<p>Human Factors and Wearable Technologies I Co-Chairs: Marcus Schmidt and Yusuke Shimazaki, Germany/Japan</p>	HFWT
8:00-10:00 - PALOS VERDES	<p>A wearable flexible sensor network platform for the analysis of different sport movements Marcus Schmidt, Sebastian Wille, Carl Rheinländer, Norbert When and Thomas Jaitner, Germany</p> <p>Moti-meter: A system for visualizing personal learning motivation Yusuke Shimazaki and Toshikazu Kato, Japan</p> <p>Emotion recognition using physiological signals: Laboratory vs. wearable sensors Martin Ragot, Nicolas Martin, Sonia Em, Nico Pallamin and Jean-Marc Diverrez, France</p> <p>Development of support systems for capturing and reducing the hand-arm-stress Aydin Ünlü, Emine Alan and Meltem Gedik, Germany</p> <p>A wearable device supporting multiple touch- and gesture-based languages for the deaf-blind Nicholas Caporusso, Giovanni Cinquepalmi, Luigi Biasi, Gianpaolo Trotta, Antonio Brunetti and Vitoantonio Bevilacqua, Italy</p> <p>What missing the cellular means? – Experiencing the absence of the mobile phone Hananel Rosenberg, Israel/USA</p>	
23	<p>Applied Digital Human Modeling and Simulation I Co-Chairs: Jianwei Niu and Zhizhong Li, China</p>	DHMAO/PEHF
8:00-10:00 - SANTA ANITA A	<p>Effects of socks and shoes on normal foot skin temperature Ameersing Luximon, Balasankar Ganesan and Abida Younus, Hong Kong</p> <p>Building a high accuracy body fitted harness system for puppet carrier Cathy Chow, Hong Kong</p> <p>Research on the competency model for the professional ship crew Zhen Liao, Xin Wang, Tuoyang Zhou, Shuang Liu, Gui Cai and Lei Liu, China</p> <p>Ergonomic study to compare digital human modeling simulation versus real life and momentum Carolina Massolino, Salvador Avila Filho, Ivone Cerqueira, René Pimentel, Napoleão Neto and Cristiane Fragoso, Brazil</p>	
10:00 - 10:30 Refreshments will be provided in California Ballroom		

24	Affective Value and Kawaii Engineering Co-Chairs: Michiko Ohkura and Ryota Horie, Japan	APD
10:30-12:30 - SANTA ANITA A	<p>Relationship between physical attributes of spoon designs and eye movements caused by kawaii feelings Tipporn Laohakangvalvit and Michiko Ohkura, Japan</p> <p>Are Kawaii products valuable to Chinese customers? Pei-Luen Patrick Rau, Nan Qie and Chien-Wen Tung, China</p> <p>How to model value-creating communication: coaching processes as an example Hiroko Shoji and Yuri Hamada, Japan</p> <p>Participation in a virtual reality concert via brainwave and heartbeat Ryota Horie, Minami Wada and Eri Watanabe, Japan</p> <p>Evaluation of immersive feeling in VR system with HMD by FNIRS measurement Kazuki Miyamoto, Yoshiki Koinuma, Shinichiro Kanoh and Michiko Ohkura, Japan</p> <p>Evaluation of "feelings of excitement" caused by a VR interactive system with unknown experience using ECQ Kodai Ito, Shigeki Usuda, Kiryu Yasunaga and Michiko Ohkura, Japan</p> <p>From HCI and affective computing to sentiment analysis: Extending the pool of context-aware features in affective-aware systems Aggeliki Vlachosterigou, George Marandianos and Stefanos Kollias, Greece/UK</p>	
25	Human-Machine Interactions and Tools Chair: Umer Asgher, Pakistan	CCDM
10:30-12:30 - SANTA ANITA B	<p>Designing culturally appropriate responses to culturally influenced computer usage behaviors Fuad El-Qirem and Gilbert Cockton, Jordan</p> <p>Comparative study of design by culture reference: Design examples Yan Gan and Yasuyuki Hirai, Japan</p> <p>Analyzing various functions of prefrontal cortex (PFC) in decision making via brain imaging techniques Umer Asgher, Riaz Ahmed, Yasar Ayaz, Noman Naseer, Liaqat Ali, Jose Arzola Ruiz and Maureen Kole, Pakistan</p>	
26	Applied Digital Human Modeling and Simulation II Co-Chairs: Byung Cheol (Bruce) Lee and Ying-Yin Huang, USA/Taiwan	DHMAO/HFSIM
10:30-12:30 - SANTA ANITA C	<p>Evaluation of newly-implemented auto-detection software tool for real-time eye fixations in a driving simulation Ying-Yin Huang and Marino Menozzi, Taiwan/Switzerland</p> <p>Validation of interruption management stage model: Can we develop the human cognitive behavior model in interruptive working environment? Byung Cheol Lee and Heejin Jeong, USA</p> <p>An evaluation method for human fatigue in virtual maintenance simulation based on cube model Yimin Li, Qing Xue, Minxia Liu and Jingqian Wen, China</p> <p>Cranium shape analysis from bald head scans Peng Li and Steven Paquette, USA</p> <p>Occupant protection modeling and injury prediction for NASA human exploration spacecraft Nancy Currie-Gregg, Charles Lawrence and Jeffrey Somers, USA</p> <p>Optimization-based prediction of the motion of a human performing a horizontal drop jump Mahdiar Hariri, Toyin Ajisafe and Jangwoon Park, USA</p> <p>Monitoring postures in work environments using multiple Kinect sensors Byoung-Keon Park, Scott Openshaw, Herman Miller and Matthew Reed, USA</p>	

27	Ergonomics in Clothing, Fashion and Footwear Design I Co-Chairs: Miguel Carvalho and Pedro Arezes, Portugal	ED
10:30-12:30 - SAN GABRIEL A	<p>Ergonomic assessment on the tasks performed by hairstylists in Quezon City, Philippines Maricella Valdivia, Patrizia Gayle Godinez and Marjorie Sintor, Philippines</p> <p>Discussion of the design of sanitation workers' clothes based on ergonomics Jiahui Xu and Xiaoping Hu, China</p> <p>Segmentation of anthropometric data of the Brazilian female population Carla Capelassi, Miguel Carvalho, Raquel Campos, Cristina Kattel and Bugao Xu, Portugal/USA</p> <p>Garment design and engineering for hospital use Miguel Carvalho, Elazer Edelman, Liliana Fontes and Jorge Santos, Portugal/USA</p> <p>The evaluation of ready-made clothing firms in terms of ergonomic risk factors Özlem Kaya, Turkey</p>	
28	Human Factors in Medical and Surgical Settings Co-Chairs: Denny Yu and Benjamin Strathen, USA/Germany	HC
10:30-12:30 - SAN GABRIEL B	<p>Ergonomic assessment and analysis of postural load of surgeons performing laparoscopic surgeries in Cuenca, Ecuador Mónica Ordóñez-Ríos, Oswaldo Jara, Juan Carlos Salamea and Vladimir Robles-Bykbaev, Ecuador</p> <p>Further development and evaluation of an universal foot switch for diverse medical disciplines within the framework of an open integration concept for the operation theatre of the future Anna Vitting, Armin Janß, Benjamin Strathen, Melanie Strake and Klaus Radermacher, Germany</p> <p>Effects of noises and music on nurses' mental workload and situation awareness in the operating room Li-Ping Tseng and Yung-Ching Liu, Taiwan</p> <p>Usability analysis in surgical prosthetics application for patient specific implants PSI María José González, Clara Isabel López and Fernanda Maradei, Colombia</p> <p>Operating room ergonomics: A practical approach for reducing operating room ergonomic hazards John Vaughan, Yona Vaisbuch, Robert Jackler and Justin M. Moore, USA</p> <p>Advanced medical decision support using fuzzy cognitive maps: A review of recent applications Afshin Jamshidi, Daoud Ait-Kadi and Angel Ruiz, Canada</p>	
29	Maritime I Co-Chairs: Daniel Fay and Massimo Di Nicolantonio, UK/Italy	MAR
10:30-12:30 - SAN GABRIEL C	<p>Waves of change: Understanding the maritime navigating crew in their transition from analogue to digital navigation charts Ariana Mihoc and Kirsten Cater, UK</p> <p>Identifying gaps, opportunities and user needs for future e-navigation technology and information exchange Nicole Costa, Monica Lundh and Scott MacKinnon, Sweden</p> <p>Inshore navigation's yacht: Study cases of sustainable and ergonomic yacht design Massimo Di Nicolantonio, Italy</p> <p>Assessing sonar and target motion analysis stations in a submarine control room using cognitive work analysis Daniel Fay, Neville Stanton and Aaron Roberts, UK</p> <p>"A-shaped" mast sailing yacht: Technological solution for easy navigation Jessica Lagatta and Andrea Vallicelli, Italy</p> <p>Maritime system analysis based on interaction of operation and operator factors Joohee Lee and Hyun Chung, Korea</p> <p>Using eye tracking to improve cove-its feedback to ship handling students Quinn Kennedy, Perry McDowell, Salman Aleem and Ruriko Yoshida, USA</p>	

30	Human Factors Engineering in Composite Manufacturing and Application Co-Chairs: H. Hamada, Nanami Norimichi and Yuqiu Yang, Japan	MFG
10:30-12:30 - SANTA BARBARA A	<p>Expert skill of injection molding - a new composite processing, DFFIM Yoshihisa Nagoao, Akihiko Imajo, Shinji Nojima, Hiroyuki Hamada and Yuqiu Yang, China/Japan</p> <p>Educational guidance to be an expert in trimming processes for the autoclaved CFRP products Norimichi Nanami, Toshikazu Uchida, Yosuke Watanabe, Katsuyuki Hara, Koji Kuroda, Hiroyuki Hamada, Akihiko Goto and Hayato Nakatani, China/Japan</p> <p>Processing method of Japanese Kyoto bow by oral Dento Mirai Kanjuro Shibata, Norimichi Nanami, Hayato Nakatani, Hiroyuki Hamada and Akihiko Goto, Japan</p> <p>Comparison of worker's skill during vacuum-assisted resin transfer molding using motion analysis Yasunari Kuratani, Kentaro Hase, Tomoe Kawazu, Aya Miki, Norimichi Nanami, Hayato Nakatani and Hiroyuki Hamada, Japan</p> <p>Study of expert technology on producing paper tubes Mitsunori Suda, Takanori Kitamura, Kanta Ito, Suguru Teramura, Zhiyuan Zhang, Hiroyuki Hamada and Tomoko Ota, Japan</p>	
31	Accident Analysis and Prevention II Co-Chairs: Nelson Costa and Jason Barlow, Portugal/Australia	SMHF
10:30-12:30 - SANTA BARBARA B	<p>Case study in best practice incident investigation Jason Barlow and Manikam Pillay, Australia</p> <p>The accident of the P-36 platform in Brazil: Human factors and the reliability in complex systems Marcelo Figueiredo, Denise Alvarez and Ricardo Adams, Brazil</p> <p>"Day to day, town to town, sing my songs, travel on"? Examining aspects of precarious employment for work psychologists in Austria Lisa Hopfgartner, Christian Seubert and Jürgen Glaser, Austria</p> <p>Age-related impairments such as reduced hearing capacity – a safety issue for the working world? Verena Wagner, Nina Grossi and Wolfgang Kallus, Austria</p> <p>Aviation accident analysis – a case study Mohammed Shahriari and Mehmet Aydin, Turkey</p> <p>Burning and electrocution risk's evaluation and prevention procedures: A case study in a production work shop Bouhafs Mebarki, Mhamed Bengharbi, Mohamed Mokdad and Lahcene Bouabdellah, Algeria</p>	
32	Virtualization in Physical Ergonomics Co-Chairs: Paul Gunther and Thomas Hofmann, Australia/Germany	PEHF
10:30-12:30 - SANTA BARBARA C	<p>Use of biomechanical properties of soft tissue for ergonomic product design Parth Shah, Yan Luximon and Ameersing Luximon, Hong Kong</p> <p>Assessment of human balance due to recoil destabilization using smart clothing Sofia Scatagliini, Elie Truyen, Paolo Perego, Johan Gallant, Damien Van Tiggelen and Giuseppe Andreoni, Belgium</p> <p>Virtualization in physical ergonomics: Seat indenter testing rig Arj Sivakumar, Peter Slattery and Gunther Paul, Australia</p> <p>Systems anthropometry of digital human models for seat design Herbert Reynolds and Gunther Paul, USA</p> <p>Between information and distraction - eye-controlled multimodal interface for car cockpits Thomas Hofmann, Tom Kamender and Daniel Schwalbe, Germany</p> <p>Impact of virtual reality in design of sports equipment Rosa Virgnie and Coromp Pierre, France</p>	

33	Driver Safety II Co-Chairs: Aaron Roberts and Sérgio Rodrigues, Brazil	RR
10:30-12:30 - HOLLYWOOD BALLROOM	<p>Effects of using a cell phone on gaze movements during simulated car driving: Hand-held and hands-free conditions Bethânia Carizio, Gisele Gotardi, Juliana de Angelo, Sérgio Rodrigues, Luis Paschoarelli, Paula Favaro Polastri and Fabio Barbieri, Brazil</p> <p>Structural study of the side impact test with a fully-instrumented pole Jacob Sanchez, Melcior Malivern, Núria Parera and Fernando Bernal, Spain</p> <p>Neuro-behavioral evaluation of rehabilitation programs for dangerous drivers Pavel Řezáč, Veronika Kurečková, Petr Zámečník, Daniel Shaw, Milan Brázdil, Kristína Czekóová, Beáta Špiláková and Miguel Salazar, Czech Republic</p> <p>Different learning conditions and their impact on hazard perception training Jana Hilz, Sarah Malone and Roland Brünken, Germany</p> <p>Fuzzy logic based merging gap acceptance model incorporating driving styles and drivers' personalities Chen Chai, Xuesong Wang, Yiik Diew Wong and Yidan Gao, Singapore</p> <p>Macro analysis of traffic accidents based on an automatic classification method for drive recorder data Midori Mori, Japan</p>	
34	Social and Occupational Ergonomics II Co-Chairs: Iuliana Nastasia and Shilpi Bora, Canada/India	SOE
10:30-12:30 - PALOS VERDES	<p>Ergonomics contribution in the RTW of workers after work-related musculoskeletal disorders Iuliana Nastasia and Sarah Gaspard, Canada</p> <p>Office workspace design for policewomen in Assam, India: Applications for developing countries Shilpi Bora, Abhirup Chatterjee and Debkumar Chakrabarti, India</p> <p>Examination of occupational health and safety practices in Ghana Zakari Mustapha, Clinton Aigbavboa and Wellington Thwala, South Africa</p> <p>Construction accidents during the years 2013 to 2015 in Belo Horizonte City and its metropolitan area, Brazil Diego Frade and Wemerton Evangelista, Brazil</p>	
35	Ergonomics and Design for All Co-Chairs: Bianbian Qiu and Akhil Vinay Oswal China/USA	UUE
10:30-12:30 - SAN PEDRO	<p>A user satisfaction survey for Chinese tractors based on attitude index of product attributes Bianbian Qiu, Jiping Zhou, Zaixiang Zheng and Hui Shen, China</p> <p>Addressing the alerting needs of older adults to age in place Reema Upadhyaya, Akhil Oswal and Brian Jones, USA</p> <p>Research on efficiency of visual search of users about different forms of prompts of text entry fields Linghua Ran, Xin Zhang, Hong Luo, Ling Luo, Huimin Hu and Chaoyi Zhao, China</p> <p>Research on the degree of attraction to users of ads at different positions during targeted operation Linghua Ran, Xin Zhang, Hong Luo, Huimin Hu and Zhongting Wang, China</p> <p>Voice guidance design guideline for home appliances from viewpoints of design consistency Sawaya Harigaya and Miwa Nakanishi, Japan</p> <p>Usability-directed website redesign for Filipino student learning platform Joseph Patrick Roxas, Philippines</p>	

36	Human Factors in Energy: Policy, Implementation and Achieving Successful Outcomes Co-Chairs: Mingming Deng and Brian Green, China/USA	ENERGY
10:30-12:30 - SANTA MONICA A	<p>Test and analysis of Chinese coal miners' vision ability Mingming Deng and Feng Wu, China</p> <p>Seven ways that human performance improvement (HPI) programs fail and 21 ways to help ensure they succeed Jake Mazulewicz and Michael Legatt, USA</p> <p>When Is a human factors review appropriate? Development of a human factors screening tool for Nuclear Regulatory Commission project managers Brian Green, USA</p> <p>Indonesia's challenges and opportunities: youth petroleum engineer's role to develop economic growth and natural resources Prayang Sunny Yulia, Sugiatmo Kasmungin and Bayu Satiyawira, Indonesia</p> <p>Investigating procedures in process safety Jason Williams, Farzan Sasangohar and Camille Peres, USA</p> <p>Associating holography techniques with BIM practices for electrical substation design Alexandre Cardoso, Isabela Cristina Peres, Edgard Lamounier, Gerson Lima, Milton Miranda and Igor Moraes, Brazil</p>	
37	Systems Thinking in Sports and Outdoor Recreation Co-Chairs: Kevin Richardson and Chika Eke, USA	SIPOR
10:30-12:30 - SANTA MONICA B	<p>Architecting speed: Making racing data useful Kevin Richardson, USA</p> <p>Effect of rater expertise on subjective agility assessment Leia Stirling and Chika Eke, USA</p> <p>Effectiveness of avoiding head collision of a head with an object in motion – virtual reality technology in diagnostic and training from perspective of prophylactic of body injuries Roman Kalina, Robert Michnik, Piotr Wodarski, Andrzej Bieniek, Jacek Jurkojc and Dariusz Mosler, Poland</p> <p>Analysis of pitching skills in major league baseball players Michiko Miyamoto and Akihiro Ito, Japan</p> <p>Methodology for the assessment of clothing and individual equipment (CIE) Leif Hasselquist, Marianna Eddy, K. Blake Mitchell, Clifford Hancock, Jay McNamara and Christina Caruso, USA</p> <p>A first step toward the development of a situation awareness (SA) assessment technique for elite professional soccer: Some lessons from previous research Luís Meireles, Luís Alves and José Cruz, Portugal</p>	
38	Systems Usability and Device Assessment Chair: Denis A. Coelho, Portugal	SYSI
10:30-12:30 - SANTA MONICA C	<p>Development of a new ergonomic computer mouse Miguel L. Lourenço, Rui Pitarma and Denis Coelho, Portugal</p> <p>Psychometric analysis of scales for usability evaluation of pointing devices Denis Coelho, Miguel L. Lourenço and Isabel L. Nunes, Portugal</p> <p>A fuzzy usability assessment methodology Bruno Lemos and Isabel L. Nunes, Portugal</p> <p>Research methodologies in the ergonomic development and evaluation of PC mice Miguel L. Lourenço and Denis Coelho, Portugal</p> <p>S-EMG of forearm muscles activity in conventional PC mouse use Miguel L. Lourenço and Denis Coelho, Portugal</p> <p>Validation of a new algorithm for the conduction of the discussion phase in a heuristic evaluation process: An approach for software usability assessments Freddy Paz, Freddy Asrael Paz, Carmen Rosas and Manuel Sanchez, Peru</p> <p>Enhancement of user experience by hierarchical task analysis for interaction system Khadija Fyiaz, Shabana Tabassum and Ali Hasnain, Pakistan</p>	

39	Organizational Learning and Performance Chair: Terence Andre, USA	TELS
10:30-12:30 - SANTA MONICA D	<p>Competency-based training system for personalized learning Terence Andre, Kerri Conning Chik, Ryan Meyer, Gregg Liming, Rod Ford, Camilla Knott, Caitlin Robie and Danyele Harris-Thompson, USA</p> <p>Influences of mentoring functions on job satisfaction and organizational commitment of graduate employees Morena Nkomo, Wellington Thwala and Clinton Aigbavboa, South Africa</p> <p>Human resource management and effects of mentoring on retention of employees in the construction sector: A literature review Morena Nkomo, Wellington Thwala and Clinton Aigbavboa, South Africa</p>	
40	Gamification in Service Engineering Co-Chairs: Freimut Bodendorf and Christian Zagel, Germany	HSSE
10:30-12:30 - BEAUDRY A	<p>Using gamification to enhance user motivation: The influence of gender and age Sophie Jent and Monique Janneck, Germany</p> <p>The interaction of causal attribution of performance and compliance with decision support systems in cyber-physical production systems - An empirical study using a business simulation game Philipp Brauner, Ralf Philippsen, André Calero Valdez and Martina Ziefle, Germany</p> <p>Gamified self-service checkouts: The influence of personality traits on user motivation and experience Adelka Niels and Christian Zagel, Germany</p> <p>Defining recuitainment: A model and a survey on the gamification of recruiting and human resources Oliver Korn, Florian Brenner, Julian Börsig, Fabio Lalli, Maik Mattmüller and Andrea Mueller, Germany</p> <p>SciencOmat: A gamified research platform for evaluating visual attractiveness Christian Zagel, Alexander Piazza, Freimut Bodendorf and Yoan Petrov, Germany</p> <p>Data driven campaigning – a framework for the use of data in German campaigns André Haller, Germany</p>	
41	Control Using Multimodal Input Chair: Anna Trujillo, USA	HFRUS
10:30-12:30 - BEAUDRY B	<p>Challenges of using gestures in multimodal HMI for unmanned mission planning Meghan Chandarana, Erica Meszaros, Anna Trujillo and B. Danette Allen, USA</p> <p>Compensating for limitations in speech-based natural language processing with multimodal interfaces in UAV operation Erica Meszaros, Meghan Chandarana, Anna Trujillo and B. Danette Allen, USA</p> <p>Investigation of gesture based UAV control Brian Sanders, Dennis Vincenzi and Yuzhong Shen, USA</p> <p>Crew performance and situation awareness in three UAS GCS layouts Derek McColl, Jena-Francois Gagnon, Simon Banbury, Robert Arrabito, Nada Pavlović, Fred Williams, Mario Charron and Ming Hou, Canada</p> <p>Leveraging different modalities in a multimodal interface for UAV flight path generation Erica Meszaros, Meghan Chandarana, Anna Trujillo and B. Danette Allen, USA</p>	

42	Recent Advances in Design for Ageing Population Co-Chairs: Giuseppe Mincoelli and Matteo Zallio, Italy/Ireland	DI
10:30-12:30 - SACRAMENTO	<p>Adaptive design of physical, hand-operated interfaces for the transgenerational user using parameterization Benedikt Janny, Johann Winterholler and Thomas Maier, Germany</p> <p>IoT based recipes for enabling senior citizens: Stakeholders views on how integration of IoT and web services can enhance the well-being and inclusion of older people Matteo Zallio, John McGrory and Damon Berry, Ireland</p> <p>Design for the active ageing and autonomy: The role of industrial design in the development of the "habitat" IOT project Giuseppe Mincoelli, Silvia Imbesi and Michele Marchi, Italy</p> <p>Inclusive design for ageing people and the internet of things: Understanding needs Giuseppe Mincoelli, Michele Marchi and Silvia Imbesi, Italy</p> <p>Exploring choice criteria for older Chinese female consumers: A wardrobe study approach Minzhi Zhang, Sonja Andrew and Simeon Gill, UK</p> <p>Qualitative study on salient factors influencing Indian elderly's perception on fall and its related interventions Nilakshi Yein and Swati Pal, India</p>	
43	Organization and Leadership Co-Chairs: Anna Szopa and Tibor Barath, Poland/Hungary	HFML
10:30-12:30 - EMERALD BAY	<p>Simulation and surface response methodology for simultaneous optimization of response variables: Case study in a warehousing process Jorge Gonzalez, Humberto Híjar, Jaime Sanchez-Leal and Daniel Hernández, Mexico</p> <p>Effects of occupational health and safety assessment series (OHSAS) standard: A study on core competencies building and organizational learning Ebo Kwegyir-Afful, Emma Kwegyir-Afful, Richard Addo-Tenkorang and Jussi Kantola, Finland</p> <p>Comparison of laboral tension between management and operational teams Velia Castillo-Pérez, Mario Corral-Chacón, Liliana Carrasco Armendariz and Ramon Elizondo, Mexico</p> <p>Relationship between diversity fault-lines and turnover intentions of nurses in Japan Takumi Iwaasa, Yasuyuki Yamada and Motoki Mizuno, Japan</p> <p>Systematic review of a study of male nurses in Japan Yasuyuki Yamada, Takumi Iwaasa and Motoki Mizuno, Japan</p> <p>Promoting the organizational development in the knowledge economy: A fractal architecture of T-innovative capacities Marcelo Conti, Sapienza, Cristina Simone and Andres Salas, Italy/Spain</p>	
44	Human Factors, Software and Systems Engineering I Co-Chairs: Daniel Yaeger and Rafiqul Tarefder, USA	HFSSE
10:30-12:30 - AVALON	<p>Ground penetrating radar for measuring thickness of an unbound layer of a pavement Rafiqul Tarefder and Mesbah Ahmed, USA</p> <p>Efficient language model generation algorithm for mobile voice commands Daniel Yaeger and Christopher Bubeck, USA</p> <p>Use of the systems modeling language to incorporate future human factors into the soldier as a system domain to optimize future soldier systems Shauna Dorsey, Sean Pham, Frank Torres and Dana Perriello, USA</p> <p>Defining 'architecture' for software engineering – a review of terminology Julio Guzman, Alexia Pacheco and Gustavo Lopez, Costa Rica</p> <p>Design of a secure location based service for mobile cloud applications K. Meenakshi Sundaram and Navjeet Kumar, Botswana</p> <p>Research on paper submission management system by using automatic text categorization Qi Luo, China</p> <p>Development of a rapid prototype of the computational model to evaluation of environmental indicators Elvira Rolon, Juan Rios, Rene Cabrera, Julio Rolon and Martha Torres, Mexico</p>	

45	<p>Human Reliability and Human Factors Research in China Co-Chairs: Zhizhong Li and Manrong She, China</p>	HERRP
10:30-12:30 - BEVERLY	<p>Effects of information acquisition method on diagnostic task performance using digitalized interfaces Xuansheng Ding, Zhizhong Li and Manrong She, China</p> <p>Cognitive processes and PEMs of TSA in digitized MCRs of NPPs Pengcheng Li, Simon M. Hsiang, Licao Dai, Li Zhang, Yu Jiang and Xiaofang Li, China</p> <p>The effects of operator characteristic and information retrieval methods on diagnosis performance Dan Pan, Lu Yang, Manrong She, Zhizhong Li and Xuansheng Ding, China</p> <p>The effect of the urban bus stop on human - machine characteristics in public transport Fengyuan Wang, Xiaoting Chen, Lu Wang, Shiyuan Yan and Fuquan Pan, China</p> <p>Operating events in Chinese nuclear power plants: A preliminary analysis Lixin Zheng, Feng Jiao, Peng Liu, Jiejuan Tong and Zhizhong Li, China</p> <p>Description of diagnosis process: A review of existing measures and a new approach Xi Lyu and Zhizhong Li, China</p> <p>Status of human reliability analysis and its review in Chinese nuclear power plant Jiajia Zhang, China</p>	
46	<p>Human Factors in Communication of Design I Co-Chairs: Timothy Richards and Lung-Wen Kuo, USA/Taiwan</p>	HFGD
10:30-12:30 - SAN FRANCISCO	<p>Trust building privacy preferences for young adults visiting political campaign websites Timothy Richards and A. Ant Ozok, USA</p> <p>Humanistic teaching approaches in typographic communication design Amic Ho, Hong Kong</p> <p>Analysis of communicational design and information on university websites Livia Inglesis Barcellos, Ekaterina Emmanuil Inglesis Barcellos and Galdenoro Botura, Jr., Brazil</p> <p>The style of imagery: A color study of landscape paintings Chih-Chun Lai and Lung-Wen Kuo, Taiwan</p> <p>Comparison of on-line and laboratory experiments to determine single-color preference Luwen Yu, Stephen Westland and Xinxiong Liu, UK/China</p>	
47	<p>Emotional Engineering II Co-Chairs: Jiwon Park and Dosun Shin, USA/Korea</p>	APD
10:30-12:30 - SAN BERNARDINO	<p>Research on the way of 'Blank' in web design Ji Xuewen and Yuan Huaxiang, China</p> <p>Emotional values of ceramic material applications in product design Dosun Shin, USA</p> <p>Cultivating a new emotive brand experience that parallels the business turnaround strategy using systems-thinking and service design methodologies: A rebranding case study in the resort industry Jiwon Park, USA/Korea</p> <p>Spacial empathy as a tool to measure the pleasure of a place Ethel Santana and Barbara Nascimento, Brazil</p> <p>The hearing-impaired and the sound: Reflections about the interpretation of the soundscape from the perspective of the hearing impaired person Juliana Oliveira and Andrea Rego, Brazil</p> <p>Urban sonorities: Reflections on the social and affective interaction by sound ambiances through sensitive spaces Barbara Nascimento, Juliana Oliveira, Ethel Santana and Andrea Rego, Brazil</p>	
<p>Lunch Break (12:30-13:30) - Enjoy lunch at the restaurant of your choice.</p>		

48	Kansei Engineering and AI-VR Chair: Mitsuo Nagamachi, Japan	APD
13:30-15:30 - SANTA ANITA A	<p>Measurement of surface and virtual prototyping for Kansei engineering Shigekazu Ishihara, Tatsuro Matsubara, Yukihiro Matsubara and Mitsuo Nagamachi, Japan</p> <p>Kansei ergonomic study of a new body brush development Kousuke Morinaga, Keiko Ishihara, Masayuki Booka and Shigekazu Ishihara, Japan</p> <p>Development and evaluation of ankle mobility VR rehabilitation game Atsushi Kanbe and Shigekazu Ishihara, Japan</p> <p>Persuasive semantics of aging health products based on AHP and Kansei engineering Yongyan Guo, Minggang Yang and Meiyu Zhou, China</p> <p>Development of remote control unit of domestic water heater by Kansei engineering Toshio Tsuchiya, Japan</p> <p>History of Kansei engineering and application of artificial intelligence Mitsuo Nagamachi, Japan</p> <p>A study of contemporary Chinese jewelry design based on Kansei engineering Zhiye Yu and Wei Yu, China</p>	
49	General and Systemic Structural Activity Theory Chair: Gregory Bedny, USA	CN
13:30-15:30 - SANTA ANITA B	<p>The model of the factor of significance of goal-directed decision making Alexander Yemelyanov, USA</p> <p>Applying SSAT in computer-based analysis and investigation of operator errors Alexander Yemelyanov and Alla Yemelyanov, USA</p> <p>Mediating subjective task complexity in job design: a critical reflection of historicity in self-regulatory activity Mohammed-Aminu Sanda, Ghana</p> <p>The emerging cognitive difficulties and emotional-motivational challenges of Ghanaian air traffic controllers: implication for improved job design Mohammed-Aminu Sanda and Emmanuel Owusu-Asiedu, Ghana</p> <p>Studying thinking in the framework of SSAT Gregory Bedny, Inna Bedny and Waldemar Karwowski, USA</p> <p>Concept of the computer-based task in production and non-production environment Gregory Bedny and Inna Bedny, USA</p> <p>Activity approach in management Fred Voskoboynikov, USA</p>	
50	Assistive Technology II Chair: Maria Lucia Okimoto, Brazil	ED
13:30-15:30 - SANTA ANITA C	<p>Implementation of integrated instrumentation in assistive technology Eugenio Andres Merino, Giuliano Mannrich, Bruno Guimarães, Giselle Speck, Diego Mattos, Susana Domenech and Giselle Schmidt A. Merino, Brazil</p> <p>Research and development of pedagogical objects to support inclusive education Janete Cicero, Saul Mizrahi, Gil Brito, Felipe Sampaio and Gabriel Ferreira, Brazil</p> <p>Modularity and variety in the customization of functional clothes for people with disabilities Bruna Brogin, Maria Lucia Okimoto, and Carlo Martino, Brazil/Italy</p> <p>Use perception analysis in custom made footwear for people with physical disability Rosangela Santos, Flávio Ventura, Francienne Hernandes, Ademir Marques, Jr., João Eduardo Guarnetti dos Santos and Luis Paschoarelli, Brazil</p> <p>Usability evaluation of mine machine interface based on eye movement experiment Hongxia Li, Shuicheng Tian, Fang Li and Yixin Huang, China</p>	

51	Prospective Ergonomics II Co-Chairs: Fernando Moreira da Silva and Paulo Maldonado, Portugal	ED
13:30-15:30 - SAN GABRIEL A	<p>Inspædia: Changing the landscape of cultural reflection and influence through user experience design Paulo Maldonado, Leonor Ferrão and Pablo Ermida, Portugal</p> <p>User-centered design and theory of innovation problem solving integration approach for ergonomic product design Fanglan Zhang and Sharon Joines, China/USA</p> <p>How design processes add innovative capacity in startup companies Isabela Maria Moroni, Amilton José Arruda, Pablo Felipe Bezerra and Theska Laila Freitas, Brazil</p> <p>Analysis of characteristic features of juvenile female aged between 15 and 17 in Quangdong Province P. R. China Huajuan Lin and Xiaoping Hu, China</p> <p>Anthropometric measurement of Filipino manufacturing workers Jinky Leilanie Lu, Philippines</p> <p>Evaluation of human-system interface complexity using NASA TLX and eye tracking in the digital nuclear power plants Yingying Wei, Shengyuan Yan and Cong Chi Tran, China</p>	
52	Human Factors in Medical Devices Design Chair: Helen Fuller, USA	HC
13:30-15:30 - SAN GABRIEL B	<p>Development of pneumatic dual-cell stacking implanter Yih-Lin Cheng and Yi-Tung Lai, Taiwan</p> <p>Human factors in prosthesis of total knee arthroplasty Renê Pimentel, Cristiano Fontes, Salvador Avila Filho, Jocelma Rios, Adonias Magdiel, Cristiane Fragoso, Ivone Cerqueira and Caroline Massolino, Brazil</p> <p>Teaching proactive risk assessment to clinicians and administrators Tandi Bagian and Helen Fuller, USA</p> <p>Design of wearable dialysis unit Neela Rajhans, Vicky Sardar and Atul Sajgure, India</p> <p>Ankle support design for squatting pushing skills during the second stage of labor Ghi-Hwei Kao, Philip Hwang, Yu-Ching Lin and Yi Lin, Taiwan</p>	
53	Applications in Cognitive and Internet of Things Co-Chairs: Sharon Chinoy and Neil Gomes, USA	CCIoT
13:30-15:30 - SAN GABRIEL C	<p>Thing to service: Perspectives from a network of things Sharon Chinoy, USA</p> <p>Designing a cognitive concierge service for hospitals Hari Madduri and Neil Gomes, USA</p> <p>Accessibility on the internet of things: Challenges for the design of socially responsible interfaces Lucas Azevedo and Galdenoro Botura, Jr., Brazil</p> <p>Eye tracking SDK: A framework for e-learning Tessie Lobo, USA</p> <p>A quantitative approach of product styling design evaluation based on eye movement data and artificial neural network method Wenhua Li, Jianjie Chu, Bingchen Gou and Suihui Yu, China</p>	

54	Safety Culture and Training Co-Chairs: Gladstone Reid and Walter Eichendorf, USA/Germany	SMHF
13:30-15:30 - SANTA BARBARA A	<p>Usability of machinery Gyula Szabo, Hungary</p> <p>Establishing a culture of prevention Walter Eichendorf, Germany</p> <p>Occupational exposure to biological agents in the waste industry – characterization of bacteria and fungi in air, operators Marta Pinto, Joana Guerreiro, Manuela Velho, Sérgio Gonçalves, Carla Ramos, Paulo Fernandes, José Veiga and João Almeida, Portugal</p> <p>Safety culture in the ergonomics perspective: Case study in offshore platforms Francisco Duarte, Brazil</p> <p>Awareness of safety guidelines among South African construction professionals Ayodeji Oke, Clinton Aigbavboa and Codelia Seemola, South Africa</p> <p>Active shooter training evaluation Gladstone Reid, Elizabeth Mezzacappa, Gordon Cooke, Kevin Tevis, Robert DeMarco and John Riedener, USA</p> <p>The principles of support for guaranteed level of safety in air navigation services in Ukraine Oleh Alexeiev, Ukraine</p>	
55	Ergonomics Methods and Outcomes in Physical Product Design Chair: Chandra Nair, USA	PEHF
13:30-15:30 - SANTA BARBARA B	<p>Getting a seat at the table in product development: A case study Noel Bankston, USA</p> <p>Aviation snips: Ergonomic investigation, testing and design specifications Tolga Caglar, Tom Pelletier and Kevin Costello, USA</p> <p>Benefits of multimodal speech directed order fulfillment systems vs single mode systems Chandra Nair, USA</p> <p>Lessons from real world: How to transition from graduate school into industry Wenjun Sun, USA</p> <p>Field user feedback study: Rugged handheld device preferences in manual material handling Katherine King, USA</p> <p>Using virtual reality in the ergonomics-design workflow Thomas Hofmann, Tom Kamender and Fabian Staerk, Germany</p> <p>Techniques for quantifying ergonomic product performance Kevin Costello, USA</p>	
56	Driver Safety III Co-Chairs: Katie Parnell and Nurul Ikhmar Ibrahim, UK/Australia	RR
13:30-15:30 - SACRAMENTO	<p>Willing to be distracted? Decisions drivers make to engage with in-vehicle technologies within a simulator and real-world environment Katie Parnell, Neville Stanton and Katherine Plant, UK</p> <p>Assessing distraction: Exploring the effects of smartphone voice control interfaces on driving performance Nurul Ikhmar Ibrahim, Carlo Caponecchia and Michael Regan, Australia/Malaysia</p> <p>Exploring adolescent texting while driving behaviors using the theory of planned behavior and psychosocial factors Maranda McBride, Lemuria Carter and Brandis Phillips, USA</p> <p>Risky behavior and the attitudes towards the police safety operations in the Czech Republic Petr Zámečník, Veronika Kurečková, Pavel Řezáč and Vít Gabrhel, Czech Republic</p> <p>Does the familiarity of road regulation contribute to driving violation? A simulated study on familiar and unfamiliar road intersections among young Chinese drivers Siyan Huang, Daniele Ruscio, Dedy Ariansyah, Jun Yi and Monica Bordegoni, China/Italy</p>	

57	Human-Machine Interaction I Co-Chairs: Lee Skrypchuk and Patrick Langdon, UK	RR
13:30-15:30 - BEVERLY	<p>Identifying difference thresholds of haptics and acoustics of control devices Tobias Glohr, Thomas Maier and Andreas Zimmermann, Germany</p> <p>Digital touchpoints in campus slow traffic service system Jintian Shi and Ke Ma, China</p> <p>Cognitive vehicle design guided by human factors and supported by Bayesian artificial intelligence Ata Khan, Canada</p> <p>Assessing in-vehicle secondary tasks with the NHTSA visual-manual guidelines occlusion method Mikael Ljung Aust, Robert Broström and Sofia Lindvall, Sweden</p> <p>The benefit of touchless gesture control: An empirical evaluation of commercial vehicle-related use cases Michael Stecher, Britta Michel and Andreas Zimmermann, Germany</p> <p>Quantifying the physiological impacts of real-time travel information on route choice behavior: A driving simulator-based study Srinivas Peeta, Shubham Agrawal, Irina Benedyk, Jian Wang, Dong Yoon Song and Yuntao Guo, USA</p>	
58	Social and Occupational Ergonomics III Chair: Alessandro Maddeo, Italy	SOE
13:30-15:30 - PALOS VERDES	<p>Task analysis and comfort evaluation through simulations: Differences between subjective perceptions and simulated data in the case of car-hood lifting Alessandro Naddeo, Davide D'Ambrosio and Bruno Antonini, Italy</p> <p>Human factors in designing workspace: Customizing kitchen counter design Anuradha Patil and Neela Rajhans, India</p> <p>Ergonomic assessment and workplace design in dairy processing industry Nevra Akbilek, Turkey</p> <p>Ergonomic value stream mapping: A novel approach to reduce subjective mental workload Anel Arce, Luis Romero-Dessens and Jaime Leon-Duarte, Mexico</p> <p>To analyze the effect of the occupational factors on the prevalence of musculoskeletal disorders among bank office employees in Nawanshahr Punjab, (India) - a case study Rajinder Moom, Lakhwinder Janagal and Neelam Moom, India</p> <p>Macro-ergonomics studies in the nursing field. Theoretical review Juliana Avila-Vargas and Elvia González-Muñoz, Mexico</p>	
59	User Experience and Social Networking Co-Chairs: Ron McLeod and Atsushi Uenoyama, Scotland/Japan	UUE
13:30-15:30 - SAN PEDRO	<p>Playbook data analysis tool: Collecting interaction data from extremely remote users Bob Kanefsky, Jimin Zheng, Ivonne Deliz, Jessica Marquez and Steven Hillenius, USA</p> <p>Estimating user's intention and emotion by analyzing operation log data of IOT appliances Atsushi Uenoyama, Miwa Nakanishi and Masahiko Sakata, Japan</p> <p>Usability heuristics for mobile apps: An integrative approach Samar Swaid, USA</p> <p>The impact of smartphone use and its differences between cultures Caio Silva, Daniela Gobbo, Ana Luiza Chyla, Jéssica Dudyk, Regiane Friedemann and Thi Anh Tuyet Tran, Brazil</p>	

60	Human Factors on Crises Management Chair: Mário Simões-Marques, Portugal	SYSI
13:30-15:30 - SANTA MONICA A	<p>System decision support for emergency management Hugo Ramos and Jose Borges, Portugal</p> <p>Knowledge management in the development of an intelligent system to support emergency response Anacleto Correia, Inês Severino, Isabel L. Nunes and Mário Simões-Marques, Portugal</p> <p>Modeling and simulation in support of disaster preparedness Mário Simões-Marques, João Bica and Anacleto Correia, Portugal</p> <p>Visual search techniques and performance in electronic map display Jean Luc Habiyaemye and Yan Shengyuan, China</p> <p>Interlinking standardized OpenStreetMap data and citizen science data in the OpenData cloud Werner Leyh and Homero Fonseca Filho, Brazil</p> <p>Higher functioning teams improve the triage process in Las Cruces, NM Lori DeLeeuw, Nancy Hallbauer, Chris Baeza, Deborah E. Welsh, Gary Sculli and Crystal Davis-Whited, USA</p> <p>Empirical studies in user experience of emergency systems Anacleto Correia, Maria Teodoro, Mário Simões-Marques and Isabel L. Nunes, Portugal</p>	
61	Novel Approaches for Learning and Instruction II Co-Chairs: Mario Ribeiro and Aaron Manabat, Portugal/USA	TELS
13:30-15:30 - SANTA MONICA B	<p>High-level context information for tasks in teaching Renée Schulz, Ghislain Maurice Isabwé, Andreas Prinz and Takahiro Hara, Norway</p> <p>The positive effect of digital game based programming on students Ebru Yeniman Yildirim, Turkey</p> <p>Valuing of economic efficiency of university spin-offs: Case of Peter the Great St. Petersburg Polytechnic University Aleksandr Kozlov and Olga Miroliubova, Russian Federation</p> <p>Optimizing the teaching/learning experience in fashion education Mario Ribeiro and Ines Simoes, Portugal</p> <p>E-book accessibility evaluations Yuting Sun, Ryan Fritz, Laura Yorba, Aaron Manabat, Noam Katz and Kim-Phuong Vu, USA</p> <p>Participatory design of a multimedia product and cartoons for professionals and patients education to promote safety and quality of care Michela Tanzini, Elena Beleffi, Francesco Ranziniv and Sara Albolino, Italy</p>	
62	Advances in Simulation Based Training for Providers Interacting with Health Information Technology (HIT) Chair: Lukasz Mazur, USA	HSSE/HC
13:30-15:30 -SANTA MONICA C	<p>Improving procedural compliance of radiation oncology professionals using simulation-based training Lukasz Mazur, USA</p> <p>Utilizing the bio-design process to develop unique patient care environments Janene Fuerch and Louis Halamek, USA</p> <p>Manikins, fake blood and...eye trackers? Combining human factors and simulation to improve medical processes Alberto Bonifacio, USA</p> <p>To assess relationship between workload, task demand and performance during physician-EHR interaction Prithima Mosaly, Fei Yu, Lukasz Mazur, Hua Guo, Derek Merck, David Laidlaw, Lawrence Marks and Javed Mostafa, USA</p>	

63	Training for Human-Machine Teams Co-Chairs: Charlene Stokes, Marissa McCoy and Monika Lohani, USA	HFRUS
13:30-15:30 - SANTA MONICA D	<p>Near-term assistive support from robots to humans in collaborative manufacturing Brian Scassellati, USA</p> <p>A motivation for co-adaptive human-robot interaction Caroline Harriott, USA</p> <p>An integration of cognitive task analysis results for situation awareness-focused training program development David Kaber, Rebecca Green and Manida Swangnetr, USA/Thailand</p> <p>The softer side of human-machine teaming Jonathan Gratch, USA</p> <p>Why we need to train with current autonomous systems Matthias Scheutz and Charlene Stokes, USA</p>	
64	Inclusive and Universal Design in Clothing, Footwear and Accessories Co-Chairs: Miguel Carvalho and Pedro Arezes, Portugal	DI
13:30-15:30 - HOLLYWOOD BALLROOM	<p>Sports-wear in wheelchair rugby: Establishing design needs Sara Braganca, James Steele, Simeon Gill, Miguel Carvalho and Pedro Arezes, UK/Portugal</p> <p>Anthropometric data collection of Portuguese children with over-weight and obesity Raquel de Campos, Miguel Carvalho, Carla Capelassi, Humberto Lopes and Bugao Xu, Portugal/USA</p> <p>Clothing comfort for the dependent elderly - Caregivers perspective Artemisia Caldas, Miguel Carvalho and Humberto Lopes, Portugal</p> <p>Haute couture and ergonomics Gianni Montagna, Sandra Sousa and Carla Morais, Portugal</p> <p>Main characteristics and anthropometrics of people with down syndrome – impact in garment design Rochele Barboza, Miguel Carvalho, Fernando Ferreira and Bugao Xu, Portugal</p>	
65	Leadership Style and Safety Management Co-Chairs: John Celona and Aftab Ahmad, USA/Pakistan	HFML
13:30-15:30 - BEAUDRY B	<p>Leadership and the role of information for innovation, security and knowledge based management Dobrinka Peicheva, Valentina Milenkova, Boris Manov and Denislav Peichev, Bulgaria</p> <p>Workplace stress assessment among managers of textile industries at developing countries: A case study from Pakistan Aftab Ahmad, Amjad Hussain, Mohammad Pervez Mughal, Nadeem Ahmad Mufti and M. Qaiser Saleem, Pakistan</p> <p>Research on enterprise personnel safety awareness based on Voronoi Diagram Xu Peng-Zhuo, Xuebo Chen, Li-juan Wu and Qiubai Sun, China</p> <p>The study of population evacuation problems Dapeng Li and Xuebo Chen, China</p> <p>Applying decision analysis to program management and leadership issues at the U. S. Veterans health administration John Celona, USA</p> <p>Modeling the security risk management process in higher education institutions to understand, explain and improve Per Gustafson, Sweden</p> <p>Assessing state of implementation of guidance into pharmaceutical quality management system using an industry survey and human – system interaction design analysis Peiyi Ko and Peter Calcott, USA</p>	

66	Human Factors, Software and Systems Engineering II Chair: Sigmund Schimanski, Germany	HFSSE
13:30-15:30 - AVALON	<p>Usage-perspective development approach in the fuzzy front ends Sigmund Schimanski, Germany</p> <p>Human factors approach to study border control automation impacts and needs: Methodology and preliminary results of field studies Elise Le Guellec, Christine Megard, Gregore Havarneau, Sonia Huguenin, Virginie Papillault, Juliette Richoux and Sirra Toivonen, France/Finland</p> <p>Strategies to improve at-risk students' learning and achievement: Undergraduate software engineering course case study Suad Al-Ramouni and Hisham Alkharwar, Saudi Arabia</p> <p>Bibliometric analysis of human factors research: Intellectual structure and evolution Jingyi Wang and Wei Shan, China</p> <p>Body temperature monitoring system for slaughterhouse workers Saulo Güths, Victor Augusto dos Santos, Fabiano Takeda, Diogo Cunha dos Reis and Antonio Renato Pereira Moro, Brazil</p> <p>Building the knowledge-based system of machining supplier matching Shang-Liang Chen and Hoai-Nam Dinh, Taiwan</p>	
67	Advances in Computational Social Sciences Chair: Zining Yang, USA	HFSIM
13:30-15:30 - EMERALD BAY	<p>How triangle structure in inter-firm human network affects bankruptcy evolution: An agent-based simulation study with real and artificial data Shihan Wang, Mohsen Jafari Songhori, Shuang Chang and Takao Terano, Japan</p> <p>A preliminary study of human decision-making, risk attitude, and social preference on knowledge management with behavioral experiments and agent-based simulation Jessica Gu, Japan</p> <p>The agent-based agri-household micro-simulation platform and its application Xiangyu Wan, China</p> <p>Complex intelligence preparation of the battlefield: A behavioral space analysis of Sugarscape Piotr Zagorowski and Tom Pike, USA</p> <p>An agent-based approach on conditional deterrence Zining Yang, Kyungkook Kang and Jacek Kugler, USA</p> <p>Clientelism strategies in election: An agent based model on how political candidate employ vote buying in electoral campaign Domrongphol Sangmanee, Thailand</p>	
68	Human Factors and Game Design I Co-Chairs: Christianne Falcao and Wenjin Qin, Brazil/China	HFGD/ED
13:30-15:30 - SANTA BARBARA C	<p>Framework for creating audio games for intelligent personal assistants Jose Ciccio and Luis Quesada, Costa Rica</p> <p>The implementation of acoustic in the game design: Insight from the recently onmyoji phenomenon in China An Ran Feng, China</p> <p>Game design creative industry: An overview of the Porto Digital Project in Brazil Christianne Falcao, Carla Patricia Teixeira, Breno Jose Carvalho, Anthony Cunha Lins, Caroline de Souza and Caio Vinicius Monteiro, Brazil</p> <p>Voice-control as a new trend in games applications Wenjin Qin and Chunfu Li, China</p> <p>Game design for students: Teaching as a whole context Milton Luiz Horn Vieira, Andre Salomao, Flávio Andaló and Bruna Mendes, Brazil</p> <p>Prognostic evaluation instrument for selection of m-games in strategies of educational resources Rafael Dubiela and Stephania Padovani, Brazil</p>	

<p>69</p>	<p>Human Performance in Healthcare and Medicine Co-Chairs: Matthew Weinger and Jawahar (Jay) Kalra, USA/ Canada</p>	<p>HERRP/HFMD</p>
<p>13:30-15:30 - SAN BERNARDINO</p>	<p>Quality care and patient safety: Strategies to disclose medical errors Jawahar (Jay) Kalra and Ashish Kopargaonkar, Canada</p> <p>Error, reliability & resilience in health information technology Shilo Anders, Carrie Reale and Matthew Weinger, USA</p> <p>A novel human factors use of video-based framework analysis: Trauma resuscitation using in-situ simulation team training (TRUST) Mark Fan, Patricia Trbovich, Sonia Pinkney, Christopher Hicks, Kari White, Melissa McGowan, Alice Gray, Doug Campbell, Sandro Rizoli, Najma Ahmed and Andrew Petrosioniak, Canada</p> <p>Integrating safety climate with resilience engineering for advance occupational health and safety practices Udara Ranasinghe, Sri Lanka</p>	
<p>70</p>	<p>Usability and User Experience I Co-Chairs: Josefina Gil and Thomas Strybel, France/USA</p>	<p>UUE</p>
<p>13:30-15:30 - SAN FRANCISCO</p>	<p>Research on webpage interface design based on user experience Qingxing Qu and Vincent Duffy, China/USA</p> <p>Beyond “usability and user experience, ” towards an integrative heuristic inspection: From accessibility to persuasiveness in the user experience evaluation - a case study on an insurance prospecting (Tablet) application Josefina Gil, Eric Brangier and Laurent Cessat, France</p> <p>Usability test in different types of control authority allocations for multi-operator single-robot system OCTOPUS Kui Chen, Mitsuhiro Kamezaki, Takahiro Katano, Taisei Kaneko, Kohga Azuma, Masatoshi Seki, Ken Ichiryu, Tatsuzo Ishida and Shigeki Sugano, Japan</p> <p>A validation test of an accessibility evaluation method Yuting Sun, Kim-Phuong Vu and Thomas Strybel, USA</p> <p>Introducing Lean-er UX: Getting the benefits of lean, with techniques your manager will actually let you use Everett McKay, USA</p>	
<p>71</p>	<p>Panel: Human-Computer Symbiosis Chair: Ryan McKendrick, USA</p>	<p>CN</p>
<p>13:30-15:30 - BEAUDRY A</p>	<p>Human-computer symbiosis Ryan McKendrick, USA</p> <p>Facilitating transparency in semiautonomous human-machine systems Carryl Baldwin, USA</p> <p>Towards ubiquitous and continuous measurement of the neural function Hasan Ayaz, USA</p> <p>Super intelligent machines: Man’s evolution or extinction? Ewart de Visser, USA</p>	
<p>15:30 - 16:00 Refreshments will be provided in California Ballroom</p>		

72	Design For Touch: Emotionally and Physically Chair: Young Ae Kim, USA	APD
16:00-18:00 - SANTA ANITA A	<p>Taking risks in a risk-averse society-engaging students, faculty, students and administrators in risk and accepting the consequences Bernard Canniffe, USA</p> <p>Creating effective and engaging interactive educational apps for early learners through emotional design Jeremy Swanston, USA</p> <p>The evolution of emoticons and their effectiveness in mobile mediated communications: Animated vs. non-animated Emoji use Young Ae Kim, Julie Ellingson, Joe Schaeffer and SooYeun Park, USA</p> <p>Emotion displays in public: A comparison between Asia and America Young Ae Kim, USA</p> <p>A study of romantic relationships of Thai women for jewelry design Nattapong Kongprasert, Kageeporn Wongpreedee and Porngarm Virutamasen, Thailand</p>	
73	Ergonomics in Clothing, Fashion and Footwear Design II Co-Chairs: Miguel Carvalho and Pedro Arezes, Portugal	ED
16:00-18:00 - SANTA ANITA C	<p>Human factors applied to the understanding of the importance of therapeutic clothing textiles for children with autism spectrum disorders Su-Jeong Shin and Kristi Gaines, USA</p> <p>Research on the body size of women in late pregnancy and the maternity clothing prototype Yuting Shang, China</p> <p>All about fashion Hala Waznah, Saudi Arabia</p> <p>Ergonomic wearable garments and interface for childhood overweight and obesity reduction André Dias, Maria Pereira, Rui Miguel, José Lucas, Manuel Santos Silva and Nuno Garcia, India</p>	
74	Cognitive Ergonomics in Design Co-Chairs: Hien Dang and Paulo Noriega, Taiwan/Portugal	ED
16:00-18:00 - SAN GABRIEL A	<p>The importance of physical elements and their influences on users' concentration of academic library Hien Dang and Wenzhi Chen, Taiwan</p> <p>Aerial surveillance: A theoretical comparison study on remote controlled aircrafts José Alberto Castañon, Wilian Amaral and Guilherme Brandão, Brazil</p>	

75	Human Factors and Employee Health Co-Chairs: Nancy Lightner and Vince Duffy, USA	HC
16:00-18:00 - SAN GABRIEL B	<p>Effect of walking upon fatigue due to monotonous work Kosuke Aramaki and Hiroshi Hagiwara, Japan</p> <p>Modeling self-determination in emotional labor: Stressful patient interactions, emotion regulation, and burnout in geriatric nursing Severin Hornung, Bettina Lampert, Matthias Weigl and Jürgen Glaser, Austria/Germany</p> <p>Assessment of postural analysis in a dialysis clinic Kira Chan, John Molina and Denise Ann Tirthdas, Philippines</p> <p>Most effective exercise load for burning body fat with aerobic exercise in young Japanese women Tamaki Mitsuno, Japan</p> <p>Gender difference and optimal carrying load limit for industrial workers Rohit Sharma, Kushal Kamboj, Purshottam Kumar and Jyoti Bhardwaj, India</p> <p>Influence of the traditional use of chumbi in lumbar weakness in women of Ecuadorian highlands Thalia San Antonio, Maria Naranjo, Anita Larrea, Maria Latta and Fernando Urrutia, Ecuador</p> <p>Analysis of risk for repetitive work using thermography sensory Alejandra García, Claudia Camargo, Jesús Olguín and J. Andrés López Barreras, Mexico</p>	
76	Ergonomics for People with Disabilities: Social and Occupational Integration Chair: Aleksandra Polak-Sopinska, Poland	MFG
16:00-18:00 - SAN GABRIEL C	<p>Changes in maintenance management practices: Standards and human factor Zbigniew Wisniewski and Artur Blaszczyk, Poland</p> <p>Workplace adjustments for people with disabilities. A case study of a research company. Part I - Barriers for people with disabilities Aleksandra Polak-Sopinska, Poland</p> <p>Workplace adjustments for people with disabilities. A case study of a research company. Part II - Adjustment recommendations Aleksandra Polak-Sopinska and Monika Owczarek, Poland</p> <p>Job creation for people with disabilities: A case study of a concrete batching plant Aleksandra Polak-Sopinska, Magdalena Wrobel-Lachowska, Zbigniew Wisniewski and Piotr Sopinski, Poland</p>	
77	Human Factors and Safety Chair: Walter Eichendorf, Germany	SMHF
16:00-18:00 - SANTA BARBARA A	<p>Study on error-cognition mechanism of task interface in complex information system Xiaoli Wu, Jing Li and Yan Chen, China</p> <p>The design of alarm systems and alarm management – an empirical investigation from an ergonomic perspective Martina Bockelmann, Peter Nickel and Friedhelm Nachreiner, Germany</p> <p>Rolling out an ergonomics program in an international industrial group Jean Francois Thibault, France</p> <p>Effects of background music on visual lobe and visual search performance Lindong Yang and Ruifeng Yu, China</p> <p>A press-through package design similarity with in-painting technique Seitaro Suzuki and Masaomi Kimura, Japan</p> <p>Utilization of participatory ergonomics and socio-technical models to identify the risk factors of invasive medical technologies in non-clinical environments Joshua Gray and Najm Meshkati, USA</p> <p>Assessment and comparison of human-robot co-work order picking systems focused on ergonomic factors Jooae Lee, Yoon Seok Chang and Yeong Hun Choe, Korea</p>	

78	Ergonomic Performance of Work Systems Chair: Pradip Kumar Ray, India	PEHF
16:00-18:00 - SANTA BARBARA B	<p>On ergonomic perception Özlem Kaya and Emine Koca, Turkey</p> <p>Postural analysis of face drilling operation in underground mines in India: A case study Rahul Mondal and Pradip Ray, India</p> <p>Work related musculoskeletal disorders (WRMSD) of construction workers and main causes Zenija Roja, Henrijs Kalkis, Inara Roja and Janis Zalkalns, Latvia</p> <p>Investigation of magnitude of work related musculoskeletal disorders for manual cotton spinning operation Vishwas Deshpande and Dhananjay Ikhar, India</p>	
79	Human-Machine Interaction II Co-Chairs: Tobias Glohr and Jinitian Shi, Germany/China	RR
16:00-18:00 - SACRAMENTO	<p>How does awareness affect performance in an automotive dual task condition? Lee Skrypchuk, Alex Mouzakitis, Patrick Langdon and P. John Clarkson, UK</p> <p>Intelligent driving interface layout and design research Linghua Ran, Hong Luo, Yunhao Yan, Mengli Yu and Xin Zhang, China</p> <p>Human-machine interface design development for connected and cooperative vehicle features William Payre and Cyriel Diels, UK</p> <p>How does eye-gaze relate to gesture movement in an automotive pointing task? Bashar Ahmad, Patrick Langdon, Lee Skrypchuk and Simon Godsill, UK</p> <p>Determination of auditory stimuli for the auditory variant of the detection response task method Kristina Stojmenova and Jaka Sodnik, Slovenia</p> <p>Cognitive load assessment of tractor driver based on cognitive task workload model Yeqing Pei, Xiaoping Jin, Bowen Zheng, Haoyang Li, Zhenghe Song and Ling Luo, China</p>	
80	Driving Simulation and Test Track Co-Chairs: James Brown and Aie Liu, UK/China	RR
16:00-18:00 - SANTA ANITA B	<p>Motion sickness measurements for young male adults in vitality, endurance, profiles and sensitivity Aie Liu, Yan Li and Li Ding, China</p> <p>Modeling the real world using STISIM Drive® simulation software: A study contrasting high and low locality simulations Craig Allison, Katie Parnell, James Brown and Neville Stanton, UK</p> <p>Development a driving simulator: Interfacing STISim3 with the controller area network of a Land Rover discovery sport James Brown and Neville Stanton, UK</p> <p>What driving abilities do racing video games stimulate? Rating the levels of realism that can be experienced in commercial racing video games Daniele Ruscio, Italy</p> <p>Multivariate differences in driver workload: Test track versus on-road driving Jack Auflick, USA</p>	

<p>81</p>	<p>Macroergonomics Solutions of Engineering Management Challenges I Co-Chairs: Leszek Pacholski and Robert Waszkowski, Poland</p>	<p>SOE</p>
<p>16:00-18:00 - PALOS VERDES</p>	<p>How to make maintenance processes more efficient using lean tools? Anna Saniuk and Malgorzata Jasiulewicz-Kaczmarek, Poland</p> <p>One point lesson as a tool for work standardization and optimization - case study Jan Kaczmarek and Katarzyna Szwedzka, Poland</p> <p>Implementation of TPM methodology in worker fatigue management - a macro-ergonomic approach Marcin Butlewski, Grzegorz Dahlke, Milena Drzewiecka-Dahlke, Adam Górny and Leszek Pacholski, Poland</p> <p>Methodology of maturity level rating for macro-ergonomic system in area of sustainable development Leszek Pacholski and Marek Szczuka, Poland</p> <p>Spread page approach to document management Robert Waszkowski, Poland</p> <p>Classified document flow management Robert Waszkowski, Tadeusz Nowicki and Maciej Kiedrowicz, Poland</p>	
<p>82</p>	<p>Ergonomics and Material Environment Design Co-Chairs: Jerzy Charytonowicz and Anna Jaglarz, Poland</p>	<p>SUPI</p>
<p>16:00-18:00 - SAN PEDRO</p>	<p>Child-friendly kindergarten bathrooms: Design ideas Anna Jaglarz, Poland</p> <p>New challenges for the industrial architecture. Ergonomics on the edge a new era of it technology and deep learning Pawel Horn, Poland</p> <p>Parasitic architecture – theory and practice of the postmodern era Teresa Bardzinska-Bonenberg, Poland</p>	
<p>83</p>	<p>Usability and User Experience II Co-Chairs: Stefano Filippi and Maximiliano Olivares, Italy/Chile</p>	<p>UUE</p>
<p>16:00-18:00 - SANTA MONICA A</p>	<p>User experience (UX) evaluation based on interaction-related mental models Stefano Filippi and Daniela Barattin, Italy</p> <p>Introducing ‘Human-Centered Agile Workflow’ (HCAW) – An agile conception and development process model Leonhard Glomann, Germany</p> <p>Measuring user experience of using battery swapping station Fei-Hui Huang, Taiwan</p> <p>How screen magnification with and without word-wrapping affects the user experience of adults with low vision Elyse Hallett, Wayne Dick, Tom Jewett and Kim-Phuong Vu, USA</p> <p>Providing individual knowledge from students with autism and mild mental disability using computer interface Tugbagul Altan Akin and Mehmet Gokturk, Turkey</p> <p>Assessing information ergonomics in work by logging and heart rate variability Jussi Okkonen, Tomi Heimonen, Reijo Savolainen and Markku Turunen, Finland/ USA</p>	

84	System Interaction in Mixed Reality Environments and Emergency Management Chair: Isabel L. Nunes, Portugal	SYSI
16:00-18:00 - SANTA MONICA B	<p>Augmented reality in support of disaster response Isabel L. Nunes, Raquel Lucas, Mário Simões-Marques and Nuno Correia, Portugal</p> <p>Virtual environments integrative design - From human-in-the-loop to bio-cyber-physical-systems Didier Fass and Franck Gechter, France</p> <p>Augmented system verification using automated testing Amir Schur and Mike Williams, USA</p> <p>Thermal manikin crus with thermal regulation characteristics research Lei Yun, Tian Yisheng, Tanqiu Li, Jiang Ke, Wen Lei and Ding Li, China</p> <p>Mid-air Hangeul input system Kyungjin Han and Jongweon Lee, Korea</p> <p>Improving the communication of emergency and disaster information using visual analytics Chittayong Surakitbanharn and David Ebert, USA</p> <p>An analysis on the visual depth perception and workload among young adults through virtual reality technology Maria Carmela Acosta, Marianne Joy Bautista and Dan Kenard Abriol, Philippines</p>	
85	Human Factors, Business Management and Society I Co-Chairs: Yumeng Bie and Florentin Popescu, USA/Netherlands	HFBMS
16:00-18:00 - SANTA MONICA C	<p>Econometric modeling of time series bid-ask (Spread) for a sample of Chilean companies Ricardo Campos-Espinoza, Hanns De la Fuente-Mella and Gonzalo Farías, Chile</p> <p>The value analysis in the investment evaluation of innovative productions Galina Sycheva, Yulia Salnikova and Vasilyi Sychev, Russian Federation</p> <p>Airbnb in China: The impact of sharing economy on Chinese tourism Yumeng Bie, Jieyu Wang and Jingyu Wang, USA</p> <p>Comprehensive internationalization at Han University of Applied Sciences. Articulated institutional commitment Florentin Popescu, The Netherlands</p> <p>Corporate image management procedure. Application in Cuban companies Yoandra Negrón Martínez and Beatriz Pupo Guisado, Cuba</p>	
86	Multimedia and Virtual Reality in Learning Applications Co-Chairs: Thomas Alexander and Juan Cristobal Castro-Alonso, Germany/Chile	TELS
16:00-18:00 - SANTA MONICA D	<p>Emotional intelligence in VR – fostering empathy in teaching Vanessa Camilleri, Alexiei Dingli, Vince Briffa and Matthew Montebello, Malta</p> <p>A children's interaction within a virtual reality environment for learning chemistry Ghislain Maurice Isabwe, Margrethe Moxnes, Marie Ristesund and Derek Woodgate, Norway</p> <p>Virtual tele-cooperation: Applying AR and VR for cooperative tele-maintenance and advanced distant learning Thomas Alexander, Alexander Ripkens, Claudius Pfindler, Martin Westhoven and Michael Kleiber, Germany</p> <p>Anatomy builder VR: Applying a constructive learning method in the virtual reality canine skeletal system Jinsil Seo, Brian Smith and Margaret Cook, USA</p> <p>Sign language trainer using leap motion Christian Feicán, Julio Cabrera, John Arévalo, Edy Ayala, Fernando Guerrero and Eduardo Pinos, Ecuador</p> <p>Study on competency modeling for high plateau airline pilots Qi Luo, China</p>	

87	Designing Better Healthcare Facilities: Integrating Lean Thinking into Architectural Design Process Chair: Kendra Johnson, USA	HSSE
16:00-18:00 - BEAUDRY A	<p>Using table-top simulation activities to explore operations in healthcare settings Kendra Johnson, USA</p> <p>Translating lean process to design solutions Mark Vaughan, USA</p> <p>Biomechanical analysis of healthcare professionals during two common procedures for neonatal resuscitation Nicole Yamada, Anil Kumar and Louis Halamek, USA</p> <p>Insights from Japanese government research program for service science Kazuyoshi Hidaka, Japan</p>	
88	HFRUS in Maritime and Expeditionary Environments Co-Chairs: Jacob Norris, Robert Gutzwiller and Jamie Lukos, USA	HFRUS
16:00-18:00 - BEAUDRY B	<p>Human factors in military maritime and expeditionary settings: Opportunity for autonomous systems Jacob Norris, USA</p> <p>Human robotic interaction: Investigating perceptions of trust Ericka Rovira, Richard Pak, Ning Wang and David Pynadath, USA</p> <p>Improving the man in unmanned systems: Consistency training for visual search behaviors improves performance Adam Biggs, USA</p> <p>U. S. Navy MK 18 unmanned underwater vehicle (UUV) systems: Automation and autonomy in the mine countermeasures (MCM) UUV cycle of use Maria Rodas, Ron Honaker and Heather Williams, USA</p>	
89	Cybersecurity Tools and Analytics I Co-Chairs: Phillip Griffin and Ebru Cankaya, USA	CYBER
16:00-18:00 - AVALON	<p>Cybersecurity management through logging analytics Michael Muggler, Rekha Eshwarappa and Ebru Cankaya, USA</p> <p>Adaptive weak secrets for authenticated key exchange Phillip Griffin, USA</p> <p>Internet of things and distributed denial of service mitigation Fahad Al-Harby, Mohammed AlSaudi Ali and Dyaa Motawa, Saudi Arabia</p> <p>Design methodology of BCP exercise for electric power systems based on Japan Electrotechnical Standards and Codes Committee Guideline Akihiro Tsuchiya, Tomomi Aoyama, Nyambayar Davaadorj, Yoshihiro Hashimoto and Ichiro Koshijima, Japan</p> <p>Optimizing phishing from a red team perspective: A GOMS model approach to phishing effectiveness John Graham, USA</p>	

90	Methodology and Training in Design for Inclusion Co-Chairs: Giuseppe Di Bucchianico and Young Mi Choi, Italy/USA	DI
16:00-18:00 - HOLLYWOOD BALLROOM	<p>Design for all. The increasing dissemination of teaching experiences Giuseppe Di Bucchianico, Italy</p> <p>Challenges to teaching empathy in design Young Mi Choi, USA</p> <p>An exploration of designer-to-user relationship from a care-orientated perspective Ying Jiang, Timothy Joseph and Hua Dong, China</p> <p>Pedagogical framework for E-Learning: A theory-based design framework Cristina Mimoso, Portugal</p> <p>Webquest and gamification as learning strategy in higher education: Pilot experiment using a learning object Rafael Dubiela, Vânia Ulbricht and Claudio da Silva, Brazil</p>	
91	Human Factors, Software and Systems Engineering III Co-Chairs: Maria Lusky and Angelos Barmpoutis, Germany/USA	HFSSE
16:00-18:00 - SANTA BARBARA C	<p>Software cost estimation for user-centered mobile app development in large enterprises Maria Lusky, Christoph Powilat and Stephan Böhm, Germany</p> <p>Assessing the effectiveness of emoticon-like scripting in computer programming Angelos Barmpoutis, Kim Huynh, Peter Ariet and Nicholas Saunders, USA</p> <p>Adaptive interface combined with interface patterns in human factors Natalie Takahashi and Plinio Aquino, Jr., Brazil</p> <p>A stochastic programming model for resource allocation with uncertainties and carbon emission constraints Wen Yang, Yanchun Pan and Xingyu Chen, China</p> <p>Handling scenarios for a complex intersection crossing assistance system: A spatial-temporal approach Hycham Aboutaleb, France</p> <p>Fuzzy analysis of synergistic collaboration of biserial and parallel servers with a common server Sameer Sharma, Deepak Gupta and Seema Sharma, India</p>	
92	Bridging Human Factors and Human Error Co-Chairs: Alice Salway and Jing Xing, Canada/USA	HERRP
16:00-18:00 - SAN BERNARDINO	<p>A literature study to explore empirically: What is the scientific discipline of human factors and what makes it distinct from other related fields Karin Laumann, Martin Rasmussen and Ronald Boring, Norway/USA</p> <p>A systemic view of human factors: Connecting the domains through a human performance program Alice Salway, Lynda Hunter, Sean Smith and Kevin Lee, Canada</p> <p>Use of risk information to support NRC human factors license amendment reviews, inspections, and research Brian Green and Jing Xing, USA</p> <p>Task analysis as a cornerstone technique for human reliability analysis Claire Taylor, Norway</p> <p>Combination of human reliability analysis and task analysis in human factors engineering Jinggong Liu, Shiguang Deng, Xiufeng Tian, Xinwei Liu and Kunxiu Liu, China</p> <p>Improving barrier effectiveness using bow-tie analysis Dave Grattan, USA</p> <p>Integration of resilience engineering for advancing occupational health and safety in construction industry Sadith Ovitigala Vithanage Don, Sri Lanka</p>	

93	Cross-Cultural Design and Team Decision Making Co-Chairs: Ronda Jenson and Arden Day, USA	CCDM
16:00-18:00 - SAN FRANCISCO	<p>Cultural and social determinants of working conditions in Europe Denis Coelho, Portugal</p> <p>Veterans in STEM: Supporting the transition from military culture to the culture of college Ronda Jenson, Alexis Petri and Arden Day, USA</p> <p>Cross functional teamwork based innovation and leadership Martin Stein, USA</p> <p>New approach to decision making (DM) -evaluation of DM not by choice but preference of alternatives Atsuo Murata, Japan</p> <p>Nationalism, patriotism and multinational decision-making competence: Evidence from a situation judgment test Gerald Matthews, Lauren Reinerman-Jones, Grace Teo, Shawn Burke and David Scribner, USA</p> <p>Integrating an interdisciplinary experience into design education Tess Luna, USA</p> <p>Using a systemic approach to understand culture paradigm: Towards a holistic framework Hycham Aboutaleb, France</p>	
94	Human Factors Safety in Aviation and Aerospace II Chair: Elena Psyllou, UK	AVI
16:00-18:00 - EMERALD BAY	<p>Planning of general aviation pilots using interviews Elena Psyllou, Arnab Majumdar and Washington Ochieng, UK</p> <p>Aerospace neuropsychology: Exploring the construct of psychological and cognitive interaction in the 100 most fatal civil aviation accidents through multidimensional scaling Andreas Nidos, Spyros Stavrakis Kontostavlos, Petros Roussos and Kostas Mylonas, Greece</p> <p>The effect of cultural differences on risk mitigation in air traffic controller performance Caitlin Surakitbanharn and Steven Landry, USA</p> <p>An interactive analysis of UAS sightings and near misses Michael Sawyer, USA</p>	

95	Designing Affective and Pleasurable Design Interactions Co-Chairs: Haruka Tanida and Masanari Toriba, Japan	APD/UUE
8:00-10:00 - SANTA ANITA A	<p>Influence of individual fashion item images on the image of coordinates Miu Sato, Toshikazu Kato and Takashi Sakamoto, Japan</p> <p>Estimation of unconscious preference judgment with near-infrared spectroscopy Haruka Tanida and Toshikazu Kato, Japan</p> <p>Analysis of change in purchasing motivation by tone of product-recommendation agent in electronic commerce site Masanari Toriba and Toshikazu Kato Japan</p> <p>Interference thermal sensation simulation using visual and auditory stimuli Tatsuya Amano, Takashi Sakamoto, Toru Nakata and Toshikazu Kato, Japan</p> <p>Effectiveness of sense of value to physical exercise for enhancing motivation Hitoshi Urata, Toshikazu Kato and Takashi Sakamoto, Japan</p> <p>Research on attractive factors of city souvenir Ziheng Zhang, Wei Ding, Jianxin Cheng, Junnan Ye and Tengye Li, China</p> <p>Exploring of the barrier-free design for visual impairment in graphical user interface design Yilin Chai and Yin Cao, China</p>	

96	Social Media and Social Change Co-Chairs: Mark Turner and Agnieszka Cybal-Michalska, UK/Poland	CCDM
8:00-10:00 - SANTA ANITA B	<p>A cross-cultural comparison of the accuracy of personality judgements made through social media Mark Turner and Eeven Chin, UK</p> <p>Mobile commerce adoption on tablets in the world: A cross-cultural comparison of the website reputation on consumer loyalty Jean-Eric Pelet, Ekaterina Nemkova and Nathaniel Boso, France/UK</p> <p>Constructing a career as a determinant of career success in the globalizing society - on the need for pro-development and proactive behaviors of the subject Agnieszka Cybal-Michalska, Poland</p> <p>Autochthonous materials & traditional manufacturing methods: Analysis based on cultural and historical features Aline Souza, Rita Almendra and Lia Krucken, Brazil/Portugal</p> <p>Comparison of cross-cultural reactions to crisis events via language and emoticon use Samira Shaikh, Prasanna Lalingkar, Eliza Barach and Laurie Feldman, USA</p> <p>Geo-tagged social media data as a proxy for urban mobility Philipp Kats, Cheng Qian, Sergey Malinchik, Mark Hoffman, Brian Kettler, Constantine Kontokosta and Stanislav Sobolevsky, USA</p>	
97	Human-Autonomy Teaming Chair: Kim Vu, USA	CN
8:00-10:00 - SANTA ANITA C	<p>Human-autonomy teaming: Symposium introduction Kim-Phuong Vu, USA</p> <p>Why human-autonomy teaming? R. Jay Shively, Joel Lachter, Summer Brandt, Michael Matessa, Vernol Battiste and Walter Johnson, USA</p> <p>A human-autonomy teaming approach for a flight-following task Summer Brandt, Joel Lachter, Ricky Russell and R. Jay Shively, USA</p> <p>Measuring the effectiveness of human automation teaming Thomas Strybel, Jillian Keeler, Natassia Mattoon, Armando Alvarez, Vanui Barakezyan, Edward Barraza, James Park, Kim-Phuong Vu and Vernol Battiste, USA</p> <p>Beyond point design: General pattern to specific implementations Joel Lachter, Summer Brandt, Garrett Sadler and R. Jay Shively, USA</p> <p>Using a crew resource management framework to develop human-autonomy teaming measures Michael Matessa, USA</p>	
98	Physical Ergonomics and Human Factors Co-Chairs: Yanbin Wu and Gonca Bumin, Japan/Turkey	PEHF
8:00-10:00 - SAN GABRIEL A	<p>Exercise reminder software for office workers Ahsen Irmak and Gonca Bumin, Turkey</p> <p>Heart rate based evaluation of operator fatigue and its effect on performance during pipeline work Yanbin Wu, Takashi Miwa and Makoto Uchida, Japan</p> <p>Assessment of heat stress impacts on construction workers: A South African exploratory study Katlane Seema and Clinton Aigbavboa, South Africa</p> <p>The effect of head posture on functioning of entire body Yousefi Ha, Bumkyoo Choi and Yasushi Mitani, South Korea/Japan</p> <p>Human factors engineering effects on cost and productivity Salah Elshourbagy and Jaber Alothman, Saudi Arabia</p> <p>Basic calculation of metabolic exergy of block-laying activity in an outdoor environment in Ogun State, Nigeria Adekunle Musa, Nigeria</p>	

<p>99</p>	<p>Building Design Co-Chairs: John Smallwood and Amilton Arruda, South Africa/Brazil</p>	<p>ED</p>
<p>8:00-10:00 - SAN GABRIEL B</p>	<p>The constructive advantages of Buckminster Fuller's geodesic domes and their relationship to the built environment ergonomics Theska Laila Freitas, Amilton José Arruda, Edna Moura and Justino Barbosa, Brazil</p> <p>An ergonomic design of senior high school science laboratories in the Philippines Pauline Hannah Dizon, Jerielle Trini Santiago, Mary Agnes Espina and Melen Tamayao, Philippines</p>	
<p>100</p>	<p>Human Factors in the Healthcare Environment Co-Chairs: Michael Greene and Nancy Johnson, USA</p>	<p>HC</p>
<p>8:00-10:00 - SAN GABRIEL C</p>	<p>Operating room layout configuration: A tool to improve staff experience, performance, and efficiency Sara Bayramzadeh, Anjali Joseph and Herminia Machry, USA</p> <p>Increasing patient safety through resilient design: Using human factors engineering and environmental support mechanisms to reduce potentials of hospital acquired infection Lisa Sundahl Platt and Michael Greene, USA</p> <p>An ergonomic evaluation of preoperative and postoperative workspaces in ambulatory surgery centers Deborah Wingle, Anjali Joseph and Rutali Joshi, USA</p> <p>Neuro-dynamic and semantic evidence for uncertainty within healthcare teams during simulation training Ann Willemsen-Dunlap, Ronald Stevens, Trysha Galloway, Jamie Gorman and Donald Halpin, USA</p> <p>Human factors evaluation of hand hygiene compliance in a healthcare setting Mark Garibaldi, Nancy Johnson and Carolyn Brown, USA</p> <p>Hospital store room usability issues: Diagnosis of institutional illness Gavin Bailey and Katherine Plant, UK</p> <p>The relationship between architectural design and visitor behavior in internal medicine ward corridors Lusi Morhayim, Israel</p>	
<p>101</p>	<p>Human Factors and Ergonomics in Textile Manufacturing Co-Chairs: Hiroyuki Hamada and Akihiko Goto, Japan</p>	<p>MFG</p>
<p>8:00-10:00 - SANTA BARBARA A</p>	<p>Decision-making procedure for the reproduction of ancient Japanese braids Masumi Tada, Hiroyuki Hamada, Makiko Tada and Masahito Ueda, Japan</p> <p>Development of manufacturing techniques by hand for non-straight braids Yuko Yoshida, Makiko Tada and Tadashi Uozumi, Japan</p> <p>Structure and strength of traditional Japanese woven band, Sanada-Himo Tamaki Takagi and Asami Nakai, Japan</p> <p>Color recognition of students observed during braid making Akinori Shimodaira and Hiroyuki Hamada, Japan</p> <p>Teaching method of technique to make the braiding Akiko Kimura, Makiko Tada, Tadashi Uozumi and Akihiko Goto, Japan</p> <p>Investigation of evaluation method for braiding strings Mayako Kikuchi, Akio Ohtani and Makiko Tada, Japan</p>	

Thursday, July 20

102	Risk Prevention and Assessment I Co-Chairs: Janusz Rymaniak and Michael Vredenburg, Poland/USA	SMHF
8:00-10:00 - SANTA BARBARA B	<p>Investigation of human's evacuation behavior in multi-ethnics jumping-off of China Lin Luo and Yang Lizhong, China</p> <p>Risk communication for consumer products Ilene Zackowitz, Meriel Bench, Alison Vredenburg and Michael Vredenburg, USA</p> <p>Lessons learned from analysis of Los Frailes tailing dam failure Mohammad Shahriari and Mehmet Aydin, Turkey</p> <p>Work automation and psychophysical hazards in employees' opinion Janusz Rymaniak and Lis Katarzyna, Poland</p> <p>Is it smart to use smartphones to measure illuminance for occupational health and safety purposes? Diogo Cerqueira, Filipa Carvalho and Rui Melo, Portugal</p> <p>Analysis of competencies for decision crisis management in actions under progressive stress: A simulated case Ivone Cerqueira, Salvador Avila Filho, Antônio Silva, Cristiane Frago, Renê Pimentel and Caroline Massolino, Brazil</p> <p>Development of child climbing behavior video database Mikiko Oono, Koji Kitamura and Yoshifumi Nishida, Japan</p>	
103	Anthropometric Measurement and Ergonomic Modeling Co-Chairs: Yu-Chi Lee and Ahamed Altaboli, Singapore/Libya	PEHF
8:00-10:00 - SANTA BARBARA C	<p>A pilot study of gender difference on anthropometric measurements in Singapore population Yu-Chi Lee, Chun-Hsien Chen and Li-Pheng Khoo, Singapore</p> <p>Anthropometric evaluation of the design of the classroom desk for the eighth and ninth grades of Benghazi schools Ahamed Altaboli, Naija Nawras, Ahmed Mahdi, Hanin Alzardomi, Mohammed Alyseri and Mhammed Alkendi, Libya</p> <p>An artificial neural network model to predict anthropometric dimensions for Saudi males Waleed Basuliman, Saudi Arabia</p> <p>Digital human modeling tools and design methods for ergonomic analysis of workstation in automotive cluster Lidia Ghibaudo, Stefania Spada, Fabrizio Sessa and Danila Germanà, Italy</p> <p>A simple predictive method to ergonomically assess and select sizes for school furniture Sutanit Puttapanom, Thailand</p> <p>Effects of seat cushion contour on biomechanics and comfort during seated work Wenhua Li, Jianjie Chu, Bingchen Gou and Suihuai Yu, China</p>	
104	Human-Machine Interaction III Co-Chairs: Patrick Langdon and Izza Anwer, UK	RR
8:00-10:00 - SANTA MONICA A	<p>Perceptions towards the use of intelligent transport system technologies by earthquake victims Izza Anwer and Susan Grant-Muller, UK/Pakistan</p> <p>Blind driving using auditory feedback with a steering-based predictor algorithm Pavlo Bazilinsky, Charles Beaumont, Xander Van der Geest, Reinier De Jonge, Koen Van der Kroft and Joost de Winter, The Netherlands</p> <p>Using interior design principles to improve the user's perception of vehicle interiors: A study on visual parameters Susan Shaw and Claudia Escobar, USA</p> <p>Possibility of automobile seat evaluation with seat fidgets and movements Junya Tatsuno, Setsuo Maeda, George Sammonds and Neil Mansfield, Japan/UK</p>	

105	Macroergonomics Solutions of Engineering Management Challenges II Co-Chairs: Leszek Pacholski and Robert Waszkowski, Poland	SOE
8:00-10:00 - PALOS VERDES	<p>The use of IT technologies in the development of employees Jerzy Olszewski and Alicja Rytelewska, Poland</p> <p>Research methods of utility of smartphones in mobile telecare Wiesław Grzybowski, Adam Minkowski and Jerzy Olszewski, Poland</p> <p>Total quality management in the improvement of work environment - conditions of ergonomics Adam Górny, Poland</p> <p>Improvement of interactive products based on an algorithm minimizing information gap Małgorzata Sławińska and Ewa Więcek-Janka, Poland</p> <p>Diagram process as a tool to improve communication process inside a company – case study Maciej Siemieniak, Poland</p> <p>Optimization of agricultural tractor mufflers noise level: A finite element method approach Naveen Kumar and Virendra Kumar Tewari, India</p>	
106	User-Centered Design and Human Computer Interaction Co-Chairs: Tiziano Bernard and Claas Digmayer, USA/Germany	UUE
8:00-10:00 - SAN PEDRO	<p>Not ready for Industry 4.0: Usability of CAx systems Eva-Maria Jakobs, Claas Digmayer, Sara Vogelsang and Michael Servos, Germany</p> <p>Designing the remote aerodrome flight information service systems interface base on human centered design approach Satoru Inoue, Kazuhiko Yamazaki and Yuto Fukuchi, Japan</p> <p>Understanding the international space station crew perspective following long duration missions through data analytics and visualization of crew feedback Cody Bryant, Susan Schuh, Nicole Schoenstein and David Meza, USA</p> <p>The relationship between the severity of usability problems and user skin conductance levels during human-computer interactions Chuan Wang and Linghua Ran, China</p> <p>From healthcare to human-computer interaction: Using framework analysis within qualitative inquiry Ger Joyce, Mariana Lilley, Trevor Barker and Amanda Jefferies, UK</p> <p>A study to improve interaction between children and the elderly through interactive multimedia museum websites Yidan Men, China</p> <p>The virtual employment test bed: An immersive synthetic environment allows engineers to test and evaluate material solutions Robert DeMarco, Gordon Cooke, Gladstone Reid and Elizabeth Mezzacappa, USA</p>	
107	Injury Prevention and Analysis of Individual and Team Sports Chair: Roman Kalina, Poland	SIPOR
8:00-10:00 - SANTA MONICA B	<p>Safe fall technique, avoiding collision and fun forms of martial arts elementary methods prophylactic and therapeutic agonology for all Roman Kalina, Poland</p> <p>Design of a secure biofeedback digital system (BFS) using a 33-step training table for cardio equipment Xiaokun Yang and Nansong Wu, USA</p> <p>Ergonomics in sports and exercise: Biomechanics of performance and safety Behice Durgun, Turkey</p> <p>Mixed assessment of agonology as the primary means of defence against intellectual violence and to extend mental health and social health Roman Kalina and Bartłomiej Barczyński, Poland</p> <p>Blast performance of a demining footwear: Numerical and experimental trials on frangible leg model and injury modeling Mehmet Karahan and Nevin Karahan, Turkey</p> <p>Risk of injuries caused by fall of people differing in age, sex, health and motor experience Roman Kalina and Dariusz Mosler, Poland</p> <p>A real-time feedback navigation system design for visually impaired swimmers Ze En Chien, Chien-Hsu Chen, Fong-Gong Wu, Nien-Pu Lin, Tong Hsieh and Tzu Hsuan Hong, Malaysia</p>	

108	System Interaction in Industry Co-Chairs: Wei Zhang and Anne Reimer, USA/Germany	SYSI
8:00-10:00 - SANTA MONICA C	<p>Operators working with transmission flexibility: Enhancing utility control rooms with dynamic line rating technique Wei Zhang, Katya Le Blanc, Jake Gentle and Timothy McJunkin, USA</p> <p>An approach for the integration of non-ergonomic work design as a new type of waste in lean production systems Uwe Dombrowski, Anne Reimer and Jonas Wullbrandt, Germany</p> <p>A novel concept for a collaborative dash-boarding framework Sebastian Schöffel, Johannes Schwank and Greg Weibell, Germany</p> <p>Group characteristics and task accuracy in distributed remote user controlled manufacturing as collaborative environment Vesna Spasojevic Brkić, Zorica Veljković, Goran Putnik, Vaibhav Shah and Ahmed Essdai, Serbia</p> <p>The use of context aware pervasive systems in the area of human factors and ergonomics Beza Mamo, Ethiopia</p> <p>Learning the “language” of road users - how shall a self-driving car convey its intention to cooperate to other human drivers? Nina Kauffmann, Frederik Naujoks and Franz Winkler, Germany</p>	
109	Training Applications in Military and Operational Environments Co-Chairs: Thomas Alexander and Tetsuo Kikuchi, Germany/Japan	TELS
8:00-10:00 - SANTA MONICA D	<p>Evaluating the learning value of enhanced ePubs for the army Annie Hester and Curtis Archuleta, USA</p> <p>Development of hand lay-up robot reproducing skilled molding techniques of composite materials Tetsuo Kikuchi, Japan</p> <p>State of information and communication technology usage in the training of construction students in Ghanaian polytechnics Simon Ametepey, Clinton Aigbavboa and Samuel Ansah, Ghana</p> <p>Using trainee’s cognitive state to understand why suboptimal decision performance occurs: Preliminary validation of the cognitive alignment with performance targeted training intervention model (CAPTTIM) Quinn Kennedy, USA</p> <p>Methods and means for the in-house training of mining machine operators Vladimir Velikanov, Azat Abdrakhmanov, and Natalja Dyorina, Russia</p> <p>Transforming a gender specific training device to address a critical medical training gap Angela Alban, Edward Stadler and Teresita Sotomayor, USA</p>	
110	Innovations in Quality and Safety Practices in Health Care Systems Co-Chairs: Alison Amos and Gregg Tracton, USA	HSSE
8:00-10:00 - BEAUDRY A	<p>Building a robust treatment delivery system by balancing the reliability of “safety” processes with workload Trevor Thompson, Gregg Tracton, Thomas Howell, Prithima Mosaly and Lukasz Mazur, USA</p> <p>Improving quality and safety in radiation oncology Lawrence Marks and Bhisam Chera, USA</p> <p>Validation of quality assessment tool for A3 thinking-based improvement projects Alison Amos, Kinley Taylor, Kendra Johnson and Lukasz Mazur, USA</p> <p>Alarm management: A systems approach to patient safety Vinaya Sebastian and Carolyn Brown, USA</p> <p>How is the quality of life in patients with cerebral palsy improved? Qualitative and quantitative evaluation of a communication and learning assistance system based on ICTs Jonnathan Berrezueta, Vladimir Robles-Bykbaev and Luis Serpa-Andrade, Ecuador</p>	

111	Human Factors and Cultural Considerations for Wearable Robotics Co-Chairs: Angela Boynton and Jennifer Neugebauer, USA	HFRUS
8:00-10:00 - BEAUDRY B	<p>Form, fit, function. Human-in-the-loop development of wearable robotic exo-suits Kathleen O'Donnell, Danielle Ryan, Brendan Quinlivan, Taylor Greenberg Goldy, Vanessa Sanchez, Dmitry Popov, Yu Meng Zhou and Conor Walsh, USA</p> <p>Human factors in exoskeleton design: 10 years in at Ekso bionics Kurt Amundson, USA</p> <p>Optimization of actuation parameters for ankle exoskeletons: Comparison of results with different exoskeletons and exo-suits Philippe Malcolm, USA</p> <p>Users' trust in automation: A cultural perspective Hsiao-Ying Huang and Masooda Bashir, USA</p> <p>Prosthetic and exoskeleton controllers must choose between fundamentally controlling positions or forces. How do we know what the user wants? Max Shepherd, USA</p>	
112	Privacy and Cultural Factors in Cybersecurity Co-Chairs: Scott Cadzow and Wayne Patterson, UK/USA	CYBER
8:00-10:00 - AVALON	<p>Preserving dignity, maintaining security and acting ethically Scott Cadzow, UK</p> <p>The gender Turing test Wayne Patterson, USA</p> <p>Users' attitudes towards the "going dark" debate Aseel Addawood and Masooda Bashir, USA</p> <p>Do you really trust "privacy policy" or "terms of use" agreements without reading them? Abbas Moallem, USA</p> <p>Authenticity identification and forensic study of email Guocheng Pu and Yonghao Mai, China</p>	
113	Human Dimension and Visualization for Cybersecurity Co-Chairs: Char Sample and Johan de Heer, USA/The Netherlands	HFSIM/ CYBER
8:00-10:00 SAN BERNARDINO	<p>Human behavior analytics from Microworlds: The cyber security game Johan de Heer and Pap Porskamp, The Netherlands</p> <p>Culture + cyber: Exploring the relationship Char Sample, Jennifer Cowley, Steve Hutchinson and Jonathan Bakdash, USA</p> <p>Exploring 3D cybersecurity visualization with the Microsoft HoloLens Jason Youzwak, Paul Toliver, Steve Beitzel and Josiah Dykstra, USA</p> <p>Dynamic online model fitting to predict attacker actions Vladislav Veksler and Norbou Buchler, USA</p>	
114	Human Factors and Game Design II Co-Chairs: Peter Rasche and Christianne Falcao, Germany/Brazil	HFGD/ED
8:00-10:00 - EMERALD BAY	<p>Study with fun: Development of a game-based & haptically enhanced application for the visually impaired Anirudh Juloori, Yueqing Li and Weihang Zhu, USA</p> <p>Evaluating the UX of a VR game using a mixed methodology Francimar Maciel, Taynah Miyagawa, Paulo Melo and Marcos De Souza Muniz, Brazil</p> <p>Interaction evaluation methods for game controllers of digital games developed for children with Down syndrome: A review of the literature Lizie Nascimento, Laura Martins, Marilene Calderaro da Silva Munguba and Windson Viana de Carvalho, Brazil</p> <p>Pokémon Go – An empirical user experience study Peter Rasche, Anna Schlomann, Katharina Schäfer, Matthias Wille, Christina Bröhl, Sabine Theis and Alexander Mertens, Germany</p> <p>What distinguishes a traditional gaming experience from one in virtual reality? An exploratory study Federica Pallavicini, Ambra Ferrari, Andrea Zini, Giacomo Garcea, Andrea Zancacchi, Gabriele Barone and Fabrizia Mantovani, Italy</p> <p>Audio games hub - games for the visually impaired Jaroslaw Beksa and Philip Carter, New Zealand</p>	

115	Safety Management and Loss Prevention I Co-Chairs: Manikam Pillay and Anna Nagyova, Australia/Slovakia	SMHF
8:00-10:00 - SAN FRANCISCO	<p>Implementation proposal of OH&S management system according to the standard ISO/DIS 45001 Anna Nagyova, Michaela Balazikova, Stefan Markulik, Hana Pacaiova and Juraj Sinay, Slovakia</p> <p>Dealing with the role of people in barrier management systems Ron McLeod, Scotland</p> <p>Assessing the safety use of tower cranes on construction sites in central region of Ghana Emmanuel Bamfo-Agyei and Lawrence Atepor, Ghana</p> <p>Preliminary study on occupational safety parameters with content validity index method in India Arshveer Singh Brar, Jobanveer Singh Brar and Vikramjit Singh, India</p>	
116	Ergonomics Design and Evaluation II Co-Chairs: Namrata Charpe and José Vicente, India/Portugal	ED
8:00-10:00 - HOLLYWOOD BALLROOM	<p>Sustainable product design in the wood furniture sector José Vicente, Rui Frazão and Fernando Moreira da Silva, Portugal</p> <p>Ergonomics in the design process - study of adaptability of evolutive high chairs Cristina Salvador, Portugal</p> <p>Evaluation of macro-ergonomic methods for the application of organizational analyzes in startups Luiza Silva, Elton Nickel and Flavio A. N. Santos, Brazil</p> <p>New concepts in flexible packaging Álvaro Sampaio, Cátia Silva, André Lima, André Fernandes and António Pontes, Portugal</p> <p>User-chair Fit Index (FUCI): An ergonomic evaluation tool for user-chair compatibility Namrata Charpe, India</p> <p>Cultural and creative elements of digital technology art and product design Lung-Wen Kuo and Chih-Chun Lai, Taiwan</p>	
<p>10:00 - 10:30 Refreshments will be provided in California Ballroom</p>		
117	Product Development and Design Process Co-Chairs: Cliff Shin and Amic Ho, USA/Hong Kong	APD
10:30-12:30 - SANTA ANITA A	<p>Case study: Application of online services and social platforms as an effective tool in the classroom and its impact on industrial design education Jose Rivera-Chang, USA</p> <p>Exploring two design processes: Slow and fast Cliff Shin and Joyce Thomas, USA</p> <p>Design changing a tradition product in a contemporary way Isabel Bieger, Cristina Carvalho and Gianni Montagna, Portugal</p> <p>Analysis of emotion and cultural background on affective design process Amic Ho, Hong Kong</p> <p>Design and validation of affective warning pictorials on alcohol container labels Waratta Authayarat, Papawee Kasornsuwan and Arisara Jiamsanguanwong, Thailand</p> <p>Rematerializing the user interface of a digitized toy through tokens: A comparative user study with children aged five to six Marieke Van Camp, Lukas Van Campenhout and Guido De Bruyne, Belgium</p>	

118	Aviation and Aerospace: Situational Awareness and Communications Chair: Neville Stanton, UK	AVI
10:30-12:30 - SANTA ANITA B	<p>HMIM: A method to study the information and control flow exchange in the flight deck Yiyuan Zheng, Yanyu Lu, Yuwen Jie and Shan Fu, China</p> <p>Exploring situation awareness compatibility in different users of the aviation system Katherine Plant and Neville Stanton, UK</p> <p>Communication at risk in the cockpit: Human factors and the ICAO language proficiency program Simon Cookson, Japan</p> <p>Analyzing positive and negative effects of salience in air traffic control tasks Haruka Yoshida, Satoru Inoue, Hisae Aoyama and Kazuo Furuta, Japan</p>	
119	Modeling and Simulation: Optimization, Analysis and Scheduling Chair: Doina Bein, USA	DHMAO/HFSIM
10:30-12:30 - SANTA ANITA C	<p>A comparison between physical and virtual experiments of convective heat transfer between head and bicycle helmet Shriram Mukunthan, Kalev Kuklane, Toon Huysmans and Guido De Bruyne, Belgium</p> <p>A combined statistical shape model of the scalp and skull of the human head Femke Danckaers, Daniël Lacko, Stijn Verwulgen, Guido De Bruyne, Toon Huysmans and Jan Sijbers, Belgium</p> <p>Improved motion capture processing for high-fidelity human models using optimization-based prediction of posture and anthropometry Anna Seydel, Kimberly Farrell, Ross Johnson, Timothy Marler, Salam Rahmatalla, Rajan Bhatt and Karim Abdel-Malek, USA</p> <p>Finding the maximal day-time dependent component of a subway system Marian Sorin Nistor, Doina Bein, Horia Nicolai Teodorescu and Stefan Pickl, Germany/USA</p> <p>The research of manipulability analysis based on immersive virtual maintenance technology Wei Zhang, Wei Wang and Weijia Feng, China</p> <p>Biometric identification through eye-movement patterns Akram Bayat and Marc Pomplun, USA</p>	
120	Assistive Technology III Co-Chairs: Maria Lucia Okimoto and Henrique Simas, Brazil	ED
10:30-12:30 - SAN GABRIEL A	<p>Contribution to the design of hospital bed: Systematic for surveying the design requirements and functional requirements for synthesis of mechanism Daniel Martins, Henrique Simas, Elias Maletz and Rodrigo Pereira Barreto, Brazil</p> <p>Ergonomic aspects in the redesign of a child's inclusive textbook Fernanda Domingues and Laís Licheski, Brazil</p> <p>A descriptive study on the influence of wheelchair design and movement trajectory on the upper limbs' joint angles Guilherme Bertolaccini, Frode Sandnes, Idinei Carvalho Filho, Luis Paschoarelli and Fausto Medola, Brazil/Norway</p> <p>Ergonomic evaluation of human-computer interfaces through the ergonomic aspects of Scarpin and Bastien Marly de Menezes Gonçalves, Ricardo Bontempo, Marcelo Falco de Deus and Carlos Augusto Gottsfritz Fernandes, Brazil</p>	

121	Interaction and Interface Design Co-Chairs: Fernando Moreira da Silva and Marco Neves, Portugal	ED
10:30-12:30 - SAN GABRIEL B	<p>The effect of font type on character legibility for different age groups Yunqian Zhao, Li Ding, Linghua Ran and Yan Li, China</p> <p>Drivers dialogue analysis for innovative vehicle design Claudio Germak, Joseph Giacomini and Luca Giuliano, Italy</p> <p>A story of mis-encounters: Graphic design and the production of digital interaction Marco Neves, Portugal</p> <p>The influence of different style of icons on users' visual search in touch screen interface Tianyang Xi and Xiaoli Wu, China</p> <p>Techniques for managing stale mission information through card-based user interfaces Erika Von Kelsch, Stephanie Kane and Chris Muller, USA</p> <p>Charles Morris's theoretical model as the basis for the creation of pictographic sign systems, coherent in form and meaning Carlos Rosa, Portugal</p>	
	10:30-12:30 - SAN GABRIEL C	<p>Medical tourism and hazard analysis in healthcare systems in India: A case study Bela Das, India</p> <p>DesignX in the emergency department: Requirements of a digital antibiogram Isaac Fehr, Lars Mueller and Eliah Aronoff-Spencer, USA</p> <p>Lessons learned with the implementation of a specialized health care network in the municipality of Porto Alegre Anna Luiza Coutinho and Werner Leyh, Brazil</p> <p>Operational efficiency analysis of public hospital systems of India: Application of data envelopment analysis Abhik Patra and Pradip Ray, India</p> <p>Video task analysis of primary care in emergency department of hospital in India Sanjeet Kumar and Pradip Ray, India</p> <p>Mathematical modelling of human energy consumption during hand arm vibration in drilling operation for male and female operator Chandrashekhar Mohod and Ashish Mahalle, India</p>
122		Human Factors and Ergonomics in Healthcare Systems Design Chair: Pradip Kumar Ray, India
10:30-12:30 - SANTA BARBARA A	<p>Advanced real-time weld monitoring evaluation demonstrated with comparisons of manual and robotic TIG welding used in critical nuclear industry fabrication Richard French, Hector Marin-Reyes and Michalis Benakis, UK</p> <p>Applying ANN and SVM to the identification of control chart patterns for a multivariate SPC/EPC manufacturing process Yuehjen Shao and Yu-Ting Hu, Taiwan</p> <p>Predicting human cycle times in robot assisted assembly Henning Petruck and Alexander Mertens, Germany</p> <p>Age-differentiated analysis of the influence of introduction methods on learning sensorimotor tasks Francoise Kuhlénbäumer, Philipp Przybysz and Susanne Mütze-Niewöhner, Germany</p> <p>Development and characterization of hybrid composites from textile waste Mehmet Karahan, Nevin Karahan and Yasir Navib, Turkey</p> <p>Decision making framework using interpretative structural modelling (ISM) and SHP methods for implementing reverse logistics: A case study of automotive components manufacturing industry Srivathsan Anandan, D. Sughosh and Sedhuraman Jayakumar Mathiravedu, India</p>	
	123	Human Factors in Contemporary Technology Systems I Co-Chairs: Richard French and Tamaki Takagi, UK/Japan

124	Risk Prevention and Assessment II Co-Chairs: Jeongseok Song and Mariel Bench, Korea/USA	SMHF
10:30-12:30 - SANTA BARBARA B	<p>The stamp analysis of the HANMI short selling episode Jeongseok Song, Yoo Woo Lee and Sunzu Kim, Korea</p> <p>An epidemiological perspective of individual and population health risk prevention Meriel Bench, Alison Vredenburg, Ilene Zackowitz and Michael J. Vredenburg, USA</p> <p>Development of a risk assessment tool for small scale gold mining in the Philippines Virginia Soriano, Isachar Bernaldez and Mili-Ann Tamayao, Philippines</p> <p>Alternative methods to root cause analysis for understanding adverse events in healthcare systems Basma Bargal, James Benneyan, Joseph Eisner, Karen Chen and Satyan Chari, USA</p> <p>The sound of violin: Quantifying and evaluating the impact on the performer's and near audience's ear Pedro Salvadores Palacio and Mercedes de Barrios Carro, Spain</p>	
125	Human Factors and Ergonomics in Japanese Sewing Scissors Co-Chairs: Hiroyuki Hamada and Yasuko Kitajima, Japan	PEHF
10:30-12:30 - SANTA BARBARA C	<p>Text mining analysis for craftsman's tacit knowledge during making process of Japanese sewing scissors Hayato Nakatani, Yasuko Kitajima, Akihiko Goto, Hiroyuki Hamada and Norimichi Nanami, Japan</p> <p>Characteristics of cutting performance for Japanese sewing scissors made by the So-Hizukuri forging process Yasuko Kitajima, Hayato Nakatani, ; Akihiko Goto and Hiroyuki Hamada, Japan</p> <p>Eye movement analysis for craftsman of Japanese sewing scissors Yasuko Kitajima, Hayato Nakatani, Yoichiro Ogura, Akihiko Goto, Hiroyuki Hamada and Norimichi Nanami, Japan</p> <p>Analysis of the So-Hizukuri forging process for Japanese sewing scissors Hayato Nakatani, Yasuko Kitajima, Akihiko Goto and Hiroyuki Hamada, Japan</p>	
126	Eco-Driving Co-Chairs: Craig Allison and Ralf Philipsen, UK/Germany	RR
10:30-12:30 - SACRAMENTO	<p>Range makes all the difference? – Weighing up range, charging time and fast-charging network density as key drivers for the acceptance of battery electric vehicles Julian Halbey, Ralf Philipsen, Teresa Schmidt and Martina Ziefle, Germany</p> <p>Fast-charging stations or conventional gas stations: Same difference? - variations of preferences and requirements Ralf Philipsen, Teresa Schmidt and Martina Ziefle, Germany</p> <p>Eco-driving, future technology and user acceptance: A questionnaire approach Craig Allison and Neville Stanton, UK</p>	

127	Automation I Co-Chairs: Frederik Naujoks and Joscha Wasser, Germany/UK	RR
10:30-12:30 - BEVERLY	<p>A review of non-driving-related tasks used in studies on automated driving Frederik Naujoks, Dennis Befelein and Alexandra Neukum, Germany</p> <p>Driverless pods: From technology demonstrators to desirable mobility solutions Joscha Wasser, Cyriel Diels, Anthony Baxendale and Michael Tovey, UK</p> <p>Testing-scenarios for human factors research in level 3 automated vehicles Christian Gold, Frederik Naujoks, Jonas Radlmayr, Hanna Bellem and Oliver Jarosch, Germany</p> <p>Autonomous vehicles: reliability of their perception of the world around them and the role of human driver Ata Khan, Canada</p> <p>Connecting rural road design to automated vehicles: The concept of safe speed to overcome human errors Pasquale Colonna, Nicola Berloco, Paolo Intini and Vittorio Ranieri, Italy</p> <p>A longitudinal simulator study to explore drivers' behaviour during highly-automated driving David Large, Gary Burnett, Andrew Morris, Arun Muthumani and Rebecca Matthias, UK</p>	
128	Human Aspects of Change Management and Implementation Co-Chairs: Zbigniew Wisniewski and Aleksandra Polak-Sopinska, Poland	SOE
10:30-12:30 - SAN PEDRO	<p>Dynamics of interactions - motivation Zbigniew Wisniewski, Aleksandra Polak-Sopinska, Malgorzata Wisniewska and Magdalena Wrobel-Lachowska, Poland</p> <p>A change of approach to management from the functional to the process one: A human factor and an administrative factor in a public university Zbigniew Wisniewski and Joanna Mnich, Poland</p> <p>ICT in logistics as a challenge for mature workers: Knowledge management role in information society Magdalena Wrobel-Lachowska, Zbigniew Wisniewski, Aleksandra Polak-Sopinska and Robert Lachowski, Poland</p> <p>The role of the lifelong learning in Logistics 4.0 Magdalena Wrobel-Lachowska, Zbigniew Wisniewski and Aleksandra Polak-Sopinska, Poland</p> <p>Labor ergonomic analysis applied to a Brazilian solid materials recycling cooperative Hebert Silva, Brazil</p>	
129	User Experience and Assistive Technology in Healthcare and Medical Devices Co-Chairs: Richard Featherstone and Hyung Nam Kim, UK/USA	UUE
10:30-12:30 - SANTA MONICA A	<p>Learning about gestures from traditional interfaces in medical imaging software Glebys Gonzalez, Naveen Madapana and Juan Wachs, USA</p> <p>Comparison between color and grayscale interfaces: Recipe usability of a dietary plan in diabetics Carlos Diaz de Leon Zuloaga and Lilia Prado León, Mexico</p> <p>Preventing trauma accidents in children: An ecosystem based on interactive ludic activities for mobile and web-based environments Daniel Pulla-Sánchez, Verónica Cevallos León Wong, Gabriela Moreno-Luzuriaga, Diego Quisi-Peralta and Vladimir Robles-Bykbaev, Ecuador</p> <p>Usability of assistive and mainstream technologies for people with visual impairments Hyung Nam Kim, USA</p> <p>Ease of use and medical devices – perceptions and reality Marie Davis, Natalie Shortt and Richard Featherstone, UK</p> <p>Patient-centered design (PCD): Redesigning the patient-user experience Erica Savage and Akhila Iyer, USA</p>	

130	Systems Interaction: Societal Impact Perspectives Co-Chairs: Arminda Lopes and Shiquan Xiong, Portugal/China	SYSI
10:30-12:30 - SANTA MONICA B	<p>Creative activity mediated by technology - artifacts, technology and ideas that could shape our lives Arminda Guerra Lopes, Portugal</p> <p>Recognition of physiotherapeutic exercises through DTW and low-cost vision-based motion capture Yves Rybarczyk, Jan Kleine Deters, Arián Aladro Gonzalo, Danilo Esparza, Mario Gonzalez, Santiago Villarreal and Isabel L. Nunes, Ecuador/Portugal</p> <p>Modeling the user business behavior through log data Shiquan Xiong and Shuping Yi, China</p> <p>Understanding user behavior using multi-modal behavioral biometrics Guo Xu, Shuping Yi and Fan Mo, China</p> <p>Analysis on trustworthy interaction through network user behavior Shuping Yi and Shiquan Xiong, China</p> <p>Improving the search retrieval effectiveness by an ontological explicit user profile Mandeep Pannu and Robert Bird, Canada/UK</p>	
131	Education Research and Applications I Co-Chairs: Henrik Lund and Shinnosuke Iwamoto, Denmark/Japan	TELS
10:30-12:30 - SANTA MONICA C	<p>Detection system for distinguishing between initial reading and rereading of a digital document of observing focal point movement Shinnosuke Iwamoto, Toru Nakata, Takashi Sakamoto and Toshikazu Kato, Japan</p> <p>Digital social learning – collaboration and learning in enterprise social networks Christian Zinke, Kyrill Meyer, Leopold Reif and Julia Friedrich, Germany</p> <p>Sero!: A learning assessment platform for adult learning environments Brian Moon and Sana Rizvi, USA</p> <p>Time and control in teachers' work - the erosion of rhythms Henrik Lund, Denmark</p> <p>Interactions between learner assessment and content requirement: A verification approach Robert Wray and Kimberly Stowers, USA</p> <p>Chinese teaching on the move: A case study of mobile App assisted Chinese teaching in a primary school Xu Yang and Xiaowei Wang, China</p>	
132	Shaping the Human Side of T-Shaped Professionals I Chair: James Spohrer, USA	HSSE
10:30-12:30 - SANTA MONICA D	<p>Developing T-shaped civil engineers through involvement in out-of-class activities Denise Simmons, USA</p> <p>T-shape professionals co-working in smart contexts: VEGA(ST) - Venice Gateway for Science and Technology Paolo Piciocchi, James C. Spohrer, Linda Martuscelli, Maria Cristina Pietronudo, Michele Scocozza and Clara Bassano, Italy/USA</p> <p>Gaining a deeper understanding of the T: Components and assessment Philip Gardner, USA</p> <p>T-shaped people in smarter/wiser service systems James Spohrer, USA</p> <p>Interactional expertise, experience with different systems and t-shaped expertise: Two pilot studies Michael Gorman and Caitlin Wylie, USA</p> <p>Thriving through people-centered adaptive platforms Yassi Moghaddam, USA</p>	

133	Panel: Tactile Applications for Enhanced Performance in Naturalistic Settings Co-Chairs: Linda Elliott and Gina Hartnett-Pomranky, USA	HFRUS
10:30-12:30 - BEAUDRY A	<p>How close is close enough? Temporal matching between visual and tactile signaling Catherine Neubauer, USA</p> <p>Identifying errors in tactile displays and best practice usage guidelines Linda Elliott and Bruce Mortimer, USA</p> <p>Can you feel me now? Wearable concept for soldier communications Linda Elliott, Gina Hartnett, Lisa Baraniecki, Rodger Pettitt and Kenyon Riddle, USA</p> <p>Artificial tactile sensor structure for giving psychological feeling to machine Jae Eun Jang, South Korea</p> <p>Development of a vibro-tactile metronome to assist in conducting contemporary classical music Patrick Ignoto, Ian Hattwick and Marcelo Wanderley, Canada</p> <p>A comparison of tactile, auditory, and visual cues in a target engagement task Timothy White, USA</p>	
134	Design Driven Social Innovation: Interdisciplinary Weltanschauung for All by All Co-Chairs: Avril Accolla and Wolfgang Wagenhäuser, China/Germany	DI
10:30-12:30 - BEAUDRY B	<p>Building a tool for multisensory storytelling through DFA Avril Accolla and Wolfgang Wagenhäuser, China/Germany</p> <p>The business opportunity of longevity Avril Accolla and Filippo Garini, China</p> <p>Alternative approaches for responsible development Avril Accolla and Roberto Doná, China</p> <p>The strength of brain diversity Gabriele Floris, China</p>	
135	Leadership and Skill Development I Co-Chairs: Edward Faber and Tibor Barath, The Netherlands/Hungary	HFML
10:30-12:30 - AVALON	<p>Mind steering leadership game Johan de Heer, Rafal Hryniewicz, Thomas de Groot and Edward Faber, The Netherlands</p> <p>Soft skills and the construction site manager: The chameleon professional Andries van Heerden, South Africa</p> <p>Enhancing managers' leadership capabilities with a leadership process reference model David Tuffley, Australia</p> <p>Motivation and work: A survey of the motivational aspects in industries Sarah Salim Vasconcelos, Maria Auxiliadora Barreto and Eduardo Ferro dos Santos, Brazil</p> <p>Capacity building in higher education: Achievements in the Middle East Mohamed Ismail and Hamid Parsaei, Qatar/USA</p>	

136	Occupational Safety Simulators Chair: Brianna Eiter, USA	HFSIM
10:30-12:30 - EMERALD BAY	<p>Analysis of occupational security management interventions based on coupling human factors Yujun Xu, Xuebo Chen and Qiubai Sun, China</p> <p>Group safety consciousness reconstruction based on the inclusion principle Yangguang Xu, Xuebo Chen, Qiubai Sun and Wei Ye, China</p> <p>Emergent research of employee safety awareness based on multi-agent model Siyuan Fan, Xuebo Chen and Qiubai Sun, China</p> <p>Recognizing mine site hazards: Identifying differences in hazard recognition ability for experienced and new mineworkers Brianna Eiter, Jennica Bellanca, William Helfrich, Timothy Orr, Jonathan Hrica, Brendan Macdonald and Jason Navovski, USA</p> <p>Modeling of muscle atrophy and exercise induced hypertrophy Xianlian Zhou, Paulien Roos and Xinyu Chen, USA</p> <p>Influence of human intervention on the modern manufacturing processes: An approach to process simulation focused on the human factor Carmen Madriz, Olga Sanchez, Malagy Sanchez and Juan Hernandez, Costa Rica</p>	
137	Human Factors and Wearable Technologies II Chair: Chantal Lidynia, Germany	HFWT
10:30-12:30 - SAN BERNARDINO	<p>A step in the right direction – Understanding privacy concerns and perceived sensitivity of fitness trackers Chantal Lidynia, Philipp Brauner and Martina Zieffle, Germany</p> <p>Development of customized orthotics based on lower-leg anthropometric data and task Shramana Ghosh, Nina Robson and J. Michael McCarthy, USA</p> <p>An intelligent pen to assess anxiety levels through pressure sensors and fuzzy logic Cristian Tapia-Jaya, Isaac Ojeda-Zamalloa, Verónica Cevallos León Wong, Ismael San Andrés Becerra, Fernando Pesántez-Avilés and Vladimir Robles-Bykbaev, Ecuador</p> <p>Universal design based evaluation framework for design of wearables Vladimir Tomberg and Sebastian Kelle, Estonia</p> <p>The pressure comfort sensation of female's body parts caused by compression garment Yongrong Wang, Yu Liu, Shengli Luo, Cheng Chen and Lingzi Jin, China</p>	
138	Ergonomics Design and Evaluation I Co-Chairs: Chih-Yang Huang and Liuxing Tsao, Taiwan/China	ED
10:30-12:30 - PALOS VERDES	<p>Design of an innovative mattress to improve sleep quality by increasing deep sleep time Chih-Yang Huang and Fong-Gong Wu, Taiwan</p> <p>A quick method to extract earphone-related ear dimensions using two-dimensional (2D) image Liang Ma, Liuxing Tsao, Chen Yu and Wei Zhou, China</p> <p>Design requirements to enhance the postural control in patients with severe spastic quadriplegia Paulina Manzano-Hernandez, David Vidana-Zavala, Irma Landa-Avila and Carlos Aceves Gonzalez, México</p> <p>Design strategies for inclusive environments Miguel Aboim Borges and Fernando Moreira da Silva, Portugal</p> <p>Pillow design and evaluation of shoulder and neck surface pressure to sleep quality Tsung-Yao Li and Fong-Gong Wu, Taiwan</p> <p>Preliminary study on the evaluation of musculoskeletal risk of car drivers using infrared thermography Blanca del Carmen Flores, Orlando Susarrey Huerta, Amalia Yoguez Seoane, Claudia del Carmen Gutiérrez and José Alfredo Jiménez, Mexico</p> <p>A new apparatus system design and evaluation of osteoarthritis for middle-aged people to enhance lifelong mobility Jian-Wei Cheng and Fong-Gong Wu, Taiwan</p>	

139	Infrastructure Planning and Learning for Sustainable Future Co-Chairs: Julia Krause and Ardeshir Anjomani, Germany/USA	SUPI
10:30-12:30 - SAN FRANCISCO	<p>Better (not) charge in your garage! Perceived benefits and optimal positioning of public fast charging infrastructure for electrical vehicles from user's perspective Julia Krause, Stefan Ladwig and Maximilian Schwalm, Germany</p> <p>Urban informality and infrastructure planning in Hong Kong and Lagos metropolis: Professionals perspectives Oluwole Soyinka and Kin Wai Michael Siu, Hong Kong</p> <p>An integrated land use-transportation planning system for sustainable metropolitan development Ardeshir Anjomani, USA</p> <p>Effects of skill shortages on sustainable construction Ayodeji Oke, Clinton Aigbavboa and Khangale Tshinakaho, South Africa</p> <p>Directions towards sustainability through higher education Maria Belo, Portugal</p> <p>Oporto rehabilitation concept Marie Belcor, Portugal</p>	
140	Healthcare and Medical Devices II Co-Chairs: Jenny Gremark and Daniel Proaño-Guevara, Sweden/Ecuador	HFMD
10:30-12:30 - HOLLYWOOD BALLROOM	<p>Mathematical modeling and ergonomic study of a pencil through numerical simulation for support of the graphological presumptive diagnosis Luis González-Delgado, Julio Verdugo-Cabrera, Luis Serpa-Andrade, Isaac Ojeda-Zamalloa, Vladimir Robles-Bykbaev, Fernando Pesántez-Avilés, Olena Naidiuk and Ninfa González-Delgado, Ecuador</p> <p>Biomimetical arm prosthesis: A new proposal Daniel Proaño-Guevara, Javier Procel-Feijóo, Johnny Zhingre-Balcazar and Luis Serpa-Andrade, Ecuador</p> <p>Workload in echocardiography Jenny Gremark Simonsen, Camilla Dahlqvist, Catarina Nordander, Anna Axmon, Inger Arvidsson and Henrik Enquist, Sweden</p> <p>Assessment of cardiac surgery ergonomic workstation Maedeh Razavipour and Hassan Sadeghi Naeini, Iran</p>	
Lunch Break (12:30-13:30) - Enjoy lunch at the restaurant of your choice		
141	Integrated Design Co-Chairs: KwanMyung Kim and Hiroya Kato, Korea/Japan	APD
13:30-15:30 - SANTA ANITA A	<p>Modeling the relationship between stress and appetite to create a dish recommendation system based on desired nutrients Hiroya Kato, Toru Nakata and Toshikazu Kato, Japan</p> <p>Assessing symptoms of excessive SNS usage based on user behavior and emotion: Analysis of log data Ploypailin Intapong, Saromporn Charoenpit, Tiranee Achalakul and Michiko Ohkura, Thailand/Japan</p> <p>Transformable camping cart design for a jack company Myungjin Kim, Haebin Lee, Muhammad Tufail and KwanMyung Kim, South Korea</p> <p>Integrated design process: A case of recliner design Haebin Lee, Muhammad Tufail, Myungjin Kim and KwanMyung Kim, South Korea</p> <p>The design of personal protective garments for workplace: An ergonomic radiation protection design practice Muhammad Tufail, Haebin Lee, Myungjin Kim and KwanMyung Kim, South Korea</p>	

142	Intelligent Systems and Applications Chair: Umer Asgher, Pakistan	CCDM
13:30-15:30 - SANTA ANITA B	<p>Influence of the directional auditory stimulus on driver's behaviors in an autonomous vehicle Susumu Shirayama and Rie Osawa, Japan</p> <p>Inference about cross cultural decision-making derived from international healthcare analysis Maureen Kole, USA</p> <p>Incorporating the cultural and decisions factors in multi-objective optimization of air conditioning conduit design process Alexis Cordovés García, José Arzola Ruíz and Umer Asgher, Ecuador/Pakistan</p> <p>The necessity of new paradigms in measuring human-Chatbot interaction Aleksandra Przegalinska and Leon Ciechanowski, Poland</p> <p>The impact of media, social networking technologies, aberrant leadership and cross-cultural decision-making on common sense Roulette Smith, USA</p>	
143	Assistive Technology IV Co-Chairs: Maria Lucia Okimoto and Gabriel Rosenmann, Brazil	ED
13:30-15:30 - SANTA ANITA C	<p>Product development of assistive technology for the feet of person with cerebral palsy Márcio Catapan, Eugênio Filho, Luane Araiun, Mateus Villas Boas, Maria Lucia Okimoto and Caio Silva, Brazil</p> <p>Development and evaluation of low-cost splint for spastic hand by additive manufacturing Gabriel Rosenmann, Mateus Weigert, Paloma Poier, José Foggiatto, Maria Lucia Okimoto, Neri Volpato and Leandra Ulbricht, Brazil</p> <p>How citizens share information in smart cities? Francisco Rebelo, Paulo Noriega, Tiago Miguel Oliveira, José Carvalhais and Daniela Santos, Portugal</p> <p>Study and design of a tactile map in Brazil: Assistive technology for blind and low vision Sabrina Oliveira, Maria Lucia Okimoto and Laura Doro, Brazil</p> <p>Effects of cognitive redundancy on interface design and information visualization Jing Zhang, Chengqi Xue, Jing Wang, Zhangfan Shen, Lei Zhou, Xiaozhou Zhou, Lin Yun and Ling Zhou, China</p>	
144	Design for High Performance and Comfort Co-Chairs: Shabboo Valipoor and Ai-Ping Yang, USA/China	ED
13:30-15:30 - SAN GABRIEL A	<p>Design for older patients: An objective evaluation of patient chairs at hospitals Shabboo Valipoor, Debajyoti Pati, Matt Stock and Doug Bazuin, USA</p> <p>A study on examining user comfort in hospital beds Güzide Güzelbey Esengün and Ekrem Cem Alppay, Turkey</p> <p>Reachable domain of adults' right leg in sitting posture Ai-ping Yang, Wen-yu Fu, Xin Zhang, Ming-ju Wang and Chau-Kuang Chen, China</p> <p>Screen design of portable terminal to promote user's motivation to use the system Suguru Ito, Miwa Nakanishi and Masahiko Sakata, Japan</p> <p>Development of a design protocol for customized swimming goggles using 3D facial scan data Jose Coleman, Christopher Hernandez, Joshua Hernandez, Shane Hubenak, Aric McBride, Mehrube Mehrubeoglu and Jangwoon Park, USA</p> <p>The study and design of university student dormitory mattress based on the influence of materials of the mattress on prone position comfort Yeyingzi Guo, Haomiao Chen and Zhang Zhang, China</p> <p>Analysis of arm forces on stationary chairs for daily activities in subjects weighing 136 to 186 kg Xiaohong Yu, Onder Tor, jilei Zhang, Bob Tackett and Lingling Hu, China/USA</p>	

145	Human Factors in Patient IT Tools Chair: Helen Fuller, USA	HC
13:30-15:30 - SAN GABRIEL B	<p>HomeAssist: An assisted living platform for aging in place based on an interdisciplinary approach Charles Consel, Lucile Dupuy and H�el�ene Sauz�eon, France</p> <p>Mobile healthcare application for foreigners living in China Syed Attiq-Ur-Rehman, Zhe Chen and Muhammad Haris, China</p> <p>Impact of age on the likelihood of patients' accessing their health information online Martina Clarke, Joi Moore, Jeffery Belden, Linsey Steege, Min Kim, Shannon Canfield and Richelle Koopman, USA</p> <p>An aging-focused diabetes self-management mHealth App: Analysis of usage patterns, acceptance and engagement among older population Shinyi Wu, H. Hsiao, I. Chi and Olivia Evanson, USA</p> <p>Train4Ortho: MIS online course as a manner of improving ergonomics in orthopedic surgery Joanna Bartnicka, Alicia Piedrabuena, Raquel Portilla, Juan Moyano, Jos�e Blas Pagador, Peter Augat, Dariusz Michalak, Jaroslaw Tokarczyk and Francisco Miguel S�anchez Marga, Poland</p> <p>Beyond ergonomics: How to safeguard users of health information in online media Thomas Wetter, Germany/USA</p>	
146	Maritime II Chair: Daniel Fay, UK	MAR
13:30-15:30 - SAN GABRIEL C	<p>Examining the role of team leaders in distributed situation awareness based on verbal exchanges and visual information gathering: a simulation study in nuclear submarines Vincent Tardan, Fran�oise Darses and L�eonore Bourgeon, France</p> <p>Using heart rate variability (HRV) to examine the workload of submarine command team members during simulated submarine operations Aaron Roberts, Neville Stanton and Daniel Fay, UK</p> <p>Visualization in maritime navigation: A critical review Victor Concei�o, Maria Beatriz Carmo, Joakim Dahlman and Ana Navarro, Portugal</p> <p>Project MARTHA: Seafarer fatigue and sleepiness Mike Barnett and Claire Pekcan, UK</p> <p>Gaps between users and designers: A usability study about a tablet-based application used on the ship bridges Yemao Man, Margareta L�utzh�oft, Nicole Costa, Monica Lundh and Scott MacKinnon, Sweden</p> <p>Identifying causal factors of human fatigue in vessel traffic system Fan Li, Yu-Chi Lee, Chun-Hsien Chen and Li-Pheng Khoo, Singapore</p>	
147	Safety Analysis Approaches Co-Chairs: Amir Mahmood and Pedro Arezes, Singapore/Portugal	SMHF
13:30-15:30 - SANTA BARBARA A	<p>Safety culture and its contributing factor in education sector in Malaysia Nor Kamilah Makhtar, Balakrishnan Parasuraman, Mohd Nazri Zakaria and Ahmad Rasdan Ismail, Malaysia</p> <p>Occupational health and safety in the ASEAN member nations: Challenges and opportunities Kavitha Palaniappan and Amir Mahmood, Singapore</p> <p>Towards a framework for steering safety performance: A review of the literature on leading indicators Seyed Sajad Mousavi, Elizabeth Cudney and Paolo Trucco, Italy/USA</p> <p>Dynamic fuzzy safety analysis of an industrial system Antonio Venditti, Nguyen Duy Phuong Tran and Anh Dung Ngo, Canada</p> <p>Personnel involvement to encourage international patient safety goals in a Mexican healthcare institution Luis Cuautle and Jes�us Ju�arez, Mexico</p>	

148	Making a Difference Chair: Thomas Hofmann, Germany	PEHF
13:30-15:30 - AVALON	<p>An interview study on children's spectacle frame fit Jiaxin Zhang and Yan Luximon, Hong Kong</p> <p>A comparative study of the effects of electrical stimulation and intermittent compressive forces on soft tissue mechanical properties Ben-Yi Liao, Chien-Liang Chen, Yih-Kuen Jan, Hsin-Ying Chiu, Pei-Syuan He and Chi-Wen Lung, Taiwan/USA</p> <p>Prospective design of seating systems for digitalized working worlds Nico Feller, Kim-Hoa Huynh, Ulf Müller, Thomas Dupré, Wolfgang Potthast and Joanna Funck, Germany</p> <p>Air traffic control HCI - how to handle very special user requirements Thomas Hofmann and Jörg Bergner, Germany</p> <p>Working conditions for maintaining a seating posture during working with a personal computer on a balance chair Noriyasu Hirokawa, Yasuyuki Toyoda, Kenichi Itose, Tadashi Shibue, Takashi Hayami and Mitsushi Ohmasa, Japan</p>	
149	Automation II Co-Chairs: Neville Stanton and Alexander Eriksson, UK	RR
13:30-15:30 - SACRAMENTO	<p>The effect of self-regulated control transitions on driving performance: A simulator study Alexander Eriksson and Neville Stanton, UK</p> <p>What to expect of automated driving: Expectations and anticipation of system behavior Johanna Josten, Teresa Schmidt, Ralf Philipsen, Lutz Eckstein and Martina Ziefle, Germany</p> <p>The design of a vibro-tactile seat for conveying take-over requests in automated driving Sebastian Petermeijer, Paul Hornberger, Ioannis Ganotis, Joost de Winter and Klaus Bengler, Germany/The Netherlands</p> <p>Temporal evolution of driver behavior characteristics when resuming manual control Silvia Varotto, Haneen Farah, Klaus Bogenberger, Bart van Arem and Serge Hoogendoorn, The Netherlands</p> <p>A study on driver-vehicle interaction with using a fuzzy-logic driver model and increased autonomy vehicle in virtual environment simulation Antoni Kopyt, Dominik Jastrzebski and Tomasz Dziewonski, Poland</p>	
150	Automation III Co-Chairs: Kirsten Revell and Claus Marberger, UK/Germany	RR
13:30-15:30 - BEVERLY	<p>Learning from the best: Naturalistic arbitration for cooperative driving Gina Weßel, Constanze Schreck, Eugen Altendorf, Yigiterkut Canpolat and Frank Flemisch, Germany</p> <p>Modelling the dynamics of driver situation awareness in automated driving Zhenji Lu, Riender Happee and Joost de Winter, The Netherlands</p> <p>Evaluation of an autonomous vehicle external communication system concept: A survey study Jingyi Zhang, Erik Vinkhuyzen and Melissa Cefkin, USA</p> <p>Machine learning and big data analytics in support of fleet safety during severe weather Zachary Spielman, David Gertman, Scott Wold, Haoran Liu, Steven Wismuller and Justin Traiteur, USA</p> <p>Understanding and applying the concept of "driver availability" in automated driving Claus Marberger, Holger Mielenz, Frederik Naujoks, Klaus Bengler, Jonas Radlmayr and Bernhard Wandtner, Germany</p> <p>The impact of technologies on cognitive demands for train control officers in the South African railway industry Moses Shaba, South Africa</p>	

151	Ergonomics in Public Building Design Chair: Wojciech Bonenberg, Poland	SUPI
13:30-15:30 - PALOS VERDES	<p>Applications of the theory of fuzzy sets to modelling a user- experience system in architecture Wojciech Bonenberg, Poland</p> <p>Changes in the contemporary public space: Libraries Joanna Jablonska, Elzbieta Trocka-Leszczynska and Romuald Tarczewski, Poland</p> <p>Ergonomic solutions in capsule hotels? Joanna Jablonska, Elzbieta Trocka-Leszczynska and Romuald Tarczewski, Poland</p>	
152	Interface Design and Usability Evaluation Chair: Marcus Jenke, Germany	UUE
13:30-15:30 - SAN PEDRO	<p>Usability evaluation on learning management system Nattaporn Phongphaew and Arisara Jiamsanguanwong, Thailand</p> <p>What does the eye want? An investigation of interface parameters to ensure intuitive gaze controlled interactions for multidimensional inputs Marcus Jenke and Thomas Maier, Germany</p> <p>Usability heuristic evaluation of scientific data analysis and visualization tools Samar Swaid, Mnsa Maat, Hari Krishnan, Devarshi Ghoshal and Lavanya Ramakrishnan, USA</p> <p>Evolution of user experiences and interfaces for delivering context-aware recommendations to information analysts Adam Fouse, Ryan Mullins, Gabriel Ganberg and Chad Weiss, USA</p> <p>A smarTactile map designed for the visually impaired to improve spatial cognition MyungJoong Lee, South Korea</p> <p>A research on the barrier-free color design in digitalized interaction Xi Wang and Zhaohui Huang, China</p>	
153	Assistive Technologies and Natural User Interaction Co-Chairs: You Fang and Gustavo Lopez, China/Costa Rica	SYSI
13:30-15:30 - SANTA MONICA A	<p>Scan&Go: A technology that helps the visually impaired in grocery shopping Parisa Alirezaee, Canada</p> <p>Research on driver's visual and psychological characteristics under right-turning scenario for car head-up displays Xi Wang, Yujia Wang, Xiaoqiu Zhang and Chang Liu, China</p> <p>Take-over requests analysis in conditional automated driving and driver visual research under encountering road hazard of highway Fang You, Yujia Wang, Jianmin Wang, Xichan Zhu and Preben Hansen, China</p> <p>Alexa vs. Siri vs. Cortana vs. Google Assistant: A comparison of speech-based natural user interfaces Gustavo Lopez, Luis Quesada and Luis Guerrero, Costa Rica</p> <p>Human factors affecting the development of smart device-based notifications Marcelo Guzman, Gustavo Lopez and Luis Guerrero, Costa Rica</p> <p>Developing a proxy service to bring naturality to Amazon's personal assistant Alexa Luis Carvajal, Luis Quesada, Gustavo Lopez and Jose A. Brenes, Costa Rica</p> <p>A calculator application with 3D-printed cover for the visually impaired in China Yifan He, Bo Zhu and Pinata Winoto, China</p>	

154	Human Factors, Business Management and Society II Chair: Jussi Kantola, Finland	HFBMS
13:30-15:30 - SANTA MONICA B	<p>Encompassing the work-life balance into early career decision-making of future employees through the analytic hierarchy process Remigiusz Gawlik, Poland</p> <p>Safety culture and collective commitment in organizational context Jarno Einolander, Jussi Kantola, Hannu Vanharanta and Evangelos Markopoulos, Finland</p> <p>On the basis of the sales engineering competences and education Tero Reunanen, Timo Holopainen, Thomas Röhr, Jobst Görne and Ludger Schneider-Störmann, Finland</p> <p>Design thinking: User-centered design multidisciplinary methodology based on people and innovation Ekaterina Barcellos and Galdenoro Botura, Jr., Brazil</p> <p>A co-evolute approach to analyze the competencies of sales personnel of banking sector of Pakistan Faisal Imran and Jussi Kantola, Finland</p> <p>Human factor based conceptual framework for construction business marketing Jonas Yankah, Clinton Aigbavboa and Wellington Thwala, South Africa</p>	
155	Education Research and Applications II Co-Chairs: Angie Brunk and Jean-Francois Lapointe, USA/Canada	TELS
13:30-15:30 - SANTA MONICA C	<p>A review of personal profile features in personalized learning systems Jean-Francois Lapointe, Irina Kondratova, Heather Molyneaux, Kamran Shaikh and Norman G. Vinson, Canada</p> <p>Satisfaction and cognitive styles in students of the virtual collaborative project: Our earth: deforestation Luis Montoya, Pere Ponsa and Ramon Vilanova, Mexico</p> <p>Early engagement of schoolchildren in research activities: The human factor Alexander Karpov, Russia</p> <p>Potentials of 3D printing to support STEM education in remote areas: Gaza as a case study Bilal Mansoor, Dena Al Thani and Marwa Qaraqe, Qatar</p> <p>Instructional design using multimodal measurements as indicators of cognitive load Bonn Kleiford Seranilla, Allura Vianca Panistante and Jon Becios, Philippines</p>	
156	Shaping the Human Side of T-Shaped Professionals II Chair: James Spohrer, USA	HSSE
13:30-15:30 - SANTA MONICA D	<p>MyT-Me: Your personal T-shape scoring system Louis Freund and Stephen Kwan, USA</p> <p>E-business as an example of T-shape education Wojciech Cellary and Jarogniew Rykowski, Poland</p> <p>Developing DSA-enabled and T-shaped professionals for the hybrid economy Debbie Hughes, USA</p> <p>Humanity-embedded service science education Fu-ren Lin, Taiwan</p> <p>Management of innovation, sustainability and technology: A master's curriculum for T-shaped professionals at UC Merced Paul Maglio, USA</p>	

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<p>157</p>	<p>Understanding the Key Drivers of Human-Machine Trust: Lessons Learned and Future Directions Chair: Joseph Lyons, USA</p>	<p>HFRUS</p>
<p>13:30-15:30 - BEAUDRY A</p>	<p>A theoretical conceptualization for overtrust Alan Wagner and Mollik Nayyar, USA</p> <p>Effects of automation predictability and understandability on trust in human-machine teaming Jeremy Friedman, Karanvir Panesar, Nhut Ho, Jessie Chen, Joseph Lyons, Bill Gray, Walter Johnson and Jeremy Friedman, USA</p> <p>Trust towards an in-vehicle cyclist detection system + emergency braking Marco De Angelis, Luca Pietrantoni, Gabriele Prati, Federico Fraboni, Víctor Marín Puchades and Filippo Fassina, Italy</p> <p>The sky's (not) the limit - influence of expertise and privacy disposition on the use of multi-copters Chantal Lidynia, Ralf Philipson and Martina Ziefle, Germany</p> <p>Trust repair in autonomy part 1: Comparing the severity of trust violations between human and self-driving cars Ewart de Visser, Spencer Kohn, Tyler Shaw and Richard Pak, USA</p> <p>Trust repair in autonomy part 2: Evaluating the effectiveness of human-inspired trust repair strategies with automation Daniel Quinn, Richard Pak and Ewart de Visser, USA</p>	
<p>158</p>	<p>Cybersecurity Training and Education Co-Chairs: Fernando Maymi and Saurabh Dutta, USA</p>	<p>CYBER</p>
<p>13:30-15:30 - BEAUDRY B</p>	<p>Humans as the strong link in securing the total learning architecture Fernando Maymi, Angela Woods and Jeremiah Folsom-Kovarik, USA</p> <p>Utilizing ChatBots to increase the efficacy of information security practitioners Saurabh Dutta, Ger Joyce and Jay Brewer, USA</p> <p>Understanding human factors in cybersecurity as a dynamic system Heather Young, Tony van Vliet, Josine van de Ven, Steven Jol and Carlijn Broekman The Netherlands</p> <p>A team-level perspective of human factors in cyber security: Security operations centers Balázs Hámornik and Csaba Krasznay, Hungary</p>	
<p>159</p>	<p>Recent Advances in Design for Disability I Co-Chairs: Theresa Lobo and Emilia Christie Picelli Sanches, USA/Brazil</p>	<p>DI</p>
<p>13:30-15:30 - HOLLYWOOD BALLROOM</p>	<p>Digital inclusion trajectory of people with Down Syndrome: A pilot study Dany Lussier-Desrochers, Canada</p> <p>Redeveloping game set for living alone elderly with dementia using participatory action research approach in Hong Kong Alex Pui Yuk King and Kin Wai Michael Siu, Hong Kong</p> <p>Pressure ulcer prevention system based in capacitive sensors Jorge Cazho-Tobar, Jorge Barbecho-Sarango and Freddy Bueno-Palomeque, Ecuador</p> <p>Teaching an innovative E-learning design program for visually impaired students Theresa Lobo, USA</p> <p>Analysis of primary caregiver to prevent ergonomic risks when transferring a person with motor disability Wendy Cruz, Mexico</p> <p>Three-dimensional tactile images for blind people: A proposition for a translating model of static two-dimensional images Emilia Christie Picelli Sanches, Claudia Mara Scudelari de Macedo and Juliana Bueno, Brazil</p>	

160	Transportation Modeling and Simulation Chair: J. W. C. (Hans) van Lint, The Netherlands	HFSIM
13:30-15:30 - EMERALD BAY	<p>Automated situation analysis as next level of unmanned aerial vehicle artificial intelligence Gunta Strupka, Anatoly Levchenkov and Mikhail Gorobetz, Latvia</p> <p>Comprehensive assessments of the effects of auditory cognitive distractions on driving safety across the lifespan Nazan Aksan, USA</p> <p>Exploring the effects of perception errors and anticipation strategies on traffic accidents - a simulation study Hans van Lint, Simeon Calvert, Wouter Schakel, Meng Wang and Alexander Verbraeck, The Netherlands</p> <p>Human factors in modelling mixed traffic of traditional, connected, and automated vehicles Zuduo Zheng, Md. Mazharul Haque, Mohammad Saifuzzaman, Anshuman Sharma and Yasir Ali, Australia</p> <p>Requirements for maritime search and rescue simulation: A catalogue of key features to ensure multi-user networked simulations Thomas Lübcke, Germany</p> <p>Research on correlation between eye-hand coordination pattern and cognitive process of pilot in flight deck Zongpeng Wang, Youchao Sun and Yundong Guo, China</p>	
161	Human Factors in Communication of Design II Co-Chairs: Chi-Lun Liu and Amic G. Ho, Taiwan/Hong Kong	HFCD/DI
13:30-15:30 - SANTA BARBARA C	<p>The effectiveness of message sidedness on trust in check-in advertising Chi-Lun Liu, Jo-Han Ku and Hsieh-Hong Huang, Taiwan</p> <p>An investigation of weak ontology for new media studies Edward C. K. Hung, Hong Kong</p> <p>Towards a generalization of new media Edward C. K. Hung, Hong Kong</p> <p>Smart device-based notifications: A survey on user's satisfaction of traditional notification mechanisms Shirley Yoong, Gustavo Lopez and Luis Guerrero, Costa Rica</p> <p>Looking forward to reverse image search: Measuring the effectiveness of reverse image searches in online help Fer O'Neil, USA</p> <p>Calligraphy practice app, system and tool for learning calligraphy Joao Brandao, Portugal</p>	
162	Human Error and Resilience in Safety-Critical Domains Co-Chairs: Manikam Pillay and Harold Blackman, Australia/USA	HERRP/ENERGY
13:30-15:30 - SAN BERNARDINO	<p>Epic human failure on June 30, 2013 Fred Schoeffler and Lance Honda, USA</p> <p>A systematic framework for root-cause analysis of the Aliso Canyon gas leak using the AcciMap methodology Maryam Tabibzadeh, Simone Stavros, Mikhail S. Ashtekar and Najmedin Meshkati, USA</p> <p>Human error, optimal production control policies and corrective maintenance with lockout-tagout Issa Diop, Sylvie Nadeau and Behnam Emami-mehrgani, Canada</p> <p>Permit-to-work systems as a health and safety risk control strategy in mining: A prospective study in resilience engineering Manikam Pillay and Michael Tuck, Australia</p> <p>Modeling framework of team settings for the design of laboratory experiments and team training Taro Kanno, Satoru Inoue and Daisuke Karikawa, Japan</p> <p>Nuclear operator performance on main control room tasks using touch interface Lauren Reinerman, Jonathan Harris, Niav Hughes and Amy D'Agostino, USA</p>	

163	Human-Machine Interaction IV Co-Chairs: Daniel López and Tao Xiong, Germany/China	RR
13:30-15:30 - SANTA BARBARA B	<p>A study on the relationship between passengers' visual searching efficiency in bus-waiting process and the elements of bus front face design Tao Xiong, Jianxin Cheng and Tengye Li, China</p> <p>Vision and driving support for shielded vehicles –implementation and test of an electronic vision replacement system with augmented reality Daniel López, Marcel Baltzer, Christian Lassen and Frank Flemisch, Germany</p> <p>Measuring the cognitive demands of in-vehicle dashboard and center console tasks Madeleine Conaghan, Ian Colwill, Edward Elton, Periklis Charchalakis and Elias Stipidis, UK</p> <p>Understanding Brazilians UX with their cars Caio Silva, Ana Luiza Chyla, Daniela Gobbo, Jéssica Dudyk and Regiane Friedemann, Brazil</p>	
15:30 - 16:00 Refreshments will be provided in California Ballroom		
164	Implication of User Behavior in Design Process Co-Chairs: Yusuke Kishine and Tengye Li, Japan/China	APD
16:00-18:00 - SANTA ANITA A	<p>Memory recall of nouns and adjectives expressing two-color combinations Saki Tomita, Takashi Sakamoto and Toshikazu Kato, Japan</p> <p>Determination of the optimal timing for a relaxation stimuli Yusuke Kishine, Toshikazu Kato and Toru Nakata, Japan</p> <p>Research on attitude accessibility in product design evaluation: Cognitive features & memory network Tengye Li, Jianxin Cheng, Tao Xiong, Junnan Ye and Ziheng Zhang, China</p> <p>A study on the sustainable design assessment system used for China's "Lettuce House" project and its assessment results Mingyue Lyu, China</p> <p>Research on the image difference of smart product based on perceptual interaction Xinxin Zhang, Minggang Yang and Jianning Su, China</p> <p>Influence of the virtual reality on sensorial evaluation during product test applied on a snorkel Millet Antoine and Rosa Virgnie, France</p>	
165	Aviation and Aerospace: Operational Effectiveness Co-Chairs: Craig Allison and Jens Alfredson, UK/Sweden	AVI
16:00-18:00 - SANTA ANITA B	<p>Engine failure induced task load transient for simulation based certification aiding for aircraft Jens Alfredson, Luís Trabasso, Niklas Blomstrand, Maria Eckerberg, Linda Klamer, Johanna Ledin, Jasmine Tarander and Magnus Bang, Sweden</p> <p>An analysis of human factors in operational fuel saving Daniel Vogel and Ivan Sikora, USA/UK</p> <p>Transition from conventionally to remotely piloted aircraft – investigation of possible impacts on function allocation and information accessibility using cognitive work analysis methods Max Friedrich, Anne Papenfuß and Andreas Hasselberg, Germany</p> <p>Workload and the en route Controller – an overblown issue? Richard Rohde, USA</p> <p>Data-driven pilot behavior modeling applied to an aircraft offset landing task Luís Trabasso, Felipe Turetta, Helon Ayala, Jens Alfredson and Leandro Coelho, Brazil</p> <p>Understanding business jet flight deck operation and its challenges through pilots' perspective So Young Kim, USA</p>	

166	Neuroergonomics Theory and Design I Chair: Bridget Lewis, USA	CN
16:00-18:00 - SANTA ANITA C	<p>Relationship between EEG and ECG findings at rest and during brain activity Yuto Nakahata and Hiroshi Hagiwara, Japan</p> <p>The necessity of a conceptual framework: Symbiosis between architecture and neuroscience Cherif Amor, USA</p> <p>The ambiguity of empathic design: From a historical and cross-discipline perspective Yumei Dong, Hua Dong and Shu Yuan, China</p> <p>A trial of intellectual work performance estimation by using physiological indices Shutaro Kunimasa, Kyoichi Seo, Hiroshi Shimoda and Hirotake Ishii, Japan</p> <p>A neuro-ergonomic approach for assessing pilots' performance: The effects of cockpit temperature Yundong Guo, Youchao Sun and Zongpeng Wang, China</p>	
167	Design and Assistive Technology Co-Chairs: Maria Lucia Okimoto and Teresa Cabral, Brazil/Portugal	ED
16:00-18:00 - SAN GABRIEL A	<p>Clarifying the concept of corporate identity: From collective vision to a cultural interface Daniel Raposo, Fernando Moreira da Silva, João Neves and José Silva, Portugal</p> <p>Visual perception and contemporary Portuguese type design Teresa Cabral, Portugal</p> <p>Ergonomics and warning design: Standardization of graphical symbols for safety signs João Neves, Fernando Moreira da Silva, Daniel Raposo and José Silva, Portugal</p> <p>Usage of mobile phones amongst elderly people in Pakistan Zunaira Ilyas Bhutta, Javed Anjum Sheikh, Attiq Khan and Sabah Kayani, Pakistan</p> <p>The influence of ergonomics aspects on the use of hydrotherapy devices by individuals with rheumatoid arthritis: The specialists perspective Ricardo Rodrigues, Susana Domenech and Marcelo Gomes Ferreira, Brazil</p> <p>Eyeing the future of mobile proven stalls through ergonomic innovation Bonn Kleiford Seranilla, Lucky John Tutor and Vince Matthew Mutia, Philippines</p>	
168	Human Factors in Patient Care Tools Chair: Kyle Maddox, USA	HC
16:00-18:00 - SAN GABRIEL B	<p>Superficial electromyography, motion analysis and triggered-stereo cameras technologies applied to ultrasound system user interface evaluation Federica Vannetti, Tiziana Atzori, Laura Fabbri, Guido Pasquini, Leonardo Forzoni and Claudio Macchi, Italy</p> <p>Case study of integrated ergonomic assessment of a cart-based high-end ultrasound system Giuseppe Andreoni, Alfredo Goddi, Luca Aiani, Nicola Gaibazzi, Zhang WeiWei, Fabio Rezzonico, Nicola Guraschi, Marco Delpiano, Claudio Fertino, Deanna Garcia, Luis Rojas and Leonardo Forzoni, Italy</p> <p>Development of a support system for the presumptive diagnosis of glaucoma through the processing of biomedical images of the human eye fundus in Ecuador Eduardo Pinos, Susana Encalada, Edwin Gamboa, Vladimir Robles-Bykbaev and William Ipanaque, Ecuador</p> <p>Understanding the user experience of transitioning to a new hospital clinical information system Melissa Baysari, Amina Tariq, Carol Bryant and Johanna Westbrook, Australia</p> <p>A RGB-D sensor based tool for assessment and rating of movement disorders Vitoantonio Bevilacqua, Gianpaolo Francesco Trotta, Claudio Loconsole, Antonio Brunetti, Nicholas Caporusso, Giuseppe Maria Bellantuono, Irio De Feudis, Donato Patruno1, Domenico De Marco, Andrea Venneri, Maria Grazia Di Vietro, Giacomo Losavio and Sabina Ilaria Tatò, Italy</p> <p>A comprehensive approach for physical rehabilitation assessment in multiple sclerosis patients based on gait analysis Vitoantonio Bevilacqua, Gianpaolo Trotta, Antonio Brunetti, Nicholas Caporusso, Claudio Loconsole, Giacomo Cascarano, Francesco Catino, Pantaleo Cozzoli, Giancarlo Delfine, Adriano Mastronardi, Andrea Di Candia, Giuseppina Lelli and Pietro Fiore, Italy</p> <p>Prevent elderly people from the deterioration of balance performance: Design a training equipment systems Yan-Chun Lin, Taiwan</p>	

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169	Human Factors in Contemporary Technology Systems II Co-Chairs: Boris Brinzer and Shigeru Ikemoto, Germany/Japan	MFG
16:00-18:00 - SAN GABRIEL C	<p>Measuring the human aspect: The key for managing the complexity in production Boris Brinzer and Amardeep Banerjee, Germany</p> <p>Quality assurance production based problem: A process improvement in the rolling mill line for steel manufacturing company in the Philippines Yoshiki Kurata, Marjorie Navales, Darrel Cedron, Michael Marcelino and Tennessee Pening, Philippines</p> <p>Managing the human factor during the working-out of new technologies and hardware: The reindustrialization conditions Evgeny Kolbachev, Russia</p> <p>Macro-ergonomic analysis of labor and its influence on the satisfaction and productivity of the workers of an office furniture industry in Brazil Tássia Mendes, Ricardo Machado and Leônidas Silva, Jr., Brazil</p> <p>Organizations in era of digital culture Roman Batko, Anna Szopa, Małgorzata Cwikła and Michał Zawadzki, Poland</p> <p>Information stress – new challenges for humanizing the work of software designers Andrzej Borucki, Poland</p>	
170	Safety and Ergonomics I Chair: M. Mennozi, Switzerland	SMHF
16:00-18:00 - SANTA BARBARA A	<p>Training visual vigilance in a complex and naturalistic work environment Marino Menozzi, Ying-Yin Huang, Yves Brand and Guido Beldi, Switzerland/Taiwan</p> <p>Evaluation of bodily discomfort of employees in a slaughterhouse Adriana Tirloni, Diogo Reis, Eliane Ramos and Antonio Moro, Brazil</p> <p>Assessments of ergonomic risk and physician diagnosis of musculoskeletal disorders at work: Cases in Taiwan Chih-Yong Chen, Kai Li, Liwen Liu and Ching Chen, Taiwan</p> <p>Ergonomic evaluation's contribution in a technological innovation process of meat boning's work environments Ana Oliveira, Ariel Michaloski and Antonio Xavier, Brazil</p> <p>The ergonomic study of the shipping of a drug distribution company Edson Mauro Dutra, Guilherme Laureano and Ana Regina De Dutra, Brazil</p> <p>Tool for preliminary analysis of ergonomic risk Melina Peixoto, Rodrigo Pereira, Enilene Lovatte, Marisa Coser, Alexandre Machado, Arion Rosa, Mario Neto and Marcos José Fassarella, Brazil</p>	
171	Risk Assessment and Management Co-Chairs: Tobias Hellig and Lidia Ghibaudo, Germany/Italy	PEHF
16:00-18:00 - SANTA BARBARA B	<p>A proposal for field-oriented system to support medical risk management. Support of risk management in small and medium sized hospital Akifumi Hiranuma and Yusaku Okada, Japan</p> <p>Risk of developing musculoskeletal disorders in a meat processing plant Diogo Reis, Adriana Tirloni, Eliane Ramos and Antonio Renato Moro, Brazil</p> <p>Investigation of the effectiveness of European Assembly Worksheet is assessing organizational measures for MSD risk assessment Tobias Hellig, Robert Stranzenbach, Alexander Mertens, Christopher Brandl, Vera Rick and Philipp Przybysz, Germany</p> <p>A successful ergonomic solution based on lean manufacturing and participatory ergonomics Symone A. Miguez, João F. A. Garcia Filho, Jose Eduardo Faustino and Anderson Goncalves, Brazil</p> <p>Assessment of ergonomic risks in banana cultivation and production Oswaldo Jara, Fanny Ballesteros and Esteban Carrera, Ecuador</p> <p>Analysis of eso-skeleton introduction in industrial reality: Main issues and EAWS risk assessment Stefania Spada, Lidia Ghibaudo, Maria Pia Cavatorta, Laura Gastaldi and Silvia Gilotta, Italy</p> <p>Upper limb musculoskeletal disorders in German automotive production workers resulting from snap-fit assembly – a nested case-control study Johan Ohlander, Mekail-Cem Keskin, Stephan Weiler, Joachim Stork and Katja Radon, Germany</p>	

172	Automation IV Co-Chairs: Neville Stanton and Kirsten Revell, UK	RR
16:00-18:00 - SACRAMENTO	<p>A study on the human and the automation in automated driving: Getting to know each other Eugen Altendorf, Raphael Schütz, Yigiterkut Canpolat, Gina Weßel and Frank Flemisch, Germany</p> <p>How automation level and system reliability influence driver performance in a cut-in situation Jonas Radlmayr, Veronika Weinbeer, Cathrine Löber, Mehdi Farid and Klaus Bengler, Germany</p> <p>Looking at drivers and passengers to inform automated driver state monitoring of in and out of the loop Christopher Cabrall, Veronika Petrovych and Riender Happee, The Netherlands/Sweden</p> <p>Planned handover in level 3 autonomous cars: Exploring constraints with cognitive work analysis to inform interaction design Kirsten Revell and Neville Stanton, UK</p> <p>Taxonomy of traffic situations for the interaction between automated vehicles and human road users Tanja Fuest, Lenja Sorokin, Hanna Bellem and Klaus Bengler, Germany</p> <p>Gaze concentration to predict reduced vigilance for automated vehicle failures Randall Drury, Dean Cisler, Steven Chong, Shawn Mulvey, Pamela Greenwood and Carryl Baldwin, USA</p>	
173	Rail Safety and Design Co-Chairs: Kate Dixon and Kate Bowers, UK/Canada	RR
16:00-18:00 - BEVERLY	<p>A comparison of three systemic accident analysis methods using 46 SPAD (Signal Passed at Danger) incident Kate Dixon, Patrick Waterson and Jo Barnes UK</p> <p>Understanding railway employees' perceptions of managers' safety commitment Kate Bowers and Mark Fleming, Canada</p> <p>Human factors design of high-speed train driver's cab Beiyuan Guo and Weining Fang, China</p> <p>The old meets new: Railway systems co-existing in harmony Ntombikayise Ndaki, South Africa</p>	
174	Ergonomics is Urban Design Chair: Anna Jaglarz, Poland	SUPI
16:00-18:00 - PALOS VERDES	<p>The requirements of human factors and ergonomics for the safe and comfortable stairs versus the escalators Zdzislaw Pelczarski, Poland</p> <p>Evidence based design a of scooter parking design in Taiwan Meng-Cong Zheng, Taiwan</p> <p>Human factors in planning of open public urban spaces Agata Bonenberg, Poland</p> <p>Application and analysis of BIM technology in green building - a case study of green building in China Xia Wei, Wojciech Bonenberg, Mo Zhou, Jinzhong Wang and Xiaolei Wang, Poland/China</p> <p>The case study of BIM in urban planning and design Xia Wei, Wojciech Bonenberg, Mo Zhou, Jinzhong Wang and Xiaolei Wang, Poland/China</p> <p>Smart street furniture: Innovation in the concept design process Lorenzo Savio, Grazia Cocina, Roberta Gariano, Federico Giampetruzzi, Roberto Pagani, Marco Maria Pedrazzo and Roberto Pennacchio, Italy</p>	

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175	Accessibility and Ergonomics Modeling in Industry Co-Chairs: Yifen Qiu and Abdulrahman Hafez, China/USA	UUE
16:00-18:00 - SAN PEDRO	<p>User experience and user acceptance of an augmented reality based knowledge-sharing solution in industrial maintenance work Susanna Aromaa, Antti Väättänen, Eija Kaasinen and Mika Hakkarainen, Finland</p> <p>Implementation of information management system: Human factors lessons learned from industrial company Magdalena Wyrwicka, Barbara Zasada and Beata Mrugalska, Poland</p> <p>Sitting comfort for pedal operators Yifen Qiu, Pei Zhou, Songtao Zhu, Chaoyi Zhao and Huimin Hu, China</p> <p>An accessibility evaluation of social media through mobile device for elderly Abdulrahman Hafez, Kathy Wang and Jessica Arfaa, USA</p> <p>Conceptualising mobile interaction scale Jean-Eric Pelet and Jashim Khan, France</p>	
176	Human Factors in Energy: Applications in Energy Generation, Transmission and Consumption Co-Chairs: Wimberly Hoyle and Gino Lim, USA	ENERGY
16:00-18:00 SANTA MONICA A	<p>A GPP-based sectionalization toward a fast power transmission system restoration Saeedeh Abbasi, Masoud Barati and Gino Lim, USA</p> <p>Effects of situation awareness for performance with offshore drilling: How does task complexity and criticality interact with elements of situation awareness? Wimberly Hoyle, Camille Peres, Ashley Shortz and Ranjana Mehta, USA</p> <p>Generation of electricity using embedded product of sensors in highways Atchaya Arivalagan and Sowmeya Nagarajan, India</p>	
177	System Interactions in Aviation and Space Missions Co-Chairs: Musso Giorgio and Yanfei Liu, Italy/China	SYSI
16:00-18:00 - SANTA MONICA B	<p>Habitability issues in long duration space missions far from earth Giorgio Musso, Simona Ferraris, Franco Fenoglio, Antonio Zafarana, Adriana Salatino and Raffaella Ricci, Italy</p> <p>Performance evaluation of numeric keypad layout based on cognitive workload Yanfei Liu, Shoupeng Huang, Yu Tian, Yuzhou Liu, Junsong Li, Feng Fu, Zhiqiang Tian and Jing Bian, China</p> <p>A study on the interface of dashboard camera designed for the elderly Shu Yao Chang, Shuo-Fang Liu, Ming-Chyuan Lin and Ming-Hong Wang, Taiwan</p> <p>Motor imagery brain-computer interface for RPAS command and control Rosa Arnaldo, Fernando Gomez Comendador, Luis Perez and Alvaro Rodriguez, Spain</p> <p>Do age and experience level affect views of pilots' towards cockpit automation Aysen Taylor and T. Steven Cotter, USA</p>	
178	Human Factors, Business Management and Society III Chair: Vesa Salminen, Finland	HFBMS
16:00-18:00 - SANTA MONICA C	<p>Value network development in industry 4.0 environment Heikki Ruohomaa, Jussi Kantola and Vesa Salminen, Finland</p> <p>Ontology based service environment supports successful aging Vesa Salminen, Päivi Sanerma, Seppo Niittymäki and Patrick Eklund, Finland</p> <p>Management style, focus and purpose in development of LEAN in university hospital Tero Reunanen and Riikka Maijala, Finland</p> <p>Identification of factors predictive of nurses' time pressure and job satisfaction in Ghanaian public hospitals Mohammed-Aminu Sanda and Elikplim Cudjoe, Ghana/USA</p> <p>Service recovery model based on the fulfillment of the value promise Mariana Alfaro, Mexico</p> <p>Applying multiple criteria decision-making approach on establishing green marketing auditing criteria in ERP system Hui-Chiao Chen, Taiwan</p>	

179	Novel Approaches for Learning and Instruction I Co-Chairs: Juan C. Castro-Alonso and Maryam Zahabi, Chile/USA	TELS
16:00-18:00 - SANTA MONICA D	<p>Computerized and adaptable tests to measure visuospatial abilities in STEM students Juan Castro-Alonso, Paul Ayres and Fred Paas, Chile/Australia/The Netherlands</p> <p>A comparison of virtual reality-based psychomotor task training with visual and haptic aiding Wenqi Ma, David Kaber, Guk-Ho Gil, Michael Clamann, Wooram Jeon, Biwen Zhu and Nancy Currie, USA</p> <p>Fading scaffolds in stem: Supporting students' learning on explanations of natural phenomena Valeria Cabello and Martin Sommer Lohrmann, Chile</p> <p>Advance use of training simulator in maritime education and training: A questionnaire study Salman Nazir and Karina Hjelmervik, Norway</p> <p>The effect of teacher questions on elementary school students' written responses on an online stem platform Roberto Araya and Enzo Aljovin, Brazil/Chile</p> <p>Impact of the dunning Kruger effect on psychology students at the University of Cuenca Luis Serpa, Roman Bunay, Karla Flores and Wilson Siguenza, Ecuador</p> <p>Exploring the potential of mixed and immersive virtual reality to promote active learning in materials science and engineering education Bilal Mansoor, Mustafa Makki, Ali Sheharyar and Tanil Ozkan, Qatar</p>	
180	Industry 4.0 and Smart Service World Chair: Walter Ganz, Germany	HSSE
16:00-18:00 - BEAUDRY A	<p>Agile development of smart services in manufacturing industries Thomas Meiren, Walter Ganz and Ilyas Khan, Germany</p> <p>Applying value proposition design for developing smart service business models in manufacturing firms Jens Neuhüttler, Inka Woyke and Walter Ganz, Germany</p> <p>The key success factors in the development of platform-based business in China: Case study on Alibaba and Jingdong Wenjuan Zhang, Ming Chen, Wenjia An and Jianan Zhang, China</p> <p>Scaling services up: A critical success factor in servitization Veronica Martinez, Andy Neely, Pavel Albores and Karolis Šikšnius, UK</p> <p>Wisdom service systems: Harmonious interactions between people and machines Md Abul Siddike, Kazuo Iwano, Kazuyoshi Hidaka, Youji Kohda and James Spohrer, Japan/USA</p>	
181	Virtual Reality Technologies for Training Applications and C2 of Unmanned Systems Co-Chairs: Katia Estabridis and Iina Aaltonen, USA/Finland	HFRUS
16:00-18:00 - BEAUDRY B	<p>Automated collision avoidance developed within a mixed reality system Josh Wilkerson, Ryan McGee, Brian Reitz, Roberto Bellido, Katia Estabridis, Gary Hewer and Ryan Erg, USA</p> <p>Multimodality evaluation metrics for human-robot interaction needed: A case study in immersive tele-robotics Iina Aaltonen, Susanna Aromaa, Kaj Helin and Ali Muhammad, Finland</p> <p>VR for divers - redirected swimming David Rousseau, USA</p>	

182	Recent Advances in Design for Disability II Co-Chairs: Jhonny Pauta-Pintado and Daniele Leonardis, Ecuador/Italy	DI
16:00-18:00 - SAN FRANCISCO	<p>A hybrid approach based on multi-sensory stimulation rooms, robotic assistants and ontologies to provide support in the intervention of children with autism Vladimir Robles-Bykbaev, Carlos Arévalo-Fernandez, Eulalia Naranjo-Cabrera, Paúl Quito-Naula, Jhonny Pauta-Pintado, Geanina Ávila and Ronald Quezada-Guerrero, Ecuador</p> <p>A survey on innovative refreshable braille display technologies Daniele Leonardis and Claudio Loconsole, Italy</p> <p>Wayfinding for visually impaired pedestrians Maria Figueiredo, Portugal</p> <p>Wayfinding systems for users with visual disabilities Terry Beco, USA</p>	
183	Recent Advances in Inclusive Product and Service Design II Co-Chairs: Daniele Busciantella Ricci and Kathryn Summers, Italy/USA	DI
16:00-18:00 HOLLYWOOD BALLROOM	<p>Designing to include judges and inner-city tenants Kathryn Summers, Amy Pointer and Michele Cotton, USA</p> <p>Inclusion in sharing-based services (I-SBS): An analytical tool Daniele Busciantella Ricci, Hua Dong, Alessandra Rinaldi and Francesca Tosi, Italy</p> <p>Universal design of user interfaces in self-driving cars Mexhid Ferati, Pietro Murano and G. Anthony Giannoumis, Norway</p> <p>Real-time cognitive load measurement for dynamic modality selection using eye tracking methods Azam Majooni, Amir Akhavan and Mona Masood, Malaysia</p> <p>Inclusive design of educational environment for diverse people Zuzana Ceresnova, Lea Rollova and Danica Koncekova, Slovakia</p>	
184	Medical Simulation: Filling the Training Gap Co-Chairs: Mark Mazzeo and Amber Linde, USA	HFSIM
16:00-18:00 SANTA BARBARA C	<p>Human simulation system for injury assessment due to repetitive loading Sultan Sultan, Karim Abdel-Malek, Jasbir Arora and Rajan Bhatt, USA</p> <p>Image enhancement using fuzzy set Gunamani Jena, Shubhashish Jena and V. Rajesh Bonam, India</p> <p>Medical simulation training: targeting medical skills to emulate real-time field injuries Amber Linde, Kevin Kunkler and Jona Caridha, USA</p>	
185	Evaluating Expert Performance Co-Chairs: Stacey Hendrickson and Martin Rasmussen, USA/Norway	HERRP
16:00-18:00 - SAN BERNARDINO	<p>Are we flooding pilots with data? Effects of situational awareness automation support concepts on decision-making in modern military air operations Christopher Roos and Olaf Brouwer, The Netherlands</p> <p>Comparison of mutual awareness in analog vs. digital control rooms Kateryna Savchenko, Heather Medema, Ronald Boring and Thomas Ulrich, USA</p> <p>Characteristics analysis for the effect of mental fatigue in monitoring task Yiqi Ai, Qianxiang Zhou, Yun Tian and Zhongqi Liu, China</p> <p>Evaluation of decision making processes in critical situations Lisa Fromm, Christian Plegge, Thomas Alexander and Gundula Zerbes, Germany</p> <p>Impact of symptom-based emergency operating procedures on operators' performance Ghulam Farid, Pakistan</p>	

186	Human Factors and Wearable Technologies III Co-Chairs: Steven Truijen and Venere Ferraro, Belgium/Italy	HFWT
16:00-18:00 - AVALON	<p>Accuracy and efficiency validation of a helmet mounted vibrotactile feedback system for aerodynamic head position during cycling Stijn Verwulgen, Thomas Peeters, Jochen Vleugels, Robbie Geysen, Guido De Bruyne, Wim Saeys and Steven Truijen, Belgium</p> <p>Wearability and user experience through user engagement: The case study of a wearable device Venere Ferraro, Mila Stepanovic and Silvia Ferraris, Italy</p> <p>A study of viewpoint and feedback in wearable systems for controlling a robot arm Colin Kilby and Anthony Whitehead, Canada</p> <p>Enabling touch-based communication in wearable devices for people with sensory and multisensory impairments Nicholas Caporusso, Luigi Biasi, Giovanni Cinquepalmi, Gianpaolo Trotta, Antonio Brunetti and Vitoantonio Bevilacqua, Italy</p>	
187	Applied Digital Human Modeling and Simulation III Co-Chairs: Akram Bayat and Victor Chan, USA/China	DHMAO
16:00-18:00 - EMERALD BAY	<p>Enhancing user identification during reading by applying content-based text analysis to eye-movement patterns Akram Bayat, Amir Hossein Bayat and Marc Pomplun, USA/Iran</p> <p>The modeling of technological trade-off in battery system design based on an ergonomic and low-cost alternative battery technology Victor Chan, China</p> <p>A virtual reality based evaluation system for the space design of products with consideration of ergonomics Ziyue Guo, Dong Zhou, Pengyan Liu and Chuan Lv, China</p> <p>Fuzzy two machine flow shop scheduling with a single transporting agent Sameer Sharma, Seema Sharma and Kawal Jeet, India</p>	

Thursday, July 20

188	Exploring Aesthetics in Emotional Aspects of Information Design Co-Chairs: XinYi Xie and Lahcene Bouabdellah, China/Algeria	APD
8:00-10:00 - SANTA ANITA A	<p>A research of graphic design of OTC medicine packaging for the elderly XinYi Xie and Delai Men, China</p> <p>Musical preferences are influenced by changes in heart rate: A trial study using step aerobics Takuma Oishi, Takashi Sakamoto and Toshikazu Kato, Japan</p> <p>Fitting School buildings to the requirements of physically disabled students in Algeria: An ergonomic study Lahcene Bouabdellah, Houda Kharbache, Mohamed Mokdad and Bouhafs Mebarki, Algeria</p> <p>Neural correlates of aesthetic sensitivity to product form Kazutaka Ueda, Azumi Maekawa, Hideyoshi Yanagisawa and Tamotsu Murakami, Japan</p> <p>The aesthetics in design and cultural research Theresa Loeb, USA</p>	

189	Vision and Memory Chair: Suguru Azebara, Japan	CN
8:00-10:00 - SANTA ANITA B	<p>Analysis of relationship between impression of video and memory using fNIRS Suguru Azebara, Toru Nakata and Toshikazu Kato, Japan</p> <p>Evaluate fatigue of blue light influence on general LCD, low blue light LCD and OLED displays Yunhong Zhang, Yingbao Yang, Yilin Chen, Yong Yang and Yu Chao, China</p> <p>Comparison of visual comfort and fatigue between watching different types of 3D TVs as measured by eye tracking Yunhong Zhang, Lei Feng, Yufeng Xu and Haibo Yang, China</p> <p>An eye-movement tracking study on influence of circularly polarized light LCD and linearly polarized light LCD on visual perception processing ability for long-term continuous use Yunhong Zhang, Jinghong Ding, Haibo Yang, Fan Zhang, Haitao Wang and Yu Chao, China</p> <p>Visual pattern complexity determination for enhanced usability in cognitive testing Catherine Honegger, Kanaka Babshet, Vered Aharonson and Ashley Gritzman, South Africa</p> <p>Research and analysis on the influence factors of visual reaction time Minxia Liu, China</p>	
190	Industrial Design in Developing Countries: Ergonomics Perspective Co-Chairs: Sougata Karmakar and Francisco Rebelo, India/Portugal	ED
8:00-10:00 - SANTA ANITA C	<p>Ergonomic evaluations and design interventions for industrial plating shop-floor Sougata Karmakar and R. Solomon, India</p> <p>Juice packaging design: Effects of transparency on consumers' perception leading toward purchase preference for packaged juice Swati Pal, Shivani Holkar, Abhishek Yevalkar and Amrita Bhattacharjee, India</p> <p>Accidents and risk factor analysis among marble carving artisans of central India due to traditional hand-tool use Sangeeta Pandit and Shubham Bharti, India</p> <p>Design solution of shoe sole (base of the footwear) preparation in traditional hand sewn footwear manufacturing: A case study on Kolhapuri Chappal Urmi Salve, Ganesh Jadhav, Maharashtra and Hemant Shete, India</p> <p>Implementation of AI techniques to analyze an Indian SME for the quality of life Ruchi Chaudhary and Ajit Katiyar, India</p>	
191	Human Factors in Healthcare Process Task Analysis Co-Chairs: Najmedin Meshkati and Nancy Lightner, USA	HC
8:00-10:00 - SAN GABRIEL A	<p>A proactive risk assessment framework to enhance patient safety in operating rooms Maryam Tabibzadeh and Gelareh Jahangiri, USA</p> <p>Taxonomy of communications in the operating room Carlos Velasquez, Tian Zhou, Rashid Mazhar, Amer Chaikhouni and Juan Wachs, USA</p> <p>Methodology for modeling events and activities based on field observations Lusi Morhayim, Kartikeya Date, Davide Schaumann and Yehuda Kalay, Israel</p> <p>The use of placebo in clinical practice Anna Wouters, The Netherlands</p> <p>The process ergo-medical design allow to create innovative and performant product which an system existed yet on nature Rosa Virgnie, Millet Antoine and Coromp Pierre, France</p>	

192	Information Management: Techniques and Applications Co-Chairs: Marcia Ikezaki Ferrari and Andreas Schrader, Brazil/Germany	CCIoT
8:00-10:00 - SAN GABRIEL B	<p>The modernization & transformation journey - how cognitive computing is disrupting the line of business application John Head, USA</p> <p>Personalized instructions for self-reflective smart objects Jan Pascal Maas, Daniel Burmeister and Andreas Schrader, Germany</p> <p>The human nervous system as a model for function allocation in human-automation interaction Behice Durgun, Turkey</p> <p>Citizen science involving collections of standardized community data Werner Leyh, Maria Fava, Narumi Abe, Sandra Cavalcante, Leandro Giatti, Carolina Monteiro de Carvalho, Homero Fonseca Filho and Clemens Jacobs, Brazil/Germany</p> <p>The signs of semiotic engineering in the IOT interaction design Marcia Ikezaki Ferrari, Silvia Bim and Plinio Aquino, Jr., Brazil</p> <p>ExperTI: A knowledge based system for intelligent service desks using Free Text Alejandro Bello Ruiz, Andrés Melgar Sasieta and Daniel Pizarro, Peru</p> <p>The environmental user interface (EUI) for enhancing human technology interactivity Si Jung Kim, USA</p>	
193	Human Factors in World Class Management Systems I Chair: Stefan Trzcielinski, Poland	MFG
8:00-10:00 - SAN GABRIEL C	<p>How enterprises identify market opportunities: Research results and findings Stefan Trzcielinski and Jowita Trzcielinska, Poland</p> <p>World class remanufacturing production systems: An analysis of Mexican maquiladoras Karina Cecilia Arredondo-Soto, Jaime Sanchez-Leal, Rosa María Reyes-Martinez, Enriqueta Salazar-Ruiz and Aide Aracely Maldonado-Macías, Mexico</p> <p>Guideline for the implementation of human-oriented assistance systems in smart factories Alexander Arndt and Reiner Anderl, Germany</p> <p>Relationship between lean manufacturing and ergonomics Reza Khani Jazani, Ali Salehi Sahl Abadi and Seyed Sajad Mousavi, Iran/Italy</p> <p>Human capital in the development of mechanisms improving the agility of knowledge-based organizations Hanna Wlodarkiewicz-Klimek, Poland</p> <p>Workforce management 4.0 - Assessment of human factors readiness towards digital manufacturing Nadia Galaske, Alexander Arndt, Hermann Friedrich, Kurt D. Bettenhausen and Reiner Anderl, Germany</p>	
194	Safety and Ergonomics II Chair: Regina Pope Ford, USA	SMHF
8:00-10:00 - SANTA BARBARA A	<p>Smart phone use and the increased risks of cumulative trauma disorders in children Regina Pope Ford, USA</p> <p>Ergonomic assessment tool for real-time risk assessment of seated work postures Chika Mgbemena, Ashutosh Tiwari, Yuchun Xu, John Oyekan and Windo Hutabarat, UK</p> <p>Analysis of infrared imaging during vertical handling tasks in workers with different levels of obesity Ana Colim, Pedro Arezes, Paulo Flores, Ricardo Vardasca and Ana Braga, Portugal</p> <p>Framework for safety and security response training Nyambayar Davaadorj, Ichiro Koshijima and Tomomi Aoyama, Japan</p> <p>Three times smart – smart workplaces, smart lighting & smart glass Sandra Preto and Cristina Caramelo Gomes, Portugal</p> <p>Fit for duty: Managing worker fatigue Mike Harnett, Canada</p> <p>Effects of gender, character type, and layout of Chinese characters on eye-tracking-based recognition behaviors Yanfeng Zheng, Kai-Way Li, Hsin-Chu, Lang Gan, Caijun Zhao and Huiqiao Jia, China</p>	

195	Biomechanics Co-Chairs: Stephen Morrissey and Dennis Jones, USA	PEHF
8:00-10:00 - SANTA BARBARA B	<p>Evaluation of two types of maximal voluntary contraction and the effect of electrode positioning in recordings of muscular activity in extensor carpi radialis Camilla Dahlqvist, Catarina Nordander, Lothy Granqvist and Gert-Åke Hansson, Sweden</p> <p>Study on skeletal muscle disorders in dentistry practitioners caused by repetitive movements and fixed postures Rodrigo Dominguez and Katherine Aran, Chile</p> <p>Hand arm vibration, grip strength assessment and the prevalence of health disorders among stone crushing workers Zahid Rashid, Muhammad Shafiq, Paola Cocca, Filippo Marciano and Aisha Tayyab, Pakistan/Italy</p> <p>Understanding shoulder injury Stephen Morrissey, USA</p> <p>Firing of a cannon: Biomechanical evaluation of ergonomic hazards Theresa Stack and Lee Ostrom, USA</p> <p>Can super-imposed muscle contractions increase the variation pattern of muscle activity during an assembly task? Leticia Janeiro, Marina Cid, Afshin Samani, Pascal Madeleine and Ana Beatriz Oliveira, Brazil</p> <p>Working conditions and musculoskeletal / ergonomic disorders in a manufacturing facility – a longitudinal research study Dennis Jones, USA</p>	
196	Automation V Co-Chairs: Patrick Langdon and Eugen Altendorf, UK/ Germany	RR
8:00-10:00 - SACRAMENTO	<p>Research on effect of alert level on driver’s decision-making with use of self-driving vehicle system Wenjie Cui, Ronggang Zhou, Yunhao Yan, Linghua Ran and Xin Zhang, China</p> <p>Does shifting between conditionally and partially automated driving lead to a loss of mode awareness? Anna Feldhütter, Christoph Segler and Klaus Bengler, Germany</p> <p>Alpha band activity to predict errors in detecting automation failures Dean Cisler, Randall Drury, Steven Chong, Shawn Mulvey, Pamela Greenwood and Carryl Baldwin, USA</p> <p>Information expectations in highly and fully automated vehicles Cyriel Diels and Simon Thompson, UK</p> <p>Obtaining design requirements from the public understanding of driverless technology Patrick Langdon, Ioannis Politis, Mike Bradley, Lee Skrypchuk and John Clarkson, UK</p> <p>Manual takeover and handover of a simulated fully autonomous vehicle within urban and extra-urban settings Phillip Morgan, Chris Alford, Craig Williams, Graham Parkhurst and Tony Pipe, UK</p>	
197	Rail Passengers Co-Chairs: James Pritchard and Bin Wang, UK/China	RR
8:00-10:00 - BEVERLY	<p>Providing improved crowding information to provide benefits for rail passengers and operators James Pritchard, UK</p> <p>User experience evaluation on ticket gage of subway station: A repertory grid approach Linna Hu, Yimu Yang, Long Liu and Hua Dong, China</p> <p>A study on quantitative evaluation of relationship between longitudinal shock and ride comfort by train braking Toshiro Miura and Toshiyuki Izumi, Japan</p> <p>Physical and human factors in comfort while riding in the subway Bin Wang and John Zacharias, China</p> <p>Guidelines for electronic systems designed for aiding the visually impaired people in metro networks Eliete Mariani and Marcelo Giacaglia, Brazil</p>	

Friday, July 21

198	Social and Occupational Ergonomics in Industry Chair: Dennis Jones, USA	SOE
8:00-10:00 - PALOS VERDES	<p>Psychosocial aspects of new technology implementation Dennis Jones, USA</p> <p>A study of the analysis framework to construct the mechanism model of intellectual productivity changes affected by workplace environment Kimi Ueda, Daisuke Kamihigashi, Hiroshi Shimoda, Hirotake Ishii, Fumiaki Obayashi and Kazuhiro Taniguchi, Japan</p> <p>Workplace violence: The change laboratory as a tool for expansive learning in the activity of social reintegration of adolescent offenders Luciana Morgado, Rodolfo Vilela, Mara Takahashi, Silvio Beltramelli Neto and Elisa Camuzzo, Brazil</p> <p>A survey on occupational safety and health awareness among school teachers in Kelantan Nurul Husna Che Hassan, Nor Kamilah Makhtar, Ahmad Rasdan Ismail, Muhammad Azwadi Sulaiman, Noor Syuhadah Subki, Noor Adilah Hamzah, Suriatini Ismail, Nik Zulkarnaen Khidzir, Khairul Azhar Mat Daud and Mohd Firdaus Mahamad Ali, Malaysia</p> <p>Implications of industrial logic for the work activity in a public service company in Brazil Daniele Maciel, Claudio Brunoro and Laerte Sznelwar, Brazil</p>	
199	Ergonomics in Sustainable Architecture Co-Chairs: Eduardo Gonçalves and Wojciech Bonenberg, Portugal/Poland	SUPI
8:00-10:00 - SAN PEDRO	<p>Regenerative ergonomic design – bio-centric evolution Leszek Świątek, Poland</p> <p>User-oriented method as a way to humanize the user-energy relationship in public lighting Eduardo Gonçalves, Ana Ferreira and Henri Christians, Portugal/The Netherlands</p> <p>Barriers to implement building information modeling (BIM) into public project sector in Saudi Arabia Abdulaziz Banawi, Saudi Arabia</p> <p>Developers knowledge and compliance towards development control regulations in the Bolgatanga municipality Callistus Tengan, Clinton Ohis Aigbavboa and Stephen Allan Balaara, South Africa</p>	
200	Ergonomics and Usability Evaluation I Chair: Johannes Schwank, Germany	UUE
8:00-10:00 - SANTA MONICA A	<p>Visualizing uncertainty in node-link diagrams - a user study Johannes Schwank, Sebastian Schöffel and Achim Ebert, Germany</p> <p>Measuring user experience in situ: Use emotion data to assess user experience Yuanyuan Chen, Fang You, Jianmin Wang and Ronald Schroeter, China</p> <p>The usage of UTAUT model for digital audio workstation user experience evaluation Darko Etinger and Tihomir Orehovački, Croatia</p> <p>Hesitation analysis for exploring difficulties during mental operation in RTA furniture assembly Ting-Ju Kuo, Yao-Ting Huang, Yi-Chia Chien and Philip Hwang, Taiwan</p> <p>Using heuristic evaluation to enhance the usability: A model for illiterate farmers in Pakistan Javed Sheikh and Anam Arshad, Pakistan</p> <p>Usability evaluation of ticketing system of Metro Manila train network Jeremiah Medina, Troy Jerson Canicosa, Benjamin Guzman, II, Benette Custodio and Alyssa Jean Portus, Philippines</p> <p>The effect of WECHAT emoticon on the cognitive, emotional and social attributes of user experience Wu Lei, Juan Li and LiJun Mou, China</p>	

201	Physical Fitness and Exercise Co-Chairs: Yujiro Kawata and Roman Kalina, Japan/Poland	SIPOR
8:00-10:00 - SANTA MONICA B	<p>Development of a depth-camera based instructional tool for resistive exercise during spaceflight Linh Vu, Han Kim, Elizabeth Benson, William Amonette, Andrea Hanson, Jeevan Perera and Sudhakar Rajulu, USA</p> <p>The effect of awareness of physical activity on the characteristics of motor ability among five-year-old children Akari Kamimura, Yujiro Kawata, Shino Izutsu and Masataka Hirose, Japan</p> <p>Effect of relative age on physical size and motor ability among Japanese elementary schoolchildren Yujiro Kawata, Akari Kamimura, Shino Izutsu and Masataka Hirose, Japan</p> <p>Non-apparatus, quasi-apparatus and simulations tests in diagnosis positive health and survival abilities Roman Kalina and Władysław Jagiełło, Poland</p> <p>Combined effects of lower limb muscle fatigue and decision making to the knee joint during cutting maneuvers based on two different position-sense-acuity groups Xingda Qu and Xingyu Chen, China</p> <p>The effects of partial sleep deprivation for two consecutive nights on the shooting accuracy of basketball players Kamran Hosseinzadeh Ghasemabad, Malaysia</p>	
202	Understanding and Transforming Human-System Interactions: Practical Applications Chair: Filipa Carvalho, Portugal	SYSI
8:00-10:00 - SANTA MONICA C	<p>Investigation of musculoskeletal symptoms and associated risk factors in the Horeca sector Rute Alves, Rui Melo and Filipa Carvalho, Portugal</p> <p>Ergonomic work analysis of industrial quality control workstations Élson Marques, Rui Melo and Filipa Carvalho, Portugal</p> <p>A comparative analysis of human-mediated and system-mediated interruptions for multi-user, multitasking interactions Nia Peters, Griffin Romigh, Bhiksha Raj and George Bradley, USA</p> <p>HFE application in human system interface design of nuclear power plant Xiaoyang Ming, Guangwei Yu and Shiguang Deng, China</p> <p>Task design in human-robot-interaction scenarios – challenges from a human factors perspective Patricia Rosen and Sascha Wischniewski, Germany</p> <p>Design of a haptic virtual system for improving fine motor skills in children with autism Huan Zhao, Zhaobo Zheng, Amy Swanson, Amy Weitlauf, Zachary Warren and Nilanjan Sarkar, USA</p>	
203	Human Factors, Business Management and Society IV Co-Chairs: Tero Reunanen and Marcus Penttinen, Finland	HFBMS
8:00-10:00 - SANTA MONICA D	<p>Working life within a hybrid world – how digital transformation and agile structures affect human functions and increase quality of work and business performance Wilhelm Bauer, Christian Vocke and Sebastian Schlund, Germany</p> <p>Avoiding wow-gaps through wow-canvas in business development Tero Reunanen, Marcus Penttinen and Arndt Borgmeier, Finland</p> <p>History of social responsibility in Mexico: A review of the literature Juan Ramon Pérez-Morales, Alfonso Aldape-Alamillo, Rosa María Reyes-Martínez, Humberto Híjar-Rivera and Velia H. Castillo-Pérez, Mexico</p> <p>Measurement of organizational happiness Eyal Eckhaus, Israel</p> <p>Universities of the future: Universities in transition under the influence of stakeholders' changing requirements Marcin Geryk, Poland</p> <p>Finding the wow-factor to enhance business Tero Reunanen, Marcus Penttinen and Arndt Borgmeier, Finland</p> <p>Implicit acquisition of consumers' motivations for writing product reviews online Dongning Yan, Zhijun Fan and Xiaoqing Zhang, China</p>	

204	Tacit Knowledge Education Using Traditional Wisdom Co-Chairs: Hiroyuki Hamada and Kohei Okado, Japan	TELS
8:00-10:00 - BEAUDRY A	<p>Development of learning habit scale and situational analysis of Japanese junior high school student learning habits Kohei Okado, Hiroyuki Hamada and Noriyuki Kida, Japan</p> <p>Education of the hospitality of the employees in the bridal industry Shigeyuki Takami, Hiroyuki Hamada, Tomoko Ota, Noriyuki Kida, Jeanne Murata, Noriko Gokita and Aya Takei, Japan</p> <p>Evaluation of recreational picture coloring on elderly nursing home patients by Mirai pen Kanta Ito, Zhiyuan Zhang, Suguru Teramura, Takanori Kitamura, Teruko Doi, Tomoko Ota and Hiroyuki Hamada, Japan</p>	
205	Service Science and UX Design Co-Chairs: Shrikant Parikh and Debra Satterfield, India/USA	HSSE
8:00-10:00 - BEAUDRY B	<p>Factors influencing academic success for design students: A study of curricular expectations and ethical issues Debra Satterfield, USA</p> <p>Customer value calculus – an analogy in a service system network Md Abul Siddike, Stephen Kwan and Youji Kohda, Japan/USA</p> <p>Organization & cultural impact of microservices architecture Sunil Joshi and Christine White, USA</p>	
206	Smart Tech, Web and Media for All I Chair: Alessandra Rinaldi, Italy	DI
8:00-10:00 HOLLYWOOD BALLROOM	<p>Design and smart technologies for physical activity as key factors in promoting quality of life and social inclusion Alessandra Rinaldi and Francesca Tosi, Italy</p> <p>Technological study of Brazilian government websites Reinaldo Ferraz and Newton Calegari, Brazil</p> <p>Assessment of users impressions of mobile devices vibrations and how such impressions affect the recognition of information Masayoshi Kubo, Japan</p>	
207	Cognitive Modeling Chair: Vladislav (Daniel) Veksler, USA	HFSIM
8:00-10:00 - SANTA BARBARA C	<p>A stock market model based on the interaction of heterogeneous traders' behavior Ye Yuan, Xuebo Chen and Qiubai Sun, China</p> <p>Diagnosis of Alzheimer disease through an artificial neural network based system Ivo Ramalhosa, Pedro Mateus, Victor Alves, Henrique Vicente, Filipa Ferraz, João Neves and José Neves, Portugal/USA</p> <p>The use of computational cognitive models to support real-time state assessment Matthew Walsh, Leslie Blaha, Christopher Fisher, Glenn Gunzelmann, Veda Setlur and Bella Veksler, USA</p> <p>Commonalities in mechanisms responsible for vigilance and sleep deprivation effects Bella Veksler and Glenn Gunzelmann, USA</p> <p>Separation of function and style for enabling decision aids, testing, and training agents Vladislav Veksler and Norbou Buchler, USA</p> <p>Using cognitive modeling for adaptive automation triggering Daniel Cassenti and Vladislav Veksler, USA</p> <p>The central role of heuristic search in cognitive computational systems Wai-Tat Fu, USA</p>	

208	Advanced Analysis Techniques for Human Error Co-Chairs: Jinkyun Park and Sarah Ewing, Korea/USA	HERRP
8:00-10:00 - SAN BERNARDINO	<p>Detection of typical progress patterns of industrial incidents by text mining technique Toru Nakata and Mohammad Sohrab, Japan</p> <p>Use of a big data mining technique to extract relative importance of performance shaping factors from event investigation reports Jinkyun Park, Yochan Kim and Wondea Jung, Korea</p> <p>Text mining for procedure-level primitives in human reliability analysis Sarah Ewing, Ronald Boring, Martin Rasmussen and Thomas Ulrich, USA/Norway</p> <p>The virtual human reliability analyst Martin Rasmussen, Ronald Boring, Thomas Ulrich and Sarah Ewing, Norway/USA</p> <p>A dynamic mechanistic model of human response proposed for human reliability analysis Yunfei Zhao and Carol Smidts, USA</p> <p>The general methodology of an integrated human event analysis system (IDHEAS-G): Bridging human factors and human reliability analysis Jing Xing and James Chang, USA</p> <p>Study on human error management culture in medium and small scale manufacturing setups of Mysore City in India Skanda Moda Gururajaroo and Ramesh Vajram, India</p>	
209	Ergonomics Design and Evaluation III Co-Chairs: Ana Moreira da Silva and Chirapriya Mondal, Portugal/India	ED
8:00-10:00 - SAN FRANCISCO	<p>Drawing as reasoning tool in UX design - doodling and drawing as foundation for project planning José Silva, Fernando Moreira da Silva, Daniel Raposo and João Neves, Portugal</p> <p>Ergonomics in the design conceptual process: The case study Daciano da Costa Ana Moreira da Silva, Portugal</p> <p>Travel kit organizer for carry-on luggage design contribution to traveler's comfort Paula Mercedes Neves and Fernando Moreira da Silva, Portugal</p> <p>A study exploring the facets of visual elements in ethnic products: Case study of sarees from West Bengal Chirapriya Mondal and Sougata Karmakar, India</p> <p>Introducing ergonomics into innovations of fire escaping window Yan Zhao, China</p> <p>Web accessibility: Definitions, assumptions and relations to universal design Edson Souza, Brazil</p> <p>Potentials of a face reading tool to digital game evaluation and development: A preliminary study Yanick Trindade, Francisco Rebelo and Paulo Noriega, Portugal</p>	
210	Cybersecurity Tools and Analytics II Co-Chairs: Mandeep Pannu and Martin Mihajlov, Canada/Macedonia	CYBER
8:00-10:00 - AVALON	<p>Eye tracking graphical passwords Martin Mihajlov and Borka Jerman Blazić, Macedonia</p> <p>Understanding and discovering SQL injection vulnerabilities Fahad Al-Harby, Abdullaziz Sarhan and Shehab Farhan, Saudi Arabia</p> <p>Case study on street-wide cyber security exercise management: National cross-sectoral exercise Tomomi Aoyama, Kenji Watanabe, Akihiro Tsuchiya and Ichiro Koshijima, Japan</p> <p>Grid framework to address password memorability issues and offline password attacks Mohd Anwar and Paul Biocco, USA</p>	
10:00 - 10:30 Refreshments will be provided in California Ballroom		

Friday, July 21

211	Emotion and the Qualitative Side of Experience Chair: Miso Kim, USA	APD
10:30-12:30 - SANTA ANITA A	<p>The pain and pleasure of autonomy: The role of negative emotion in serviced reality storytelling Miso Kim and Youngsoo Lee, USA/South Korea</p> <p>Soma-deep as the marker for idealized experience Stephen Neely, USA</p> <p>Design for dignity and procedural justice Margaret Hagan and Miso Kim, USA</p> <p>Ritual design: Crafting team rituals for meaningful organizational change Fatih Ozenc and Margaret Hagan, USA</p> <p>A framework for empathy in design Terese Cober, USA</p>	
212	Gray Zone Challenges Chair: Mark Hoffman, USA	CCDM
10:30-12:30 - SANTA ANITA B	<p>Quantum models for cross-cultural decision making in the gray zone Timothy Darr, Richard Mayer and Timothy Ramey, USA</p> <p>Examining how perception of external threat influences the popularity of government leaders Michael Bernard and Asmeret Naugle, USA</p> <p>A fast track approach towards automatic detection of Gray Zone activities from text Jason Schlachter and Jennifer Lautenschlager, USA</p> <p>Challenges and opportunities in gray zone combat Martin Hofmann and Mark Hoffman, USA</p> <p>Intra-group tension under inter-group conflict: A generative model using group social norms and identity Roger Whitaker, Liam Turner, Gualtiero Colombo, Dinesh Verma, Diane Felmlee and Gavin Pearson, UK/USA</p> <p>Security challenges in the 21st century: The changing nature of risk, security and sustainability Glenn Pierce, Paul Cleary, Curtis Holland and Gordana Rabrenović USA</p>	
213	Human Work Interactions: Design Beyond Human Factors Co-Chairs: Arminda Lopes and Pedro Campos, Portugal	ED
10:30-12:30 - SANTA ANITA C	<p>Establishing dynamic ergonomic evaluation index system for tractors based on the theory of PLC-A Delphi survey conducted in China Bianbian Qiu, Jiping Zhou, Hui Shen and Zaixiang Zheng, China</p> <p>Human work interaction design beyond human factors Arminda Guerra Lopes, Pedro Campos and Barbara Barricelli, Portugal/Italy</p> <p>Direct digital manufacturing for rapid turnaround of ergonomic tools and safety solutions in manufacturing Rebecca Cook, USA</p> <p>Do Zenware applications reduce the digital distraction of knowledge workers? A qualitative study based on expert interviews Damian Gerbaulet and Oliver Korn, Germany</p> <p>Risk assessment for small scale gold surface mining at Licuan Baay Abra in the Philippines Isachar Bernaldez and Virginia Soriano, Philippines</p> <p>Ageing at work: How to design a lifelong workplace? Sara Ramos and Helena Carvalho, Portugal</p> <p>Integrating activity analysis with product designer Carla Sirqueira, Claudia Mazzoni and Fabiano Porfílio, Brazil</p>	

214	Product Design Co-Chairs: Yueqing Li and Eric Brangier, USA/France	ED
10:30-12:30 - SAN GABRIEL A	<p>Ergonomics evaluation of a manual braking system for skateboards Uzairulhassan Syed, Manoj Patil, Yueqing Li and Brian Craig, USA</p> <p>Medical device design for improving orthostatic hypotension during supine-to-stand (STS) Fong-Gong Wu and Xin-An Chen, Taiwan</p> <p>The effect of ergonomic to improve the convenience of the consumer packaging of edible oil industry Rahul Tirpude, Tanweer Alam and Narayan Saha, India</p> <p>Tasman chair: Ergonomic seat for users of the drawing room of the Federal Institute of Minas Gerais Santa Luzia campus Thais Quintão and Wemerton Evangelista, Brazil</p>	
215	Human Factors in Patient Safety Co-Chairs: Helen Fuller and Sherman Lau, USA	HC
10:30-12:30 - SAN GABRIEL B	<p>Learning effects of perturbation to postural control in diabetics with neuropathy Byungjoon Kim and Tracey Kim, USA</p> <p>Application of medication management technologies in a healthcare systems pharmacy: A retrospective appraisal Sherman Lau, USA</p> <p>Considering ergonomics in the accident and emergency department: Possible or not Ahmad Rasdan Ismail, Shaik Farid Abdull Wahab and Rohayu Othman, Malaysia</p> <p>What facets of emotional intelligence influence residents' emergency care performance?: A simulation study Léonore Bourgeon, Anthony Vacher, Mourad Bensalah, Jean-Claude Ardouin and Bruno Debien, France</p> <p>Using disaster-scenario simulation in healthcare to test preventative solutions to never events Maryanne Mariyaselvam and Peter Young, UK</p>	
216	Human Factors in World Class Management Systems II Co-Chairs: Lucia Botti and Arturo Realyvásquez, Italy/Mexico	MFG
10:30-12:30 - SAN GABRIEL C	<p>The impact of ergonomics on the design of hybrid multi-model production lines in lean manufacturing Lucia Botti, Cristina Mora, Francesco Piana and Alberto Regattieri, Italy</p> <p>Macroergonomic compatibility index for manufacturing systems. A case study Arturo Realyvásquez, Aide Aracely Maldonado-Macias, Jorge García-Alcaraz and Alejandra Arana, Mexico</p> <p>Group technology supporting application of lean manufacturing (LM) based on a polish case study: Measurable results and real problems Mariusz Bednarek, Poland</p> <p>Resource flexibility of a seaport as a cluster. Regulatory conditions and management capabilities (on the example of Poland) Janusz Rymaniak and Mariusz Piotrowski, Poland</p> <p>Complementarity of modern management methods and tools, and its impact on economic and organizational performance of enterprises. Empirical results from Polish enterprises Edmund Pawlowski and Krystian Pawlowski, Poland</p> <p>Framework for the systematical design of productivity strategies Marc-Andre Weber, Tim Jeske, Frank Lennings and Sascha Stowasser, Germany</p>	

Friday, July 21

217	Safety Management and Loss Prevention II Co-Chairs: Manikam Pillay and Toni Waefler, Australia/Switzerland	SMHF
10:30-12:30 - SANTA BARBARA A	<p>Managing tacit knowledge in safety critical systems Toni Waefler, Katrin Fischer, Christian Kunz and Nina Saric, Switzerland</p> <p>Advancing organizational health and safety management: Are we learning the right lessons? Manikam Pillay, Australia</p> <p>Anomaly in safety management - is it constantly possible to make safety compatible with economy? Atsuo Murata and Makoto Moriwaka, Japan</p> <p>Needs and opportunities for applying voluntary occupational health and safety management systems in the high-hazard U. S. dairy production industry Daniel Autenrieth and Noa Roman-Muniz, USA</p> <p>Factors which affect construction safety in different types of construction work Rita Yi Man Li, Daniel Chi Wing Ho, Beiqi Tang and Herru Ching Yu Li, Hong Kong/UK</p> <p>Cooperative approach of game theory applied to health and safety management Valentina Villa and Giuseppe Di Giuda, Italy</p>	
218	Ergonomic Evaluations Co-Chairs: Carisa Harris Adamson and Mark Boocock USA/New Zealand	PEHF
10:30-12:30 - SANTA BARBARA B	<p>The effects of an intervention focusing on hip flexion and posterior movement of the pelvis on postural stability, spinal loading and lumbar flexion during reaching and lifting Grant Mawston, Mark Boocock and Wayne Milicich, New Zealand</p> <p>Biomechanical evaluation of hotel luxury bed making while using a mattress lift tool and fitted sheets Carisa Harris Adamson, Emma Lam, Stephen Hill and Andrew Smith, USA</p> <p>An ergonomic analysis of the traditional Sorbetes cart Krisella Robles, Angela Marie Fausto, Carla Ocampo and Benette Custodio, Philippines</p> <p>Ultraviolet radiation in sunlight and artificial lighting systems: Are they alike? Sandra Preto and Cristina Caramelo Gomes, Portugal</p> <p>Ergonomic assessment of the lifting tasks performed by north Indian workers in LPG cylinder distribution supply chain Sachin Kapur and Mahipal Lamboria, India</p> <p>Development of domestic manual handling hazards rating expert system for women Adeyemi Oluwole and Akinyemi Olasunkanmi, Nigeria</p> <p>A look at the ergonomic situation of the bakery industry in the city of Quito Esteban Carrera, Oswaldo Jara and Fanny Ballesteros, Ecuador</p>	
219	Vulnerable Road Users Co-Chairs: Catherine Berthelon and Manuel Silvestri, France/Italy	RR
10:30-12:30 - HOLLYWOOD BALLROOM	<p>Operational and safety analysis of signage and pavement marking treatments in Puerto Rico dynamic toll lane using a driving simulator Bryan Ruiz, Didier Valdes, Benjamin Colucci, Johnathan Ruiz, Ricardo Garcia and Enid Colon Torres, Puerto Rico</p> <p>Driver - cyclist interaction under different bicycle crossroad configurations Francesco Bella and Manuel Silvestri, Italy</p> <p>Is the driving behavior of young novices and young experienced drivers under alcohol linked to their perceived effort and alertness? Catherine Berthelon and Edith Galy-Mary, France</p> <p>Bicycling in developing countries – the role of gender Rahul Thozhuvanur Mana, Meghna Verma and Ashish Verma, India</p> <p>Semantic trajectory – based pedestrian’s crossing event detection and mining Rolla Almodfer and ShengWu Xiong, China</p>	

220	Human Factors, Sustainable Urban Planning and Infrastructure Co-Chairs: Sebastian Schöffel and Johannes Schwank, Germany	SUPI
10:30-12:30 - SAN BERNARDINO	<p>Analyzing time-dependent infrastructure optimization based on geographical-information system technologies Sebastian Schöffel and Johannes Schwank, Germany</p> <p>Managing complex scenarios for optimization of infrastructure transformations in rural areas Johannes Schwank, Sebastian Schöffel and Achim Ebert, Germany</p> <p>Gaming as a driver for social behavior change for sustainability Satyakam Sharma and Kin Wai Michael Siu, Hong Kong</p> <p>A new methodology for partnering transportation projects John Hannon and Fan Zhang, USA</p> <p>A conceptual building-block and practical OpenStreetMap-Interface for sharing references to hydrologic features Werner Leyh, Brazil</p> <p>Developing an urban sustainability assessment framework for developing economics: Iraq case study Raed Mohammed Ameen, UK</p>	
221	Smart Design and User Experience I Co-Chairs: Bo Zhou and Hanne Sørum, Germany/Norway	UUE
10:30-12:30 - PALOS VERDES	<p>Smart blanket: A real-time user posture sensing approach for ergonomic designs Bo Zhou, Monit Shah Singh, Muhammet Yildirim, Ivi Prifti, Heber Cruz Zurian, Yorman Munoz Yuncosa and Paul Lukowicz, Germany</p> <p>Visual attention and recall in website advertisements: An eye tracking study Hanne Sørum, Norway</p> <p>The IOT design deck: A tool for the co-design of connected products Massimiliano Dibitonto, Federica Tazzi, Katarzyna Leszczynska and Carlo Maria Medaglia, Italy</p> <p>User experience research on automotive interior lighting design Xingyu Luo and Wen Luo, China</p> <p>Should an artificial window substitute a natural one? Sandra Preto and Cristina Caramelo Gomes, Portugal</p> <p>iTunes®: User evaluation Lizie Nascimento, Iara Margolis, Tareq Ahram, Laura Martins and Walter Correia, Brazil/USA</p> <p>Usability model based on traditional metrics and physiological and eye tracking variables depending on user profile Jose Lapparra-Hernández, Juanma Belda-Lois and Alvaro Page, Spain</p>	
222	Panel: Human Factors in Cybersecurity Co-Chairs: Derek Bryan, Melissa Walwanis and Denise Nicholson, USA	CYBER
10:30-12:30 - SAN PEDRO	<p>Human performance interventions for a competent cyber workforce Melissa Walwanis and Derek Bryan, USA</p> <p>Architectures for simulation of cyber threats in synthetic training and exercise environments Derek Bryan, USA</p> <p>Objective measures of performance in dynamic decision making in cyber time Jennifer Pagan, USA</p> <p>Adaptive training for complex operational cyberspace training Wendi Van Buskirk, USA</p> <p>Team training considerations for cyber workforce Heather Priest, USA</p> <p>Human modeling for evaluating and developing testing instruments for cyber warriors Robert Thomson and Denise Nicholson, USA</p>	

223	Human Factors, Business Management and Society V Co-Chairs: Mahdi Safa and Karina Arredondo, USA/Mexico	HFBMS
10:30-12:30 - SANTA MONICA A	<p>Technological capability of the small and medium-sized enterprises manufacturing sector Maria Marcela Solis-Quinteros, Teresa Carrillo-Gutiérrez, Karina Cecilia Arredondo-Soto and Luis Alfredo Ávila-López, Mexico</p> <p>A methodology for strategic port human resource management: Knowledge creation and learning Mahdi Safa, Kelly Weeks and Rolf Stromberg, USA</p> <p>E- service adoption: The three Q model Margaret Luo, Taiwan</p> <p>Relationships matter: Director and revenue performance in the Fortune 500 network Mark Abdollahian, Zining Yang and John Thomas, USA</p> <p>Online anonymity and its relationship to group identification in online communities Kyungkyu Kim, Jaeseong Lee and Il Sup Lee, South Korea</p> <p>The human factors research of police officers retirement decision - case study of fifth special police corps Luke H. C. Hsiao, Yung-Ching Chou and Albert Shangpao Yeh, Taiwan</p>	
224	Military Undergraduate and Graduate Education in Human Factors and Human Systems Integration Chair: Chad Tossell, USA	TELS
10:30-12:30 - SANTA MONICA B	<p>An overview of the air force institute of technology's human systems master's degree program Jeffrey Parr, Michael Miller and Christina Rusnock, USA</p> <p>Preparing human systems integration students to become human systems integration practitioners Lawrence Shattuck, USA</p> <p>Teaching and conducting research at the U. S. Military academy Ericka Rovira, USA</p> <p>Human factors and systems engineering curriculum at the US Air Force Academy Brian Tidball, USA</p> <p>Human factors curriculum at USAFA Caroline Kurtz, USA</p>	
225	Human Side of Service Engineering I Co-Chairs: Aura Matias and Carolyn Brown, Philippines/USA	HSSE
10:30-12:30 - SANTA MONICA C	<p>Use of robotic exoskeleton devices in the rehabilitation of patients following stroke and injury Amy Millan, USA</p> <p>Prevalence and risk factors of respiratory problems among solid waste collectors in the Philippines Lizabeth Mariano and Aura Matias, Philippines</p> <p>Work-related factors affecting sustained alert state among bank security personnel in the Philippines Yoshiki Kurata and Aura Matias, Philippines</p> <p>The negative effect that benefit delay in service consumption causes to a customer and the countermeasure against it Kazuhiro Fujimura, Japan</p> <p>Prevalence, severity, and risk factors of work-related musculoskeletal disorders among stevedores in a Philippine break-bulk port terminal Keneth Sedilla and Aura Matias, Philippines</p> <p>A task analysis of small-scale jewelry craft workers to investigate the effects of work system elements and sitting mobility on body discomfort Hazel Caparas and Aura Matias, Philippines</p>	

226	Human-Robot Teaming Co-Chairs: Mustafa Demir and Meir Pachter, USA	HFRUS
10:30-12:30 - SANTA MONICA D	<p>Human robot team development: An operational and technical perspective Jurriaan Van Diggelen, Rosemarijn Looije, Mark Neerinx and Jasper van der Waa, The Netherlands</p> <p>Team synchrony in human-autonomy teaming Mustafa Demir, Nathan McNeese and Nancy Cooke, USA</p> <p>Optimal human-machine teaming for UAV sequential inspection and target recognition Krishna Kalyanam, David Casbeer and Meir Pachter, USA</p> <p>Human factors of implementing automated load-haul-dump vehicles at an underground mine Robin Burgess-Limerick, Tim Horberry, Lisa Steiner and Joe Cronin, Australia</p>	
227	Cybersecurity Interface and Metrics Co-Chairs: Christian Zinke and Kirsten Richards, Germany/USA	CYBER
10:30-12:30 - BEAUDRY A	<p>Modelling, analysis and control of personal data to ensure data privacy – a use case driven approach Christian Zinke, Jürgen Anke, Kyrrill Meyer and Johannes Schmidt, Germany</p> <p>Exploring the discoverability of personal data used for authentication Kirsten Richards and Anthony Norcio, USA</p> <p>Trust the warning: How differences in automation design influence user's trust and performance for a difficult task Scott Mishler, Jing Chen, Edin Sabic, Bin Hu, Ninghui Li and Robert Proctor, USA</p> <p>Human centric security and privacy for the IOT using formal techniques Florian Kammueler, UK</p> <p>Feasibility of leveraging an adaptive presentation layer for cyber security visualizations Lauren Massey, Remzi Seker and Denise Nicholson, USA</p>	
228	Smart Tech, Web and Media for All II Co-Chairs: Jean-Eric Pelet and Kelly Cowart, France/USA	DI
10:30-12:30 - BEAUDRY B	<p>Recommendations for age-appropriate mobile application design Alireza Darvishy and Hans-Peter Hutter, Switzerland</p> <p>The moderating effect of age on the brightness of color found on an E-commerce website: Implications for baby boomers and persons with impaired color vision Jean-Eric Pelet and Kelly Cowart, France/USA</p> <p>Mobile technologies used as communication support system for people with intellectual disabilities: An exploratory study Chantal Mongeau and Dany Lussier-Desrochers, Canada</p>	
229	Human Factors and Organizations Co-Chairs: Salman Nazir and Momoko Kitada, Norway/Sweden	HFML
10:30-12:30 - AVALON	<p>Examining the role of self-leadership in an integrated model of work characteristics and health-related outcomes Christian Seubert, Severin Hornung and Jürgen Glaser, Austria</p> <p>Cultivating networked innovation: Tools and techniques for innovation in the maritime clusters Johan Bolmsten and Momoko Kitada, Sweden</p> <p>Developing and testing a methodological approach to assess the QWL in retail banks André Luís Freitas and Mara Regina Barcelos, Brazil</p> <p>The construction of the picture database for different ethnic life styles: A case study of lifestyles of health and sustainability (LOHAS) Peng-Jyun Liu, Ching-yi Wang and Ming-Chuen Chuang, Taiwan</p> <p>Research into the effect of monetary supply on effectiveness of China's monetary policy based on macro-data from 1995 to 2013 Liqun Du, China</p>	

230	Modeling and Simulation for the Extreme Environment Chair: Brian Gore, USA	HFSIM
10:30-12:30 - EMERALD BAY	<p>Modeling operator workload for the resource prospector lunar rover mission Becky Hooey and Brian Gore, USA Becky Hooey, Jason Toy, Robert Carvalho, Terrence Fong and Brian Gore, USA</p> <p>Minimizing human risk: Human performance models in the human factors and behavioral performance element Brian Gore, USA</p> <p>When less is more: Studying the role of functional fidelity in a low fidelity mixed-reality tank simulator Peter Khooshabeh, Catherine Neubauer and Julie Campbell, USA</p> <p>Advancements in fleet synthetic training systems: A use case of landing signal officers Alexis Neigel and Heather Priest, USA</p> <p>Automated collection of space utilization data Gordon Vos, USA</p> <p>Spacecraft habitability for exploration missions Sherry Thaxton, USA</p>	
231	Healthcare and Medical Devices III Co-Chairs: Subhanshu Gupta and Santiago Luna-Romero, USA/Ecuador	HFMD
10:30-12:30 - SACRAMENTO	<p>Design of an intelligent system for prediction and simulation of writing in children with spasticity Luis Serpa-Andrade, Luis González-Delgado, Ana Parra-Astudillo, Isaac Ojeda-Zamalloa, Vladimir Robles-Bykbaev and Roman Bunay, Ecuador</p> <p>Precise placement of precordial electrodes with 0.5 cm accuracy for recording ECG in self-operable diagnostic devices Kavita Shashank, Sakire Arslan Ay, Ankit Phulzale, R. C. Ram, Huan Hu and Subhanshu Gupta, India/USA</p> <p>A domotic control tool based on MYO devices and neural networks Santiago Luna-Romero, Paul Delgado-Espinoza, Fredy Rivera-Calle and Luis Serpa-Andrade, Ecuador</p> <p>Bibliometric analysis and case study on functional tests of upper limb prostheses Arturo Vaine, Brazil</p>	
232	New Methods for Human Reliability Analysis Co-Chairs: Julie Bell and Oliver Straeter, UK/Germany	HERRP
10:30-12:30 - BEVERLY	<p>Evaluation and consolidation of the heart human reliability assessment principles Julie Bell and Jeremy Williams, UK</p> <p>Assessing dependency in SPAR-H: Some practical considerations Harold Blackman and Ronald Boring, USA</p> <p>Simulation-based optimization of resilient communication protocol for nuclear power plant outages Cheng Zhang, Zhe Sun, Pingbo Tang, Shawn St. Germain and Ronald Boring, USA</p> <p>Task and procedure level primitives for modeling human error Ronald Boring, Martin Rasmussen, Thomas Ulrich, Sarah Ewing and Diego Mandelli, USA</p> <p>Operator timing of task level primitives for use in computation-based human reliability analysis Thomas Ulrich, Ronald Boring, Sarah Ewing and Martin Rasmussen, USA/Norway</p> <p>A systematic method to build a knowledge base to be used in a human reliability analysis model Yunfei Zhao, Keith Altman, Kreteeka Chaudhury, Muhammad Anandika and Carol Smidts, USA</p> <p>The human assessment layer for evaluating human performance in complex systems Oliver Straeter, Germany</p>	

233	Fatigue and Performance Chair: Mike Harnett, Canada	SMHF
10:30-12:30 SAN FRANCISCO	The exploration and analysis of the influence factors for staff interactive relationship Tonghe Jiang, Xuebo Chen and Qiubai Sun, China	
	Going from zero to hero: A case study of how one company took on fatigue Mike Harnett, Canada	
	The effects of night shift schedule on workers' life and wellbeing: Gender differences Bankole Fasanya and Regina Pope-Ford, USA	
	Fatigue assessment in the ops room: Towards an ATS FRMS approach Fabrice Drogoul, Philippe Cabon and Viravanh Somvang, Belgium	
	Occupational health and safety dimensions and work outcomes in the mental hospitals in Ghana: The moderating effect of job satisfaction Michael Gyensare, Olivia Anku-Tsede and Lucky Kumedzro, Ghana	
234	Neuroergonomics Theory and Design II Co-Chairs: Jeremiah Still and Colin Elkin, USA	CN
10:30-12:30 SANTA BARBARA C	Physiological model to classify physical and cognitive workload during gaming activities Néstor Arroyo, Jose Laparra-Hernández, Andrés Soler, Enrique Medina and Helios de-Rosario, Spain	
	Predicting stimulus-driven attentional selection within mobile interfaces Jeremiah Still, John Hicks, Ashley Cain and Dorrit Billman, USA	
	Evaluating ANN efficiency in recognizing EEG and eye-tracking evoked potentials in visual-game-events Andreas Wulff-Jensen and Luis Emilio Bruni, Denmark	
	Fundamental cognitive workload assessment: A machine learning comparative approach Colin Elkin, Sai Nittala and Vijay Devabhaktuni, USA	
Lunch Break (12:30-13:30) - Enjoy lunch at the restaurant of your choice		
235	Material and Texture Exploration Chair: Taekyeom Lee, USA	APD
13:30-15:30 - SANTA ANITA A	New typographic experience in the post-digital age with 3D printing and ceramics Taekyeom Lee, USA	
	Sensorial engagement and materiality pave the way for pleasurable design Purva Chawla, USA	
	The black color of product design and packaging research Lungwen Kuo and Chih-Chun Lai, Taiwan	
	The application of 'User Experience' design concept in the agricultural product packaging design Delai Men, Lvhuayang Feng and Xizo Zhang, China	
	Analysis of affective evaluation for material perception of resin surfaces - combined effect of tactile sensation and hue Michiko Ohkura, Wataru Morishita, Ryuji Miyazaki, Masato Takahashi, Hiroko Sakurai, Kiyotaka Yarimizu and Akira Nakahara, Japan	
236	Audition and Workload Chair: Carryl Baldwin, USA	CN
13:30-15:30 - SANTA ANITA B	Neurofeedback for personalized adaptive training Jesse Mark, Neha Thomas, Amanda Kraft, William Casebeer, Matthias Ziegler and Hasan Ayaz, USA	
	SHELL revisited: Cognitive loading and effects of digitized flight deck automation Sam Holley and Mark Miller, USA	
	Workload assessment and human error identification during the task of taking a plain abdominal radiograph: A case study Cesar Alferez-Padron, Aide Aracely Maldonado-Macías, Jorge García-Alcaraz, Liliana Avelar-Sosa and Arturo Realyvasquez-Vargas, Mexico	
	Effects of emotion and mental workload on decision-making based on behavior results and event-related potentials Huiqiao Jia, Kai-Way Li, Hsin-Chu, Taiwan, Li Zhang and Yanhua Zou, China	

237	Applied Digital Human Modeling and Simulation IV Co-Chairs: Dan Hogberg and Annika Ulherr, Sweden/Germany	DHMAO/ HFSIM
13:30-15:30 - SANTA ANITA C	<p>Concept for formalized test procedures of proactive ergonomics assessment by DHM Dan Hogberg and Lars Hanson, Sweden</p> <p>Simulating seat discomfort: An experimental design for using digital human models Annika Ulherr, Florian Zeller and Klaus Bengler, Germany</p> <p>Full body statistical shape modeling with posture normalization Femke Danckaers, Toon Huysmans, Steven Truijen, Ann Hallemans, Guido De Bruyne and Jan Sijbers, Belgium</p> <p>A study of digital media art utilizing 2D animation: Digital video expression using projection mapping and multi screen techniques Zhipeng Feng and Kiyoshi Tomimatsu, Japan</p> <p>Comprehensive mappings of postural angles on a normalized plane of reachability Raffaele Castellone, Fabrizio Sessa, Stefania Spada and Maria Pia Cavatorta, Italy</p> <p>Comparison of gender specific and anthropometrically scaled musculoskeletal model predictions using the Sorensen test Phillip Whitley, Paulien Roos and Xianlian Zhou, USA</p>	
238	Virtual Reality Challenges in Design Co-Chairs: Paulo Noriega and Marcelo Soares, Portugal/Brazil	ED
13:30-15:30 - SAN GABRIEL A	<p>Review of virtual reality technology: An ergonomic approach and current challenges Ana Carol França and Marcelo Soares, Brazil</p> <p>A preventive ergonomic approach based on virtual and immersive reality Francesco Caputo, Egidio D'Amato, Alessandro Greco, Stefania Spada and Immacolata Notaro, Italy</p> <p>Improving the design of virtual reality devices applying an ergonomic guideline Pere Ponsa and Catalina Mariani, Spain</p> <p>Methods and procedures for usability testing in virtual reality systems Ana Carol França and Joaquim Pereira Neto, Brazil</p>	
239	Simulation and Evaluation Co-Chairs: Ernesto Vilar and Francisco Rebelo, Portugal	ED
13:30-15:30 - SAN GABRIEL B	<p>Effect of various screen size of smartphone on neck flexion and arms Saishyam Akurke, Yueqing Li and Brian Craig, USA</p> <p>Simulation as a pedagogical strategy in product design Johana Ruiz and Gustavo Sevilla-Cadavid, Colombia</p> <p>A mission library for mission plan management Stephanie Kane and Erika Von Kelsch, USA</p> <p>Eye tracking-based reverse inference approach for design of restaurant information display Hirotaka Aoki and Satoshi Suzuki, Japan</p> <p>An elastic interface for artistic composition and performance Carlos Arce-Lopera, Juan Salamanca and Daniel Gomez, Colombia</p> <p>Physical and virtual wind tunnels: Automobile design approach Daniel Pereira and Ernesto Vilar, Portugal</p>	

240	Human Factors in Healthcare Chair: Kyle Maddox, USA	HC
13:30-15:30 - SAN GABRIEL C	<p>Research on the functionality of maternity hospital gown based on the ergonomics Yuting Shang, China</p> <p>Movement analysis and ergonomic garment opening design of garment block patterns for physically disabled people with scoliosis using fuzzy logic Xianyi Zeng, Yan Hong, Pascal Bruniaux, Antonela Curteza and Yan Chen, Romania/France/China</p> <p>Design for tailored patient experiences: Exploring values, needs and context through generative research Bob Groeneveld, Marijke Melles, Stephan Vehmeijer, Nina Mathijssen and Richard Goossens, The Netherlands</p> <p>Modeling of electronic and mechanical dimensioning of an exoskeleton bottom for bipedal gait Luis Serpa, Eduardo Pinos, Francisco Illescas and William Cuzco, Ecuador</p> <p>Effectiveness and user satisfaction from a usability evaluation of a Veterans' benefits letter Nancy Lightner, Helen Fuller, Kyle Maddox, Nsikak Inyang and Dennis Lofton, USA</p> <p>Performance indicators of indoor environmental quality (IEQ) assessment in hospital buildings: A confirmatory factor analysis (CFA) approach Pontip Nimlyat and Mohd Kandar, Nigeria/Malaysia</p>	
241	Safety Culture and Organizational Aspects Co-Chairs: F. Guldenmund and Karen Klockner The Netherlands/Australia	SMHF
13:30-15:30 - SANTA BARBARA B	<p>Are safety culture assessments really necessary? Frank Guldenmund, The Netherlands</p> <p>Strategically developing a resilient safety culture: Organizational mindfulness and mindful organizing Karen Klockner, Australia</p> <p>Development and initial testing of a regulatory body safety culture perception survey Mark Fleming, Kate Bowers, Tabatha Thibault and Brianna Cregan, Canada</p> <p>Role of emotions in risk perception Catherine Huyen, Alexandra Vredenburg, Ilene Zackowitz and Alison Vredenburg, USA</p> <p>Occupational safety and health culture - influence of participatory processes Syed Naqvi, USA</p>	
242	Movement and Balance Co-Chairs: Shuping Xiong and Yueqing Li, South Korea/USA	PEHF
13:30-15:30 - SANTA BARBARA C	<p>What are the major risk factors for falls among community-dwelling Korean older women? Taekyoung Kim and Shuping Xiong, South Korea</p> <p>Effects of healthcare personal protective equipment on gait characteristics and postural balance stability Ali Aljaroudi, Yongsuk Seo, Tyler Quinn, Jeffrey Powell and Jung-Hyun Kim, USA</p> <p>Acupuncture/acupressure for knee osteoarthritis (OA) relieving in the elderly: A review Zidan Gong, Winnie Yu, Thomas Wong and Yuanqi Guo, Hong Kong</p> <p>Effect of walking, running and gradients on muscle pump and edema Vishnu Mahesh, Yueqing Li and Brian Craig, USA</p> <p>A review of interactive exer-game interventions for elderly fall prevention Sang Choi, Liangjie Guo, Shuping Xiong and Donghun Kang, USA/Korea</p> <p>Perturbation training in virtual reality environment on human postural stability Erin Wroblewski, Tarryn Porter, Paulus Wahjudi, Jian Liu and Daniel Lewis, USA</p> <p>Impact of wearing high heeled shoes on human body Nikeeta Patil and Yueqing Li, USA</p>	

243	Infrastructure and Road Safety I Co-Chairs: Aaron Roberts and Shoichiro Fujisawa, UK/Japan	RR
13:30-15:30 - SANTA BARBARA A	<p>Driving performance, adaptation, and cognitive workload costs of logo sign panel detection as mediated by driver age Mei Lau and David Kaber, USA</p> <p>Verification of installed position of LED block equipped with projections to indicate travel direction Shoichiro Fujisawa, Tomoyuki Inagaki, Norihiro Ikeda, Kazuya Takahashi, Kiyohito Takeuchi, Hiroshi Ogino, Katsuya Sato, Sin-Ichi Ito and Hideaki Nagahama, Japan</p> <p>Do end users really have a place in the design arena when safe design is critical? Elise Crawford, Yvonne Toft, Ryan Kift and Geoff Dell, Australia</p> <p>Seat belts unfastened: Non-seat belt use in the Czech Republic Vit Gabrhel, Petr Zamecnik, Veronika Kureckova and Pavel Rezac, Czech Republic</p> <p>Novice drivers' objective and subjective hazard detection skills: Potentially hazardous pedestrian events in typical car-pedestrian accident locations in Denmark Liva Abele, Denmark</p> <p>The effect of see-through truck on driver monitoring patterns and responses to critical events in truck platooning Bo Zhang, Ellen Wilschut, Dehlia Willemsen, Tom Alkim and Marieke Martens, The Netherlands</p>	
244	Usability and User Experience III Co-Chairs: Philipp Jordan and Andree Woodcock, USA/UK	UUE
13:30-15:30 - SANTA MONICA A	<p>The fiction in computer science: A qualitative data analysis of the ACM Digital Library for traces of Star Trek Philipp Jordan and Brent Auernheimer, USA</p> <p>Understanding the effect of architectural and environmental features on human behavior Anthony Durante, Eric Rivers, George Beane and Rebecca Chau, USA</p> <p>Comparison of Japanese text input efficiency between pc and smartphone Jun Iio, Japan</p> <p>The effects of website white space on middle-aged users Chih-Hsiang Ko and Yu Chun Liu, Taiwan</p> <p>Virtual reality, a new way to elicit emotion in laboratory Jean-Marc Diverrez, Nicolas Martin, Martin Ragot, Nico Pallamin and Sonia Em, France</p> <p>A study on the usability of typing interface on large-screen phones for different thumb sizes Ching-Yi Wang and Peng-Jyun Liu, Taiwan</p> <p>Empathy, design and human factors Andree Woodcock, Deana McDonagh, Jane Osmond and Wesley Scott, UK</p>	
245	Human Factors in Energy: Applications in Infrastructure Safety and Design Chair: Jurriaan van Diggelen, USA	ENERGY
13:30-15:30 - SANTA MONICA B	<p>An intelligent operator support system for dynamic positioning Jurriaan van Diggelen, Jasper van der Waa, Jan Maarten Schraagen and Hans van den Broek, The Netherlands</p> <p>Autonomous algorithm for safety systems of the nuclear power plant by using the deep learning Daeil Lee and Jonghyun Kim, Korea</p> <p>Ergonomic diagnosis and work conditions improvement in oil production platforms Francisco Duarte and Fausto Mascia, Brazil</p>	

246	Leadership and Skill Development II Co-Chairs: Florentin Popescu and Marcin Geryk The Netherlands/Poland	HFML
13:30-15:30 - SAN PEDRO	<p>Taking a holistic approach in training and educating Knowmads and Daredevils of the 21st century Florentin Popescu and Saskia Harkema, The Netherlands</p> <p>University leaders responsibilities in carrying new programs into practice Marcin Geryk, Poland</p> <p>Communicative skills and the training of the collaborative operator Edmara Drigo, Salvador Avila Filho and Marcelo Embirucu, Brazil</p> <p>Leader profiles for the Canadian armed forces: The process and methodology behind their development Lisa Williams and Karen Rankin, Canada</p> <p>Influence of female senior managers work practices on the stock market Eyal Eckhaus, Batia Ben-Hador and Roi Taussig, Israel</p> <p>Learning through 'doing good well': Integrating social innovation into a leadership and team building course Thomas Menkhoff, Siew Ning Kan and Rani Tan, Singapore</p>	
247	Teaching Methods and Applications Chair: Tibor Barath, Hungary	TELS
13:30-15:30 - SANTA MONICA D	<p>Why is video modeling not used in special needs classrooms? Ahmad Abualsamid and Charles Hughes, USA</p> <p>The redefined learning in higher education: Service design based model for improving the learning experience and learning Tibor Barath, Hungary</p> <p>The impact of curriculum teaching reform on graduate students' innovation and entrepreneurship Yangguang Xu, Xuebo Chen, Qiubai Sun and Wei Ye, China</p> <p>Effectiveness of learning management system application in the learnability of tertiary students in an undergraduate engineering program in the Philippines Yoshiki Kurata, Rose Marie Lou Bano and Ma Carole Marcelo, Philippines</p> <p>A study of problems and needs in teaching in a virtual science lab to develop middle school students' analytical thinking skills Unchana Klentien and Wannachai Wannasawade, Thailand</p> <p>Technology of students' gradual formation of valuable attitude to the teaching profession in higher education Alena Ignatovitch, Belarus</p>	
248	Human Side of Service Engineering II Chair: Regiane Romano, Brazil	HSSE
13:30-15:30 - BEAUDRY A	<p>Do you like according to your lifestyle? A quantitative analysis of the relation between individual Facebook likes and the users' lifestyle Alexander Piazza, Christian Zagel and Freimut Bodendorf, Germany</p> <p>Impact analysis of demonetization on service sector: An Indian experience Uma Narain and R. K. Pattnaik, India</p> <p>The consequences of lean Six Sigma on banking improvement: A study at a front-line unit of a bank company in Indonesia Nilda Putri, Andi Gunawan and Agus Sutanto, Indonesia</p> <p>The human side of smart cities and the fundamental role of education in the training of new millennium engineers – a study case from Brazil Regiane Romano, Brazil</p>	

249	Teleoperations in Healthcare and Other Domains Chair: Denny Yu, USA	HFRUS
13:30-15:30 - SANTA MONICA C	<p>Ergonomics in robotic surgery Denny Yu, USA</p> <p>Understanding and improving the delivery of robotic surgery Ken Catchpole, USA</p> <p>Teleoperation with flexible tools: Effects of visual and haptic cues on task performance Manuel Aiple and André Schiele, The Netherlands</p> <p>User-centered design and evaluation of smartphone-controls for the movement control of mobile platforms Robert Fingerle, Lars Krause, Hugo Tausch and Carsten Wittenberg, Germany</p> <p>Performance and physiological stresses during robotic surgical skills tasks Juan Wachs, Jackie Cha, Glebys Gonzalez, Chandru Sundaram and Denny Yu, USA</p>	
250	Design for Inclusion in the Living Environment I Co-Chairs: Margarida Gamito and Daniela Ladiana, Portugal/Italy	DI
13:30-15:30 - SAN FRANCISCO	<p>Opportunities for inclusive play in densely populated cities: an analysis of the human factors in Hong Kong play space Kin Wai Michael Siu and Yi Lin Wong, Hong Kong</p> <p>Study on wall colors which constitute a comfortable interior for the elderly Yoshiaki Goto, Masayuki Shintani and Hiroki Imoto, Japan</p> <p>Urban furniture’s chromatic planning methodology – Bucelas, a case study Margarida Gamito, Portugal</p> <p>The adaptability of living space and its technological solutions for autonomy independence and wellbeing of real users Daniela Ladiana, Michele Di Sivo and Cristiana Cellucci, Italy</p>	
251	Human Factors and Simulated Agents Co-Chairs: Robert Gutzwiller and Jason Bindewald, USA	HFSIM
13:30-15:30 - EMERALD BAY	<p>Exploring trust barriers to future autonomy: A qualitative look Joseph Lyons, Nhut Ho, Anna Lee Van Abel, Lauren Hoffmann, W. Eric Fergusson, Garrett Sadler, Michelle Grigsby and Amy Burns, USA</p> <p>A design pattern for working agreements in human-autonomy teaming Robert S. Gutzwiller, Sarah H. Espinosa, Caitlin Kenny and Douglas S. Lange, USA</p> <p>Grounding spatial concepts for autonomous mobile robots Thomas Howard, Rohan Paul, Derya Aksaray, Jacob Arkin and Nicholas Roy, USA</p> <p>Connected and automated vehicle simulation to enhance vehicle message delivery Daniel Barber and Andrew Best, USA</p> <p>Measuring human trust behavior in human-machine teams Jason Bindewald, Christina Rusnock and Michael Miller, USA</p> <p>DSR platform as a service: Furthering soldier performance characteristics to existing entity simulations Manuel Diego and Joseph McDonnell, USA</p> <p>Developing robotic algorithms to recognize and respond to battle anomalies in a simulated environment MaryAnne Fields and Ralph Brewer, USA</p>	

252	Human Factors in Communication of Design III Co-Chairs: Yangmin Zhang and Amic G. Ho, USA/Hong Kong	HFCD/DI
13:30-15:30 - SAN BERNARDINO	<p>The challenge of online meal ordering platforms: Website design and credibility, customers' trust, and food safety Yangmin Zhang, Jieyu Wang and Jingyu Wang, USA</p> <p>Directing untrained users' attention using simple sound patterns Lars Larsen, Mai Baunstrup and Søren Jensen, Denmark</p> <p>Consistency of visual information in web design: Focusing on responsiveness of a university website Toshiki Matsuo and Wonseok Yang, Japan</p> <p>Teaching methodologies in communication design Cátia Rijo, Helena Grácio and Sandra Antunes, Portugal</p> <p>Ergonomics and organizational communication: Methods for business communication auditing Bruna Bischoff and Flávio Anthero Nunes Vianna dos Santos, Brazil</p>	
253	New Applications of Human Reliability in Aviation, Finance, Nuclear, Transportation, Cybersecurity and Manufacturing Co-Chairs: Ron Boring and Karin Laumann, USA/Norway	HERRP
13:30-15:30 - PALOS VERDES	<p>A sound investment: Managing human error in the finance sector Andrew Wright and Clare Borrás, UK</p> <p>Adapting the cognitive framework of NUREG-2114 for use in human error analysis for AP1000 plant licensing in the United Kingdom April Whaley, USA</p> <p>A framework for understanding operator decision making in simulated nuclear power plant cyber attacks Susan Adams, Stacey Hendrickson and Phillip Turner, USA</p> <p>Regulatory issues and insights regarding advanced main control room human reliability analysis in Korea Seungwoo Lee, South Korea</p>	
254	Safety Management and Loss Prevention III Co-Chairs: Denis Coelho and Joana Santos Guerreiro, Portugal	SMHF
13:30-15:30 - AVALON	<p>European countries social and working conditions association with fatal and non-fatal occupational accidents Denis Coelho, Portugal</p> <p>Thermal environment: Case study of a meat processing industry Joana Santos Guerreiro, Andreia Cravo, João Almeida and Marta Vasconcelos Pinto, Portugal</p> <p>Behavior monitoring with non-wearable sensors for precision nursing Erisa Murata, Koji Kitamura, Yoshihisa Shirato, Mikiko Oono and Yoshifumi Nishida, Japan</p> <p>Analysis and control research of employee groups emergency based on construction scenes Wang Qiquan, Ni Junwen and Wang Weixian, China</p> <p>Probabilistic void detection using FEA Pallavi Pawar, Vinaay Patil and Shantanu Kale, India</p> <p>Influence of industrial safety shoe characteristics on postural stability Varsha Chorsiya, Pranab Nag, Priya Dutta and Anjali Nag, India</p> <p>Assessment of boundary conditions for FEA of engine mounting bracket using co-relation with experimental results Priyanka Dahale, Pallavi Pawar and Vinaay Patil, India</p>	
15:30 - 16:00 Refreshments will be provided in California Ballroom		

255	Methodology in Textile and Furniture Design Co-Chairs: Scott Shim and Jia Lü, USA/China	APD
16:00-18:00 SANTA ANITA A	<p>Research on user experience design applications in detail designs of elders' garment products Xiaoping Hu, Xiao Zhang and Lvhuayang Feng, China</p> <p>Affective design of women's career suits based on event-related potentials (ERPS) Jia Lü, Yue Sui, Dongsheng Chen and Yunjuan Liu, China</p> <p>A panoramic study of the artisanal references on the Brazilian contemporary furniture design Yasmin Fernandes and Virginia Cavalcanti, Brazil</p> <p>Considerations for using traditional structures to design flexible and modern furniture through LU ban lock Ying Li, Japan</p>	
256	Smart Design and User Experience II Co-Chairs: Tareq Aljaber and Wayne Dick, UK/USA	UUE
16:00-18:00 - SANTA ANITA B	<p>Usability of the enlargement method: How enlargement method influences the amount of scrolling actions needed to read publications Wayne Dick, USA</p> <p>A hybrid evaluation approach and a guidance for mHealth education applications Tareq Aljaber and Neil Gordon, UK</p> <p>Visual feedback for grasping in virtual reality environments for an interface to instruct digital human models Andreas Geiger, Imke Bewersdorf, Elisabeth Brandenburg and Rainer Stark, Germany</p> <p>A hybrid usability inspection method for illiterate users Saba Kayani, Atiq Ahmed Khan, Jamil ur Rehman, Muhammad Hammad, Fatima Masood and Mahnoor Dar, Pakistan</p> <p>An interactive behavior-based hierarchical design method for form hints Qi Zhou and Huai Cao, China</p>	
257	Spatial Perception Co-Chairs: Yanfei Liu and Min-Xia Liu, China	CN
16:00-18:00 SANTA ANITA C	<p>The study of sound and shape effects on design Tyan-Yu Wu and Alan Lee, Taiwan</p> <p>Research and analysis on the influence factors of spatial perception ability Min-xia Liu, Cheng-tong Tang, Lin Gong and Qing Xue, China</p> <p>Cognitive modeling for robotic assembly/maintenance task in space exploration Yanfei Liu, Zhiqiang Tian, Yuzhou Liu, Junsong Li, Feng Fu and Jing Bian, China</p>	
258	Comfort and Methodology Issues in Design Chair: Alexander Walker, Australia	ED
16:00-18:00 - SAN GABRIEL B	<p>Improving HMIs of vehicle exterior design using adaptive structures and systems Andrea Hein, Elena Patzer and Thomas Maier, Germany</p> <p>Ergonomic/human factors in the design process: Methodological tool for context characterization and analysis of accessibility Gustavo Sevilla-Cadavid, Johana Hoyos-Ruiz and Luz M. Sáenz, Colombia</p> <p>Co-designing an arthritis nurse-call device, With lead aged-care users Alexander Walker and Peter Schumacher, Australia</p> <p>The role of human factors in surface design Gianni Montagna, Luís Ricardo Santos and Maria João Pereira Neto, Portugal</p> <p>Information characteristics in the operation of a healthcare service from the staff perspective Zuli Galindo, Carlos Aceves Gonzalez, Genaro Ortiz, John Rey Galindo and Mario Mireles Ramirez, Colombia</p> <p>Visual comfort analysis methodologies for workplaces: A literature review Giovana Bortolan, Marcelo Gomes Ferreira and Flavio A. N. Santos, Brazil</p>	

259	Human Factors in Digital and Collaborative Technology Chair: Lukasz Sulkowski, Poland	MFG
16:00-18:00 - SAN GABRIEL C	<p>A checklist based approach for evaluating augmented reality displays in industrial applications Volker Paelke, Sebastian Büttner, Henrik Mucha and Carsten Röcker, Germany</p> <p>Digital tools to support knowledge sharing and cooperation in high investment product-services Susanna Aromaa, Simo-Pekka Leino, Arcadio Reyes Lecuona, Nikos Frangakis, Jonatan Berglund, Tim Bosch, Gu van Rhijn and Göran Granholm, Finland</p> <p>Consumer perception of internet of things Lukasz Sulkowski and Dominika Kaczorowska Spychalska, Poland</p> <p>Collaborative robots and new product introduction: Capturing and transferring human expert knowledge to the operators Paola Fantini, Marta Pinzone, Franco Sella and Marco Taisch, Italy</p>	
260	Safety Management in Industry Co-Chairs: Nelson Costa and Andreas Gregoriades, Portugal/Cyprus	SMHF
16:00-18:00 - SANTA BARBARA A	<p>Mining traffic data for the development of an accident warning application for tourists Andreas Gregoriades and Andreas Chrystodoulides, Cyprus</p> <p>Driving workload indicators: The case of senior drivers Nelson Costa, Paulo Simoes, Susana Costa and Pedro Arezes, Portugal</p> <p>A study of the knowledge, attitude, behavior and practices pertaining to the safety of public school children among school van drivers and helpers in the 5 towns of the republic of Mauritius Soolakshna Lukea-Bhiwajee and Prabha Ramseook-Munhurrun, Mauritius</p> <p>Integrative literature review: What are the barriers that stop organizations from learning the lessons highlighted in serious incident investigations? Michelle Gillman and Manikam Pillay, New Zealand/Australia</p>	
261	Ergonomics Interventions Co-Chairs: Manfred Dangelmaier and Risako Shiraishi, Germany/Japan	PEHF
16:00-18:00 SANTA BARBARA C	<p>A study of incentive stimulating human error activity on public service Risako Shiraishi, Minami Wakata, Yusaku Okada and Kumiko Takahashi, Japan</p> <p>Development of an ergonomic evaluation tool for health-promoting physical workplaces Manfred Dangelmaier and Pablo Theissen, Germany</p> <p>Adoption of construction ergonomic interventions on building construction sites in Nigeria Abdul Hafeez Ibrahim and John Smallwood, Nigeria</p> <p>Assessment in office work and productivity Jenny Rodriguez-Garcia and Fernanda Maradei, Colombia</p> <p>The impact of ergonomics interventions on musculoskeletal injuries among construction workers Emmanuel Bamfo-Agyei and Lawrence Atepor, Ghana</p>	
262	Driving Automation and Human Factors Issues Co-Chairs: Anabela Simoes and Kirsten Revell, Portugal/UK	RR
16:00-18:00 - SAN GABRIEL A	<p>Three driver and operator behavior models in the context of automated driving – identification of issues from human actor perspective Pirkko Rämä and Hanna Koskinen, Finland</p> <p>The right moment for braking as informal communication signal between automated vehicles and pedestrians in crossing situations Matthias Beggato, Claudia Witzlack, Sabine Springer and Joseph Krems, Germany</p> <p>Older drivers and driving automation Anabela Simoes, Portugal</p> <p>Driver state monitoring in automation; developing adaptive ADAS to support safe transitions under automation Stella Nikolaou, Evangelos Bekiaris and Anna Anund, Greece</p> <p>A feasibility study and a state of the art on the opportunities to detect inattention in driving to facilitate the takeover of an automated vehicle Catherine Gabaude, Guillaume Pepin, Christophe Jallais and Alexandra Fort, France</p>	

263	Musculoskeletal Aspects of Social and Occupational Ergonomics Co-Chairs: Alessio Silveti, Amandeep Singh and Giovanni Michael Silva-Peñaherrera, Italy/India/Ecuador	SOE
16:00-18:00 - SAN PEDRO	<p>Upper limb repetitive movement risk assessment by means of sEMG fatigue parameters Alessio Silveti, Giorgia Chini, Alberto Ranavolo and Francesco Draicchio, Italy</p> <p>The impact of ergonomic exposures on the occurrence of back pain or discomfort: Results from the first working conditions survey in Quito, Ecuador Antonio Ramon Gomez Garcia, Pamela Merino-Salazar, Giovanni Michael Silva-Peñaherrera and Marianela Rojas, Ecuador/Costa Rica</p> <p>Comparison of two post office workstation layouts by means of an optoelectronic motion analysis system Alessio Silveti, Alberto Ranavolo, Tiwana Varrecchia, Martina Rinaldi, Giorgia Chini, Agnese Marchesi and Francesco Draicchio, Italy</p> <p>A review study on biodynamic response of seated occupants exposed to whole body vibration Amandeep Singh, Lakhwinder Pal Singh, Sarbjit Singh and Harwinder Singh, India</p> <p>Biomechanical study of the relationship between anthropometry and mechanical loads applied on the lumbar vertebrae during surgery Fatemeh Zokaei and Nima Jamshidi, Iran</p> <p>Occupational exposure to workers in Indian forging unit: A case study Kamaljeet Bhambri, Harwinder Singh, Ishbir Singh and Tajeet Singh, India</p>	
264	Heuristic Evaluation, Software and Service Design Chair: Steven Karrmann, USA	UUE
16:00-18:00 SANTA MONICA A	<p>Optimal visual search elements in small scale map design Steven Karrmann and Connie Shears, USA</p> <p>Inspiration mining: Exploring startup research Paulo Maldonado, Portugal</p> <p>The difficulties reported by engineers in searching information Shuai Zhang and Aylmer Johnson, UK</p>	
265	Tools and Methods in Education and Training Chair: Thomas Alexander, Germany	TELS
16:00-18:00 - SANTA MONICA B	<p>Knee arthroscopy simulation: A randomized controlled trial evaluating the effectiveness of the Imperial Knee Arthroscopy Cognitive Task Analysis (IKACTA) tool Rahul Bhattacharyya, Donald Davidson, Kapil Sugand, Rajarshi Bhattacharya and Chinmay Gupte, UK</p> <p>Identifying relevance of security, privacy, trust, and adoption dimensions concerning cloud computing applications employed in educational settings Tihomir Orehovački, Snježana Babić and Darko Etinger, Croatia</p> <p>Generic cognitive task analysis (GCTA) wizard – a tool to train orthopaedic trauma surgeons of the future Rahul Bhattacharyya, Kapil Sugand, Ian Sinha, Rajarshi Bhattacharya and Chinmay Gupte, UK</p> <p>Ergonomic intervention using a train-the-trainer approach in a biotechnology company: A case study Kathryn Meeks, USA</p> <p>Educational effect using expert model in fire process of quartz glass Masamichi Suda, Akio Hattori, Akihiko Goto, Hiroyuki Hamada and Toru Takahashi, Japan</p> <p>An intelligent system to automatically generate video-summaries for accessible learning objects for people with hearing loss Paola Ingavélez-Guerra, Irma Cuzco-Calle, Daniel Calle-López, Christian Oyola-Flores, Inés Yambay-Aulla, Vladimir Robles-Bykbaev and José Ramón Hilera, Ecuador</p>	

266	Advanced Displays and Intuitive Interfaces Co-Chairs: Maia Cook and Cory Rieth, USA	HFRUS
16:00-18:00 - SANTA MONICA C	<p>Formation of operator intuitions and preferences: Implications for configurable command and control displays Maia Cook and Cory Rieth, USA</p> <p>Issues and advances in anomaly detection evaluation for joint human-automated systems Cory Rieth, Ben Amsel, Randy Tran and Maia Cook, USA</p> <p>Maintain and regain well clear: Maneuver guidance designs for pilots performing the detect-and-avoid task Kevin Monk and Zachary Roberts, USA</p> <p>Evaluation of early ground control station configurations for interacting with a UAS Traffic Management (UTM) System Arik-Quang Dao, Lynne Martin, Christoph Mohlenbrink, Nancy Bienert, Ashley Gomez, Lauren Claudatos and Joey Mercer, USA</p> <p>UAS detect and avoid – alert times and pilot performance in remaining well clear Rania Ghatas, James Comstock, Michael Vincent, Keith Hofferler, Dimitrios Tsakpinis and Anna DeHaven, USA</p>	
267	Human Factors in Cyber-Warfare Co-Chairs: Robert Thomson and Scott Lathrop, USA	CYBER
16:00-18:00 - SANTA MONICA D	<p>Interacting with synthetic teammates in cyberspace Scott Lathrop, USA</p> <p>Applying human factors to reverse asymmetry in cyber warfare Robert Thomson, USA</p> <p>Valuing information security from a phishing attack Kenneth Nguyen, Richard John and Heather Rosoff, USA</p> <p>Event detection based on nonnegative matrix factorization: Ceasefire violation, environmental, and malware events Barry Drake, Tiffany Huang, Ashley Beavers, Rundong Du and Haesun Park, USA</p> <p>The impact of information security choices on malware detection rates Fer O'Neil and Stephen Cobb, USA</p> <p>Detection and prediction of insider threat behaviors Elizabeth Whitaker, Ethan Trehwhitt and Frank Greitzer, USA</p>	
268	Design for Inclusion in the Living Environment II Chair: Jasmien Herssens, Belgium	DI
16:00-18:00 - PALOS VERDES	<p>Comfort in the indoor environment – a theoretical framework linking energy efficiency and universal design Ermal Kapedani, Jasmien Herssens and Griet Verbeeck, Belgium</p> <p>Design strategies for inclusive cities: A case study approach of a city workshop Jasmien Herssens and Pete Kercher, Belgium/Italy</p> <p>Toward inclusive public transportation: Rights, not privileges Satoshi Kose, Japan</p> <p>Design and evaluation method for living function resilient equipment based on daily living systems science Masaaki Takizawa, Koji Kitamura, Yoshifumi Nishida and Hiroshi Mizoguchi, Japan</p> <p>Ergonomics and inclusive service design: Exploring possibilities for its application in a developing world city Carlos Aceves Gonzalez, Mexico</p> <p>Inclusion defined from the horse’s mouth: Research by designing a riding school for all Jasmien Herssens, Belgium</p> <p>Inclusion in architectural publications: Exploring inclusive ways to represent children’s multisensory experience of iconic buildings Jasmien Herssens and Jan Vanrie, Belgium</p>	

Friday, July 21

269	<p>Altered Reality Co-Chairs: Marino Menozzi and Juan Carlo Figueroa, Switzerland/Philippines</p>	HFSIM
16:00-18:00 - BEAUDRY B	<p>The effect of task experience on presence in virtual reality Marino Menozzi, Chin-Yih Ung, Sandro Ropelato, Christina Hartmann and Michael Siegrist, Switzerland</p> <p>The virtuality continuum and storytelling: simulation, interactivity, user experience and interaction design in virtual and mixed environments. A steam based approach Jose Luis Rubio-Tamayo, Manuel Gertrudix Barrio and Francisco García García, Spain</p> <p>A comparative study of virtual reality & 2D display methods in visual search in real scenes Juan Carlo Figueroa, Raul Alberto Arellano, III and Janeen Mikee Calinisan, Philippines</p>	
270	<p>Human Factors and Wearable Technologies IV Co-Chairs: Hadas Chassidim and Christianne Falcao, Israel/Brazil</p>	HFWT
16:00-18:00 - AVALON	<p>Awareness collaboration with users and designers: Relationship between the image schema of spoken language and the spacial path of sign language Zhengyu Tan, Shijing Fang, Wei Li and Shihui Xu, China</p> <p>Would you swap your smartphone for a smart watch? Hadas Chassidim and Anat Meir, Israel</p> <p>Wearable sensor system for lumbosacral load estimation by considering the effect of external load Yoshio Tsuchiya, Takashi Kusaka, Takayuki Tanaka and Yoshikazu Matsuo, Japan</p> <p>Storytelling-based hand gesture interaction in a virtual reality environment Jiyoung Kang and Jongkuk Lim, South Korea</p> <p>Development of a protocol of motion analysis using inertial sensors Claudia Mazzoni, Carla Sirqueira and Fabricio Anicio, Brazil</p>	
271	<p>Citizen Engagement, HSSE Best Paper Award and 2018 HSSE Planning Co-Chairs: Lou Freund and Wojciech Cellary, USA/Poland</p>	HSSE
16:00-18:00 - SACRAMENTO	<p>Mobilisation of citizen engagement in the EU Christine Leitner and Christian Stiefmueller, UK</p> <p>An online tool to promote citizenship roles in urban communities Li Liu and Adrian Haurat, USA</p> <p>Smart Card Facens: A smart geo-referencing solution to improve human experience on campus Adriano Pilo, Alexandre Machado and Victor Alonso, Brazil</p> <p>HSSE Best Paper Award Lou Freund and Wojciech Cellary, USA/Poland</p>	
272	<p>Causal Analysis in Complex Environments Co-Chairs: David Blumstein and Amy Sliva USA</p>	CCDM
16:00-18:00 - EMERALD BAY	<p>Challenges in making policy decision-support systems operational Corey Lofdahl, USA</p> <p>Integrating passive and active data streams to support causal modeling and analysis of deterrence strategies in the gray zone Victoria Romero, USA</p> <p>Complex causality: Computational formalisms, mental models, and objective truth David Blumstein, Mukesh Dalal and Amy Sliva, USA</p> <p>Enabling mixed method modeling through the use of causal networks James Starz, Jennifer Lautenschlager, Timothy Siedlecki and Luis Asencios Reynoso, USA</p>	

273	Human Factors, Business Management and Society VI Chair: Henrijs Kalkis, Latvia	HFBMS
16:00-18:00 - SANTA BARBARA B	<p>The trust of the information from employer rating platforms Tom Sander, Biruta Sloka and Henrijs Kalkis, Germany/Latvia</p> <p>Motivational factors for users' reposting behavior in different mobile UGC online communities Xingyu Chen, Dandan Tian, Shiyuan Liu, Dao Tao and Xingda Qu, China</p> <p>An investigation of the relationship between job satisfaction and work function, stress, quality of life of blue versus white collars with structural equation modeling Gokcen Akyurek, Deniz Yüce, Ahsen Irmak and Gonca Bumin, Turkey</p> <p>Measuring new product development project success in Vietnamese small and medium-sized enterprises Nga Hoang Thanh Dang, Adela J. McMurry and Xueli (Charlie) Huang, Australia</p> <p>Design education and the creative industries Tessa Belob, USA</p> <p>Importance of human factors in performance improvement of business management Hossein Ghahremani, Iran</p>	
274	Infrastructure and Road Safety II Co-Chairs: Nicolas Herzberger and Laila Martinussen, USA/Denmark	RR
16:00-18:00 - SAN BERNARDINO	<p>Comparison between young male drivers' self-assessed and objectively measured driving skills Laila Martinussen, Mette Møller and Carlo Prato, Denmark</p> <p>Identification of criteria for drivers' state detection Nicolas Herzberger, Gudrun M. I. Voß and Maximilian Schwalm, Germany</p> <p>A real case-based study exploring influence of human age and gender on drivers' behavior and traffic safety Nazha R. Ghadban, Galal M. Abdella, Khalifa N. Al-Khalifa, Abdel Magid Hamouda and Khadija B. Abdur-Rouf, Qatar</p> <p>Data-driven analysis of approach and departure driving behaviors at signalized intersections Chao Wang, Fei Ye and Guoyuan Wu, China</p>	

Interactive Poster Demonstrations

Posters will be displayed Wednesday, July 19 - Friday, July 21, 2017, during the designated timeslots listed below. Posters should be positioned 30 minutes prior to the designated start of the session and removed no later than 30 minutes after the end of the session.

POSTER/DEMONSTRATION SESSIONS, WEDNESDAY, JULY 19

Session Time: 10:30-12:30

Room: California Ballroom

- A1. Study on a method for extracting safety know-how considering selections of transferring method
Daisuke Takeda and Yuko Hirotsu, Japan
- A2. The investigation of using classroom response system in teacher education
Fu-Hsing Tsai, Taiwan
- A3. IT professional preferences to evaluate systems usability
Samira Ribeiro and Elizabeth Furtado, Brazil
- A4. The Veronesi Method - Judicial expertise for physical therapists
José Ronaldo Veronesi, Brazil
- A5. Motigravity: A VR system to increase the performance and safety in space operations simulation and rehabilitation medicine
Salman Nazir, Irene Schlacht, Antonio Del Mastro, Yacine Benyoucef and Gernot Groemer, Norway/Italy
- A6. User evaluation and acceptance of an innovative road infrastructure: The green wave for cyclists
Luca Pietrantoni, Marco De Angelis, Gabriele Prati, Federico Fraboni, Víctor Marín Puchades and Filippo Fassina, Italy
- A7. Safety awareness emergence and behavior-based safety management in enterprise
Xiaohui Zhang, Xuebo Chen and Qiubai Sun, China
- A8. Team building and training for organizational transformation: A case of university road relay (Ekiden) team
Yoshihisa Ono, Takumi Iwaasa and Motoki Mizuno, Japan
- A9. Human factors in information security culture: A literature review
Henry Glaspie and Waldemar Karwowski, USA
- A10. The impact of temporal training on neurocognitive task performance
Cory Overby, Leah Enders, Jessica Villarreal, Gary Boykin and Valerie Rice, USA
- A11. Relief pictograms guidelines to visual impaired users
Bruno Giesteira and João Mesquita, Portugal
- A12. Global city: Index for industry sustainable development
Isabel Loureiro, Pedro Arezes, Nelson Costa, Paulo Ribeiro and Eduarda Pereira, Portugal
- A13. A study of gamification awareness, sport motivation, and sport self-efficacy
Jiunde Lee and Zhong Wei Hong, Taiwan
- A14. A study on the establishment of lane control system operation guidelines on freeways
Lee Ra Choi, Jae Joon Lee and Minhui Im, Korea
- A15. User experience of location-based augmented reality: A pilot study of warning application
Chun-Chia Hsu, Kai-Hsiang Chuang, Ching-Huei Lai and Ji-Liang Doong, Taiwan

Interactive Poster Demonstrations

Poster Session, Wednesday, July 19 Time: 10:30-12:30 Room: California Ballroom

- A16. Routine, team composition and resilience
Dingding Chao, Taro Kanno and Kazuo Furuta, Japan
- A17. Proposing a willingness to interact and collaborate with humanoid robots (WICHR) model
Stephen Rice, Scott Winter, Joseph Keebler and Nicole Milner, USA
- A18. Research and innovative design of the motorcycle gloves
Shu-Jen Hu and Wei Lung Kao, Taiwan
- A19. A pilot study evaluating the utility, acceptability, and feasibility of an abbreviated mindfulness meditation program before and during army warfighting training
Valerie Rice, Gary Boykin, Cory Overby, Angela Jeter and Jessica Villarreal, USA
- A20. Adhesion distribution between a hygiene mask and a female dummy face via multiple approaches
Mika Morishima and Tamaki Mitsuno, Japan
- A21. Situational factors related to yips symptoms among Japanese baseball players: Qualitative data analysis
Kaneko Yohei, Yujiro Kawata, Matsuzaki Shinpei, Noguri Ryusei, Shibata Nobuto and Masataka Hirosawa, Japan
- A22. Effect of secondary tasks and driver behavior on crash/near-crash risk at intersections and non-intersections: A naturalistic driving study
Grace Ashley, Osama Osman, Sherif Ishak, Julius Codjoe and Bitu Hashemi, USA
- A23. Students learning journey in higher education – Application of service design methods
Tibor Barath, Hungary
- A24. Research on serves of volleyball: Comparing the effect of serve rates between 6-member and 9-member volleyball system
Yuka Kose, Japan
- A25. Ergonomic variables evaluation in a motorized cultivator with two nominal rotations linked to a trencher
João Eduardo Guarnetti dos Santos, Victor Manieri Schutzer, Matheus Daniel De Souza Luciano and Bento Rodrigues de Pontes, Jr., Brazil
- A26. A study on anthropometry of individuals with cerebral palsy
Jiyoung Park, Korea
- A27. Anthropometric measurements for Saudi young males aged 19 to 26 years
Waleed Basuliman, Saudi Arabia
- A28. Dynamic model of athlete's emotions based on wearable devices
Damien Dupré, Ben Bland, Andrew Bolster, Gawain Morrison and Gary McKeown, UK
- A29. Perceived attractiveness associated with product color
Hanyu Lin, Taiwan
- A30. Designing the patient lifter route for an acute hospital
Andrea Choh and Muhammad Ashraf Adli Bin Ahmad, Singapore
- A31. Motor imagery multitask discrimination method by parallel classifier
Ryo Takahashi and Hisaya Tanaka, Japan
- A32. Neck injury criteria development for system level ejection testing Comparison of ATD and human response to -GZ accelerative input
Joe Berry, Michael Miller, Chris Perry and Jeffrey Parr, USA
- A33. Current tendency of retention management of nurses at university hospital in Japan
Motoki Mizuno, Takumi Iwaasa and Yasuyuki Yamada, Japan
- A34. A case study of human reliability in maquiladora industry manufacturing process
Teresa Carrillo-Gutiérrez, Rose Maria Reyes-Martinez, Jorge de la Riva-Rodriguez, Jaime Sanchez-Leal and Aide Aracely Maldonado-Macis, Mexico

Interactive Poster Demonstrations

Poster Session, Wednesday, July 19 Time: 10:30-12:30 Room: California Ballroom

- A35. Acceptance of a teen driver support system: Preliminary results from a focus group study
Mary Lesch, YoonSun Choi, William Horrey, Yulan Liang, Susan Jeffries and Janet Creaser, USA
- A36. Using human factors experiments to inform design of dynamic holographic displays for medical simulation
Sasha Willis, Brian Goldiez and Matthew Hackett, USA
- A37. Analysis of the effect of exclusive truck lane on expressway
Minhui Im, Jae Joon Lee and Lee Ra Choi, Korea
- A38. User-centered design in the U. S. Air force additive manufacturing; case studies on tools, jigs, and topology optimization
William Page, Jeffrey Parr, Alfred Thal and Amy Cox, USA
- A39. The difference in force pulse element of force fluctuations due to local muscle fatigue
Yen-Ting Lin, Taiwan
- A40. Qualitative research of resilience for complexity and adversity: A case of junior high school teachers in Japan
Takuya Ohsiro, Yasuyuki Hochi, Takumi Iwaasa and Motoki Mizuno, Japan
- A41. Modeling transition and mobility patterns
Adele Hedrick, Ying Zhu and Ken Pu, Canada
- A42. Research methods for fatigue risk management systems in aviation
Celine Muehlethaler and Chiara Knecht, Switzerland
- A43. Experimental research of measurement of human error characteristics in nuclear power plants
Tongil Jang, Hyun-Chul Lee, Sa Kil Kim and Kwangsu Moon, Korea
- A44. A conceptual design on screening nurses' postures
Haleh Barmaki, USA
- A45. Interactions of factors contributing to low back pain in patrol police officers: Implications for intervention
Aditya Jayadas, Adriana Petrova and Semra Peksoz, USA
- A46. Relationship between psychological skills and trait anxiety for sports among Japanese university athletes
Takaya Sukizaki, Yujiro Kawata, Yamaguchi Shinji, Shibata Nobuto and Masataka Hirose, Japan
- A47. Relationship between empathy and prosocial and antisocial behaviors in sports
Yu Murayama, Yujiro Kawata, Yamaguchi Shinji, Shibata Nobuto and Masataka Hirose, Japan
- A48. Electronic Health Record Systems: Using high fidelity simulation to train clinicians, and predict and mitigate latent threats prior to implementation
Ruth Fanning, USA

Interactive Poster Demonstrations

POSTER/DEMONSTRATION SESSIONS, WEDNESDAY, JULY 19

Session Time: 13:30-15:30

Room: California Ballroom

- B1. Impact of cognitive learning disorders on accessing online resources
Alex Cadzow, UK
- B2. Apply petri nets to human performance and workload prediction under multitask
Peng Wang, Weining Fang, Beiyuan Guo and Haifeng Bao, China
- B3. Universal design use for children and adolescents spatial inclusion in shelters: The case of Brazil
Aline Savi, Marta Dishniger and Lays Hespanhol, Brazil
- B4. Comparative study between three models of school tables and their influence in the posture of teaching students medium and superior, by means of the checklist of ABNT NBR ISO 11.226
Débora Blaszczak, Patrícia Branco, Christina Ceppeda and Jayne Silva, Brazil
- B5. Motion and time study on space maintenance mission
Hanzhao Qiu, Weining Fang, Li Wang, Bo Wang and Beiyuan Guo, China
- B6. Online posture feedback system aiming at human comfort
Thiago Otto, Alexandre Campos and Marcos Souza, Brazil
- B7. Contributory factors analysis on undergraduates' unsafe acts at university
Yunhua Gong, China
- B8. Behaviors of Japanese baseball players in coping with yips and reactions from team members
Noguri Ryusei, Yujiro Kawata, Kaneko Yohei, Shibata Nobuto and Masataka Hirotsawa, Japan
- B9. A pilot location-based motion sensing game for children learning the skills of crossing roads
Chun-Chia Hsu, Kai-Hsiang Chuang, Ching-Huei Lai and Ji-Liang Doong, Taiwan
- B10. Virtual reality/augmented reality (VR/AR): Integrating next generation data collection and user testing technology
Jennifer Lau, Andrew Sweeney and Alexa Konstantinos, USA
- B11. The impact of Chinese traditional cultural on the gesture and user experience in mobile interaction design
Ren Long, Xu Liu, Tian Lei and Ziliang Jin, China
- B12. Analysis on human unsafe acts contributing to falling accidents in construction industry
Hong Zhang and Gui Fu, China
- B13. The research of interactive information visualization design in mobile environment
Zhaohui Huang, Ziliang Jin and XuLiu, China
- B14. Comparing the effectiveness of Chinese herbs, saliva enzyme, and lemon water mouthwash on xerostomia and saliva flow rate in hemodialysis patients
I-Chen Yu, Ji-Tseng Fang, Jia-You Fang and Ching-Yun Hsu, Taiwan
- B15. Accidents in micro and small construction enterprises in Brazil – lessons from an exploratory study
Ana Gabriella Amorim, Brazil
- B16. The influence of graphical user interface's information content changes on different character trait people's mental stress
Xinqin Jin, Chen Zhou, Peng Chu and Songyan Liu, China
- B17. An analysis of the negative feedback from the uncertainties of emoticons in internet communication media
Tian Lei and Luoling Zhu, China

Interactive Poster Demonstrations

Poster Session, Wednesday, July 19 Time: 13:30-15:30 Room: California Ballroom

- B18. ACT-R feedback for personalized adaptive training
Amanda Kraft, Jesse Mark, Neha Thomas, Hasan Ayaz, William Casebeer and Matthias Ziegler, USA
- B19. Total force of pinch and grasp by hand postures
Kyung-Sun Lee and Myung-Chul Jung, South Korea
- B20. Investigation on effect of mattress hardness on sleep comfort of middle-aged and old women
Huimin Hu, Fan Yang, Chaoyi Zhao, Hong Luo, Ying Zhang, Linghua Ran, Xin Zhang and Haimei Wu, P. R. China
- B21. Association between pain and lifestyle in musicians
Inês Lima, Luana Belmonte, Luiz Belmonte, Ana Silva and Antonio Moro, Brazil
- B22. Pilates method in the treatment of pain in dentists
Thaisa Coelho, Simone Prestes, Marcelo Prestes, Jaqueline Romano and Juliana Antonucci, Brazil
- B23. Relationships between resilience, psychological stressors, and stress responses among Japanese university athletes: Gender differences
Nakamura Miyuki, Akari Kamimura, Yujiro Kawata, Yamaguchi Shinji, Shibata Nobuto and Masataka Hirose, Japan
- B24. The application of human factors engineering program in the light of beyond design basis events and severe accidents
Dongjin Kim, Yun-Hyung Chung and Jiyeon Han, Korea
- B25. The comparison of intention prediction between the built-in paths of robots and the path of humans
Kuo-Hao Tang, Taiwan
- B26. Ergonomic tools applied in a metallic systems manufacturing industry workstation
Jean Cesar De Faria Silva, Vinicius Luiz dos Santos, Danielle Rodrigues de Oliveira and Lucio Garcia Veraldo, Jr., Brazil
- B27. Clothing for breast support: Implications for female work activities
Rosiane Alves and Laura Martins, Portugal
- B28. Does weight machines training induce variations on strength elements among body mass index classifications of males?
Hassan Almoslim, Saudi Arabia
- B29. Study of the impact of investments in occupational safety and accident prevention in the construction sector
Paulo Oliveira and Rui Pais, Portugal
- B30. An emerging framework to inform effective design of human-machine interfaces for older adults using connected autonomous vehicles
Phillip Morgan, Alexandra Voinescu, Craig Williams, Praminda Caleb-Solly, Chris Alford, Ian Shergold, Graham Parkhurst and Anthony Pipe, UK
- B31. Cryptanalysis of a provably secure authenticated key agreement scheme for distributed mobile cloud computing service
Hakjun Lee, Taeui Song, Donghoon Lee and Dongho Won, Korea
- B32. Injury trends in skiing and snowboarding
Taishi Asai, Japan
- B33. Computer aided diagnosis of retinal imaging – improving quality for diabetes mellitus patients
Yoash Chassidim, Israel
- B34. Sustainable energy: Human factors in geothermal water resource management
Barbara Tomaszewska, Poland
- B35. Inflight EEG identifies reduction in phase resetting as neural signature of inattentive

Interactive Poster Demonstrations

Poster Session, Wednesday, July 19

Time: 13:30-15:30

Room: California Ballroom

- deafness in pilots
Daniel Callan, Thibault Gateau, Gautier Durantin, Nicolas Gonthier and Frederic Dehais, Japan/France
- B36. Activity and sleep monitoring: Equipment comparison for use during human factors assessments of military basecamp environments and clothing/individual equipment
Stephanie Brown, Alan Wright and Katherine Mitchell, USA
- B37. Assessment of cognitive function using event-related potential P3 components after manual driving and after monitoring of autonomous driving
Yukiyo Kuriyagawa, Nikhil Gowda, Patrick Cravalho and Erin Flynn-Evans, Japan/ USA
- B38. Interdisciplinary education for healthcare systems engineering
Hyung Nam Kim, USA
- B39. Study of followership and leader's job satisfaction in top and middle manager
Kentaro Inaba, Takumi Iwaasa and Motoki Mizuno, Japan
- B40. The impact of human errors on the estimation of uncertainty of measurements in water monitoring
Ewa Kmiecik, Poland
- B41. Careinbox: An automatic printer bridging the communication gap between the young and older generations
Caowei Zhang, Xuan Li and Wentao Luo, China
- B42. Evaluation of information amalgamation strategies using ACT-R
Justine Caylor, Timothy Hanratty, Eric Heilman, Derrik Asher and Daniel Cassenti, USA
- B43. Shape analysis of pottery using elliptic Fourier descriptor and 3D scanning
Jin Wang, Wei Qian and Haixiao Liu, China
- B44. Team efficacy and self-efficacy of nursing teams at small and medium sized hospitals in Japan
Emiko Togashi, Takumi Iwaasa and Motoki Mizuno, Japan
- B45. Research on bio-signal switches using multi sensors
Daisuke Tamaki and Hisaya Tanaka, Japan
- B46. Understanding the impact of infrastructure on electric vehicle adoption and emission reduction in California
Roxana J. Javid, Ramina Jahanbakhsh Javid and Mahmoud Salari, USA
- B47. Effect of a sago-*soy* combined supplementation on 20-km cycling time trial performance in the heat
Daniel Tarmast, Asok Kumar Ghosh and Keong Chen Chee, Iran

Interactive Poster Demonstrations

POSTER/DEMONSTRATION SESSIONS, THURSDAY, JULY 20

Session Time: 10:30-12:30

Room: California Ballroom

- C1. Variability of a monofilament buckling force with human hand motion during a Semmes-Weinstein monofilaments test
Manabu Chikai, Kiyohiko Nunokawa and Shuichi Ino, Japan
- C2. Research on multi-factor sofa inclination comfort based on user experience
Huimin Hu, Ling Luo, Yanlong Yao, Chaoyi Zhao, Haimei Wu, Xin Zhang, Linghua Ran and Rui Wang, China
- C3. A study on the necessity of measurement of functional dimension in the elderly
Jiyoung Park, Korea
- C4. Initiative for improving medical instruction communication with elderly hearing impaired patients at an outpatient pharmacy counter
Izumi Fukuzaki, Noriko Ishigami, Terumasa Sata and Shinichiro Nakaishi, Japan
- C5. An optimization of a GPU-based parallel wind field module
André Pinheiro, Claudio Pereira and Roberto Schirru, Brazil
- C6. Affordance-based menu design for users of different generations
Hsiu-Ping Yueh, Jia-Chen Chen and Weijane Lin, Taiwan
- C7. VR environment for the study of collocated interaction between small UAVs and humans
Christopher Widdowson, Venanzio Cichella, Hyung-Jin Yoon, Ranxiao Frances Wang and Naira Hovakimyan, USA
- C8. Decision support system for organizational capability assessment
Elizabeth Fleming and Nicole Murchison, USA
- C9. The analysis of the performance of eco-Chinese parks transformation from the industrial parks in the Chinese urban planning - the case study from Chinese parks
Mo Zhou, Wojciech Bonenberg and Xia Wei, Poland
- C10. Renewable energy: Sustainability by installation of photovoltaic panels and urban mobility by electric bicycle electronics
Fabia de Oliveira Maruco, Lucio Garcia Veraldo, Jr., Minella Martins and Patricia Lima Bianchi, Brazil
- C11. Assessment of the students' expectations and perception regarding the development of the competences of the industrial engineering course
Lucio Garcia Veraldo, Jr., Benedito Manoel de Almeida, Cesar Augusto Botura, Joberto Antônio Duarte, Jr., José Lourenço, Jr., Messias Borges Silva and Paulo França Barbosa Neto, Brazil
- C12. Code for America as an instructional resource for teaching user centered design and accessibility
Lisa Jo Elliott and Angie Brunk, USA
- C13. Reorganizing neonatal resuscitation equipment improves performance speed under simulation conditions
Brenda Hiu Yan Law, Po-Yin Cheung, Megan O'Reilly, Caroline Fray and Georg Schmölzer, Canada
- C14. E-shoppers' stickiness formation during augmented reality experiences
Tseng-Lung Huang and Chien-Ying Chiang, Taiwan
- C15. Categorization of aesthetic pleasure derived attributes. A cultural perspective
Angela Henao, Colombia
- C16. Soldier protection of staying in the radiated field generated by antenna of selected military communications systems
Rafał Przesmycki and Marian Wnuk, Poland
- C17. Ergonomic methodology as a partner to cleaner production practices
Edson Mauro Dutra, Guilherme Laureano and Ana Regina De Dutra, Brazil

Interactive Poster Demonstrations

Poster Session, Thursday, July 20

Time: 10:30-12:30

Room: California Ballroom

- C18. Characterization of the standing-up motion from forward-sloping toilet seats in assisted bathrooms
Shuichi Ino, Manabu Chikai, Emi Ozawa and Hiroshi Endo, Japan
- C19. Air traffic controller additional work load as a result of aircraft dynamic separations
Julio Roa, USA
- C20. Preliminary study of ontological process analysis of surgical endoscopy
Kazuhiko Shinohara, Japan
- C21. Test methods for automotive voice recognition system usability
Stephen Cargo, USA
- C22. Real-time eye-interaction system developed with eye tracking glasses and motion capture
Haifeng Bao, Weining Fang, Beiyuan Guo and Peng Wang, China
- C23. Dynamic detection method of event-related desynchronization (ERD) and synchronization (ERS) using dynamic threshold for walking control
Ryo Machida and Hisaya Tanaka, Japan
- C24. Design proposal to improve the performance and healthcare in car drivers affected by chronic stress thru cognitive training
Lizeth Huitron, Mexico
- C25. Relationship between shared leadership and organizational climate: A case of high school baseball team in Japan
Shuichiro Minato, Yasuyuki Hochi, Takumi Iwaasa, Yutaka Nakajima and Motoki Mizuno, Japan
- C26. Requirements for implementing worker centered design of factory processes in industry 4.0
Sebastian Mach, Franziska Schmalfuß, Matthias Beggiano and Josef Krems, Germany
- C27. The learning tree: Creating a learning culture by using a learning focused investigation technique
Brianna Cregan, Dylan Smibert, Mark Fleming, Keri Harvey and Tabatha Thibault, Canada
- C28. Examining the role of trust and hedonic motivation in the acceptance of social media data in business analytics
Benjamin Larson, USA
- C29. A virtual pharmacist: The cognitive, social, and emotional companion for seniors' medication management
Wi-Suk Kwon and Veena Chattaraman, USA
- C30. Evaluation of ergonomic risk factors and presence of musculoskeletal symptoms in medical specialty in echography
Elena Ochoa-Chaidez, Elvia González-Muñoz, Enrique Herrera Lugo and Jean Becker, Mexico
- C31. Engaging veterinary students with physical interaction to increase bovine laminitis competency
Margaret Cook, Jinsil Seo, Michelle Pine and Annie Sungkajun, USA
- C32. Job commitment and leadership among nurses at small- and medium-sized hospitals
Ryoko Takata, Takumi Iwaasa and Motoki Mizuno, Japan
- C33. Injury severity analysis in vehicle-pedestrian crashes
Younshik Chung, Tai-jin Song and Juyoung Kim, Korea
- C34. The effects of a non-driving task as a function of duration of automated driving
Mercedes Bueno, Ebru Dogan, Fouad Hadj Selem, Eric Monacelli, Serge Boverie and Anne Guillaume, France
- C35. Association between job insecurity, perceived job satisfaction, and life satisfaction: A comparison of Japanese and Korean regular office workers
Myunghee Park, Takumi Iwaasa and Motoki Mizuno, South Korea/Japan

Interactive Poster Demonstrations

Poster Session, Thursday, July 20

Time: 10:30-12:30

Room: California Ballroom

- C36. Reduction of number of signal-averaging by spatiotemporal information of EEG
Hisaya Tanaka and Yoshiki Ohtaki, Japan
- C37. The most important side of engineering, being human above all, is also learnt at college
Graziela Amanda Santos, Regiane Romano, Raquel Rogoschewski,
Claudio Augusto Leite and Bruna Oliveira, Brazil
- C38. Building a state of the art human systems engineering laboratory to support the DOE mission
Eric Moyer and Sidney Holman, USA
- C39. A case study in cognitive modeling: Lessons learned and a comparison to selected software development tools
Mary Freiman and Christopher Myers, USA
- C40. Future challenges for risk communication of CBRNE disaster with qualitative approach
Naoto Shoji and Takeshi Ebara, Japan
- C41. Comparing three stimulus presentation types in a virtual reality experiment to human wayfinding behavior during emergency situation
Elisângela Vilar, Francisco Rebelo and Paulo Noriega, Portugal
- C42. The comparative assessment of a two-handed grip force during bike driving: Quantifying different anthropometric grasp patterns for males and females for bike driving
Mukhtiar Singh and Sumeet Nagar, India
- C43. Port systems safety management analysis
Marcus Rodgers and Mahdi Safa, USA
- C44. Examination of drivers' performance on curves with two advance curve speed warning systems: A driving simulator study
Alidad Ahmadi and Sahar Ghanipoor Machiani, USA
- C45. Effect of heel style, heel height, and body type on gait mechanics and perceived discomfort
Lizzie Johnson, Aditya Jayadas, Adriana Petrova and Semra Peksoz, USA
- C46. Relationship between social skills and school adjustment among Japanese elementary school students
Hayao Shimizu, Yujiro Kawata, Hiroki Nakaie, Shibata Nobuto and Masataka Hirose, Japan

Interactive Poster Demonstrations

POSTER/DEMONSTRATION SESSIONS, THURSDAY, JULY 20

Session Time: 13:30-15:30

Room: California Ballroom

- D1. Accessibility in public open spaces as a factor of social inclusion: The case of Brazil
Aline Savi, Lays Hespanhol and Marta Disnhiger, USA
- D2. Study of arm fatigue on vertical and horizontal computer mouse
Xinqin Jin, Chen Zhou, Peng Chu and Songyan Liu, China
- D3. HEI quality culture in Poland – multi-paradigm view
Lukasz Sulkowski and Zofia Patora-Wysocka, Poland
- D4. Haptic device for virtual 3D shape understanding
Luciano Silva, Olga Bellon, Jonathan Szlachta and Giovanni Bertolla, Brazil
- D5. Dynamic understanding of human-skin movement and garment design of golf apparel
Ziting Hu, Li Liu, Zhengdong Liu and Mengdi Xing, China
- D6. In body nano-communication at terahertz frequencies for biomedical application
Qammer Abbasi, Akram Alomainy, Khalid Qaraqe and Joseph Boutros, UK/Qatar
- D7. What attracts older adults to social media and makes them come back for more?
Julie Udell and Mark Turner, UK
- D8. Effects of textual enhancements and pharmacy background on look-alike drug names differentiation
Hailiang Wang and Calvin Or, Hong Kong
- D9. Object recognition rate and latency using frequency-based tactons
Ricardo Jimenez, Celia Patnelli, Barbara Hernandez-Panunzio and Ana Jimenez, USA
- D10. Implementation of a SEMG-machine interface for steering a virtual car in a driving simulator
Edric John Nacpil, Rencheng Zheng, Tsutomu Kaizuka and Kimihiko Nakano, Japan
- D11. The biomechanics and ergonomics of the impact of anti-fatigue mats on decreasing whole body vibration
Redha Taiar, Xavier Chimentin, Ellie Abdi, Guillaume Polidori and Tareq Ahram, France/USA
- D12. Climbing performance in rung-hold and rail-hold styles on a simulated 52.5° pitch fire truck aerial ladder
Qianyi Fu, Thomas Armstrong, Charles Woolley, Hongwei Hsiao and Peter Simeonov, USA
- D13. Work time in agriculture through time-diary method and evaluation of the reliability of the data using GPS device
Hee-Sok Park, Yun-Keun Lee, Yuncheol Kang, Kyung-Doo Min, Kyung-Suk Lee and Hyocher Kim, Korea
- D14. Study of the influence of training in occupational safety and health in the human factors of the construction sector
Paulo Oliveira and Rui Pais, Portugal
- D15. Neurocognitive temporal training for improved military marksmanship: Grouping and zeroing
Gary Boykin and Valerie Rice, USA
- D16. Development of proactive analysis-based rare human error coping technique
Sang-Jun Park, South Korea
- D17. Using augmented reality in higher education: A discussion on ethical considerations and inclusive technology leaning strategies
Laura Huisinga, USA
- D18. An experimental study on consistency of creativity assessment
Hitoshi Terai and Mina Nakamura, Japan

Interactive Poster Demonstrations

Poster Session, Thursday, July 20

Time: 13:30-15:30

Room: California Ballroom

- D19. A multi-modal interface for natural operator teaming with autonomous robots (MINOTAUR)
Kevin McGurgan, Stephanie Kane, Martin Voshell, Camille Monnier, Stan German and Andrey Ost, USA
- D20. Decision making support for human-machine collaboration in complex environments: Determining decision making support requirements
Betsir Zemen, Andrea Postlewate and Jennifer Pagan, USA
- D21. Development of an automated pressure sensitive thermesthesiometer and its application in characterizing the thermal response of human tissue with respect to warm surfaces
Paul Soldate and Jintu Fan, USA
- D22. A study on the effectiveness of fire extinguisher placement in Melchor Hall, University of the Philippines – Diliman
Ramona Katrina Leyretana, Shanel Tan and Cyril Vinz Bana, Philippines
- D23. The social housing project: “Habita Você”
Karina Leonetti Lopes, Flavia Gara, Maria Carolina Silva, Mariana Palmeiras and Vitor Lopes, Brazil
- D24. Evaluation of the relationship between virtual environments and emotions
Tiago Oliveira, Paulo Noriega, Francisco Rebelo and Regina Heidrich, Portugal
- D25. Biomimicry as methodological tool for technical emancipation of peripheral countries
Justino Barbosa, Amilton José Arruda, Edna Moura and Theska Laila Freitas, Brazil
- D26. Could the design of a wheelchair influence the decision of the people with disabilities?
Luciana Carneiro, Francisco Rebelo, Paulo Noriega and Joana Faria Pais, Portugal
- D27. Cryptanalysis of lightweight user authentication scheme using Smart card
Dongwoo Kang, Jaewook Jung, Hyungkyu Yang, Younsung Choi and Dongho Won, South Korea
- D28. Safety ergonomics: The use of biomarkers in favor of the production of preventive work practices in benzene-exposed gas station attendants
Poliana Ferreira, Brazil
- D29. Human-automation trust assessment
Ashley Neimeier, Svyatoslav Guznov, Marc Pfahler and Joseph Lyons, USA
- D30. Teamwork strategies in air traffic control as a foundation to design automation
Åsa Svensson, Sweden
- D31. Cryptanalysis and improvement of an advanced anonymous and biometrics-based multi-server authentication scheme using Smartcards
Chunyi Quan, Hakjun Lee, Dongwoo Kang, Jiye Kim, Seokhyang Cho and Dongho Won, Korea
- D32. Results of a predictive fatigue risk monitoring system using circadian principles in an occupational environment
Carol Setters, USA
- D33. Conditional relationships between active and latent human error in military aviation mishaps
Andrew Miranda, USA
- D34. Development of stroke diagnosis algorithm through logistic regression analysis with national health insurance database
Seung Nam Min, Kyung-Sun Lee, Se Jin Park, Murali Subramaniam and DongJoon Kim, Korea
- D35. The psychological contract of employee among professional sport company: A case of Japan independent baseball league
Yasuyuki Hochi, Takuya Ohsiro, Shuichiro Minato and Motoki Mizuno, Japan

Interactive Poster Demonstrations

Poster Session, Thursday, July 20

Time: 13:30-15:30

Room: California Ballroom

- D36. Relationships between safety climate and safety performance in steel company
Ting-Yi Lin, Pin-Ling Liu, Kang-Hung Liu and Chien-Chi Chang, Taiwan
- D37. Examining race, gender, and class bias as a factor in driver yielding behaviors
James Abelar, Courtney Coughenour and Ashok Singh, USA
- D38. Leadership of curriculum coordinators and organizational climate in schools
Hazuki Fujie, Takumi Iwaasa, Yutaka Nakajima and Motoki Mizuno, Japan
- D39. The study of human skills needed for future Korean society jobs
Seung-Kyu Yi, Korea
- D40. Bridging the gap between human factors and epidemiological models:
Recommendations for future research
Anna Paula Galvão Scheidegger and Amarnath Banerjee, USA
- D41. The Proteus effect in action - the gaming for peace project
Kamila Trochowska, Poland
- D42. Data Mining and microclimate prediction in support of highway safety
Kasun Armarasinghe, Milos Manic, David Gertman, Zachary Spielman, Ira Pray and
Scott Wold, USA/Sri Lanka
- D43. The effect of music on the working memory of introverted and extroverted students
Maryam Maghsoudipour, Maryam Jamshidzad, Seyed Abolfazl Zakerian and
Enayatollah Bakhshi, Iran
- D44. Effects of negative stimuli priming on reaction time
Anar Salayev, USA
- D45. Virtual reality self-induced motion sickness: An exploratory study
Ana Lucia Almeida, Francisco Rebelo, Paulo Noriega and Elisângela Vilar, Portugal
- D46. Evaluation of a virtual environment prototype for studies on the effectiveness of
technology-based safety signs
Lara Reis de Amaral, Emília Duarte and Francisco Rebelo, Portugal
- D47. Relationship between frequency of exercise outside school time and social skills in
Japanese elementary school students: A cross-sectional study
Hiroki Nakaie, Yujiro Kawata, Yamaguchi Shinji, Hayao Shimizu, Shibata Nobuto and
Masataka Hirose, Japan

POSTER SESSIONS FRIDAY, JULY 21

Session Time: 10:30-12:30

Room: California Ballroom

- E1. Proposal of ergonomic intervention in horizontal traffic signaling
Claudemilson dos Santos and Galdenoro Botura, Jr., Brazil
- E2. Physical activity in a public park in the city of Doha
Khaled Shaaban, Qatar
- E3. Toward an "equal-footing" human-robot interaction for fully autonomous vehicles
Theocharis Amanatidis, Patrick Langdon and P. John Clarkson, UK
- E4. Sensing an object's weight through the use of a white cane for visually impaired users
Kiyohiko Nunokawa, Manabu Chikai, Kouki Doi and Shuichi Ino, Japan
- E5. Characteristics of trimethoprim and fluoxetine degradation by gamma-ray and kinetics
evaluation

Interactive Poster Demonstrations

Poster Session, Friday, July 21

Time: 10:30-12:30

Room: California Ballroom

- Seung Lim, Tak-Hyun Kim and Seungho Yu, South Korea
- E6. Cryptanalysis of chaos-based 2-party key agreement protocol with provable security
Jongho Moon, Taeui Song, Donghoon Lee, Youngsook Lee and Dongho Won, Korea
- E7. Professional workplace
Jessica Garcia, Selene Vazquez and Humberto Diaz, Mexico
- E8. Exploring quests and challenges in the perspective of player experience of need satisfaction – league of legends
Kuan-Yu Lin and Jiunde Lee, Taiwan
- E9. Ergonomic risks of physical burden and occupational low back pain in a higher education institution Cartagena-2016
Irina Escudero, Colombia
- E10. Machine typography: 3D printer as lettering machine
Taekyeom Lee, USA
- E11. The effects of cupping therapy on reducing fatigue of upper extremity muscles: A pilot study
Chien-Liang Chen, Chi-Wen Lung, Yih-Kuen Jan, Ben-Yi Liao and Jing-Shia Tang, Taiwan
- E12. User perception for social capital on social networking sites
Jaewon Choi, Korea
- E13. Innovating in the classroom
Selene Vázquez, Enrique García and Miguel Dominguez, Mexico
- E14. Incorrect surgery and invasive procedures: internet videos fail to depict the full story
Sarah Simpson, Robert Kononowech, Douglas Paull, David Sine and Robin Hemphill, USA
- E15. Direct and indirect effect of the hardiness on mental health among Japanese university athletes
Shinji Yamaguchi, Yujiro Kawata, Nobuto Shibata and Masataka Hirose, Japan
- E16. Research on blinking-luminescence travel support for visually impaired persons
Shoichiro Fujisawa, Tomohiro Okada, Takashi Miyamoto, Shin-ichi Ito, Katsuya Sato, Osamu Sueda and Norihiro Ikeda, Japan
- E17. ITS and driver cognitive distraction in a different communication modalities: A simulator study
Ales Zaoral, Czech Republic
- E18. Comparison of anthropometric data for the design of chairs between seven countries
Linghua Ran, Xin Zhang, Hong Luo, Taijie Liu, Huimin Hu and Chaoyi Zhao, China
- E19. Relationship between ergonomic workstations with musculoskeletal disorders and job stress among staff of bank in Tehran City
Tabatabaei Yahyaabadi Shahnaz, Khani Jazani Reza, Kavousi Amir and Bahreini Maryam, Iran
- E20. Research on the effects of post-doctoral system on the university faculty in China
Aili Zhang, China
- E21. Qualitative, quantitative or mixed: Which is the most preferred for healthcare studies?
Rohayu Othman, Shaik Farid Abdull Wahab and Ahmad Rasdan Ismail, Malaysia
- E22. Scalable display using a distributed network of raspberry Pi
Billy Saysavath, Krutik Amin and Doina Bein, USA
- E23. Park N Notify – web based application
Anusha Devabhaktuni and Doina Bein, USA
- E24. Realization of the principal of conformal symmetry in the structure of the heart
Galina Spirina, Russian Federation
- E25. Activation sequence patterns of forearm muscles for driving a power wheelchair
Chi-Wen Lung, Li-Feng Chao, Wen-Feng Chen, Chien-Liang Chen, Yih-Kuen and Ben-Yi Liao, Taiwan
- E26. Optimization and ergonomics of novel modular wheelchair design
Nadir Skendraoui, Fabien Bogard, Sebastien Murer, Tareq Ahram and Redha Taiar, France/USA
- E27. Proposal of a mathematical model of prediction of sinistrality values for valuation of organizational management indicators, applied to the construction industry

Interactive Poster Demonstrations

Poster Session, Friday, July 21

Time: 10:30-12:30

Room: California Ballroom

- Paulo Oliveira, João Baptista and Rui Pais, Portugal
- E28. Service based healthcare monitoring system for the elderly - physical activity and exercise
Se Jin Park, Murali Subramaniam, Seunghee Hong and Da Mee Kim, South Korea
- E29. Determinants of business overdraft accessibility within small and medium-sized enterprises in the South African construction industry: A case of Gauteng province
Olanrewaju Balogun and Nazzem Ansary, South Africa
- E30. Understanding the social and economic factors affecting adverse events in an active theater of war: A neural network approach
Erman Cakit and Waldemar Karwowski, Turkey/USA
- E31. Human factors field evaluation of a blast debris protection design concept
Katherine Mitchell, Jay McNamara and Kristine Isherwood, USA
- E32. Systems engineering education using cloud-based and collaborative modeling tool
Masashi Miura, Japan
- E33. Intuitive mobile gesture as a means for conceiving food size and performance measurements
Ying Chieh Liu, Shan Ju Lin, Su Ju Lu and Chien Hung Chen, Taiwan
- E34. Noninvasive estimation of lumbar disk load during motion to improve the posture
Yu Suzuki, Kyoko Shibata, Motomichi Sonobe, Yoshio Inoue and Hironobu Satoh, Japan
- E35. Supporting the construction of explanations of natural phenomena in primary school pupils
Martin Sommer Lohrmann and Valeria Cabello, Chile
- E36. Predicting consumer choice based on customer review text data for a recommendation system
Wi-Suk Kwon and Veena Chattaraman, USA
- E37. Airport infrastructures and satisfaction of passengers with reduced mobility: The human-systems integration and the constraint of the users
Natalha Carvalho, Nelson Matias, Claudia Araújo, Rosinei Ribeiro and Paulo Sena, Brazil
- E38. Composite ergonomic risk assessment of municipal manual waste sorting
Gyula Szabo, Hungary
- E39. The co-activation of trunk muscles during lifting by squat
Mohammad Hossein Sorayani Bafghi, Farhad Tabatabai Ghomshe, Siavash Etemadinezhad, Maryam Maghsoudipour and Jamshid Yazdani Charati, Iran
- E40. Study of effectiveness of civilian pepper spray designs during self-defense situations
David Strybel and Anil Kumar, USA
- E41. Agriculture and all-terrain vehicles: Identifying loss of control events to obtain feasible safety interventions
Hali Neves and David Gilkey, USA
- E42. A brain wave research on VR (virtual reality) usage: Comparison between VR and 2D video in EEG measurement
Sang Hee Kweon, Hea Ji Kweon, Se Jin Kim, Xuena Li, Xin Liu and Hea lin Kweon, Korea
- E43. Effects of guided reading design on comprehension for visual and verbal style learners
Weijane Lin and Hsiu-Ping Yueh, Taiwan
- E44. Psychological stressors of Japanese university baseball players with yips: Retrospective study
Matsuzaki Shinpei, Yujiro Kawata, Kaneko Yohei, Noguri Ryusei, Morio Suganami, Shibata Nobuto and Masataka Hirose, Japan
- E45. Analysis and physiological monitoring of the physical performance index of Algerian cyclists category (U19)
Abdelkader Kharabi Abdelhamid, Algeria
- E46. Social media as a risky information source: The influences of update recency and social endorsement on individuals' credibility
Jaewon Yu and Heejo Keum, South Korea
- E47. Resistance to rumor in the social media environment: An application of the Inoculation Theory in South Korea
Cixuan Zhang and Heejo Keum, South Korea

APPLIED HUMAN FACTORS AND ERGONOMICS

Proceedings of the 8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017) and the Affiliated Conferences
July 17-21, 2017, The Westin Bonaventure Hotel, Los Angeles, USA

Dr. Tareq Z. Ahram & Dr. Waldemar Karwowski (Eds)

This set of 26 volumes gathers the proceedings of the 8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017) and the Affiliated Conferences, held July 17-21, 2017, at The Westin Bonaventure Hotel, Los Angeles, California. By highlighting the latest theories and models, as well as cutting-edge technologies and applications, and by combining findings from a range of disciplines including engineering, design, robotics, healthcare, transportation, simulation, management and computer science, the set provides researchers and practitioners alike with a comprehensive, timely guide on human factors research and applications. It also offers an excellent source of innovative ideas to stimulate future discussions, collaborations and developments.

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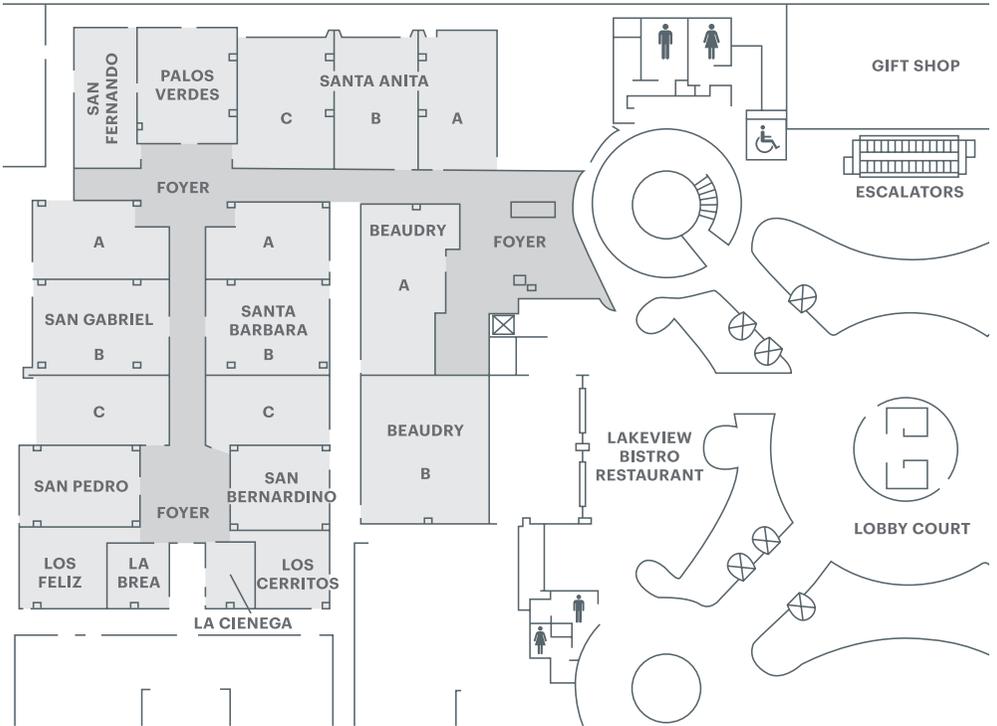
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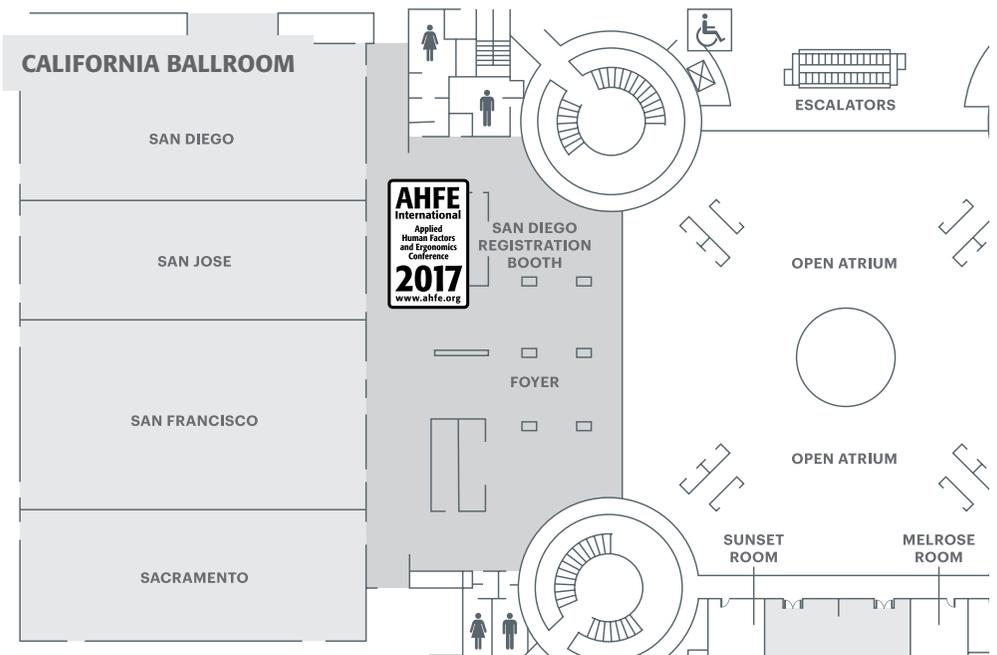
General Layout

LOBBY LEVEL AT THE WESTIN BONAVENTURE HOTEL



SECOND LEVEL AT THE WESTIN BONAVENTURE HOTEL

Conference Keynote will be held at California Ballroom (Second Level) and conference Reception Banquet will be held at Pool Deck at The Westin Bonaventure Hotel. To get to the Pool Deck you need to use escalator or stairs.



Exhibits

All conference exhibits, posters/ demonstrations, and conference refreshment breaks will be held in the California Ballroom (Second Level) at The Westin Bonaventure Hotel

EXHIBITION SCHEDULE

Exhibition Setup:

Tuesday, 18 July, 13:00 to 17:00
 Wednesday, 19 July, 8:00 -10:00

Exhibition Hours:

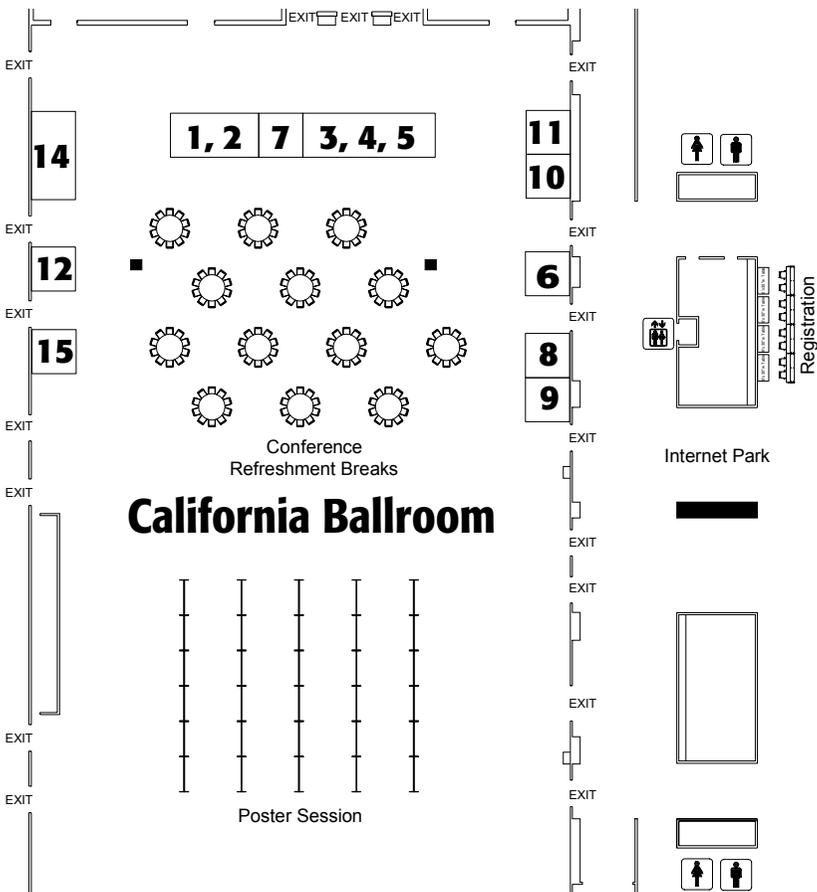
Wednesday, 19 July, 10:00 to 17:00
 Thursday, 20 July: 10:00 to 17:00
 Friday, 21 July: 10:00 to 14:00

Exhibition Closing/Dismantle:

Friday, 21 July: 14:00 to 16:00

EXHIBIT SPACE	COMPANY NAME AND WEB SITE
1, 2	Springer International Publishing AG - www.springer.com
3, 4, 5	CRC Press - Taylor & Francis - www.taylorandfrancis.com
6	UMICH Center for Ergonomics - www.centerforergonomics.org
7	NexGen Ergonomics Inc. - www.nexgenergo.com
8	Smart Eye - www.smarteye.se
9	Noraxon USA, Inc. - www.noraxon.com
10	Wearable Sensing - www.wearablesensing.com
11	TREWgrip - www.trewgrip.com
12	iHSI 2018 - www.ihsi2018.org
14	AHFE 2018 - www.ahfe2018.org
15	3dMD - www.3dmd.com

Layout of Conference Exhibition



Conference Track Chairs 2017

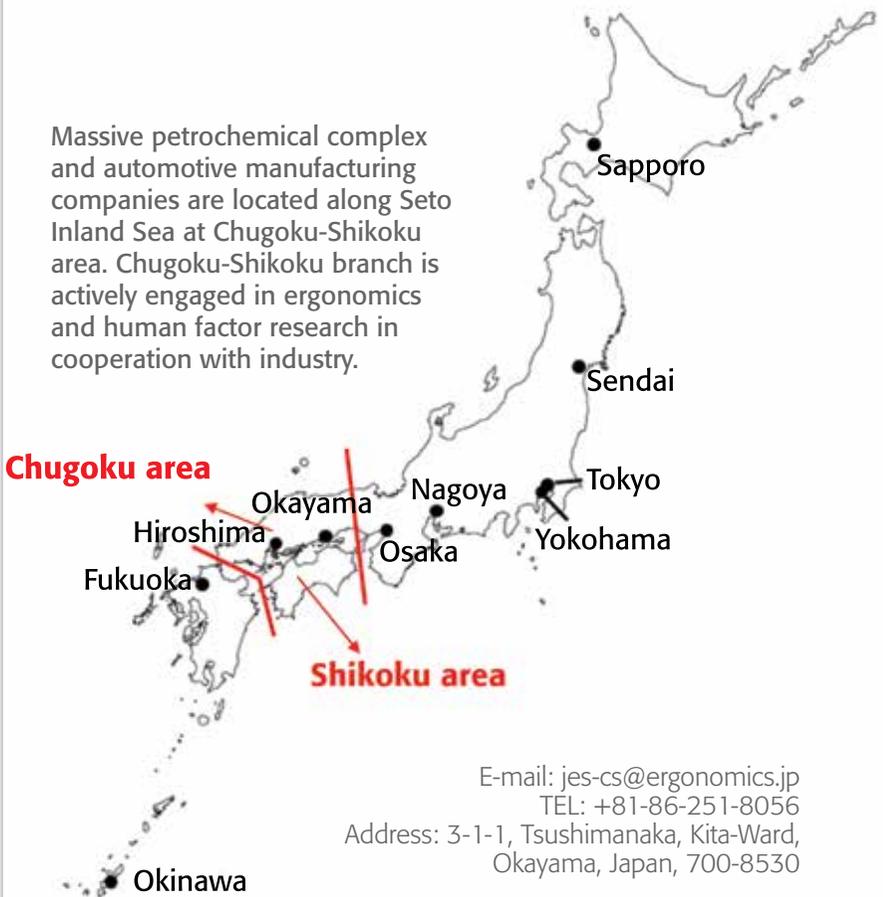
Conference Track	Chair/Co-Chairs
1st International Conference on Human Factors and Wearable Technologies	T. Ahram, Co-Chair C. Falcao, Co-Chair
1st International Conference on Human Error, Reliability, Resilience, and Performance	R. L. Boring, Chair
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1st International Conference on Human Factors and Medical Devices	V. Duffy, Chair
1st International Conference on Human Factors and Game Design	C. Falcao, Chair
2nd International Conference on Cognitive Computing and Internet of Things	C. Baldwin, Chair
2nd International Conference on Design for Inclusion	G. Di Bucchianico, Co-Chair P. Kercher, Co-Chair
2nd International Conference on Human Factors in Management and Leadership	T. Barath, Co-Chair S. Nazir, Co-Chair
3rd International Conference on Human Factors in Cybersecurity	D. Nicholson, Chair
3rd International Conference on Human Factors, Business Management and Society	J. Kantola, Chair
3rd International Conference on Human Factors and Systems Interaction	I. L. Nunes, Chair
3rd International Conference on Human Factors in Robots and Unmanned Systems	J. Chen, Chair
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3rd International Conference on Human Factors in Training, Education, and Learning Sciences	T. Andre, Chair
4th International Conference on Safety Management and Human Factors	P. Arezes, Chair
4th International Conference on Human Factors, Software, and Systems Engineering	B. Amaba, Chair
4th International Conference on Human Factors, Sustainable Urban Planning and Infrastructure	J. Charytonowicz, Chair
5th International Conference on The Human Side of Service Engineering	L. Freund, Co-Chair W. Cellary, Co-Chair
5th International Conference on Affective and Pleasurable Design	C. Shin Co-Chair W. Chung Co-Chair
5th International Conference on Ergonomics In Design	M. Soares, Co-Chair F. Rebelo, Co-Chair
5th International Conference on Human Factors in Transportation	N. Stanton, Chair
6th International Conference on Human Factors and Ergonomics in Healthcare	V. Duffy, Co-Chair N. Lightner, Co-Chair
6th International Conference on Cross-Cultural Decision Making	D. Schmorrow, Co-Chair M. Hoffman, Co-Chair
6th International Conference on Digital Human Modeling and Simulation	V. Duffy, Chair
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8th International Conference on Usability & User Experience	C. Falcão, Co-Chair T. Ahram, Co-Chair
8th International Conference on Neuroergonomics and Cognitive Engineering	C. Baldwin, Chair
8th International Conference on Social & Occupational Ergonomics	R. Goossens, Chair
18th International Conference on Ergonomics of Manufacturing: Managing the Enterprise of the Future	S. Trzcielinski, Chair

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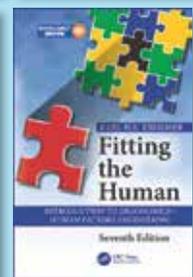
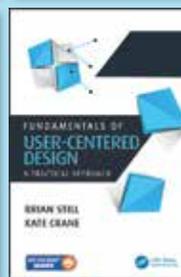
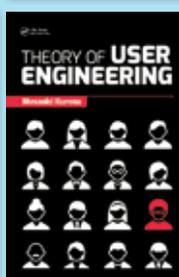
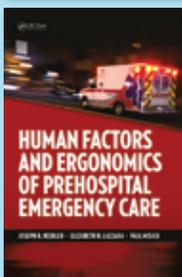
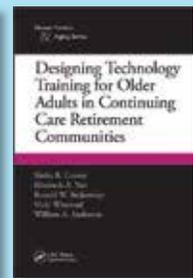
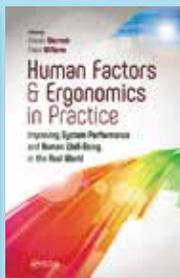
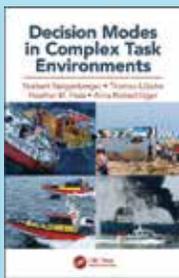
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