

# AHFE 2020 Conference



## **Best Papers Awards** Presentation

# AHFE 2020 BEST PAPER AWARD: Co-Authors

APPLIED HUMAN FACTORS AND ERGONOMICS 2020  
AND ITS AFFILIATED CONFERENCES

## AHFE 2020 BEST PAPER AWARD

Production Management and Process Control  
presented to

**Johannes Olbort, Heiko Herden,  
Vladimir Kutscher, Reiner Anderl**

for the paper on

*Mixed Reality for Visualization of Operating Data and  
Semantic Self-Descriptions of Machines using OPC UA*



July 16-20, 2020  
Virtual Conference, USA

Waldemar Karwowski  
General Conference Chair



Johannes Olbort\* (Technical University of Darmstadt), Heiko Herden (VDMA), Vladimir Kutscher (TU Darmstadt DiK), Reiner Anderl (Technische Universität Darmstadt)



Helen Fuller\* (Department of Veterans Affairs), Timothy Arnold (Department of Veterans Affairs), Tandi Bagian (VA National Center for Patient Safety), William Gunnar (VHA National Center for Patient Safety)

APPLIED HUMAN FACTORS AND ERGONOMICS 2020  
AND ITS AFFILIATED CONFERENCES

## AHFE 2020 BEST PAPER AWARD

Healthcare and Medical Devices  
presented to

**Helen Fuller, Timothy Arnold,  
Tandi Bagian, William Gunnar**

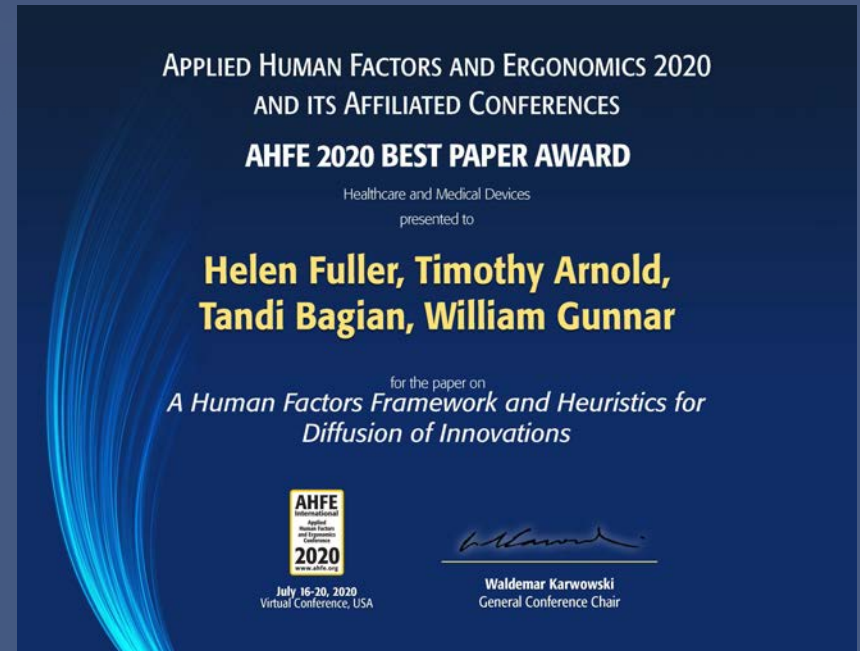
for the paper on

*A Human Factors Framework and Heuristics for  
Diffusion of Innovations*



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# AHFE 2020 BEST PAPER AWARD: Co-Authors

APPLIED HUMAN FACTORS AND ERGONOMICS 2020  
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## AHFE 2020 BEST PAPER AWARD

Additive Manufacturing, Modeling Systems and 3D Prototyping  
presented to

**Kristen McLaughlin, Allison Webb,  
Kaitlin Brätt, Daniel Saloni**

for the paper on  
*Bioplastic modified with woodflour for  
additive manufacturing*



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Kristen McLaughlin (NCSU), Allison Webb (NCSU), Kaitlin Bratt (NCSU), Daniel Saloni\* (NCSU)



Andrej Cupar\*, Jasmin Kaljun, Bojan Dolšak, Gregor Harih, (University of Maribor Maribor, Slovenia)

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## AHFE 2020 BEST PAPER AWARD

Additive Manufacturing, Modeling Systems and 3D Prototyping  
presented to

**Andrej Cupar, Jasmin Kaljun,  
Bojan Dolšak, Gregor Harih**

for the paper on  
*Design of 3D printed cellular meta-materials for  
improved tool-handle ergonomics*



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# AHFE 2020 BEST PAPER AWARD: Co-Authors

APPLIED HUMAN FACTORS AND ERGONOMICS 2020  
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## AHFE 2020 BEST PAPER AWARD

Safety Management and Human Factors  
presented to

**Fatemeh Davoudi Kakhki, Steven A. Freeman,  
Gretchen A. Mosher**

for the paper on  
*Utilization of Machine Learning in Analyzing  
Post-Incident State of Occupational Injuries in  
Agro-Manufacturing Industries*



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Henrijs Kalkis (Riga Stradins university), Zenija Roja\*  
(University of Latvia), Gunta Vaisla (University of  
Latvia), Inara Roja (Riga 1st Hospital)



Fatemeh Davoudi Kakhki\* (San Jose State  
University), Steven A. Freeman (Iowa State  
University), Gretchen A. Mosher (Iowa State  
University)

APPLIED HUMAN FACTORS AND ERGONOMICS 2020  
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## AHFE 2020 BEST PAPER AWARD

Physical Ergonomics and Human Factors  
presented to

**Henrijs Kalkis, Zenija Roja,  
Vaisla Gunta, Inara Roja**

for the paper on  
*Causes of Work Related Musculoskeletal Disorders in the  
Textile Industry*



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# AHFE 2020 BEST PAPER AWARD: Co-Authors

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## AHFE 2020 BEST PAPER AWARD

Human Factors in Robots, Drones and Unmanned Systems  
presented to

**Lynne Martin, Caterina Grossi,  
Cynthia Wolter**

for the paper on

*Obtaining public opinion about sUAS activity in an  
urban environment*



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Caterina Grossi (San Jose State University Foundation), Lynne Martin\* (NASA), Cynthia Wolter (San Jose State University Research Foundation)



Matthieu Vallat\* (HumanTech), Alessandro Silacci (HumanTech), Maurizio Caon (University of Applied Sciences and Arts Western Switzerland), Omar Abou Khaled (University of Applied Sciences and Arts of Western Switzerland), Elena Mugellini (University of Applied Sciences and Arts of Western Switzerland), Giuseppe Fedele (Technogym Research Center, Cesena, Italy)

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## AHFE 2020 BEST PAPER AWARD

Physical Ergonomics and Human Factors  
presented to

**Matthieu Vallat, Alessandro Silacci,  
Maurizio Caon, Omar Abou Khaled,  
Elena Mugellini, Giuseppe Fedele**

for the paper on

*Comparing the ergonomics of gestural interfaces  
while running on a treadmill*



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# AHFE 2020 BEST PAPER AWARD: Co-Authors

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## AHFE 2020 BEST PAPER AWARD

Digital Human Modeling and Applied Optimization  
presented to

**Peng Li, Steven Paquette**

for the paper on

*Female torso shape classification:  
Methods and Comparison*



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Peng Li\*, Steven Paquette (United States Army Natick Soldier Research, Development and Engineering Center)



Florian Maier\* (Fraunhofer IPA), Martin Ihle (United Monolithic Semiconductors GmbH), Tina Paschke (United Monolithic Semiconductors GmbH), Vlad Valea (Amorph Systems S.R.L.)

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## AHFE 2020 BEST PAPER AWARD

Production Management and Process Control  
presented to

**Florian Maier, Martin Ihle,  
Tina Paschke, Vlad Valea**

for the paper on

*Approach for a Digital Operator Support System for  
Manual Machine Setup*



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# AHFE 2020 BEST PAPER AWARD: Co-Authors

## APPLIED HUMAN FACTORS AND ERGONOMICS 2020 AND ITS AFFILIATED CONFERENCES AHFE 2020 BEST PAPER AWARD

Human Factors and Simulation  
presented to

**Lotte Van Dammen, Neil Barnett,  
Roselynn Conrady, Lucas Wright,  
Bradon Thymes, Elizabeth Shirtcliff**

for the paper on

*Evoking stress reactivity in a virtual dance competition*



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Lotte van Dammen\* (Iowa State University), Neil Barnett (Iowa State University), Roselynn Conrady (San Diego State University), Lucas Wright (Hamilton), Bradon Thymes (Howard University), Elizabeth Shirtcliff (Iowa State University)



Alyssa Milner (United States Military Academy), Dae Han Seong (United States Military Academy), Ralph Brewer\* (US Army Research Laboratory), Anthony Baker (US Army Research Laboratory), Andrea Krausman David Chhan (CCDC Army Research Laboratory), Robert Thomson (United States Military Academy), Ericka Rovira (United States Military Academy), Kristin Schaefer (US Army Research Laboratory)



## APPLIED HUMAN FACTORS AND ERGONOMICS 2020 AND ITS AFFILIATED CONFERENCES AHFE 2020 BEST PAPER AWARD

Human Factors and Simulation  
presented to

**Alyssa Milner, Dae Han Seong, Ralph Brewer,  
Anthony Baker, Andrea Krausman, David Chhan,  
Robert Thomson, Ericka Rovira, Kristin E. Schaefer**

for the paper on

*Identifying New Team Trust and Team Cohesion Metrics that  
Support Future Human-Autonomy Teams*



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# AHFE 2020 BEST PAPER AWARD: Co-Authors

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## AHFE 2020 BEST PAPER AWARD

Interdisciplinary Practice in Industrial Design  
presented to

**Susan Sokolowski,  
Chrissy Bettencourt, Jennifer Null**

for the paper on

*Investigation of 3D Functional Grip Shape to  
Design Products for Dog Walking and Hiking*



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Janice Rieger\*  
(Queensland University  
of Technology)

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## AHFE 2020 BEST PAPER AWARD

Design for Inclusion  
presented to

**Janice Rieger**

for the paper on

*Moving Beyond Visitor and Usability Studies:  
Co-designing Inclusion in Museums and Galleries*



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Susan Sokolowski\* (University of Oregon), Chrissy Bettencourt (University of Oregon), Jennifer Null (University of Oregon)



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## AHFE 2020 BEST PAPER AWARD

Human Factors in Architecture, Sustainable Urban Planning and Infrastructure  
presented to

**Jackeline Salinas, Gabriela Vega,  
Jesús Rafael Hechavarría Hernández**

for the paper on

*Green areas plan with native and/or endemic plants for  
mitigation of heat island in Letamendi Parish, Guayaquil*



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A handwritten signature in blue ink, likely belonging to Waldemar Karwowski.

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Jackeline Salinas\* (Universidad de  
Guayaquil), Gabriela Vega (Universidad de  
Guayaquil), Jesús Rafael Hechavarría Hernández  
(Universidad de Guayaquil)



Maria Luísa Costa\*  
(CIAUD – Research  
Centre of Architecture,  
Urbanism and Design)

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## AHFE 2020 BEST PAPER AWARD

Human Factors in Communication of Design  
presented to

**Maria Luísa Costa**

for the paper on

*Wayfinding Systems:  
Digital versus analogical media*



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# **Best Student Papers Awards** Presentation



# AHFE 2020 BEST PAPER AWARD: Co-Authors

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## AHFE 2020 BEST STUDENT PAPER

Healthcare and Medical Devices  
presented to

**Patrick Seitzinger, Zoher  
Rafid-Hamed, Jay Kalra**

for the paper on

*The Value of the Medical Autopsy as a  
Quality Improvement Tool in Modern Diagnostic Medicine*



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Patrick Seitzinger\* (University of Saskatchewan;  
University of British Columbia Faculty of  
Medicine), Zoher Rafid-Hamed (University of  
Saskatchewan), Jay Kalra (Royal University  
Hospital)



Craig Johnson\* (Arizona State  
University), Glenn Lematta (Arizona  
State University), Lixiao Huang (Arizona  
State University), Eric Holder (Army  
Research Laboratory), Shawaiz Bhatti  
(Arizona State University), Nancy Cooke  
(Arizona State University)



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## AHFE 2020 BEST STUDENT PAPER

Human Factors in Robots, Drones and Unmanned Systems  
presented to

**Craig Johnson, Glenn Lematta,  
Lixiao Huang, Eric Holder,  
Shawaiz Bhatti, Nancy Cooke**

for the paper on

*An Interaction Taxonomy of Human-Agent Teaming in  
Next Generation Combat Vehicle Systems*



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# AHFE 2020 BEST PAPER AWARD: Co-Authors

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## AHFE 2020 BEST STUDENT PAPER

Affective and Pleasurable Design  
presented to

**Tomofumi Sakata, Keiichi Watanuki,  
Keiichi Muramatsu, Kazunori Kaede**

for the paper on

*Chaotic Analysis of Finger Plethysmogram during  
Aroma Exposure for Examining Emotions and Examination of  
Optimal Analysis Method*



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Tomofumi Sakata\* (Saitama university), Keiichi Watanuki (Saitama University), Keiichi Muramatsu (Saitama University), Kazunori Kaede (Saitama University)



Ping Zhang\* (University of Science and Technology of China), Lizhong Yang, Siuming Lo (City University of Hong Kong), Yuxing Gao (University of Science and Technology of China), Fangshu Dong (University of Science and Technology of China)

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## AHFE 2020 BEST STUDENT PAPER

Safety Management and Human Factors  
presented to

**Ping Zhang, Lizhong Yang, Siuming Lo,  
Yuxing Gao, Fangshu Dong, Fei Peng,  
Danyan Huang, Han Cheng, Maoyu Li, Jiajia Jiang**

for the paper on

*Investigation of Human Psychology and Behaviors  
in the Emergency of Subway*



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**AHFE 2020 BEST STUDENT PAPER**

Digital Human Modeling and Applied Optimization  
presented to

**Maja Mahnic Naglic, Slavenka Petrak**

for the paper on

*Analysis of surface segments deviations between  
different female body types based on 3D flattening method*



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Maja Mahnic Naglic\* (University of  
Zagreb), Slavenka Petrak (University of Zagreb)



Carmen Bruno\* (Politecnico di Milano), Marita  
Canina (Politecnico di Milano)

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**AHFE 2020 BEST STUDENT PAPER**

Creativity, Innovation and Entrepreneurship  
presented to

**Carmen Bruno, Marita Canina**

for the paper on

*Developing a Method for Understanding How to  
Empower Creativity through Digital Technologies:  
The Case of AI*



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**AHFE 2020 BEST STUDENT PAPER**

Affective and Pleasurable Design  
presented to

**Han Wang, Rongrong Fu**

for the paper on

*Exploring User Experience of Music Social Mode -  
Take NetEase Cloud Music as an Example*



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Han Wang\* (School of Art Design and Media, East China University of Science and Technology), Rongrong Fu (East China University of Science and Technology)



Siqi Wang\* (East China University of Science and Technology), Rongrong Fu (East China University of Science and Technology)

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**AHFE 2020 BEST STUDENT PAPER**

Human Factors in Communication of Design  
presented to

**Siqi Wang, Rongrong Fu**

for the paper on

*Research on the Influencing Factors of the  
Communication Effect of Tik Tok Intangible  
Cultural Heritage Short Videos*



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APPLIED HUMAN FACTORS AND ERGONOMICS 2020  
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## AHFE 2020 BEST STUDENT PAPER

Human Factors in Architecture, Sustainable Urban Planning and Infrastructure  
presented to

**Gilson Arreaga, Gabriela Vega,  
Jesús Rafael Hechavarría Hernández**

for the paper on

*Proposal for a master plan of green area in the  
second step of the El Recreo citadel,  
Canton Duran, Ecuador*



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Gilson Arreaga\* (Universidad de  
Guayaquil), Gabriela Vega (Universidad de  
Guayaquil), Jesús Rafael Hechavarría Hernández  
(Universidad de Guayaquil)



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# CONGRATULATIONS