

# 2008

## AHFE International

2nd International Conference on  
Applied Human Factors and Ergonomics

jointly with

12th International Conference on Human Aspects of Advanced  
Manufacturing (HAAMAHA)

# Final Program

14 -17 July 2008

Caesars Palace • Las Vegas, Nevada USA

Under the auspices of 7 distinguished international boards of 167 members from 29 countries

[www.AEI2008.org](http://www.AEI2008.org)

# Opening Plenary Session and Keynote Address

Date: Monday: July 14, 2008 • 17:30 - 18:45  
Room: Palace Ballroom I-II  
Chair: Danuta Koradecka, CIOP-PIB, Poland

## REVOLUTIONS COLLIDING: THE EMERGENCE OF MODERN ERGONOMICS, THE PIONEERING OF FUTURE ERGONOMICS

### Dr. Dylan Schmorrow, USA

Dr. Dylan Schmorrow is the Founder and Chairman of the Augmented Cognition International Society. Dr. Schmorrow is a Commander in the U.S. Navy and serves as the Executive Assistant to the Chief of Naval Research at the Office of Naval Research. He has also worked at the Defense Advanced Research Projects Agency, the Naval Research Laboratory, and the Naval Postgraduate School. In addition to his PhD. in Experimental Psychology, he also holds four Masters' degrees ranging from operations analysis to philosophy.



# Conference Organization

**CONFERENCE CHAIR**  
Garviel Salvendy

**CONFERENCE ADMINISTRATOR**  
Laura Abell

**PROGRAM CHAIR**  
Waldemar Karwowski

**STUDENT VOLUNTEER CHAIR**  
John Layer

**COMMUNICATION & EXHIBITION CHAIR**  
Abbas Moallem

**THE ON-SITE REGISTRATION  
WILL BE OPENED AS FOLLOWS:**

July 13: 15:00 - 19:00  
July 14: 7:30 - 18:00  
July 15: 7:30 - 18:00  
July 16: 7:30 - 18:00  
July 17: 7:30 - 18:00

**CONFERENCE RECEPTION**

**DATE: MONDAY, JULY 14, 2008**  
**TIME: 19:15 - 22:15**  
**PLACE: PRE-FUNCTION 2**

# Technical Program Board

COGNITIVE ERGONOMICS	PHYSICAL ERGONOMICS	ERGONOMICS IN MANUFACTURING	HEALTHCARE AND SPECIAL POPULATIONS
<p>S. Bagnara, Italy G. Bedny, USA K. R. Boff, USA N. Cooke, USA G. Costa, Italy M. Endsley, USA P. Falzon, France X. Fang, USA C. Forsythe, USA E. Hollnagel, France K. Itoh, Japan D. Kaber, USA J. Layer, USA J. Lewis, USA K. Y. Lim, Singapore C. Ling, USA Y. Liu, USA T. Marek, Poland N. Marmaras, Greece R. W. Proctor, USA P.-L. P. Rau, P.R. China D. Schmorrow, USA N. Stanton, UK K. J. Vicente, Canada K.-P. L. Vu, USA J. Wilson, UK</p>	<p>T. Armstrong, USA P. Budnick, USA J. Callaghan, Canada D. Chaffin, USA M. K. Chung, S. Korea B. Das, Canada P. Dempsey, USA J. Dennerlein, USA R. Feyen, USA A. Freivalds, USA A. Genaidy, USA K. Gielo-Perczak, USA R. Goonetilleke, Hong Kong C. Haslegrave, UK R. Jang, Taiwan B. Joseph, USA S. Kumar, Canada W. S. Marras, USA A. C. Matias, Philippines E. Occhipinti, Italy K. M. Robinette, USA T. Waters, USA R. Wells, Canada S. Yeung, Hong Kong</p>	<p>R. Badham, Australia M. Bednarek, Mexico R. Bishu, USA H.-J. Bullinger, Germany A. H. S. Chan, Hong Kong C. W. Clegg, UK P. Dawson, Scotland T. Enkawa, Japan E. F. Fallon, Ireland A. K. Gramopadhye, USA A. Gunasekaran, USA W. Grudzewski, Poland M. Helander, Singapore S. Horte, Sweden B. Kayis, Australia M. Kolich, USA R. J. Koubek, USA H. Luczak, Germany H. Schulze, Germany J. Stahre, Sweden H. Strasser, Germany S. Trzcielinski, Poland M. J. Wang, Taiwan K. Zink, Germany</p>	<p>O. Bobjer, Sweden M. S. Bogner, USA L. Bonapace, Italy B. Caldwell, USA A. Cakir, Germany P. Carayon, USA S. Czaja, USA M. Dainoff, USA W. Friesdorf, Germany E. Gorska, Poland A. Hedge, USA S. Hignett, UK J. Jacko, USA M. Kumashiro, Japan J. Lewandowski, Poland V. Louhevaara, Finland A. Nikov, Bulgaria C. A. Ntuen, USA V. Rice, USA A. L. Sears, USA A. Simoes, Portugal C. Stephanidis, Greece R. Tartaglia, Italy G. Vanderheiden, USA</p>
ERGONOMICS MODELING AND USABILITY EVALUATION	SOCIAL AND ORGANIZATIONAL ERGONOMICS	SAFETY	
<p>H. Bubb, Germany V. Duffy, USA D. Fisher, USA S. H. Han, S. Korea W. Hwang, USA J. Jarvinen, USA Y. G. Ji, S. Korea P. W. Jordan, UK H. M. Khalid, Malaysia Y. Kume, Japan S. Landry, USA R. Laughery, USA Z. Li, P.R. China A. Moallem, USA K. Ogawa, Japan Y. Okada, Japan A. F. Özok, Turkey H. A. Priest, USA F. Rebelo, Portugal K. M. Stanney, USA T. Stewart, UK J. Wei, USA T. Winkler, Poland N. Ye, USA W. Zhang, P.R. China</p>	<p>P. Budnick, USA D. Caple, Australia J. Charytonowicz, Poland O. Y. Chebykin, Ukraine C. Drury, USA J. Dul, The Netherlands H. Hendrick, USA I. Hejduk, Poland D. Horn, USA S. L. Hwang, Taiwan J. Kantola, Finland B. Karsh, USA B. M. Kleiner, USA K. Lindstrom, Finland F. Moro, Canada M. Oxenburgh, Australia A. Ozok, USA L. Pacholski, Poland M. M. Robertson, USA E. Salas, USA S. L. Sauter, USA M. Smith, USA M. Soares, Brazil N. Swanson, USA H. Vanharanta, Finland P. Vink, The Netherlands</p>	<p>T. Alasoini, Finland J. Duncan, USA J. Dzissah, USA A. R. Hale, The Netherlands S. Johnson, USA D. Koradecka, Poland Y.-G. Kwon, S. Korea K. R. Laughery, USA M. R. Lehto, USA I. Majer, Slovakia P. Mondelo, Spain I. Noy, USA C.-H. Nygård, Finland D. Podgorski, Poland K. L. Saarela, Finland J. Saari, Finland S. P. Schneider, USA J. Sinay, Slovakia T. W. Van Der Schaaf, The Netherlands E. Wang, Taiwan M S. Wogalter, USA B. Zimolong, Germany</p>	

# Tutorials

**July 14, 2008 • Full day / 8:30 - 17:00**

**Room Verona**

## **MULTIMODAL AND ADAPTIVE DISPLAY DESIGN**

K. M. Stanney and K. S. Hale,  
Design Interactive, Inc., Orlando, Florida, USA

**July 14, 2008 • Half day / 13:30 - 17:00**

**Room Turin**

## **CONDUCTING COGNITIVE WORK ANALYSIS: SUPPORTING NOVICES AND EXPERTS WITH A SOFTWARE TOOL**

D. P. Jenkins and N. Stanton,  
Brunel University, UK

**July 14, 2008 • Half day / 13:30 - 17:00**

**Room Trevi**

## **THE FOUR PLEASURES: UNDERSTANDING USERS HOLISTICALLY**

P. Jordan,  
Candlesby House, UK

# Exhibitions

## Roman Ballroom

<b>Tuesday</b>	<b>July 15<sup>th</sup> 10:00 - 18:00</b>
<b>Wednesday</b>	<b>July 16<sup>th</sup> 9:30 - 18:00</b>
<b>Thursday</b>	<b>July 17<sup>th</sup> 9:30 - 16:00</b>

## **Exhibitors**

- Augmented Cognition and Neurotechnology of Today and Tomorrow
  - 100 University of Central Florida (UCF)
  - 102 Institute of Simulation and Training (IST)
  - 104 Office of Naval Research (ONR)
  - 106 Naval Research Lab (NRL)
  - 108 Naval Post Graduate School (NPS)
  - 110 Potomac Institute for Policy Studies (PIPS)
  - 101 Design Interactive (DI)
  - 103 Advanced Brain Monitoring (ABM)
  - 105 SA Technologies
  - 107 Chi Systems (CHI)
  - 109 Quasar USA
  - 111 Electrical Geodesics, Inc (EGI)
- 113 g.tec medical engineering GmbH
- 200 Seeing Machines Limited
- 212 Wiley-Blackwell
- 204 - 206 Taylor and Francis
- 210 Dassault Systemes/Safework Exhibit
- 202 VMWare
- 208 NexGen Ergonomics

**Refreshment Breaks  
will be provided in  
the Exhibit Hall:  
Roman Ballroom**

# Conference at a glance

**Tuesday: July 15, 2008**

<b>Time</b>	<b>Room</b>	<b>Session Title</b>
<b>8:00-10:00</b>	Verona	Medico-ergonomics and Patient Safety: Part I
	Turin	Designing New Buildings and Facilities for End Users
	Trevi	Physical Ergonomics
	Pisa	Users Interface Design & Team Performance
	Anzio	Haptics Modeling and Usability Evaluation
	Capri	Human Error Management
	Siena	Social Innovation
<b>10:00 - 10:30 Refreshment break provided in Roman Ballroom</b>		
<b>10:30-12:30</b>	Verona	General and Systemic-Structural Activity Theory (SSAT)
	Turin	Case Studies in Forensic Human Factors and Ergonomics
	Trevi	Human-System Integration and Optimization in Operational and Training Applications
	Pisa	Roadmaps for Interactive Application of Ergonomics in Industry and Community Service
	Anzio	Beyond Traditional Ergonomics
	Capri	Design of Production Systems
	Siena	Human Performance and Design
<b>13:30 - 15:30</b>	Verona	Forensics' Contribution to Human Factors Research
	Turin	Universal Access to Novel Interaction Environments: Challenges and Opportunities
	Trevi	Ergonomics and Material Environment Design
	Pisa	Working Environments
	Anzio	Medicoergonomics and Patient Safety: Part II
	Capri	Impact of Human Factors on Technical Systems Failure
	Siena	Managing Human Performance with Human Object Ontologies
<b>15:30 - 16:00 Refreshment break provided in Roman Ballroom</b>		
<b>16:00-18:00</b>	Verona	Digital Human Modeling with Applications
	Turin	Cognitive and Physical Work Analysis and Design
	Trevi	Information Complexity
	Pisa	Driving and In-Car Technology: Part I
	Anzio	Affective Design
	Capri	Vehicular and Public Warnings
	Siena	Human Factors in Industry

# Conference at a glance

**Wednesday: July 16, 2008**

<b>Time</b>	<b>Room</b>	<b>Session Title</b>
<b>8:00-10:00</b>	Verona	Ergonomic Assessment and Interventions
	Turin	Macroergonomic Considerations in System Performance
	Trevi	New Ways of Sustainable Office Interior Design: The Process of Design
	Pisa	Input Technology Design
	Anzio	Decision Making in Complex Environments
	Capri	Safety and Design
	Siena	Examining the Behavior of Special Populations During the Warning Process
<b>10:00 - 10:30 Refreshment break provided in Roman Ballroom</b>		
<b>10:30-12:30</b>	Verona	Impact of the Interaction Between Psychosocial and Physical Factors on Work-Related Musculoskeletal Disorders
	Turin	Applied Participatory Ergonomics
	Trevi	Work Design
	Pisa	Driving and In-Car Technology: Part II
	Anzio	Special Populations
	Capri	SPECIAL INTEREST GROUP PANEL 2: AugCog-Enabled Research and Applications
	Siena	ISO standards on manual handling and repetitive movements: updates on main reference methods
<b>13:30-15:30</b>	Verona	New Ways of Sustainable Office Interior Design: Measures effects
	Turin	Cognitive Systems Research
	Trevi	Macroergonomics Organizational, Managerial and Social Aspects
	Pisa	Human Systems Integration
	Anzio	Versatility of Ergonomic Applications in Health Care
	Capri	Medications, Public Health, and Warnings
	Siena	Innovations in Ergonomics
<b>15:30 - 16:00 Refreshment break provided in Roman Ballroom</b>		
<b>16:00-18:00</b>	Verona	Overcoming Impediments to Achieving Enterprise Agility
	Turin	Human Performance
	Trevi	Managing Business Performance with Business Object Ontologies
	Pisa	The Use of Driver Assistance Systems: Experimental Evaluation and Modeling of Human Behavior
	Anzio	Human Factors in Design
	Capri	Ergonomics in Service
	Siena	Ergonomics and Safety Potpourri

# Conference at a glance

**Thursday: July 17, 2008**

<b>Time</b>	<b>Room</b>	<b>Session Title</b>
<b>8:00-10:00</b>	Verona	Ergonomics Assessment
	Turin	Command and Control: Current Perspectives and Future Concepts
	Trevi	The Relationship Between Contents Service and HCI in Post Ubiquitous Days
	Pisa	Ergonomics Modeling and Usability Evaluation
	Anzio	Anthropometry at China
	Capri	Ergonomics in Pattern and Industrial Design
	Siena	Human-Machine Systems
<b>10:00 - 10:30 Refreshment break provided in Roman Ballroom</b>		
<b>10:30-12:30</b>	Verona	Usability in complex systems
	Turin	Working Time and Social Design
	Trevi	Enterprise Management
	Pisa	Digital Human Modeling
	Anzio	Usability Evaluation and User Research I
	Capri	Ergonomics in Design
	Siena	Environmental Ergonomics
<b>13:30 - 15:30</b>	Verona	Theoretical issues in cognitive ergonomics
	Turin	Cognition in dynamic and complex environment
	Trevi	Systemic Approach to Human Factors
	Pisa	Modeling Human Factors in Healthcare Systems
	Anzio	User research and usability evaluation II
	Capri	Occupational Ergonomics
	Siena	Human Factors Design in Industry
<b>15:30 - 16:00 Refreshment break provided in Roman Ballroom</b>		
<b>16:00 - 18:00</b>	Verona	Information processing
	Turin	Usability Training and Learning
	Trevi	From Mobile Phones to Medical Devices: Cognitive Ergonomics at Work in our Daily Lives
	Pisa	Information Technology Management on Human Perspectives
	Anzio	Usability evaluation and user research III
	Capri	Usability Studies in Taiwan
	Siena	Modern Manufacturing Practices and Ergonomics

# Detailed Technical Program

Tuesday: July 15, 2008

## SESSION 1: Medico-ergonomics and Patient Safety: Part I

CO-CHAIRS: W. Friesdorf, Germany and R. Wears, USA

8:00-10:00	ROOM: VERONA	<ul style="list-style-type: none"><li>• Medicoergonomic issues in emergency care R. J. Fairbanks, USA</li><li>• Complex failures in clinical environment – A case study R. L. Wears, USA</li><li>• Complex systems' workflow management F. Friesdorf, Germany</li><li>• Ergonomic design of ICU work places W. Friesdorf, Germany</li><li>• Ergonomics and process design in the healthcare service U. Hoelscher, Germany, L. Long, China and S. S. Schwarz, Germany</li><li>• Study of a training method for inexperienced nurses to find out the cause of a ventilator's alarm quickly J. Hamaguchi, D. Kobayashi and S. Yamamoto, Japan</li><li>• Usability and safety of medical devices within the OR: Preliminary results of an analysis of reported incidents to the BfArM U. Matern, T. Rolleke, K. Montag and D. Buechel, Germany</li></ul>
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## SESSION 2: Designing New Buildings and Facilities for End Users

CHAIR: C. W. Clegg, UK

8:00-10:00	ROOM: TURIN	<ul style="list-style-type: none"><li>• The design and re-design of healthcare facilities: In pursuit of excellence M.-C. Race and R. Yarandipour, UK</li><li>• The design of new oncology facilities M. Gould and R. Malby, UK</li><li>• The CARITAS project and generative space J. Mizan, UK and W. Ruga, USA</li><li>• Practical human factor integration-Lessons learnt from a case study of a large project implementation I. Rowe, UK</li><li>• Designing the factory of the future K. Ridgway, C. Cerulli, M. Davis, R. Challenger, S. Wiseall, P. Hill, K. Hollis and C. Clegg UK</li><li>• Modeling crowd behavior for new facilities R. Challenger, M. A. Robinson and C. Clegg, UK</li><li>• Based on the 3D-bodyscanWorX minors standing and sitting on ergonomics Z. Zhu and M. Zhang, P. R. China</li></ul>
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## SESSION 3: Physical Ergonomics

CHAIR: R.-L. Jang, Taiwan

8:00-10:00	ROOM: TREVİ	<ul style="list-style-type: none"><li>• The influence of working pace on lifting tasks R.-L. Jang, R.O.C.</li><li>• Combining statistical model with girth ratio-based classified figure to facilitate the design of industrial sizing standards C.-H. Hsu, R.O.C.</li><li>• Ergonomics hazards of the pharmacist during prescription preparing C. Lu, J.-P. Cheng and T.-Y. Tsai, R.O.C.</li><li>• Positioning and strap of satchel design of effects on physiological responses during load carriage B.-S. Liu, H.-Y. Tseng and T.-C. Chia, R.O.C.</li><li>• Glovebox gloves: Design and selection guidelines for prevention of musculoskeletal disorders for tweezers operations P.-C. Sung, Taiwan, W. Hinds, USA, and C.-L. Lee, Taiwan</li><li>• MSE approach to analyze physiological loading on internet browsing C.-H. Hung and B. C. Jiang, R.O.C.</li><li>• Ergonomic challenges of USA ground ambulances: An all hazards approach N. Levick and C. Sparks, USA</li></ul>
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# Detailed Technical Program

Tuesday: July 15, 2008

## SESSION 4: Users Interface Design & Team Performance

CHAIR: S. L. Hwang, Taiwan

8:00-10:00 ROOM: PISA

- Effects of RSVP and graphical displays on the visual performance of mobile devices  
Y.-L. Lin and P.-C. Wang, Taiwan
- Cross-cultural design and communication styles  
A. Xie and P. L. P. Rau, CHINA
- Teamwork under time pressure with varying information distribution  
F.-H. Huang, S.-L. Hwang and G.-F. Liang, Taiwan
- Redesigning interface of on-line news for the blind  
T.-Y. Kuo and S.-L. Hwang, Taiwan
- A case study of system usability in supply chain management  
C.-H. Lin, S.-L. Hwang and M.-Y. E. Wang, Taiwan
- A comparison of workloads and performance for air traffic controllers and pilots in flight communications  
W.-J. Chang, E. M.-Y. Wang, W.-L. Tsai, J.-R. Yen, H. Ho and W. Hsu, Taiwan
- The effect of early warning interface design on team performance in an advanced control room  
J.-T. Lin, G.-F. Liang, Y.-J. Yau, S.-L. Hwang, and E. M.-Y. Wang, Taiwan

## SESSION 5: Haptics Modeling and Usability Evaluation

CHAIR: W. Hwang, South Korea

8:00-10:00 ROOM: ANZIO

- Physical Surface roughness parameters and perceived roughness  
J. Hwang, Korea, T. Park, USA and W. Hwang, Korea
- Haptic heuristics: An exploratory study  
W. Hwang, Korea, T. Park, USA and J. Hwang, Korea
- Biclustering algorithms for usability experimental data  
K. Kim and W. Hwang, South Korea
- A study of evaluation framework for tangible user interface  
H. Kim, M. Kim, J. Choi, and Y. Ji, S. Korea
- Applying card sorting method to cluster products on shopping website: A case study  
S.-F. M. Liang and C.-T. Yang, Taiwan
- The user's behavior of ubiquitous tourism service  
Y. G. Kwon and H.-J. Park, South Korea

## SESSION 6: Human Error Management

CHAIR: Y. Okada, Japan

8:00-10:00 ROOM: CAPRI

- PSF approach to education for careful driving  
H. Nishitani and M. Takemoto, Japan
- Human error management for aerospace product  
J. Nishiguchi, Japan
- Development of e-learning program on human error  
Y. Nakamura, Japan
- Design of Plant alarm systems on the basis of operator's workload  
M. Noda and H. Nishitani, Japan
- Assessment of human error management in organizations  
Y. Mori, A. Yokomizo and Y. Okada, Japan
- A study of measure for prevention of human error based on operator's behavior model  
D. Suzuki and Y. Okada, Japan

# Detailed Technical Program

Tuesday: July 15, 2008

## SESSION 7: Social Innovation

CHAIR: P. Dawson, UK/Australia

8:00-10:00 ROOM: SIENA

- Supply chains and inter-firm relationships: Communication, coherence and social innovation  
M. Clements and R. J. Clarke, Australia
- Social innovation, sustainable futures and commercial concerns: People, profits and social well-being  
P. Dawson, UK/Australia and L. Daniel, Australia
- Building bridges: producing social innovation in rural older people's services  
J. Farmer, A. Steinerowski, and G. King, Scotland
- Lost and found: Social innovation and occupational health and safety in organizations  
M. Zanko Australia and P. Dawson, UK/Australia
- A 'sociotechnical tool' for 'co-producing' e-services for older people at home  
I. McLoughlin, G. Maniopoulos, R. Wilson and M. Martin, UK
- New century supertrends: Emotional ergonomics for contemporary society  
P. Jordan, UK

10:00 - 10:30 Refreshment break provided in Roman Ballroom

## SESSION 8: General and Systemic-Structural Activity Theory (SSAT)

CO-CHAIRS: G. Bedny and W. Karwowski, USA

10:30 - 12:30 ROOM: VERONA

- General and systemic-structural activity theory as a foundation of human work studies  
W. Karwowski, and G. Bedny, USA, and O. Y. Chebykin, Ukraine
- Activity, personality and professions  
G. Zarakovsky, Russia and W. Karwowski, USA
- Analysis of pilot activity in an emergency situation  
V. Ponomarenko, Russia and G. Bedny, USA
- Study of computer based tasks during skill acquisition process  
T. Sengupta, USA and I. Bedny, Ukraine, and W. Karwowski, USA
- Monitoring of human psychophysiological condition as a method of increasing of activity's efficiency  
A. Karpoukhina, USA and O. Kokun, Ukraine, and M. L. Zeltser, USA
- Cognitive work and individual response to external factors  
O. Burov, I. Filatova and K. Burova, Ukraine

## SESSION 9

### FORENSIC SYMPOSIUM: Case Studies in Forensic Human Factors and Ergonomics

CO-CHAIRS: I. Zackowitz and M. Wogalter, USA

10:30 - 12:30 ROOM: TURIN

- When is a warnings case not a warnings case?  
I. Zackowitz and A. Vredenburgh, USA
- Case study: Death by roller coaster  
K. Nemire, USA
- Who turned off the lights?  
A. Vredenburgh and I. Zackowitz, USA
- Rear-end crashes into farm equipment  
R. Mortimer, USA
- Human factors/ergonomics (HFE) issues re: an automated marine navigation system: A case of an auto-pilot defect, and/or one of human pilot error?  
D. Lenorovitz and E. Karnes, USA

# Detailed Technical Program

Tuesday: July 15, 2008

<p><b>SESSION 10 SPECIAL INTEREST GROUP: Panel 1</b>  <b>Human-System Integration and Optimization in Operational and Training Applications</b>            CO-CHAIRS: D. Schmorrow and D. Nicholson, USA</p>	
<p>10:30 - 12:30 ROOM: TREV1</p>	<ul style="list-style-type: none"> <li>• The reality of field research with Marine Corps W. Becker and S. Burke, USA</li> <li>• Learning efficiency in complex domains: Implications from cognitive load therapy J. J. Vogel-Walcutt, S. Schatz, C. A. Bowers and D. Nicholson, USA</li> <li>• Retrofitting GUI-based educational applications for augmented training R. Stripling and J. Coyne, USA</li> <li>• Instrumentation for the recording of building clearing exercises A. Hoover and E. Muth, USA</li> <li>• Optimizing warfighter performance D. A. Kobus, E. Palmer and M. Quinn, USA</li> </ul>
<p><b>SESSION 11: Roadmaps for Interactive Application of Ergonomics in Industry and Community Service</b>            CO-CHAIRS: K. Kogi and S. Horino, Japan</p>	
<p>10:30 - 12:30 ROOM: PISA</p>	<ul style="list-style-type: none"> <li>• Ergonomics roadmaps responding to diversifying needs K. Kogi, Japan</li> <li>• Developing ergonomics roadmaps – experiences in Europe J. Dul, The Netherlands</li> <li>• Future issues of ergonomics, safety and health S. Nanthavanij, Thailand</li> <li>• Roadmaps for ergonomics practice in universal design S. Horino, Japan</li> <li>• Developing roadmaps for management of work systems W. Karwowski, USA</li> <li>• A roadmap of ergonomics for advancing business K. S. Lee, Korea</li> <li>• Future directions in ergonomics research and applications D. Caple, Australia</li> </ul>
<p><b>SESSION 12: Beyond Traditional Ergonomics</b>            CHAIR: R. Goonetilleke, Hong Kong</p>	
<p>10:30 - 12:30 ROOM: ANZIO</p>	<ul style="list-style-type: none"> <li>• Working together as a global human factors team: American and Chinese perspectives T. Plocher, USA and Z. X. Jin, China</li> <li>• Variation of error rates for different task factors in Chinese writing J. C. Y. So and A. H. S. Chan, Hong Kong</li> <li>• Developing an understanding of genotypes in studies of shared interaction Y. Kitahara, T. Hope, K. Nonose, T. Kanno and K. Furuta, Japan</li> <li>• Is statistics making human factors researchers lose touch with reality? R. Goonetilleke, Hong Kong</li> <li>• What is needed in ergonomics design – a footwear design perspective Y. Luximon, A. Luximon and M. Zhang, Hong Kong</li> <li>• Applying card sorting method to cluster products on shopping website: A case study S.-F. M. Liang and C.-T. Yang, Taiwan</li> <li>• Top ten design failures to avoid in emerging markets N. Aykin, USA, B. Prabhu, India, A. L. Chavan, India, and S. Arora, India</li> </ul>

# Detailed Technical Program

**Tuesday: July 15, 2008**

## **SESSION 13: Design of Production Systems**

CO-CHAIRS: M. Grandt and C. M. Schlick, Germany

10:30 - 12:30 ROOM: CAPRI

- Ergonomics consideration for the design of production systems  
S. Zschoernack and M. Goebel, South Africa
- Mixed-mock-up crane simulator for the ergonomic design of production systems  
D. Spath, M. Braun and F. Haselberger, Germany
- Task-Oriented process planning for cognitive production systems using MTM  
M. Mayer, B. Odenthal, M. Grandt and C. M. Schlick, Germany
- Examination of visual representation of assembly instructions for an augmented reality-based support system of a cognitive production system  
B. Odenthal, M. Mayer, M. Grandt, S. Muetze-Niewoehner and C. M. Schlick, Germany
- Performance measures for green supply management  
J. S. Park, Korea, Y. S. Chang, Korea, H. Vanharanta, Finland and J. Kantola, Finland
- Analysis of specific requirements for the human-machine interface in industrial product-service-systems  
M. Rotting and B. Hoge, Germany
- Using blogs to improve the motivation and teamwork of collaborative learning  
T. Zhang and P.-L. P. Rau, P. R. China

## **SESSION 14: Human Performance and Design**

CO-CHAIRS: M. J. Wang, Taiwan, ROC and R. Bruder, Germany

10:30 - 12:30 ROOM: SIENA

- Handling instable objects: A kinematic model based on ergonomics issues  
M. Diaz-Zeledon and K. Landau, Germany
- Development and application of methods for stress analysis in manufacturing  
K. Schaub, K. Landau and R. Bruder, Germany
- Ergonomic analysis and design of industrial workplaces with special reference to age  
H. Rademacher, A. Sinn-Behrendt, K. Landau and R. Bruder, Germany
- The strategy of improving SEM inspection performance and eye-fatigue problems  
C. L. Lin, M. J. Wang and F. S. Chen, Taiwan, ROC
- Evaluation of perceived discomfort in repetitive arm reaching and holding task  
C. L. Lin, M. J. Wang and Y. S. Chen, Taiwan, ROC
- Ergonomics evaluation of car pushing and pulling in TFT-LCD industry  
C.-L. Lin, M.-J. Wang and Y.-L. Wei, Taiwan, ROC
- Designing accessible E-learning: a development model for accessible content in E-learning  
C. Lucena and C. Mont'Alvão, Brazil

## **SESSION 15: Forensics' Contribution to Human Factors Research**

CO-CHAIRS: K. R. Laughery and M. S. Wogalter, USA

13:30 - 15:30 ROOM: VERONA

- From forensics to research: Cases of tire rim mismatch and dietary supplements  
K. R. Laughery, USA
- Pedestrian runover in a commercial parking lot: Human factors-based Rule 26 Report and Deposition concerning lighting, noise, crosswalk, and traffic patterns for civil litigation  
J. G. Casali, USA
- From forensics to research: Cases of greenhouse roof and industrial equipment hazards  
M. J. Kalsher, USA
- From forensics to research: Cases of tire aging and new tire positioning  
M. S. Wogalter, USA
- From forensics to research: Cases of MSDs and pharmaceutical risks  
T. L. Smith-Jackson, USA

# Detailed Technical Program

Tuesday: July 15, 2008

## **SESSION 16: Universal Access to Novel Interaction Environments: Challenges and Opportunities**

CHAIR: C. Stephanidis, Greece

13:30 - 15:30 ROOM: TURIN

- Are ambient intelligent applications more universally accessible?  
R. Adams, UK, A. Granic, Croatia, and S. Keates, USA
- Levels of intelligence in an ambient intelligence environment  
P. L. Emiliani, Italy
- Evaluating coach support in e-learning environments  
C. Stary, Austria
- Universal access in ambient intelligence environments: Emerging research issues  
C. Stephanidis and G. Paparoulis, Greece
- Human factors analysis for operators using stairclimbing device  
S.-Z. Lou, C.-L. Lee, Y.-C. Chen and C.-L. Chen, Taiwan
- Designing for accessibility: Extending to ordinary users in extraordinary circumstances  
S. Keates, USA

## **SESSION 17: Ergonomics and Environment Design**

CHAIR: J. Charytonowicz, Poland

13:30 - 15:30 ROOM: TREVI

- The chair as a symbol of applied ergonomics  
J. Charytonowicz, Poland
- Ergonomics of the process based on the urban renewal projects  
J. Charytonowicz and L. Swiatek, Poland
- Low- and high-tech in architecture as a factor creating home comfort  
P. Nowakowski, Poland
- Burial as a social problem of contemporary Metropolises  
J. Charytonowicz and T. Lewandowski, Poland
- Application of QFD method in website designing  
W. Prussak and K. Hankiewicz, Poland
- Ergological science development and evolution  
E. Tytyk, Poland

## **SESSION 18: Working Environments**

CHAIR: T. Winkler, Poland

13:30 - 15:30 ROOM: PISA

- Meeting the challenge of cognitive human performance model interpretability through transparency: MIDAS v.5x  
B. F. Gore, B. L. Hooey, D. C. Foyle and S. Scott-Nash, USA
- Estimating error rates for aimed movements of varying speeds  
R. G. Feyen and M. J. Grove, USA
- SNIF-DM: A cognitive model of information seeking and decision making of the World Wide Web  
W.-T. Fu, USA
- An integrated model of situation awareness and Assessment  
S. Landry and S. Vaitkunas, USA
- Virtual working environment of nurses  
T. Winkler and J. Bartnicka, Poland
- The virtual environments and new human-centred design method in the design of vehicular working machine interfaces  
K. Helin, J. Viitaniemi, S.-P. Leino, B. Krassi and M. Poyade, Finland
- Development of the adjustable multi-finger force measurement (MFFM) systems for research of handtool-related musculoskeletal disorders  
D.-M. Kim and Y.-K. Kong, Korea

# Detailed Technical Program

Tuesday: July 15, 2008

## SESSION 19: Medicoergonomics and Patient Safety: Part II

CO-CHAIRS: W. Friesdorf, Germany and R. Wears, USA

13:30 - 15:30 ROOM: ANZIO

- Medicoergonomic basics for patient safety and system efficiency  
I. Marsolek and W. Friesdorf, Germany
- Patient Safety Applications in the Integrated OR  
S. Malone, USA
- The correlation between human health and the natural and constructed environment  
S. Marino, M. Donisi, R. Gurin and M. Testasecca, Italy
- A modeling approach to evaluate the response of health care facilities during a pandemic influenza  
M. Peralta and D. Abraham, USA
- Measuring healthcare quality through usability  
L. Strawderman, A. Salehi and Y. Huang, USA
- Verbal protocol as an information ergonomics tool to verify reading strategies in medicine inserts  
P. L. Fujita and C. G. Spinillo, Brazil
- Managing workload transitions in a hospital inpatient pharmacy  
L. Ignacio, USA

## SESSION 20: Impact of Human Factors on Technical Systems Failure

CO-CHAIRS: J. Sinay and I. Majer, Slovakia

13:30 - 15:30 ROOM: CAPRI

- Human factor as a significant aspect in risk prevention  
J. Sinay and I. Majer, Slovak Republic
- Human limbs diagnostics by thermovision systems  
J. Zivcak and Hudak, Slovak Republic
- Efficient tools for human factor reliability improvement in the nuclear power industry  
M. Palecek and S. Maly, Czech Republic
- Human factors in occupational health and safety system of management  
M. Vachova, Czech Republic
- The causes of failures and variations of technological processes considering the human factor  
I. Bartlova, Czech Republic
- Human reliability in maintenance tasks  
H. Pacaiova, Slovak Republic

## SESSION 21: Managing Human Performance with Human Object Ontologies

CHAIR: H. Vanharanta, Finland

13:30 - 15:30 ROOM: SIENA

- The management windshield: An effective metaphor for management and leadership  
H. Vanharanta, Finland
- Competence to Innovate?  
J. Jussila, A. Suominen and H. Vanharanta, Finland
- Cultural Dimensions on Innovation Cultures  
Y. Chang, Korea, A. Suominen, Finland, J. Jussila, Finland, M. Harris, UK, Bikfalvi, Spain, and H. Vanharanta, Finland
- Role of competence development in the stress process. An empirical study based on conservation of resources theory  
N. Mancebo, A. Bikfalvi and J. Llach, Spain
- International "Students as Entrepreneurs"- study  
J. Kantola, Finland, A. Bikfalvi, Spain, Y. Chang, Korea and H. Vanharanta, Finland
- Competence Evaluation to Explain Work Role Performance  
J. Pagès, N. Mancebo, P. Marquès and A. Bikfalvi, Spain
- Enhancement of operators competences based on nuclear safety culture  
A. Piirto, P. Paaanen and H. Vanharanta, Finland

# Detailed Technical Program

Tuesday: July 15, 2008

15:30 - 16:00 Refreshment break provided in Roman Ballroom

## SESSION 22: Digital Human Modeling with Applications

CO-CHAIRS: J. Pellettiere and Z. Cheng, USA

16:00 - 18:00 ROOM: VERONA

- Digital human modeling with application  
Z. Cheng and J. Pellettiere, USA
- Integrated biomechanical-physiological modeling of human body responses to blast waves  
A. Przekwas and P. Wilkerson, USA
- Viscoelastic properties and finite element modeling of human flesh  
K. Darvish, Z. Cheng, J. Smith and J. Pellettiere, USA
- Postural templates for digital human models in the F-16  
G. F. Zehner, J. A. Hudson and A. J. K. Oudenhuijzen, USA
- Numerical determination of the injury mechanism and associated tolerance in rat brain  
K. Yang, USA
- Using a 3D human modeling tool for design: An application of the V5 virtual ergonomic solution  
A. J. Johnson, G. Collier, S. Sarama, USA, J. Charland, Canada, A. Dagenais, Canada, and D. McGranahan, USA
- Ergonomic design of a multilevel writing system for school children  
K. Meinken, A. Rix, H. Widroither, U. Plihal and A. Mullerleile, Germany

## SESSION 23: Cognitive and Physical Work Analysis and Design

CHAIR: N. Marmaras, Greece

16:00 - 18:00 ROOM: TURIN

- Models for cognitive work analysis in view of a design: A critical review  
N. Marmaras and D. Nathanel, Greece
- Introducing a cognitive aid to support credit risk analysis and decision making  
P. Vassilakopoulou and D. Nathanel, Greece
- Designing ADAS: What kind of analysis is needed?  
V. Papakostopoulos and N. Marmaras, Greece
- Building-up cognitive artifacts for a complex socio-technical system  
S. Drivalou, Greece
- A multi-scale human modeling method with case study  
T. Li and Z. Li, P. R. China
- Differences in anthropometric, strength and isokinetic performance parameters of South African male and female emergency care students  
S.E.H. Davies, B. Parr and N. Naidoo, South Africa
- Differences in anthropometric, physiological and fitness performance parameters of South African male and female emergency care students  
S.E.H. Davies, B. Parr and N. Naidoo, South Africa

# Detailed Technical Program

Tuesday: July 15, 2008

## SESSION 24: Information Complexity

CHAIR: C. Ling, USA

16:00 - 18:00 ROOM: TREVI

- Monitoring task performance with datablocks on air traffic control display  
C. Ling and L. Hua, USA
- Investigating the effects of depth on visual search using a multi-layered display  
G. A. Reis, Y. Liu, P. Havig and E. L. Heft, USA
- Visual complexity estimation of web documents, A multi-resolution approach  
G. Song, USA
- Uncertainty of Head-Related Transfer Function and Morphologic Features  
S. Xu, Z. Li, L. Zeng and G. Salvendy, P.R. China/USA
- Operators' prioritization of response patterns to concurrent alarms with consistent and inconsistent levels of relative reliability and importance  
E. Newlin, E. Bustamante, T. Turner and J. Bliss, USA
- Quantifying complexity of emergency operating procedures in safety-critical systems  
Z. Li, S. Xu, Y. Zhang, L. Yu and F. Song, China
- Modeling approach to "effective augmentation" for designing manuals with augmented reality  
M. Nakanishi, T. Akasaka and Y. Okada, Japan

## SESSION 25: Driving and In-Car Technology: Part I

CO-CHAIRS: P. W. Jordan and P. Palo, Sweden

16:00 - 18:00 ROOM: PISA

- Driver segmentation, new technology and safety  
P. W. Jordan, F. Chen and A. Lindgren, Sweden
- Improving driver behavior by design: a cognitive task analysis methodology  
S. Birrell, M. Young, N. Stanton and D. Jenkins, UK
- Cross-cultural issues and driver requirements for advanced driver assistance systems  
A. Lindgren, F. Chen, P. W. Jordan and P. Ljungstrand, Sweden
- Entering the integrated world: Comparing driving performance when using Nomadic device and integrated in-car system  
F. Chen, Y. C. Pan, P. Ljungstrand, S. Dahlstrom and P. Jordan, Sweden
- Using 3D natural sounds to present traffic warnings  
S. K. Winther, Denmark and F. Chen, Sweden
- The impact of haptic and visual secondary tasks on drivers' visual behavior and driving performance – A qualitative analysis  
A. Rydstrom and P. Bengtsson, Sweden

## SESSION 26: Affective Design

CHAIR: M. Nagamachi, Japan

16:00 - 18:00 ROOM: ANZIO

- Change in emotion during use of products  
R. Fukuda, Japan
- Effects of space design visualization system on users' subjective states about communicating information with reassurance  
S. Iizuka, Japan
- A test of the 'attraction-similarity hypothesis' in the relationship of young adult users and mobile phones  
Q. Wu, USA
- Trait arousal: An individual difference that may actually be useful for designers  
S. Schatz, C. A. Bowers, D. Nicholson and J. J. Vogel-Walcutt, USA
- Translation of customer Kansei and emotional needs into products  
R. Hirata, Mexico, M. Nagamachi, S. Ishihara and T. Nishino, Japan
- Cross-disciplinary problem solving workshops  
P. H. Dejean and M. Le Chapellier, France
- Team work at a Center for Psychosocial Care (CAPS)  
C. Brunoro, U. Montedo, L. I. Sznclwar, F. L. Mascia and S. Lancman, Brazil

# Detailed Technical Program

**Tuesday: July 15, 2008**

## **SESSION 27: Vehicular and Public Warnings**

CO-CHAIRS: M. Wogalter and M. J. Kalsher, USA

16:00 - 18:00 ROOM: CAPRI

- All-terrain vehicle warning labels: The dissonance between “effective” warnings and user behavior  
R. G. Mortimer, USA
- Evaluation and design of tram crossings/stops in town environment to decrease the risk for pedestrian accidents  
A.-L. Osvalder and S. Dahlman, Sweden
- In-vehicle devices: how to attend to the elderly users - some aspects of ITS in Brazil  
C. MontAlvao and B. V. Rodrigues, Brazil
- Indirectly conveyed warnings: A behavioral compliance evaluation  
M. S. Wogalter and E. Feng, USA
- Evaluation of driving behavior when entering a non-signalized intersection based on drive model including inner factors  
M. Takemoto, H. Kosaka, H. Nishitani, M. Uechi and K. Sasaki, Japan
- Ergonomic modeling and simulation for EVA planning  
S. Chen, Y. Liu and H. Li, China

## **SESSION 28: Human Factors in Industry**

CHAIR: M. Bednarek, Poland

16:00 - 18:00 ROOM: SIENA

- Business coaching in an executive teams  
M. A. Flores and A. Beuchot, Mexico
- The application of industrial engineering methods in industrial service management  
K. Santarek, Poland
- Methodology proposal for the implementation of lean manufacturing system in selected Mexican industrial plants  
M. Bednarek, Poland and L. F. N. Luna, Mexico
- Introduction of ergonomics into production development processes: An approach  
R. Bruder, M. Kugler, A. Sinn-Behrendt, K. Schaub, K. Ghezal-Ahmadi and A. Feith, Germany
- Human factors engineering (HFE) verification and validation (V&V) for advanced control room in Korean nuclear power plant  
J. C. Ra and S. B. Jo, Korea
- Top ten design failures to avoid in emerging markets  
N. Aykin, USA, B. Prabhu, India, A. L. Chavan, India, and S. Arora, India
- A simulation system for weakly structured work processes in complex development projects  
B. Kausch, S. Tackenberg, M. Grandt and C. M. Schlick, German

# Detailed Technical Program

Wednesday: July 16, 2008

## SESSION 29: Ergonomic Assessment and Interventions

CHAIR: A. C. Matias, Philippines

8:00 - 10:00 ROOM: VERONA

- Anthropometric data of Filipino workers  
A. L. Velasco, Philippines
- Risk assessment of cumulative trauma disorder among Filipino public utility jeepney drivers and a proposed design for an ergonomic fare payment scheme  
R. A. Po, R. R. Santos and M. N. Lazarte, Philippines
- An investigation of musculoskeletal disorder amongst call center agents  
D. D. Dumpay, M. J. G. Ebuna, A. R. Sosa, M. A. d. Cueva and N. D. Enriquez, Philippines
- Risk Assessment of personal protective equipment of Filipino firefighters  
A. C. Matias, A. J. T. Alfonso and L. M. C. Borrromeo, Philippines
- Layout for the combined control used in cars  
S. Jeong, Y. Cho, E. S. Jung, J. Choe and S. Park, Korea
- Effects of lighting, font style, and polarity on visual performance and visual fatigue with electronic paper displays  
I.-H. Shen and K.-K. Shieh, Taiwan
- Designing for accessibility: Top-down or bottom-up?  
S. Keates, USA

## SESSION 30: Macroergonomic Considerations in System Performance

CHAIR: B. Karsh, USA

8:00 - 10:00 ROOM: TURIN

- The work compatibility improvement framework: A business tool for improving organizational and individual performance  
A. Genaidy, M. M. Rinder and A. D. A-Rehim, USA
- Team performance, error recovery, and increasing system robustness in NASA operations  
B. S. Caldwell, USA
- Computer input devices for an aging workforce  
A. D. Taveira and S. D. Choi, USA
- Situation awareness and safety in pediatric intensive care units  
B.-T. Karsh, K. Escoto, S. Alper, R. Holden, M. Scanlon, K. Murkowski, N. Patel, T. Shalaby, J. Arnold, R. Kaushal, K. Skibinski and R. Brown, USA
- Ergonomics, lean manufacturing, and cost strategies: do they fit?  
F. Moro, Canada
- Work place justice in work design in respect of macro ergonomics  
D. Teoman, Turkey
- Effects of sleep deprivation on operator's performance in moderate complexity spaceflight task  
Y. Zhang and Z. Li, China

## SESSION 31: New Ways of Sustainable Office Interior Design: The Process of Design

CHAIR: P. Vink, The Netherlands

8:00 - 10:00 ROOM: TREVISO

- Reduction of mental stress in the office via smart surroundings  
D. Keyson, M. Varkevisser, M. Bruns and M. de Hoogh, The Netherlands
- Changing the view of workspace from inside to outside  
C. Bazley, USA and P. Vink, The Netherlands
- The workplace game: exploring end users' new behavior  
E. De Bruyne and A. De Jong, The Netherlands
- The participatory design of office spaces by game playing?  
A. De Jong and E. De Bruyne, The Netherlands
- A pressure-time tolerance curve for discomfort  
R. Goossens, G.-J. Kleinrensink and M. G. Lechner, The Netherlands
- A study on improvement and investigation of MSD for construction workers  
Y. G. Kwon, Y.-S. Oh, N.-Y. Kwon and H. J. Lee, South Korea
- An ergonomic assessment of blocklaying activities using the Quick Exposure Check (QEC)  
R. Nugent, E. F. Fallon and D. Gill, Ireland

# Detailed Technical Program

**Wednesday: July 16, 2008**

## **SESSION 32: Input Technology Design**

CHAIR: N. Baker, USA

8:00 - 10:00 ROOM: PISA

- Developing an instrument to measure keyboarding style: The keyboard personal computer style instrument (K-PeCS)  
N. Baker and M. Redfern, USA
- The enrichment of print media through the use of the touch user interface (TUI) technology  
J. Barkeloo, USA
- Relationship between the Notebook Input Devices and working tasks  
C.-F. Wu, C.-C. Lai, Y.-K. Liu, M.-C. Fu and W.-F. Huang, Taiwan, R.O.C.
- Linguistically optimized split virtual keyboard  
J. Marila and V. Lantz, Finland
- It takes two to Tango: Designers and engineers team up to develop an innovative stroke rehabilitation device  
D. Shin, P. Wolf, T. Sugar and D. Herring, USA
- User interface to enter linear data in proportion to the fingertip pressure  
S. Saino, T. Nonaka and T. Hase, Japan
- Differences between 3D input devices  
T. Nowack, S. Lutherdt, M. Hecht and P. Kurtz, Germany

## **SESSION 33: Decision Making in Complex Environments**

CHAIR: Y. Liu, USA

8:00 - 10:00 ROOM: ANZIO

- Dynamic decision making in complex environments  
C. Gonzalez, USA
- Expert decision making: adaptive balance of internal and external factors  
W. Zachary, USA
- Cognitive models of tactical decision making  
S. Marshall, USA
- Assisting collaborative decision making in complex environments  
S. D. Scott, Canada
- Getting up to speed: Design principles for recovering situation awareness in dynamic task environments  
M. St. John and H. S. Smallman, USA
- The role of collaboration technologies in team decision making  
S. Galster, USA
- Decision making on the flight deck: assessing and managing risk  
J. M. Orasanu, USA

# Detailed Technical Program

Wednesday: July 16, 2008

## SESSION 34: Safety and Design

CHAIR: B. Das, Canada

8:00 - 10:00 ROOM: CAPRI

- Effects of high altitude partial pressure suit on mobility capability and operational performance  
H. Hu, L. Ding, C. Yang and X. Yuan, China
- Managing risks of crashes due to cutting in of a vehicle when using an ACC system  
M. Itoh and T. Inagaki, Japan
- Analysis of questionnaire concerning a bar code printed on the ampoule label  
M. Kimura, H. Furukawa, H. Tsukamoto, M. Ohkura and F. Tsuchiya, Japan
- The investigation into problems of utilization of drug information in package inserts to ensure safety of drug usage  
K. Nabeta, M. Kimura, M. Ohkura and F. Tsuchiya, Japan
- Development of driving simulator for evaluate the legibility of road sign  
J. Kim and S. Lee, Korea
- Study of skin pressure and comfort research of dynamic human body with elastic pants  
P. Xiao, W. B. Zhang, and L. Liu, China
- Revision of display of PTP sheet with mandatory bar-code  
A. Izumiya, M. Ohkura, T. Takaike and F. Tsuchiya, Japan

## SESSION 35: Examining the Behavior of Special Populations During the Warning Process

CO-CHAIRS: C. Mayhorn and M. Wogalter, USA

8:00 - 10:00 ROOM: SIENA

- Signal word, text color, and warning compliance of a consumer product: An eye-tracking study  
N. C. Silver, B. Leany, G. Kambe, M. Lee-Baker, and R. Lee, USA
- Cultural ergonomics and the pesticide risk divide  
T. Smith-Jackson, M. Wogalter and Y. Quintela USA
- A cross-cultural (China vs US) comparison of product perceptions: Implications for warning processing  
M. Lesch, USA, P.-L. P. Rau, China, and Z. Zhao, China
- Older adults' user experiences with mobile phones: A qualitative approach  
Y. Lee and T. L. Smith-Jackson, USA
- Potential uses of virtual reality to evaluate behavioral compliance with warnings  
M. E. C. Duarte and F. Rebelo, Portugal

10:00 - 10:30 Refreshment break provided in Roman Ballroom

# Detailed Technical Program

Wednesday: July 16, 2008

## **SESSION 36: Impact of the Interaction Between Psychosocial and Physical Factors on Work-Related Musculoskeletal Disorders**

CO-CHAIRS: T. Waters and N. Swanson, USA

10:30 - 12:30 ROOM: VERONA

- Role of psychosocial and physical factors in determining risk of low back disorders  
W. Marras, USA
- The interplay of psychosocial and physical risk factors in musculoskeletal symptoms – What can be learned from intervention research  
B. Amick, Canada
- Relationship between psychosocial factors and back pain in nurses  
N. Menzel, USA
- Relationship of psychosocial factors with MSD symptoms in keyboard work  
N. Swanson, USA
- The role of physical and psychosocial risk factors in development of work-related MSDs: Findings from the 2002 Quality of Worklife Survey  
T. Waters, USA
- Musculoskeletal discomfort and its reduction in cotton cultivation  
V. Sangwan, S. Gandhi and S. Mer, India
- A study of the design of “knee kicker” bumper for carpet layer  
W.-F. Huang and C.-Fu Wu, R.O.C.

## **SESSION 37: Applied Participatory Ergonomics**

CHAIR: K. Zink, Germany

10:30 - 12:30 ROOM: TURIN

- Standardization and participation in holistic production systems  
K. J. Zink, Germany
- Creating business advantage with participatory ergonomics in a holistic systems redesign  
A. S. Imada and D. C. Anderson, USA
- Participation in technology implementation and perceived technology characteristics: a case study in pediatric hospitals  
B.-T. Karsh, K. Escoto, S. Alper, R. Holden, M. Scanlon, K. Murkowski, N. Patel, T. Shalaby, J. Arnold, R. Kaushal, K. Skibinski and R. Brown, USA
- Gaining participation of a multicultural workforce in the high risk industries such as construction  
S. Artis, B. M. Kleiner and T. Smith-Jackson, USA
- Participatory ergonomics: An office ergonomics case study  
N. Larson, USA
- Participatory development and implementation of continuous improvement processes within a holistic production system  
D. Schroder and U. Steimle, Germany
- Sustainability and end-user participation: a success and a failure  
P. Vink, The Netherlands

# Detailed Technical Program

Wednesday: July 16, 2008

## SESSION 38: Work Design

CHAIR: L. Sundstrom, Sweden

10:30 - 12:30 ROOM: TREV

- Improving the working environment  
L. Sundstrom, Sweden
- Broadening our foundation for work design: A conceptual framework design with a holistic approach  
Y. C. Erensal and D. D. Teoman, Turkey
- Using cross-functional teams to implement effective ergonomics in programs  
F. Norton, USA
- Configuration of a motivation-improvement-support system focused on the level of employees' satisfaction  
D. Yatsuzuka, T. Tabe, M. Anse and Y. Taguchi, Japan
- Impact of the chosen work condition factors on the quality of the manual assembly process  
A. Hamrol and D. Kowalik, Poland
- Ergonomic assessment of women in pearl miller (bajra) cobs harvesting  
S. Gandhi, M. Bilbaghi and Bimla, India
- The study of shaping effects developed by foundation garment and physiological response by the clothing pressure  
L. Liu, W. Zhang, Y. Wang and P. Xiao, China

## SESSION 39: Driving and In-Car Technology: Part II

CHAIR: P. W. Jordan, Sweden

10:30 - 12:30 ROOM: PISA

- Trade-off between multifunctional control systems while carrying out simple and complex secondary tasks  
R. Brostrom and P. Bengtsson, Sweden
- A new measurement for simulator driving performance in situations without interfere from other vehicles  
E. Y. N. Wang and F. Chen, Sweden
- Do ridge sizes in a rotary device for menu selection influence driving performance?  
H. Berglund, C. Grane and P. Bengtsson, Sweden
- Display characteristics for enhanced seat belt reminder systems  
N. Lerner, J. Singer, R. Huey and J. Jenness, USA
- Serial or parallel search with a multi-modal rotary device for in-vehicle use  
C. Grane and P. Bengtsson, Sweden
- Infotainment overload – The proliferation of in-car technology and use of Nomadic devices  
P. Ljungstrand, Sweden
- Guided tour for international user interfaces: multimedia design in rural areas  
F. Cipolla-Ficarra, Italy

# Detailed Technical Program

Wednesday: July 16, 2008

<p><b>SESSION 40: Special Populations</b>  <b>CHAIR: V. Rice, USA</b></p>	
<p>10:30 - 12:30  <b>ROOM: ANZIO</b></p>	<ul style="list-style-type: none"> <li>• An educational exercise on backpacks for school children: Including children, faculty and parents  V. Rice, C. De Vilbiss and C. Bazley, USA</li> <li>• How function and opportunity, not diagnosis, drives clinical outcome  B. Peacock and G. Peacock, USA</li> <li>• Designing technology for older adults  C. Fausset, W. A. Rogers and A. Fisk, USA</li> <li>• A cross-cultural study of older adults' technology acceptance  L. Wang, P.-L. P. Rau and G. Salvendy, China</li> <li>• Choosing, tweaking, and designing: Considerations for older adult technologies and training  A. McLaughlin, USA</li> <li>• Usability of consumer products used in the home for adult wheelchair users  J. Lenker, V. Paquet, D. Feathers and M. Nasarwanji, USA</li> <li>• Walking in their shoes: Teaching elder design  R. Lueder, USA</li> </ul>
<p><b>SESSION 41 SPECIAL INTEREST GROUP PANEL 2: AugCog-Enabled Research and Applications</b>  <b>CO-CHAIRS: D. Schmorrow and L. Reeves, USA</b></p>	
<p>10:30 - 12:30  <b>ROOM: CAPRI</b></p>	<ul style="list-style-type: none"> <li>• User-in-the-loop adaptive system design: Information fusion examples for visualizing and measuring biophysiological states  C. Fidopiastis and D. Nicholson, USA</li> <li>• Assessing neural signatures of learning to direct training and education  P. Luu and D. M. Tucker, USA</li> <li>• Driving EEG cognitive assessment using eye fixations  K. Hale, S. Fuchs and C. Berka, USA</li> <li>• Using advanced neurocognitive techniques to ensure Warfighter resilience: Advanced tactical aircraft simulator – quality training effectiveness Assessment ATAS-QTEA  R. Cornwall and T. Schnell, USA</li> <li>• Guidelines for the use neurotechnology and AugCog systems  L. Reeves, D. McBride A. Jeannotte, K. Schiller and E. DeRenzo, USA</li> </ul>
<p><b>SESSION 42: ISO standards on manual handling and repetitive movements: updates on main reference methods</b>  <b>CHAIR: E. Occhipinti, Italy</b></p>	
<p>10:30 - 12:30  <b>ROOM: SIENA</b></p>	<ul style="list-style-type: none"> <li>• ISO Standards 11228 (Parts 1-3) on manual handling and repetitive movements  E. Occhipinti, Italy</li> <li>• NIOSH lifting equation: updates with special focus on multitask and variable tasks analysis  T. Waters, USA</li> <li>• OCRA Method (OCRA Index and Checklist): updates with special focus on multitask analysis  D. Colombini and E. Occhipinti, Italy</li> <li>• The strain index  J. S. Moore and A. Garg, USA</li> <li>• HAL-ACGIH TLV for handwork  T. Armstrong, USA</li> <li>• Discussion and answers to questions from participants  All Speakers</li> </ul>

# Detailed Technical Program

Wednesday: July 16, 2008

## **SESSION 43: New Ways of Sustainable Office Interior Design: Measures effects**

CHAIR: P. Vink, The Netherlands

13:30 - 15:30 ROOM: VERONA

- Effects of a meeting table and chairs making half standing possible  
P. Vink, The Netherlands
- Implications for health and performance when replacing mouse use with shortcut keys  
M. M. Blok, P. Vink and P. Van Lingen, The Netherlands
- Task related office chair design  
L. Groenesteijn, P. Vink, M. Looze and F. Krause, The Netherlands
- Effects on body movement of five different office chairs  
K. Keller, R. Ellegast, R. Hamburger, P. Vink, F. Krause, M. Blok, L. Groenesteijn and H. Berger, Germany
- Office work places with laptop computers: User specific requirements for input devices and software design  
C. Sutter, C. Armbruster, M. Oehl and J. Musseler, Germany
- Designing for accessibility: Extending UI design approaches to hardware  
S. Keates, USA

## **SESSION 44: Cognitive Systems Research**

CHAIR: C. Forsythe, USA

13:30 - 15:30 ROOM: TURIN

- An evaluative synthesis of human performance, cognitive demands, and quality of work life in manufacturing environments  
J. K. Layer, W. Karwowski and A. Furr, USA
- Interactive search for patterns of behavior  
R. G. Abbott, J. H. Whetzel and J. D. Basilico USA
- Studying teamwork with automated behavior modeling  
R. G. Abbott and J. D. Basilico, USA
- Improving the human-vehicle interface: estimating the impact of difficult physical situations on drivers  
K. R. Dixon, J. D. Basilico and C. Forsythe, USA
- The effectiveness of electronic brainstorming in an industrial setting  
S.M. Stevens, C. C. Dornburg, S. M. L. Hendrickson, J. C. Forsythe, T. L. Bauer and G. S. Davidson, USA
- Ethical considerations with cognitive systems and neuro technologies  
W. Shaneyfelt, USA
- Human aspects of data mining systems  
E. Jun, USA and G. Salvendy, USA/P.R. China

## **SESSION 45: Macroergonomics Organizational, Managerial and Social Aspects**

CHAIR: L. Pacholski, Poland

13:30 - 15:30 ROOM: TREVISO

- Macroergonomic prerequisites for manufacturing systems modernization  
B. Mateja and L. Pacholski, Poland
- Management of work conditions quality through ergonomic designing of work conditions sources  
E. Tytyk, Poland
- Macroergonomic determinants of working time losses in manufacturing systems  
L. Pacholski, K. Siemieniak and M. Siemieniak, Poland
- Macroergonomic aspects of ecological production  
S. Janik, Poland
- Macroergonomic specificity of quality system internal audit in medium and small enterprises  
G. Wojdyski, A. Jasiak and L. Pacholski, Poland
- The method of matching ergonomic nonpowered hand tools to maintenance tasks for the handicapped  
M. Butlewski and E. Tytyk, Poland
- Human factor as a determinant of pro-quality systems exploitation  
M. Jasiulewicz-Kaczmarek and R. Wiczorek, Poland

# Detailed Technical Program

Wednesday: July 16, 2008

## **SESSION 46: Human Systems Integration**

CHAIR: M. Dainoff, USA

13:30 - 15:30  
ROOM: PISA

- Using formal methods to predict human error and system failures  
M. L. Bolton, E. J. Bass, and R. I. Siminiceanu, USA
- Integrating human systems integration with systems engineering: Issues and (Preliminary) answers  
L. Hettinger, USA
- Human systems integration, beyond domain tradeoffs and personnel readiness  
G. Lizza, USA
- Recognizing the synergy between SE and HSI  
A. Muralidhar, USA
- Requirements are key to effective human systems integration  
A. O. Salinas and H. M. Acosta, USA
- Site found... connecting  
S. Deal, USA

## **SESSION 47: Versatility of Ergonomic Applications in Health Care**

CHAIR: M. S. Bogner, USA

13:30 - 15:30  
ROOM: ANZIO

- Usability and safety of medical devices within the OR: Preliminary results of an analysis of reported incidents to the BfArM  
U. Matern, T. Rolleke, K. Montag and D. Buechel, Germany
- Information systems in the emergency department  
R. J. Fairbanks, USA
- A framework for optimizing the use of technology in education and training for healthcare professionals  
J. Cannon-Bowers, USA
- Improving mental health outcomes using immersion technologies: A cognitive ergonomics perspective  
C. Bowers, USA
- An organizational citizenship framework for understanding patient safety behaviors  
B.-T. Karsh, USA
- Medication reconciliation: A health care imperative – an ergonomic challenge  
M. S. Bogner, USA
- Occupational postural constraint caused by the dental equipment: A workstation assessment  
E. C. Batiz, P. R. Kawase and A. R. P. Moro, Brazil

# Detailed Technical Program

Wednesday: July 16, 2008

## **SESSION 48: Medications, Public Health, and Warnings**

Co-Chairs: M. Wogalter and C. Mayhorn, USA

ROOM: CAPRI 13:30 - 15:30

- Prescription medication sharing and borrowing: Prevalence and proclivities  
R. Goldsworthy, C. Mayhorn and A. Meade, USA
- Iterative Teratogen Warning symbol design: Results from the field  
C. Mayhorn and R. Goldsworthy, USA
- Graphic and information aspects affecting the effectiveness of visual instructions in medicine inserts in Brazil  
C. Spinillo, S. Padovani and F. Miranda, Brazil
- Do alcohol warning labels influence men's and women's attempts to deter others from driving when intoxicated?  
T. Tam and T. Greenfield, USA
- Safety packaging and enhanced warnings for over-the-counter drug products in tablet, caplet and gelcap forms  
S. Weiss, USA
- A framework for describing the graphic and content representations of warnings: A contribution of information design to information ergonomics.  
E. Azevedo and C. Spinillo, Brazil

## **SESSION 49: Innovations in Ergonomics**

CHAIR: E. Gorska, Poland

ROOM: SIENA 13:30 - 15:30

- New directions in research and teaching of ergonomics at Warsaw University of Technology  
E. Gorska, Poland
- The impact of local handgrip type of physical effort on chosen parameters of cardiovascular system  
P. Rybak and E. Gorska, Poland
- The computer implementation of the results of ergonomic analysis and evaluation of workstations in Mars Polska  
M. Walda and E. Gorska, Poland
- Implementation of ergonomic solutions with the use of Kaizen continuous improvement approach  
M. Gorski and M. Gorski, Poland
- Research on the level of adaption of tools and everyday use objects handles to their user's hand  
A. Polak-Sopinska, Poland
- Paradoxes in applied ergonomics  
M. Gorski, Poland

15:30 - 16:00 Refreshment break provided in Roman Ballroom

## **SESSION 50: Overcoming Impediments to Achieving Enterprise Agility**

CHAIR: S. Trzcielinski, Poland

16:00 - 18:00 ROOM: VERONA

- A framework of organizational structure designing for agile enterprise  
E. Pawlowski and K. Pawlowski, Poland
- Methods and tools for continuous improvement  
S. Piersiala and S. Trzcielinski, Poland
- Leaning the organizational structure. Case of the multi media company  
A. Rogowski and S. Trzcielinski, Poland
- Bases of theory of opportunities  
S. Trzcielinski, Poland
- The use of ergonomics in microenterprises in Wielkopolska region  
E. Wiecek-Janka, Poland
- Psychophysical bases of pronouncement of psychosomatic diseases at Polish microenterpreuner  
E. Wiecek-Janka, Poland

# Detailed Technical Program

**Wednesday: July 16, 2008**

## **SESSION 51: Human Performance**

CHAIR: T. Marek, Poland

16:00 - 18:00 ROOM: TURIN

- The role of a priori constraints in perception of 3D shapes  
Z. Pizlo, USA
- Human operator- Cognitometrics-closing the loop  
J. Ober and J. Dylak, Poland
- Changes in the anterior cingulate cortex activity under simulated driving task - fMRI case study  
T. Marek, M. Fafrowicz, K. Golonka, J. Mojsa-Kaja, K. Tucholska, H. Oginska, T. Orzechowski and A. Urbanik, Poland
- Usability of train ticket vending machines  
K. Yamada and F. Ryoko, Japan
- Should future homes be designed differently for American and Korean?  
K.-A. Jeong, USA and G. Salvendy, USA/P.R. China
- Effects of an energy drink and cognitive loading on postural stability  
A. Enriquez and B. Chase, USA

## **SESSION 52: Managing Business Performance with Business Object Ontologies**

CHAIR: J. Kantola, Finland

16:00 - 18:00 ROOM: TREVI

- Managing by ontologies  
J. Kantola, Finland
- Capturing change intelligence through internet applications  
H. Vanharanta, Finland, J. Kantola, Finland, and W. Karwowski, USA
- Hydro power plant – metaphor for innovation culture  
A. Suominen, J. Jussila and H. Vanharanta, Finland
- Evaluating and managing R&D investment under uncertainty case study: productization of portable fuel cells  
A. Suominen, J. Kantola and A. Tuominen, Finland
- Studying achievement factor based on collective understanding  
H. Paukku, P. Paajanen, A. Piirto, J. Kantola and H. Vanharanta, Finland
- Project management: A bridge between academia and business  
A. Bikfalvi, Spain, J. L. Pages, Spain, N. M. Fernandez, Spain, P. M. Gou, Spain, and J. Kantola, Finland
- Performance measures for green supply management  
J. S. Park, Korea, Y. S. Chang, Korea, H. Vanharanta, Finland and J. Kantola, Finland

# Detailed Technical Program

Wednesday: July 16, 2008

## **SESSION 53: The Use of Driver Assistance Systems: Experimental Evaluation and Modeling of Human Behavior**

CHAIR: H. Bubb, Germany

16:00 - 18:00 ROOM: PISA

- Some bridging methods towards a balanced design of human-machine systems, applied to highly automated vehicles  
F. Flemisch, J. Schindler, J. Kelsch, A. Schieben and D. Damböck, Germany
- Acceptance of augmented reality for driving assistance information  
U. Bergmeier and C. Lange, Germany
- Development and testing of icons for driver assistance systems  
C. Lange, M. Wohlfarter and H. Bubb, Germany
- The BMW iDrive the next step of a revolution  
A. Keinath, S. Durach, L. Eckstein, and B. Niedermaier, Germany
- Visual performance of dual task execution with simultaneous peripheral and central perception  
M. Goebel, South Africa and F. Treugut, Germany
- Cultural differences in the use of nomadic devices  
P. Leiber, B. Spanner-Ulmer, M. Jentsch and W. Hamberger, Germany
- Tool-based and collaborative decision support for investments in usability engineering  
T. Komischke, USA
- Naturalistic driving study on approaching and lane-changing behavior  
D. Popiv, M. Rakic and H. Bubb, Germany

## **SESSION 54: Human Factors in Design**

CO-CHAIRS: H. Schulze and T. Wafler, Switzerland

16:00 - 18:00 ROOM: ANZIO

- Boundary spanning collaboration in new product creation: (New) trends and design approaches  
H. Schulze and T. Wafler, Switzerland
- A new approach for boundary spanning collaboration– Results and implications from a case study at Daimler AG  
H. Schulze, Switzerland, S. Mbang, Germany, and K. Stahl, Germany
- Presentation: Collaborative design using mixed reality: Suggestions from INTUITION partners  
P. Vink and J. W. v. Rhijn, The Netherlands, and B. Krassi, Finland
- Boundary spanning collaboration in planning and scheduling  
D. Fischer and T. Wafler, Switzerland
- Bridging the 3 worlds: A multi-method approach towards enhancing knowledge sharing in Rolls-Royce  
C. Shepherd and M. Kerr, UK
- How creative is your website?  
L. Zeng, USA and G. Salvendy, USA/P.R. China
- Cognitive ergonomics relevance for educational and educative websites' design  
A. Carusi and C. Mont'Alvão, Brazil

# Detailed Technical Program

Wednesday: July 16, 2008

## SESSION 55: Ergonomics in Service

CHAIR: K. Lindström, Finland

16:00 - 18:00 ROOM: CAPRI

- Interaction, work characteristics, and mental health in nursing  
J. Glaser and S. Hornung, Germany
- Promoting Innovativeness and rewards in elderly care work  
K. Lindström, Finland
- Emotional labour of funeral directors  
G. Molander, Finland
- Developing industrial service capability: change process from product-oriented culture to service-oriented culture  
M. Nuutinen and K. Ilomaki, Finland
- Improving work and work process knowledge in school kitchens – is a multilevel intervention regarded as useful?  
A. Leppänen and L. Hopsu, Finland
- Determining the optimal bin size for a video-based posture assessment method  
P. van Wyk, P. L. Weir, D. M. Andrews, K. Fiedler and J. P. Callaghan, Canada

## SESSION 56: Ergonomics and Safety Potpourri

CHAIR: S. Horino, Japan

16:00 - 18:00 ROOM: SIENA

- Fundamental concepts in occupational hip injury  
S. Morrissey, USA
- Gender perspective on work safety in the mining industry  
E. Andersson, Sweden
- Listening to the traffic  
F. Chen, J. Hagemass, M. Lindh and J. Jarlengrip, Sweden
- Analysis and prevention of traffic accident applying tele-field study making use of image-recording-type drive recorders  
S. Horino, M. Mori, N. Kubo, S. Kitajima and T. Katayama, Japan
- Ergonomics proposal for visibility requirements at urban intersections in Japan for preventing frequent crossing collisions  
M. Mori, S. Horino, N. Kubo and S. Kitajima, Japan
- A study on human factors on flight delays  
K. Onan and O. Ozaydin, Turkey
- Ergonomics modeling and simulation for spaceflight task planning  
Y. Liu, China

# Detailed Technical Program

Thursday: July 17, 2008

## SESSION 57: Ergonomics Assessment

CHAIR: P. Arezes, Portugal

8:00 - 10:00 ROOM: VERONA

- The effectiveness of a drywall sanding machine (DSM) in reducing forceful exertions and repetitive motion  
P. Vi, Canada
- Thermal comfort of trekking boots: objective versus subjective evaluation  
P. Arezes, M. Neves, S. Teixeira, C. Leao and J. Cunha, Portugal
- Subjective perception and ergonomic assessment of comfort/discomfort in school environments  
S. Marino, M. Donisi, R. Gurin, A. Silveti and A. Papale, Italy
- Evaluation of comfortable spaces for women using virtual environment - Objective evaluation by biological signals  
M. Ohkura, Y. Aoki, T. Aoto and Y. Watanabe, Japan
- Biomechanical analysis for assessing manual material handling risk in supermarkets  
F. Draicchio and A. Silveti, Italy
- Documentation of shoulder loads in automotive assembly  
F. Seaman, W. Albert, N. Weldon, J. Callaghan and J. Croll, Canada
- The relationship between working conditions and ergonomic/musculoskeletal disorders in a manufacturing facility  
D. Jones, USA

## SESSION 58: Command and Control: Current Perspectives and Future Concepts

CHAIR: N. Stanton, UK

8:00 - 10:00 ROOM: TURIN

- Digital versus analogue mission planning  
N. Stanton, UK
- Clash of the Titans: Hierarchical task analysis versus cognitive work analysis  
P. M. Salmon, N. A. Stanton, D. P. Jenkins, G. H. Walker and L. A. Rafferty, UK
- Using work domain analysis to evaluate the impact of digitization on helicopter mission planning  
D. P. Jenkins, N. A. Stanton, P. M. Salmon, G. H. Walker and M. S. Young, UK
- Distributed situation awareness and command and control: Case study and implications for system design  
P. M. Salmon, N. A. Stanton, D. P. Jenkins, G. H. Walker and L. A. Rafferty, UK
- Friendly fire and errors in teamwork: Identification of the Big 5 causal factors  
L. A. Rafferty, P. M. Salmon, N. A. Stanton, G. H. Walker and D. P. Jenkins, UK
- An evolutionary approach to NCW system design  
G. H. Walker, N. A. Stanton, P. M. Salmon and D. Jenkins, UK

## SESSION 59: The Relationship Between Contents Service and HCI in Post Ubiquitous Days

CO-CHAIRS: S. Yamamoto and H. Mori, Japan

8:00 - 10:00 ROOM: TREVINO

- Three layered-model of the ubiquitous computing  
H. Mori, Japan
- Supporting asymptomatic visually impaired drivers  
K. Go, Y. Tsuyuzaki, K. Kashiwagi and S. Kotani, Japan
- Concept of image contents life cycle processes  
N. Hirasawa, S. Ogata and K. K. Yamada, Japan
- Cognitive analysis of drivers' behavior in a mixed-reality display of the back monitor system  
K. Sudo, M. Shirahata and H. Mori, Japan
- Technique for making of Japanese older persons' active participation in network society  
D. Kobayashi and S. Yamamoto, Japan
- Design of robust society for earthquake disasters  
S. Yamamoto and T. Hayashi, Japan
- Emergency communication service on mobile phone for universal ubiquitous use  
N. Hosono, M. Suzuki, R. Kimura, H. Miki and Y. Tomita, Japan

# Detailed Technical Program

Thursday: July 17, 2008

## SESSION 60: Ergonomics Modeling and Usability Evaluation

CHAIR: J. Lenker, USA

8:00 - 10:00 ROOM: PISA

- Usability evaluation of personal internet banking in China: A case study  
J. Wu, L. Sun, Q. Li and S. Xu, P.R. China
- A study about search engine interface design for user's search goal  
B. Jin, S. Baik, K. Lee and Y. Ji, S. Korea
- Reliability and repeatability of the bone conducted speech intelligibility using the Callsign Acquisition Test  
X. Jiang, K. Benson, and B. Osafo-Yeboah, USA
- Incorporating the principles of universal design into assessment of product usability  
V. Paquet, J. Lenker, D. Feathers and M. Nasarwanji, USA
- Airlines and the user experience: The practical and emotional ergonomics of complex human-machine systems  
P. W. Jordan, UK
- Study on usage of biological signal to evaluate Kansei of a system-evaluation of feelings at a simple task using cards  
T. Aoto, Y. Nakamura, T. Harada and M. Ohkura, Japan

## SESSION 61: Anthropometry at China

CHAIR: X. Zhang, P. R. China

8:00 - 10:00 ROOM: ANZIO

- China national body size survey for minors  
X. Zhang, L. Taijie and R. Linghua, P. R. China
- Seizing China anthropometrics to better serve the apparel industry  
M.-E. Faust, Hong Kong
- A new approach to measure women's breast volume using 3D scan data  
R. Zheng, P. R. China, W. Yu and J. Fan, Hong Kong
- Study on parameterized mannequin modeling  
Y. Liu, P. R. China
- The analysis of the minor's bodily form based on fuzzy cluster in Shanghai area  
X. Hong, P. R. China
- Body measurement standardization in China  
R. Linghua, Z. Xin and L. Taijie, P. R. China
- The analysis of the minor's bodily form based on fuzzy cluster in Shanghai area  
X. Hong and Z. Xiang, China
- Measurement and analysis of the minor's bodily form based on fuzzy recognition  
Z. Xiang, X. Hong and C. Jing, China

## SESSION 62: Ergonomics in Pattern and Industrial Design

CO-CHAIRS: J. Lewandowski and Z. Wisniewski, Poland

8:00 - 10:00 ROOM: CAPRI

- Ergonomic student workstation as a condition for the proper shaping of body posture  
J. Lecewicz-Bartoszewska, Poland
- Ergonomic analysis of activities as the basis for design verification of machines on the example of a straw rolling press  
J. Lecewicz-Bartoszewska, Z. Wisniewski and J. Rozycki, Poland
- Product design and engineering design: Conformity of aims, difference of tasks on the example of surgical microscope  
Z. Wisniewski, J. Lecewicz-Bartoszewska and J. Lewandowski, Poland
- Ergonomic design of tool handles for everyday use appliances  
A. Polak-Sopinska, J. Lecewicz-Bartoszewska and A. Miarka, Poland
- Ergonomic analysis and assessment of a selected production line and improvement plan  
A. Polak-Sopinska, Poland
- Interface ergonomics– application of ergotronics  
Z. Wisniewski, Poland
- Ergonomic analysis of activities as the basis for design verification of machines on the example of a straw rolling press  
J. Lecewicz-Bartoszewska, Z. Wisniewski and J. Rozycki, Poland

# Detailed Technical Program

Thursday: July 17, 2008

## SESSION 63: Human-Machine Systems

CHAIR: S. Scott, USA

8:00 - 10:00 ROOM: SIENA

- Decision-making in safety management  
T. Waefler, F. Ritz, K. Gaertner and K. Fischer, Switzerland
- Human reliability analysis of changeovers in manufacturing systems  
S. Wischniewski and J. Deuse, Germany
- Computer-aided system and monitoring inefficiency: Reliability and mental workload  
I. L. Singh and P. K. Saha, India
- A Proposal of human error tendency estimation method on human personality  
R. Yano and Y. Okada, Japan
- Mitigating supervisory-level interruptions in mission control operations  
S. D. Scott, Canada, J. Wan, USA, F. Sasangohar, Canada and M. L. Cummings, USA
- A balanced approach for LLOs using group dynamics for COIN efficacy  
C. Phillips, N. Geddes and S. Kanareykin, USA
- Tailored simulation techniques for ergonomic seating systems development  
C. Lauber and R. Stetter, Germany

10:00 - 10:30 Refreshment break provided in Roman Ballroom

## SESSION 64: Usability in complex systems

CHAIR: K. Kim, USA

10:30 - 12:30 ROOM: VERONA

- Authority and responsibility in human-machine systems: Is system-initiated trading of authority permissible in the human-centered automation framework?  
T. Inagaki, Japan, and T. Sheridan, USA
- Applicability of an ecological interface design approach for an information requirement and workload assessment in nuclear power plants  
J. Park, Y.-H. Lee, T.-I. Jang, D. Kim and S.-H. Hwang, Korea
- A model for ergonomic automation design of digitalized human-systems in nuclear power plants  
C. J. Lin, T.-C. Yenn, Y.-T. Jou, C.-W. Yang and L.-Y. Cheng, R.O.C.
- Usability and socio-organizational context of on-line services in intranet portals  
M. Sikorski, Poland
- The importance of mobile telephone communication medium to the maintenance of social relationships  
M. Turner, S. Love and M. Howell, UK
- Human aspects of cell phone menu design  
K. Kim, USA and G. Salvendy, USA/P.R. China

## SESSION 65: Working Time and Social Design

CHAIR: G. Costa, Italy

10:30 - 12:30 ROOM: TURIN

- Working hours, ageing and health  
G. Costa, Italy
- Effectiveness of shiftwork lifestyle training  
A. Aguirre and T. Dawson, USA
- Nursing personnel and the diversity of stressors associated with health dimensions  
A. A. Silva, F. M. Fischer, M. B. Fonseca, N. S. Soares, F. N. Borges, L. Rotenberg, Brazil and P. Landsbergis, USA
- Comparison of a large metropolitan fire department working two different shift schedules: A look at Circadian alterations  
L. Glazner, USA
- Understanding sociability of social software: An exploratory study  
Q. Gao, R. Kang, Z. Fan, Y. Dai, S. Wu and Y. Yang, China
- The Portuguese aging workforce and ergonomics  
A. F. Costa and I. L. Nunes, Portugal
- Nurses' work ability in a Portuguese Central Hospital  
T. Cotrim, J. Carvalhais, A. Paes Duarte and A. Simoes, Portugal

# Detailed Technical Program

Thursday: July 17, 2008

## SESSION 66: Enterprise Management

CHAIR: W. Grudzewski and I. Hejduk, Poland

10:30 - 12:30 ROOM: TREVI

- Methodology of trust measurement  
W. M. Grudzewski, I. K. Hejduk, A. Sankowska and M. Wantuchowicz, Poland
- The relationship between intellectual capital and firm performance: An empirical study of the environment moderating role  
D. T. Ediraras, S. E. Margianti, E. S. Suhendra and T. Saptariani, Indonesia
- Heterogeneous or Homogeneous? Heuristic development in small owner-managed firms  
P. Donaldson, UK
- Analysis of incentives and quantification of benefits in 'project based value added networks'  
H. Winkler, H. B. Schemitsch and B. Kaluza, Austria
- The management of wisdom in organizations  
M. A. Sinclair, C. Siemieniuch and E.-M. Molloy, UK
- Proposition of a PC based methodology for the 2nd. phase - recurrent practice and feedback - of CRM -the corporate resource management  
L. M. E. d. P. Cabral, S. L. d. Ribeiro, L. Landau and C. Gerson, Brazil

## SESSION 67: Digital Human Modeling

CHAIR: V. Duffy, USA

10:30 - 12:30 ROOM: PISA

- Proof of concept for test of virtual assembly cell with high product complexity  
H. O. Demirel, V. Balchandani, N. W. Hartman, A. Lowe, V. G. Duffy and H. Rozali, USA
- Performing dynamic ergonomics analysis through virtual interactive design  
R. Tian and V. G. Duffy, USA
- Evaluation of mental workload with a combined measure based on pupil dilation and eye blink interval  
T. Artavatkun, E. Arslanturk, Y. Du, V. G. Duffy, S. Collins, C. Belcher, Z. Shou and K. Prabhakar, USA
- Validating motion capture for dynamic work assessment  
J. Sutherland and V. G. Duffy, USA
- Virtual reality escapism: A new approach to coping with workplace stress  
M. Connors and J. Bloedel, USA
- The correlation analysis of human body measurements for human model  
L. Wang, H. Li, and D. Dong, China
- Development of a human scale motion simulation system with multimodal feedback for ergonomics evaluation  
B. Hu, Y. Wang, W. Wu and W. Zhang, P.R. China

# Detailed Technical Program

Thursday: July 17, 2008

## **SESSION 68: Usability Evaluation and User Research**

CHAIR: A. Moallem, USA

10:30 - 12:30 ROOM: ANZIO

- An industry-focused approach to medical device development: A new blood vessel imaging device  
J. Martin, E. Murphy and J. Crowe, UK
- The power of gestures in human-robot interaction  
H. Y. Kim, S. S. Kwak and M.-S. Kim, Korea
- Design and improve user experience in agile development cycles: advantages, frustrations and more  
A. Moallem, USA
- Multi-cultural ergonomics contextual study in designing a new generation of mammography equipment  
B. Kapitaniak, USA
- Users' expectations of USB connectivity with virtualization  
S. Swamy and G. Cochran, USA
- Designing online reputation system  
S. Swamy, USA
- Control of a smart home with a brain-computer interface  
C. Guger, K. Gunther, H. Clemens, E. Guenter, Austria, and C. Groenegrass and M. Slater, Spain

## **SESSION 69: Ergonomics in Design**

CHAIR: F. Rebelo, Portugal

10:30 - 12:30 ROOM: CAPRI

- Virtual Reality in wayfinding studies  
E. Vilar and F. Rebelo, Portugal
- The contribute of ergonomic design in the interaction with control displays  
S. Ramos, F. Rebelo, I. Goncalves and H. Simoes, Portugal
- Study of a car seat concept design proposal using Kansei Ergonomics  
M. Santos, F. Rebelo and J. Teles, Portugal
- Valorized aspects in an educational multimedia game for children  
F. Rebelo, E. Filgueiras and A. Marques, Portugal
- Design and evaluation of unfamiliar software icons: A case study  
M. E. C. Duarte and F. S. Rebelo, Portugal
- From the qualities to the quantities; Applied ergonomics in a control room architectural project  
E. Attaianesi, Italy
- Keyboard design? Postural behavior evaluation during interaction with keyboards and typewriters  
E. Filgueiras, M. Soares and F. Rebelo, Portugal

# Detailed Technical Program

Thursday: July 17, 2008

## SESSION 70: Environmental Ergonomics

CHAIR: H. Strasser, Germany

10:30 - 12:30 ROOM: SIENA

- Age-related analysis and assessment of the effects of working in the cold on skin and core temperature of male order-pickers  
K. Kluth, M. Penzkofer and H. Strasser, Germany
- Physiological responses of male subjects to cold-exposures at +3 °c and -24°c during warehouse commissioning work  
M. Penzkofer, K. Kluth and H. Strasser, Germany
- Acclimation to hot climates and the course of resting core temperature and heart rate  
M. Schuette, B. Kampmann, P. Broede, and B. Griefahn, Germany
- Contrast, visual acuity and subjective assessment of the detectability of surface flaws depending on illumination and inclination of test objects  
J. Schneider, A. Ermert and H. Strasser, Germany
- Intra-individual variability of strain during uncompensable heat stress determined from a longitudinal study  
B. Kampmann and G. Bresser, Germany
- Calculation of cooling phases in warm and hot environments using the PHS-model  
H. Gebhardt, B. Kampmann, B. H. Mueller and K. Bux, Germany
- Robust prediction of automobile seat comfort via fuzzy rule-based model  
H.-K. Kim, B.-K. Kim, J.-I. Kim and S. Na, Korea

## SESSION 71: Theoretical Issues in Cognitive Ergonomics

CHAIR: A.-L. Osvalder, Sweden

13:30 - 15:30 ROOM: VERONA

- Tools to improve human performance technology  
O. Burov, V. Samsonkin and O. Burova, Ukraine
- Clash of the titans: Hierarchical task analysis versus cognitive work analysis  
P. Salmon, N. A. Stanton, D. P. Jenkins, G. H. Walker and L. A. Rafferty, UK
- Analyzing the ergonomics of aircraft cockpits using cognitive models  
J.-P. Osterloh and A. Luedtke, Germany
- Images and mental maps - Critical review  
J. Mateus, Jr. and E. Merino, Brazil
- Development of a human performance model in a fluid power system  
X. Jiang and K. Hughes, USA
- Generic task specification – A framework for describing task demands and mental/physical work loads in human machine system  
L.-O. Bligard and A.-L. Osvalder, Sweden

## SESSION 72: Cognition in Dynamic and Complex Environment

CHAIR: L. O'Sullivan, Ireland

13:30 - 15:30 ROOM: TURIN

- The role of attention in task performance and situation awareness  
P. Patterson, USA and J. Klamklay, Thailand
- Situation awareness as complexity: How much reliable is what we think we are doing?  
J.-C. Sarrazin, L. Chaudron, France, and A. Cleeremans, Belgium
- Team schemata as a measure of awareness in dynamic systems  
N. Stanton, P. M. Salmon, G. H. Walker and D. P. Jenkins, UK
- Possible dynamic allocation of functions in support of airborne spacing operations  
P. LeBlaye and T. C. de Brunelis, France
- Relations of the difficulty of the control in the predictive control and Bereitschafts potential  
T. Ichikawa and S. Yamamoto, Japan
- Simulating cognitive stress for the study of psychosocial risks and MSDs  
L. O'Sullivan and C. Deeney, Ireland

# Detailed Technical Program

Thursday: July 17, 2008

## SESSION 73: Systemic Approach to Human Factors

CHAIR: B. S. Caldwell, USA

13:30 - 15:30 ROOM: TREVI

- The contributions of a formative systemic modeling approach to training development  
D. Jenkins, N. A. Stanton, P. M. Salmon, G. H. Walker and M. S. Young, UK
- Identifying opportunities for the integration of quality, environmental, and health and safety management systems in the medical device sector  
M. Kelly, USA
- Developing personnel selection criteria for service sector  
O. Ozaydin and K. Onan, Turkey
- Challenges in measuring meeting performance  
A. Rausch, G. Modritscher and U. Liebhart, Germany
- The evolution of accessibility program offices in organizations  
C. M. Law, Australia
- Distributed expertise and knowledge coordination during dynamic events  
B. S. Caldwell, USA

## SESSION 74: Modeling Human Factors in Healthcare Systems

CHAIR: V. Duffy, USA

13:30 - 15:30 ROOM: PISA

- RFID for medical implant monitoring and positive patient identification  
H. O. Demirel and V. G. Duffy, USA
- Electronic prescribing adoption: Barriers and influencing factors  
A. Benedict and V. G. Duffy, USA
- Computerized physician order entry (CPOE): A review and reappraisal  
V. Balchandani, Y. E. Leong, V. G. Duffy and D. Teo, USA
- A systematic approach for introducing tablet PCs to facilitate end-user adoption of health IT  
E. Jun, L. Zeng and V. Duffy, USA
- The analysis and application of human error identification (HEI) in dental care  
L. Chadwick and E. F. Fallon, Ireland
- Impact of usability on safe use of medical devices  
L. Liu, China, U. Hoelscher, Germany and T. Gruchmann, Germany
- Dimensions of the task, the activity and the actions of the occupational therapist work in the recovery of children with cerebral paralysis: Ergonomics perspectives  
S. Mallin, J. R. Mateus, Jr., L. A. Gontijo, V. L. D. d V. Pereira, H. d V Pereira Filho and W. Pacheco, Jr., Brazil

## SESSION 75: User Research and Usability Evaluation II

CO-CHAIR: Q. Fan and A. Ozok, Turkey

13:30 - 15:30 ROOM: ANZIO

- The dream economy - Case studies of success in the 21st century  
P. W. Jordan, UK
- Ergonomics of transport multimodal information and pedestrian guidance available on mobile phone  
A. Pausie, France
- Development of the household eco-account book to enhance the user's environmental awareness  
Y. Maeda, T. Tabe, M. Anse and Y. Taguchi, Japan
- Behavioral aspects that influences wayfinding performance  
L. Ribeiro and C. Mont'Alvão, Brazil
- The color selection support tool in consideration of color barrier-free for web page  
M. Anse, S. Agatsuma, K. Sato and T. Tabe, Japan
- Computerized solution approach to improving work posture during Notebook computer operation  
S. Nanthavanij and S. Jalil, Thailand

# Detailed Technical Program

Thursday: July 17, 2008

## **SESSION 76: Occupational Ergonomics**

CO-CHAIR: P. Marlow, Australia

13:30 - 15:30 ROOM: CAPRI

- Applying good ergonomics in construction: Where do the costs and benefits lie?  
P. Marlow, Australia
- Ergonomics study of car washers  
J. R. Mateus, Jr., C. Duarte, L. Gontijo, E. Merino and R. A. Forcellini, Brazil
- The contribution of ergonomics in the secondary prevention of work-related musculoskeletal disorders  
I. Nastasia, R. Tcaciuc and M.-F. Coutu, Canada
- Development in professional cleaning work brings challenges to ergonomics  
A. Pekkarinen, Finland
- Work task and biomechanical analyses for mason tenders working in residential and commercial construction projects  
P. Vi, Canada, and J. Albers, USA
- Occupational health hazards and use of women friendly technologies  
S. Mer and V. Sangwan, India

## **SESSION 77: Human Factors Design in Industry**

CO-CHAIRS: A. Simoes and J. Carvalhais, Portugal

13:30 - 15:30 ROOM: SIENA

- Decision-making after the product-service shift and some implications for ergonomics  
E.-M. Molloy, M. Sinclair and C. Siemieniuch, UK
- Metaphorical user interface design of video blog tools for aged people  
L.-C. Chen, P.-Y. Chu, Y.-M. Cheng and W.-L. Wei, R.O.C.
- Digital accessibility for illiterates: A novel language and interaction model  
C. d. Tambascia, I. M. A. Avila and G. M. Holanda, Brazil
- Eyes: A virtual assistant for analysis of the transparency and accessibility into university portal  
F. Cipolla Ficarra and M. Cipolla Ficarra, Italy
- Aging and fitness to drive: Impacts of in-vehicle information and communication system  
M. Pereira, A. Simoes, M.-P. Bruyas, C. Rodrigues, M. Leitao and C. Campos, Portugal
- Aging and work Ability in health care shiftworkers  
J. Carvalhais, T. Cotrim and A. Paes Duarte, Portugal
- Visual discomfort and modification in physical behavior among mature VDU workers  
R. Bruenech and I.-B. K. Haugen, Norway

15:30 - 16:00 Refreshment break provided in Roman Ballroom

# Detailed Technical Program

Thursday: July 17, 2008

## SESSION 78: Information Processing

CHAIR: E. W. m. Rondeel, The Netherlands

16:00 - 18:00 ROOM: VERONA

- Eye tracking analysis of effects of key styling factors on visual attention during reading printed advertising  
H. Aoki and K. Itoh, Japan
- Cusp surface analysis for catastrophe phenomenon in visual perception of ambiguous figures  
Y. Kume, Japan
- Interactive neurotechnology platform: A real-time window on human information processing at the millisecond level  
C. Berka, K. Hale, A. J. Cowell, S. Fuchs, R. Johnson, G. Davis, R. Leathers, D. Popovic, M. Whitmoyer and R. Olmstead, USA
- The human capacity of signal detection and reaction in multi-screen monitoring tasks  
C. J. Lin, H.-C. Chang and C.-W. Yang, R.O.C.
- The function of the peripheral visual field in walking in a corridor and staircases  
Y. Yoshioka, Japan
- Human factors by age group in processing information on road signs  
K.-S. Noh , J. H. Lee and J.-M. Kim, Korea
- In the mood for change: The influence of mood on change blindness  
E. W. m. Rondeel, R. W. Holland, M. Kempen and N. J. E. Wijngaards, The Netherlands

## SESSION 79: Usability Training and Learning

CHAIR: K. Nosu, Japan

16:00 - 18:00 ROOM: TURIN

- A ergonomics research program on learning of riding a motorcycle in real context: A way to develop a new generation of motorcycle curriculum with simulation  
D. Aupetit, J. Riff, S. Espie and O. Buttelli, France
- The influence of the operators training on the successful of the detection of the informational system depending on the combination of colors  
M. Grozdanovic and D. Marjanovic, Serbia
- Influence of password updating on generation and retention of passwords  
K.-P. L. Vu, R. W. Proctor and D. O'Brien, USA
- Factors affecting time sequential emotion estimation of e-learning users from the face  
K. Nosu and T. Kurokawa, Japan
- Relations of motor readiness and difficulty of the control operator at the time of the manual control  
T. Ichikawa, D. Kobayashi and S. Yamamoto, Japan
- Assisting application users in preventing constant memory usage via visualization  
T. Akasaka and Y. Okada, Japan

# Detailed Technical Program

Thursday: July 17, 2008

## SESSION 80: From Mobile Phones to Medical Devices: Cognitive Ergonomics at Work in our Daily Lives

CHAIR: A. A. Ozok, USA

- |               |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:00 - 18:00 | ROOM: TREVI | <ul style="list-style-type: none"> <li>• Cross-cultural user interface design for mobile phones: a literature survey<br/>H. Wu, A. A. Ozok and A. F. Norcio, USA</li> <li>• Preliminary investigation into the internationalization of user interfaces<br/>J. Chakraborty, L. Hansen, D. A. Denenberg and A. F. Norcio, USA</li> <li>• Designing for accessibility for Web content and software applications<br/>R. C. Getek and A. A. Ozok, USA</li> <li>• Medication management for the elderly: A human factors perspective<br/>P. Gurses and A. A. Ozok, USA</li> <li>• Human safeguards to information security risks in E-healthcare<br/>J. Wei and M. Loho-Noya, USA</li> <li>• A methodology for developing and evaluating of ergonomic quality of governmental websites based on fuzzy approach<br/>G. Yucel and A. F. Ozok, II, Turkey</li> <li>• Humans as a source of threat to information security in airline E-ticketing<br/>M. Loho-Noyo, J. Wei and A. A. Ozok, USA</li> </ul> |
|---------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SESSION 81: Information Technology Management on Human Perspectives

CHAIR: J. Wei, USA

- |               |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:00 - 18:00 | ROOM: PISA | <ul style="list-style-type: none"> <li>• The information layering approach: A technique for formally notating multiple communications in a single information display presentation<br/>D. A. Denenberg, USA</li> <li>• User preferences of E-commerce recommender system user interfaces based on a usability criteria model<br/>Q. Fan, A. A. Ozok and F. Norcio, USA</li> <li>• Human safeguards on information privacy and security in global IT outsourcing<br/>M. Loho-Noya and J. Wei, USA</li> <li>• E-customer chain management on the human perspectives in engineering services<br/>R. Peterson and J. Wei, USA</li> <li>• SMS Use among American students: Human Factors perspective<br/>A. Ozok and J. Wei, USA</li> <li>• Smart IV pump technology from the user's perspective: Pediatric nurses' perceptions and experiences<br/>M. K. Breitenstein, A. P. Gurses, G. F. Billman and A. A. Ozok, USA</li> </ul> |
|---------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SESSION 82: Usability evaluation and user research II

CHAIR: F. Cipolla-Ficarra, Italy

- |               |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:00 - 18:00 | ROOM: ANZIO | <ul style="list-style-type: none"> <li>• User interface of AV remote controls using a standard design template<br/>S. Kimura, T. Nonaka and T. Hase, Japan</li> <li>• Dyadic for quality in hypermedia systems<br/>F. Cipolla-Ficarra, Italy</li> <li>• HECHE: Heuristic Evaluation of Colors in Homepage<br/>F. Cipolla-Ficarra and M. Cipolla Ficarra, Italy</li> <li>• Impression evaluation of skimmed CGV contents by "Choco-Para" based on emphasized speech extraction<br/>K. Hidaka, G. Irie, T. Satou, Y. Taniguchi, S. Nakajima and K. Ogawa, Japan</li> <li>• VIDS - ergonomic design in immersive virtual reality<br/>M. Laakso, Finland</li> <li>• The usability evaluation of tablet PC testing<br/>Y.-Y. Kang and M.-J. J. Wang, Taiwan, R.O.C.</li> </ul> |
|---------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# Detailed Technical Program

Thursday: July 17, 2008

## SESSION 83: Usability Studies in Taiwan

CHAIR: C. Huang, Taiwan

16:00 - 18:00  
ROOM: CAPRI

- A usability study on closet for the elderly in Taiwan  
C. Huang, R.O.C.
- An analysis on interface usability of VoIP Phone  
L.-C. Lee, R.O.C.
- Exploring the image of heroic characters in computer games  
C.-H. Kao and I.-H. Fan, R.O.C.
- Design and usability study of an external logger for registering computer input activities  
H.-C. Chen, Y.-P. Liu and H.-C. Wu, R.O.C.
- Relating website information characteristics to the service quality construct for e-customer services  
A.-C. Chen and W.-C. Chao, R.O.C.
- A study on recognition of icons used in tactile direction map  
C.-Y. Leung, C.-H. Chang and S.-C. Chuang, R.O.C.

## SESSION 84: Modern Practices in Ergonomics

CHAIR: D. T. Ediraras, Indonesia

16:00 - 18:00  
ROOM: SIENA

- JIT's profitability effects of manufacturing firms listed at ISX  
D. T. Ediraras and D. Yudianta, Indonesia
- Integrating ABC and EVA system in manufacturing company  
D. T. Ediraras, S. E. Margianti, E. S. Suhendra and T. Saptariani, Indonesia
- Implementation model of world class manufacturing practices to develop small and medium Mexican size industrial enterprises  
E. Espinoza, Mexico
- Proposing a methodology for analyzing the results of production tests  
M. Pettendorfer and C. Mont'Alvão, Brazil
- A method of quantitatively appraising strategy penetration in BSC  
Y. Taguchi, M. Ota and T. Tabe, Japan
- Effectiveness of applying ergonomic concept in vacuuming activities  
B. Wong and N. Lau, Hong Kong
- Application of REBA for ergonomic evaluation of rowers  
A. Demaison and C. Mont'Alvão, Brazil

# Interactive Poster Sessions

## PLACE Roman Ballroom

All poster presentations will be displayed during the entire duration of Exhibits.  
The authors will be present to discuss their posters on July 16 from 11:30 to 13:30.

Increasing wood processing company's productivity and competitiveness by implementing healthy environment and applying ergonomics H. Kalkis, I. Rezepina, Z. Roja, V. Kalkis and A. Goldsteins, Latvia
Evaluation of the muscle tone, elasticity and stiffness in relation to fatigue among geneticists using myometric method Z. Roja, V. Kalkis, H. Kalkis, I. Roja and J. Svirks, Latvia
Safety and ergonomic problems on the clinical practice of gastrointestinal endoscopy K. Shinohara, Japan
Metrixx Vr, Ergonomic virtual laboratory A. Vega, A. Coronado and M. Montano, Brazil
Assessment and classification of cognitive decrements associated with high workload and extended work periods in a UAV setting R. M. Schmidt, G. Wilson, I. Davis and M. Funke, USA
Enhancement of cooperation between workers by using scanning displays Y. Akiyoshi, M. Nakanishi and Y. Okada, Japan
Ergonomics and function efficiency in Orthotic Design R. Hudak and J. Zivcak, Slovak Republic
Influence of standard microclimatic consequences on reliability of human factor performance in technical systems S. Maly and S. Bernatikova, Czech Republic
An investigation on user's spatial knowledge and wayfinding strategy in virtual environment – A case study of Geotag and Earcon C.-H. Chen, H.-M. Chang and C.-Y. Tsai, R.O.C.
Ergonomic health management for preventing work-related injury M.-H. Chen, Taiwan
Predicting subjective perceptions of powered tool torque reactions based on work locations J.-H. Lin and R. McGorry, USA
An evaluation of comfort afforded by hearing protection devices P. M. Arezes, C. Abelenda and A. C. Braga, Portugal
A proposal of strategies that activates employees' consciousness and motivation on human error management K. Omori, J. Nakatani and Y. Okada, Japan
Ergonomic evaluation of an alternative tool for cake decorating C. Harris, B. Chen, I. Janowitz and D. Rempel, USA
Usability of train ticket vending machines K. Yamada and F. Ryoko, Japan
The interference between visual load and stimulus-response spatial compatibility J.-L. Doong, W.-S. Huang, C.-H. Huang and C.-C. Liu, Taiwan
Alternatives to ANSI/ISO guidelines for developing graphical safety information E. Wisniewski, S. M. Hall and J. J. Isaacson, USA
Aesthetics and Product Warning Removal J. J. Isaacson, S. M. Hall and E. Wisniewski, USA

# Interactive Poster Sessions

<p><b>A novel approach of using a portable laser scanner for three-dimensional hand anthropometric measurement</b> C.-C. Chang, USA, Z. Li, China, X. Cai, China, and P. G. Dempsey, USA</p>
<p><b>Construction and validation of biomechanical stress predicting model developed with Adam LifeMOD Software for the lifting tasks</b> C.-L. Lee, S.-Z. Lou, C.-K. Ting, P.-C. Sung and Y.-J. Sun, ROC</p>
<p><b>An analysis of human error management data on organizations – Tendencies and features of organizational human error management</b> A. Yokomizo, Y. Mori and Y. Okada, Japan</p>
<p><b>Satisfaction with work placement for disabled people in Milan, Italy</b> P. Campanini, P. M. Conway, S. Finotti and G. Costa, Italy</p>
<p><b>How to design of task-related information overlaid by AR technology – Focusing on task characteristics</b> S.-I. Tamamushi, M. Nakanishi and Y. Okada, Japan</p>
<p><b>Metrics for assessing support of cognition in command and control (MASC3): Project overview and demonstration of the S-CCS microworld</b> D. Lafond, S. Tremblay, R. Rousseau and R. Breton, Canada</p>
<p><b>Team design is C2: A step towards predicting team performance as a function of team structure</b> S. Tremblay, D. Lafond, M.-E. Jobidon and R. Breton, Canada</p>
<p><b>Empirical design of auditory media in an animated digital learning system for older adults</b> D.-Y. Lin and W.-H. Hsueh, Taiwan</p>
<p><b>Effect measurement of VR training based on PSF – About training of astronaut</b> Y. Keida, D. Suzuki, H. Kirasawa, I. Takanami and Y. Okada, Japan</p>
<p><b>Changes of the actual selling and return rates by visualizing textile touch on clothing websites</b> K. Baik, Korea, K. Jeong, USA, G. Cho, Korea and G. Salvendy, USA/China</p>
<p><b>Determination of frictional speeds by arm movement and simulation of frictional sounds of fabrics</b> C. Kim, Y. Yang, J. Park, H. You, and G. Cho, South Korea</p>
<p><b>Conflict monitoring due to prolonged monotonous versus cognitively demanding task – diurnal fMRI study</b> M. Fafrowicz, K. Golonka, T. Marek, J. Mojsa-Kaja, K. Tucholska, H. Oginska, A. Urbanik and T. Orzechowski, Poland</p>
<p><b>Diurnal variability of attention disengagement process – EOG and fMRI studies</b> M. Fafrowicz, K. Golonka, T. Marek, J. Mojsa-Kaja, K. Tucholska, H. Oginska, A. Urbanik and T. Orzechowski, Poland</p>
<p><b>Relation between continuous exercise and job stress among Japanese nurses</b> Y. Kawata, M. Hirose, Y. Yamada, M. Sugiura, Y. Nishi, S. Tanaka and M. Mizuno, Japan</p>
<p><b>Research on visual characteristics of colored LED in dense fog</b> B. A. Kurniawan, M. Takamatsu, Y. Nakashima and T. Hagiwara, Japan</p>
<p><b>Evaluation of cataractous color vision characteristic for LCD</b> T. Fujita, Y. Nakashima and M. Takamatsu, Japan</p>
<p><b>An evaluation of PSF reference list for labor accidents</b> R. Temmyo and Y. Okada, Japan</p>
<p><b>A study of automatic response systems contents for traffic information in intelligent transportation systems</b> S. Chung, S. Byun and H. Moon, Korea</p>

# Interactive Poster Sessions

<p><b>Advanced brain state monitoring and operator selection for unmanned aerial system operators</b> R. A. McKinley, L. K. McIntire, R. M. Schmidt, C. Goodyear, R. Esken and T. Hancock, USA</p>
<p><b>Relationship between depersonalization symptoms and eating disorder among Japanese nurses</b> M. Sugiura, M. Hirokawa, Y. Yamada, Y. Nishi, S. Tanaka, Y. Kawata and M. Mizuno, Japan</p>
<p><b>Statistical differentiation of depression and burnout using TEMPS-A</b> Y. Yamada, M. Hirokawa, M. Sugiura, Y. Nishi, S. Tanaka, Y. Kawata and M. Mizuno, Japan</p>
<p><b>Physical exposure during mobile phone use</b> E. Gustafsson, P.W. Johnson and M. Hagberg, Sweden</p>
<p><b>Evaluation of the transfer methods based on physiological response of care receiver</b> S. Beppu and R. Fukuda, Japan</p>
<p><b>Physical risk factors for musculoskeletal complaints among cleaners</b> E. Ozcan, K. Alptekin, I. Ozcan, H. Issever, H. Taskinsoy, B. Uysal, S. Esmaeilzadeh, N. Kesiktas and E. Ozcan, Turkey</p>
<p><b>Ergonomic evaluation of dynamic display: Influences of speed, presentation mode, text-flow orientation, stage of usage, and task type on comprehension and preference for reading Chinese text on small screen</b> Y.-H. Chien, L.-C. Chen and P.-Y. Chu, Taiwan</p>
<p><b>Information presentation to decrease distraction and cognitive load for drivers</b> P. Tretten, C. J. Normark and A. Gärling, Sweden</p>
<p><b>Instrumentation layouts for increased traffic safety</b> C. J. Normark, P. Tretten, and A. Garling, Sweden</p>
<p><b>Effects of rest breaks, time pressure and duration of computer use on the intensity of work-related upper extremity musculoskeletal symptoms among Turkish computer users</b> S. Esmaeilzadeh, E. Ozcan and K. Alptekin, Turkey</p>
<p><b>Spatial training research in virtual environments</b> C. D. Blackledge, S. S. Patnaik and D. W. Carruth, USA</p>
<p><b>Research on optimum presentation method which considered elderly people – In case of LED traffic information board</b> M. Takamatsu, Y. Nakashima, T. Fujita, S.-I. Nagayama, S. Nakajima and K.-I. Mima, Japan</p>
<p><b>Research on binocular colour fusion limit – In case of retinal fovea</b> X. Qin, M. Takamatsu, Y. Nakashima and Z. Katoh, Japan</p>
<p><b>Study on brightness perception of dichromatism for light emitting diode</b> Y. Nakashima, M. Takamatsu, K. Sassa and K.-I. Mima, Japan</p>
<p><b>“HIYARI-HATTO (incident) Map”--When and where do people face with hazardous situation in natural disasters?</b> H. Shin, Japan</p>
<p><b>Applying GOMS model to identifying team training requirements of process control systems</b> F. L. Lee, S. H. Hsu and C. N. Tu, Taiwan</p>
<p><b>Natural fiber as sustainable technology and ecologic and economically right alternative in making supporting device of ramble: An experimental research</b> J. R. H. Claumann, M. R. Lupion, R. M. Pereira, M. R. Nunes and G. M. Scabello, Brazil</p>

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**3<sup>rd</sup> International Conference  
on Applied Human Factors  
and Ergonomics**

Hotel Intercontinental  
Miami, Florida USA  
July 19-22, 2010

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The background is a complex digital collage. It features a grid of glowing blue lines that create a sense of depth and movement. Overlaid on this grid are several distinct images: a tropical beach with palm trees and a sandy shore; a city skyline at night with illuminated skyscrapers; a close-up of a pink bird, possibly a roseate spoonbill; and a map of the state of Florida. The overall aesthetic is high-tech and modern, suggesting a focus on human factors and ergonomics in a digital or industrial context.