



2024 AHFE International

AHFE International Conference on
Human Factors in Design, Engineering, and
Computing (AHFE Hawaii Edition)

Final Program

December 8-10, 2024

Hilton Hawaiian Village,
Honolulu, Hawaii, USA



WWW.HAWAII.AHFE.ORG

Conference Reception

SUNDAY, DECEMBER 8, 2024
17:00-20:00 (HST)

PAINA WAIKIKI LUAU
WAIKIKI BEACH MARRIOTT RESORT & SPA
(LEVEL 1 - OCEAN FRONT TERRACE)
2552 KALĀKAUA AVE
HONOLULU, HAWAII 96815

(REGISTERED PARTICIPANTS ONLY - DRESS: HAWAIIAN-STYLE, PHOTO ID REQUIRED)

Conference Organization

CONFERENCE TRACKS	ACRONYM
Application of Emerging Technologies	AET
Artificial Intelligence and Social Computing	AISC
Applications of Technologies in Healthcare and Medicine	ATHM
Augmented, Virtual and Mixed Reality Simulation	AVM
Computation and Intelligent Design	CID
Creativity, Innovation and Entrepreneurship	CIE
Emerging Technologies and Business Applications	ETBA
Human-Centered Design	HCD
Human-Computer Interaction	HCI
Human Factors and Simulation	HFSIM
Human-Technology and Future of Work	HTFW
Physical Ergonomics & Human Factors	PEHF
Human Factors in Sports, Injury Prevention and Outdoor Recreation	SIPOR
Safety Management and Human Factors	SM
Training and Learning Sciences	TLS
Human Factors in Transportation	TRAN
Usability and User Experience	UUE

CONFERENCE ADDRESS
Hilton Hawaiian Village
Waikiki Beach Resort
2005 Kālia Rd.
Honolulu, Hawaii 96815

CONFERENCE ADMINISTRATOR
admin@hawaii.ahfe.org

Conference at a Glance

Conference program schedule is listed in Hawaii Standard Time (HST) - Honolulu Timezone

Access to the Conference Scientific and Technical Program will be available through the AHFE Submission System


#	SESSION TITLE	TRACK	ROOM
MONDAY DECEMBER 9, 2024 - SESSION TIME: 8:30-9:30 (HST)			
Opening Session & Plenary Speech		ALL	Honolulu Suite
REFRESHMENTS: 9:30-10:00 (HST) • LOCATION: FOYER			
MONDAY DECEMBER 9, 2024 - SESSION TIME: 10:00-11:30 (HST)			
1	Applications of Technologies in Healthcare and Cognitive Assessment I	ATHM	AHFE 1: Iolani Suite I
2	Transportation: Comfort and Safety I	TRAN	AHFE 2: Iolani Suite II
3	Augmented, Virtual and Mixed Reality Simulation I	AVM	AHFE 3: Iolani Suite III
4	Ergonomic Evaluation and Biomechanical Modeling	PEHF	AHFE 4: Iolani Suite IV
5	Artificial Intelligence and Social Computing I	AISC	AHFE 5: Iolani Suite V
6	Human Robot/Machine Interaction and Collaboration I	HCI	AHFE 6: Iolani Suite VI
7	SIG: Human Factors in Naval Aviation: The Intersection of Automation, Training, and Operations	HFSIM	AHFE 7: Iolani Suite VII
REFRESHMENTS: 11:30-12:00 (HST) • LOCATION: FOYER			
MONDAY DECEMBER 9, 2024 - SESSION TIME: 12:00-13:00 (HST)			
8	Applications of Technologies in Healthcare and Cognitive Assessment II	ATHM	AHFE 1: Iolani Suite I
9	Human Robot/Machine Interaction and Collaboration II	HCI	AHFE 2: Iolani Suite II
10	Artificial Intelligence and Social Computing II	AISC	AHFE 3: Iolani Suite III
11	Augmented, Virtual and Mixed Reality Simulation II	AVM	AHFE 4: Iolani Suite IV
12	Cybersecurity and Trust in AI	AISC	AHFE 5: Iolani Suite V
13	Emerging Technologies and Business Applications I	AET	AHFE 6: Iolani Suite VI
14	Workshop: Design Maturity Frameworks and Enjoyable Design Processes	HCD	AHFE 7: Iolani Suite VII
MONDAY DECEMBER 9, 2024 - SESSION TIME: 13:00-14:00 (HST)			
15	Applications in Healthcare for the Elderly and Special Population	ATHM	AHFE 1: Iolani Suite I
16	Artificial Intelligence and Social Computing III	AISC	AHFE 2: Iolani Suite II
17	Augmented, Virtual and Mixed Reality Simulation III	AVM	AHFE 3: Iolani Suite III
18	User Experience Design and Usability Evaluation I	HCI	AHFE 4: Iolani Suite IV
19	Human-Centered Design and Human-Computer Interaction I	HCD	AHFE 5: Iolani Suite V
20	Emerging Technologies and Business Applications II	ETBA	AHFE 6: Iolani Suite VI
21	Sustainable Technologies and Business Applications	ETBA	AHFE 7: Iolani Suite VII

Conference at a Glance

Conference program schedule is listed in Hawaii Standard Time (HST) - Honolulu Timezone

Access to the Conference Scientific and Technical Program will be available through the AHFE Submission System

#	SESSION TITLE	TRACK	ROOM
TUESDAY, DECEMBER 10, 2024 - SESSION TIME: 8:30-9:30 (HST)			
22	Human-Technology and Future of Work I	HTFW	AHFE 1: Iolani Suite I
23	Transportation: Comfort and Safety II	TRAN	AHFE 2: Iolani Suite II
24	User Experience Design and Usability Evaluation II	HCI	AHFE 3: Iolani Suite III
25	Computation and Intelligent Design	CID	AHFE 4: Iolani Suite IV
26	Education and Training	TLS	AHFE 5: Iolani Suite V
27	Human-Centered Design and Design for Inclusion I	HCD	AHFE 6: Iolani Suite VI
REFRESHMENTS: 9:30-10:00 (HST) • LOCATION: FOYER			
TUESDAY, DECEMBER 10, 2024 - SESSION TIME: 10:00-11:30 (HST)			
29	Human-Centered Design and Human-Computer Interaction II	HCD	AHFE 1: Iolani Suite I
30	Creativity, Innovation and Entrepreneurship	CIE	AHFE 2: Iolani Suite II
31	Human-Technology and Future of Work II	HTFW	AHFE 3: Iolani Suite III
32	User Experience Design and Usability Evaluation III	HCI	AHFE 4: Iolani Suite IV
33	Applications in Learning Sciences and Education I	TLS	AHFE 5: Iolani Suite V
34	Human-Centered Design and Design for Inclusion II	HCD	AHFE 6: Iolani Suite VI
REFRESHMENTS: 11:30-12:00 (HST) • LOCATION: FOYER			
TUESDAY, DECEMBER 10, 2024 - SESSION TIME: 12:00-13:00 (HST)			
36	Applications in Learning Sciences and Education II	TLS	AHFE 1: Iolani Suite I
37	Application of Emerging Technologies	AET	AHFE 2: Iolani Suite II
38	User Experience Design and Usability Evaluation IV	UUE	AHFE 3: Iolani Suite III
39	Transportation: Autonomous and Automated Vehicles	TRAN	AHFE 4: Iolani Suite IV
40	Methodological Offers of Innovative Agonology	SIPOR	AHFE 5: Iolani Suite V
41	Human-Centered Design and Human-Computer Interaction III	HCD	AHFE 6: Iolani Suite VI
TUESDAY, DECEMBER 10, 2024 - SESSION TIME: 13:00-14:00 (HST)			
43	Transportation: Aviation and Driver Engagement	TRAN	AHFE 1: Iolani Suite I
44	Applications of Technologies in Healthcare and Cognitive Assessment III	ATHM	AHFE 2: Iolani Suite II
45	Safety Management and Human Performance	SM	AHFE 3: Iolani Suite III
46	Augmented, Virtual and Mixed Reality Simulation IV	AVM	AHFE 4: Iolani Suite IV
47	Human-Centered Design and Design for Inclusion III	HCD	AHFE 5: Iolani Suite V
48	Trend of Human Error Incidents Analysis Used by AI	HCD	AHFE 6: Iolani Suite VI

	Opening Session & Plenary Speech	ALL
8:30-9:30	<p>Plenary Speech Title: "From Battlefield to Boardroom: AI Innovations Shaping the Future of Human-Centric Systems"</p> <p>Speaker: Dylan Schmorow, Ph.D Accelint, USA</p>	
REFRESHMENTS: 9:30-10:00 • LOCATION: FOYER		
1	Applications of Technologies in Healthcare and Cognitive Assessment I Co-Chairs: Nichole Morris and Robert Myers, USA	ATHM
10:00-11:30 (HST) AHFE 1: IOLANI SUITE I	<p>Patient gender treatment gaps in tactical combat casualty care of gunshot wounds mitigated by training experience Nichole Morris, Curtis Craig, Bradley Drahos, Katelyn Schwieters, Mark Mazzeo, USA</p> <p>Integrating machine learning with resilience models to assist hospital resilience improvement Sheuwen Chuang, Kuei-miao Kuo, Jyun-wei Jhang, Jui-chi Lin, Taiwan</p> <p>Nurses' work with interruptions: cognitive loading and stress Robert Myers, USA</p> <p>Orange-sweet scent reduces stress associated with numerical tasks: A physiological and psychological evaluation Ayaka Yamada, Asako Noma, Takashi Sakamoto, Toshikazu Kato, Japan</p> <p>Improving quality of care through tailored medical education in a pathology residency program Avani Saxena, Bryan Johnston, Jay Kalra, Canada</p> <p>Exploring hand dexterity in spoon handling: impact of handle cross-section on dynamic tripod grip Yu-chen Huang, Johan Chang, Taiwan</p>	
2	Transportation: Comfort and Safety I Co-Chairs: Michael Baldauf, Germany and Hongyue Wu, USA	TRAN
10:00-11:30 (HST) AHFE 2: IOLANI SUITE II	<p>Exploring driving style variations when driving in work zone: A driving simulation study Ze Wang, Hongyue Wu, Yunfeng Chen, Jiansong Zhang, James L Jenkins, USA</p> <p>VTS, ROC and the OOW - Three perspectives one goal: collision avoidance Michael Baldauf, Daniel Rostek, Germany</p> <p>Application of emerging technologies in electric vertical take-off and landing CBTA training Dimitrios Ziakkas, Debra Henneberry, USA</p> <p>Analyzing the factors influencing scooter usage and safety among young riders in Taiwan Huang Fei-Hui, Taiwan</p>	
3	Augmented, Virtual and Mixed Reality Simulation I Co-Chairs: Ruilin Huang, China and Kangwon Seo, USA	AVM
10:00-11:30 (HST) AHFE 3: IOLANI SUITE III	<p>Investigating effectiveness of distraction rate: augmented reality-based eye-tracking feature to predict student formative and summative performance Kangwon Seo, Sara Mostowfi, Jung Hyup Kim, Fang Wang, Danielle Oprean, Yi Wang, USA</p> <p>Comparing the efficacy of virtual reality training, augmented reality instruction and traditional paper-based instruction methods for assembly tasks Md Abdullah, Vibhav Nirmal, Mahmudur Rahman, USA</p> <p>Simulator sickness and performance in AR vs VR: A comparative analysis applied to additive manufacturing Tazim Ahmed, Jose Lopez, Soptorshi Rai, Yiran Yang, Mahmudur Rahman, USA</p> <p>The wide area virtual environment - experience in using a novel immersive environment for medical team training Alan Liu, USA</p> <p>Light-Tracing: A novel approach for mixed-reality (MR) content creation Ruilin Huang, Yining Ge, Lu Chen, Chi Ma, Cong Fang, Le Fang, Xingtong Chen, Yangfan Cong, Stephen Jia Wang, China</p>	

4	Ergonomic Evaluation and Biomechanical Modeling Co-Chairs: Christy Manning and Yunfeng Chen, USA	PEHF
10:00-11:30 (HST) AHFE 4: IOLANI SUITE IV	<p>The influence of gender/sex on work-related musculoskeletal disorders: A systematic review and meta-analysis Christy Manning, Duha Ali, Shivani Nagrecha, USA</p> <p>Video-based ergonomic risk assessment among transportation maintenance workers in shoveling Xinran Hu, Xingzhou Guo, Yunfeng Chen, Jiansong Zhang, USA</p> <p>Advancing vision-based adaptive gripping technology with machine learning: Leveraging pre-trained models for enhanced object classification Diptesh Kumar Mandal, Kazunori Kaede, Keiichi Watanuki, India</p> <p>Biomechanical modeling of subjective fatigue during high-frequency repetitive manual-handling tasks Akisue Kuramoto, Masaya Noguchi, Motomu Nakashima, Japan</p> <p>Technological and engineering solutions to prevention and reduction of hand arm vibration syndrome in the construction industry Suma Mwaitenda, Innocent Musonda, South Africa</p>	
5	Artificial Intelligence and Social Computing I Co-Chairs: Mark Miller and David Kaber, USA	AISC
10:00-11:30 (HST) AHFE 5: IOLANI SUITE V	<p>The evolution of AI on the commercial flight deck; determining pilot trust of AI to move forward with safer and efficient AI design in the future Mark Miller, Sam Holley, Leila Halawi, USA</p> <p>Implementing an AI fatigue risk management system for aviation maintenance SMS: A technology enhanced critical process human factors safety plan Mark Miller, Bettina Mrusek, Jeff Herbic, Sam Holley, Leila Halawi, USA</p> <p>Deep learning forecast of perceptual load using fNIRS data Nicolas Grimaldi, David Kaber, Ryan McKendrick, Yunmei Liu, USA</p> <p>Artificial intelligence in the function of improving port systems Alen Jugović, Tanja Poletan Jugović, Renato Oblak, Dražen Žgaljić, Croatia</p> <p>Formalizing trust in artificial intelligence for built environment decision-making Amir Behzadan, USA</p> <p>Artificial intelligence and design: Innovation, practical applications, and future creative horizons Salvatore Di Dio, Benedetto Inzerillo, Francesco Monterosso, Samuele Morvillo, Dario Russo, Italy</p> <p>Supporting informal sustainability learning with AI-assisted educational technology Qiming Sun, Sharon Hsiao, USA</p>	
6	Human Robot/Machine Interaction and Collaboration I Co-Chairs: Stephen Jia Wang, Hong Kong SAR China and Hokey Min, USA	HCI
10:00-11:30 (HST) AHFE 6: Iolani Suite VI	<p>Leveraging service robots for enhancing the service quality: Emerging trends and future outlooks Hokey Min, USA</p> <p>Assembly Complexity Index (ACI): A framework to evaluate assembly process for validating a modular robotic design Kartikeya Walia, Philip Breedon, UK</p> <p>Designing a human-robot collaborative system to reduce work fatigue in redistributing dockless sharing bikes Yueru Chen, Yun Lam Daniel Lo, Xinghan Xiao, Weinan Li, Luolin Zhang, Fang Le, Fang Cong, Stephen Jia Wang, Hong Kong SAR China</p> <p>From underwater to air, interaction modalities and their effectiveness in different domains Stephanie Hochgeschurz, Cosima Uechtritz, Thomas E. F. Witte, Germany</p> <p>Evaluation of feedback in manual assembly assistance systems Mariannys Rodriguez Gasca, Diego Queiroz, Isabel Giannecchini, Sanderson Cesar Macedo Barbalho, Antonia Markus, Brazil</p>	

<p>7</p>	<p>SIG: Human Factors in Naval Aviation: The Intersection of Automation, Training, and Operations Co-Chairs: Beth Atkinson and Emily Gisick, USA</p>	<p>HFSIM</p>
<p>10:00-11:30 (HST) AHFE 7: IOLANI SUITE VII</p>	<p>Identifying AI technologies for training & operations Sarah Beadle, USA</p> <p>AI considerations to improve human factors analysis Beth Atkinson, USA</p> <p>Future considerations in applying AI to tactics training John Killilea, USA</p> <p>Leveraging AI for instructorless training Emily Gisick, USA</p>	
<p>REFRESHMENTS: 11:30-12:00 (HST) • LOCATION: FOYER</p>		
<p>8</p>	<p>Applications of Technologies in Healthcare and Cognitive Assessment II Co-Chairs: Aleksandar Pavic, UK and Matthias Berking, Germany</p>	<p>ATHM</p>
<p>12:00-13:00 (HST) AHFE 1: IOLANI SUITE I</p>	<p>Investigating the impact of vertical floor vibration on cognitive performance Aleksandar Pavic, Ahmed Mohammed, Ian Walker, Alessandro Margnelli, Iason Pelekis, UK</p> <p>Analysis of pre-flight and monitoring tasks using cognitive performance modeling Chihab Nadri, Yunmei Liu, Maryam Zahabi, David Kaber, Jaime Ruiz, Michael Middleton, Ryan McKendrick, USA</p> <p>Optimizing speech elicitation tasks for machine learning-based depression assessment Jonathan Bauer, Maurice Gerczuk, Bjoern Schuller, Matthias Berking, Germany</p> <p>Basic psychological needs related to information ergonomics and loneliness Reetta Oksa, Mia Laine, Edward White, Jussi Okkonen, Finland</p> <p>Cognitive cost assessment in aeronautical tasks: New objective and sensitive method Marianne Jarry, Jean-christophe Hurault, Gregory Froger, Anne-lise Marchand, Colin Blättler, France</p> <p>A digital human model for symptom progression of vestibular motion sickness based on subjective vertical conflict theory Shota Inoue, Hailong Liu, Takahiro Wada, Japan</p>	
<p>9</p>	<p>Human Robot/Machine Interaction and Collaboration II Co-Chairs: Saumil Patel and Denise Simmons, USA</p>	<p>HCI</p>
<p>12:00-13:00 (HST) AHFE 2: IOLANI SUITE II</p>	<p>Reimagining human-robot interactions: Theoretical frameworks and holistic approaches to future work dynamics Denise Simmons, Olusola Adesope, USA</p> <p>Enhancing emergency response: A reliability analysis of human-robot collaboration Daigo Misaki, Kazuma Shirakawa, Japan</p> <p>Comparative user feedback on the efficacy of a back-support exoskeleton in industrial settings Fateme Davoudi Kakhki, Armin Moghadam, USA</p> <p>Testing a motion matching algorithm for gaze-based HMI Cosima Uechtritz, Thomas E. F. Witte, Verena Rist, Torsten Gfesser, Germany</p> <p>Strategic enhancement of C-UAS through advanced human-computer collaborative command and control mechanism Yinan Zhao, Zhanxun Dong, Gang Liu, Xiaozhang Dong, Suiping Hu, China</p> <p>Human interaction with autonomous delivery robots: Navigating the intersection of psychological acceptance and societal integration Saumil Patel, USA</p> <p>Human-AI team classification Kara Orvis, Alexxa Bessey, Adam Fouse, Svitlana Volkova, USA</p>	

10	Artificial Intelligence and Social Computing II Co-Chairs: Serge Chaumette, France and Antonia Markus, Germany	AISC
12:00-13:00 (HST) AHFE 3: IOLANI SUITE III	<p>An assessment of the maintenance of heritage buildings using AI and IoT: A South African perspective Katlane Seema, Clinton Aigbavboa, Ogunbayo Babatunde, South Africa</p> <p>What if we could entangle drones? Towards the management of a swarm of drones as a non-local quantum object Serge Chaumette, France</p> <p>Engaging all elderly residents in community renewal: Designer spotlight interview tool for LLM building Ruchen Hu, Zihui Chen, Mengshi Yang, Qiong Wu, China</p> <p>Investigating the impact of confidence scores in AI-based decision support systems on decision quality and reliance in work contexts Antonia Markus, Lea Marleen Daling, Esther Borowski, Ingrid Isenhardt, Germany</p> <p>Integrating deep learning and tree-search algorithms for autonomous emergency management in nuclear power plants Yoojoon Seoung, Junyong Bae, Seung jun Lee, South Korea</p> <p>AI Play in higher education: Students' perceptions of play and co-creation of knowledge with generative AI Marjaana Kangas, Katriina Heljakka, Finland</p> <p>Optimizing AI involvement in engineering university courses based on students' personality Stefano Filippi, Italy</p>	
11	Augmented, Virtual and Mixed Reality Simulation II Chair: Jeffrey Kim, USA	AVM
12:00-13:00 (HST) AHFE 4: IOLANI SUITE IV	<p>Enhancing construction industry training through augmented reality: A study of student inspectors Jeffrey Kim, Darren Olsen, USA</p> <p>Creating a more inclusive augmented reality enabled touristic experience in outdoor contexts Rita Fernandes, Nina Costa, Teresa Galvão, Antonio Coelho, Portugal</p> <p>CreteAR: Enhancing learning experiences through tangible transformable artifacts and extended reality Antonios Tosios, Asterios Leonidis, Maria Korozi, Nikolaos Menelaos Stivaktakis, Emannouil Apostolakis, Michalis Roulis, Spiros Paparoulis, Emmanouil Stamatakis, Constantine Stephanidis, Greece</p> <p>Enhancing motorcycle safety through augmented reality: Design and development of a smart helmet prototype Georgios Gerentes, Asterios Leonidis, Nikolaos Menelaos Stivaktakis, Maria Korozi, Constantine Stephanidis, Greece</p> <p>Design of human machine interface for truck platooning using driving simulator Toshiyuki Sugimachi, Japan</p>	
12	Cybersecurity and Trust in AI Co-Chairs: Asmaa Aljohani, Saudi Arabia and Kyra Wisniewski, USA	AISC
12:00-13:00 (HST) AHFE 5: IOLANI SUITE V	<p>Emerging threat of deepfakes: Viability, risks, impacts and mitigations through a practical use case Levente Nyusti, John Eidar Simensen, Norway</p> <p>Threat analysis for autonomous vehicle systems Markus Sihvonen, Reijo Savola, Finland</p> <p>Trust us: A simple model for understanding appropriate trust in AI Kyra Wisniewski, Christina Ting, Laura Matzen, USA</p> <p>Examining the role memory plays in cyber defence evaluation: Risk and uncertainty demystified Asmaa Aljohani, James Jones, Saudi Arabia/USA</p> <p>Human-centric security engineering: Towards a research agenda Rick van der Kleij, Dianne Van Hemert, Thomas Rooijackers, Bert Jan Te Paske, Netherlands</p>	

13	Emerging Technologies and Business Applications I Co-Chairs: Panadda Marayong and Sourya Dey, USA	AET
12:00-13:00 (HST) AHFE 6: IOLANI SUITE VI	<p>Development of Android-based messaging application for onboard communication for UAM simulation Justin Cheung, Maegan Schmitz, Thomas Strybel, Panadda Marayong, Vernol Battiste, Stacey Ahuja, Kim-Phuong L. Vu, Praveen Shankar, USA</p> <p>Analyzing Large Language Model Behavior via Embedding Analysis Sourya Dey, Michael Robinson, Shauna Sweet, Andrew Lauziere, Jonathan Daugherty, Caitlin Burgess, USA</p> <p>Decision-making with responsible use of artificial intelligence: A stakeholder perspective Hind Benbya, Australia</p> <p>Identification of commuter and visitor mobility patterns using origin-destination data for mobility-service design Yusuke Nakazato, Masato Takanokura, Japan</p> <p>To work with cyber-physical systems - insights from a case study on autonomous haulage systems in open-pit mining Erik Lund, Sweden</p> <p>A hybrid regression method for predicting housing prices Gaurab Baral, Junxiu Zhou, USA</p> <p>Enhancing flip-chip packaging with copper paste: Performance evaluation Ran Liu, Zheng Zhang, Masahiko Nishijima, Chuantong Chen, Hirokatsu Sakamoto, Akihiko Happoya, Katsuaki Suganuma, Japan</p>	
14	Workshop: Design Maturity Frameworks and Enjoyable Design Processes Co-Chairs: Nandhini Giri and Erik Stolterman, USA	HCD
12:00-13:00 (HST) AHFE 7: IOLANI SUITE VII	<p>Design maturity frameworks and enjoyable design processes Nandhini Giri and Erik Stolterman, USA</p>	
15	Applications in Healthcare for the Elderly and Special Population Co-Chairs: Bahar Khayamian Esfahani, UK and Jendrik Bulk, Germany	ATHM
13:00-14:00 (HST) AHFE 1: IOLANI SUITE I	<p>Smart packaging: Overcoming barriers to medication adherence for older adults Bahar Khayamian Esfahani, Jelena Milisavljevic-Syed, Kalok C. Lee, UK</p> <p>User trust in a depression screening app when outcomes are labelled as either AI-generated or doctor-generated: A pilot study Yeganeh Shahsavari, Avishek Choudhury, USA</p> <p>Social empathetic cognitive robotics for autism (SECRA): A preliminary study Tindara Capri, Giulia Picciotto, Italy</p> <p>Preferences of elderly people in Western Taiwan towards smart sportswear Ying-Chia Huang, Taiwan</p> <p>Development of a training simulator and testing environment for electric wheelchair controls Jendrik Bulk, Benjamin Tannert, Germany</p> <p>Segmentation of augmented reality 3D meshes to discover in home safe walking spaces for older adults Aaron Crandall, USA</p>	

16	Artificial Intelligence and Social Computing III Co-Chairs: Alana Nagy and Hassan Davani, USA	AISC
13:00-14:00 (HST) AHFE 2: IOLANI SUITE II	<p>Predictive model for partner agencies dependency on food banks Henry Ivuawuogu, Steven Jiang, Lauren Davis, Mikaya Hamilton, USA</p> <p>Investigating common factors needed for consumers to trust AI\ML Alana Nagy, Bruce Nagy, Scot Miller, USA</p> <p>Intelligent flood detection to assist homeless communities residing along river margins Hassan Davani, USA</p> <p>Semantic difference method for artificial intelligence assisted cruise ship cabin design Yuwen Fang, Yitong Qiu, Anthony Kong, Gang Liu, China</p> <p>Voice function operation in hospital intelligent registration systems Xuanhui Yan, Xin Hu, China</p> <p>Exploring the impact of artificial intelligence generated content (AIGC) on game design and user experience Yi Jing Wang, Xin Hu, China</p>	
17	Augmented, Virtual and Mixed Reality Simulation III Co-Chairs: Aijun Wang, China and Jussi Okkonen, Finland	AVM
13:00-14:00 (HST) AHFE 3: IOLANI SUITE III	<p>Technology relationship, algorithmic thinking and task performance with UxV Jussi Okkonen, Mia Laine, Christian Andersson, Finland</p> <p>Enhancing user satisfaction and accessibility in VR: A comparative analysis of different user interfaces Faith Sowell, Daniel Rodarte, Yiran Yang, Shuchisnigdha Deb, USA</p> <p>Reflections and insights on haptics' influence on human factors within virtual environments Sara Buonocore, Francesca Massa, Lisa Guadagno, Giuseppe Di Gironimo, Italy</p> <p>Design of fire escape system for children based on VR technology Aijun Wang, China</p> <p>Virtual experiential design in the context of intangible cultural heritage: A case study of filigree VR design Yue Gu, Jintao Liu, Yuxuan Li, China</p> <p>User experience of virtual reality in healthcare clinical training Lizhu Zhang, Cecilia Xi Wang, USA</p>	
18	User Experience Design and Usability Evaluation I Co-Chairs: Chen Jinghong, China and Vivian Li, USA	HCI
13:00-14:00 (HST) AHFE 4: IOLANI SUITE IV	<p>Optimizing UX design to enhance user confidence in digital products Vivian Li, Peiyi Sun, Yihyun Lim, USA</p> <p>Human language-instructed robotic excavation based on behavior trees Zirui Hong, Hubo Cai, USA</p> <p>The impact of digital device configuration on elementary students' experience of writing traditional Chinese characters: A preliminary study Tzu-hsin Kao, Johan Chang, Taiwan</p> <p>Elementary students' reflection tool, content suggestions, and discussion Yi Hsuan Tsai, Johan Chang, Taiwan</p> <p>Applying UX principles to innovate citizen science platform development: An integrative approach Manuel Gertrudix Barrio, Alejandro Carbonell-Alcocer, Juan Romero-luis, Alberto Sanchez-Acedo, Begoña Rivas-Rebaque, Spain</p> <p>Mobile phone accessibility solution for people with upper limb dysfunction Chen Jinghong, Xin Hu, China</p>	

19	Human-Centered Design and Human-Computer Interaction I Co-Chairs: Alexander Kreis, Austria and Siva Mathiyazhagan, USA	HCD
13:00-14:00 (HST) AHFE 5: IOLANI SUITE V	<p>Harmonizing user-centered design and operational efficiency in battery electric vehicles: Navigating the electric dilemma for sustainable mobility Alexander Kreis, Mario Hirz, Christoph Stocker, Austria</p> <p>Digital healing: co-designing with youth for digital creative arts space for community mental wellbeing Siva Mathiyazhagan, Andrea Ngan, Eileen Feng, Avani Alvarez, Sharath Chandra Guntuku, Seul Ki Choi, Manvi Kaul, Sebin Lee, USA</p> <p>Human-centred design in AI era: Inclusive AI assistance for visually impaired persons in recycling practice Kin Wai Michael Siu, Xinzhe Zhao, Jiayi Zou, Yijia Jiang, Maoen He, Keren Zhang, Qian Jiang, Jiaman Li, Hong Kong SAR China</p> <p>A Lexical Analysis of online reviews on human-AI interactions Parisa Arbab, Xiaowen Fang, USA</p> <p>Multi-dimensional nature of human-centered design: An autoethnographic analysis of the Seiko Bell-Matic Wristwatch using information-theoretic methodologies Lance Chong, Canada</p> <p>On the practical utility and practical path of fashion model emotional memory method in performance Jianhong Wu, Xiaomei Chen, China</p> <p>Unconscious design method of Haipai cultural tourism souvenirs based on extensional narrative theory Ye Junnan, Saiya Wang, Yue Wu, China</p>	
20	Emerging Technologies and Business Applications II Co-Chairs: Lisa Steinhauser, UK and Jiejun Dai, China	ETBA
13:00-14:00 (HST) AHFE 6: IOLANI SUITE VI	<p>How wearable technologies enhance the implementation of peer support programs in aviation training Debra Henneberry, Dimitrios Ziakkas, Stephanie Brown, USA</p> <p>Developing building information relational database (BIRD) as a knowledge-management system prototype for general contractors Di Liu, Preston Robinson, Adrienne Freeman, Rui Liu, USA</p> <p>Research progress, hotspots, and trends analysis of sustainable landscape design based on bibliometrics Jiejun Dai, Cheng Qian, Mengrun He, Suwen Liu, China</p> <p>Exploring the digital inheritance and commercialization strategies of Chinese Han embroidery from the perspective of generative art Yang Fangchao, Bao Qian, Ding Yifan, China</p> <p>Sustainable business model design for generative AI Cuiping Zhai, Xin Hu, China</p> <p>From gap to gain: Advancing gender equity in venture capital investing Daniel Rukare, Lisa Steinhauser, UK</p>	
21	Sustainable Technologies and Business Applications Co-Chairs: Rui Liu, China and Anuoluwapo Kolade, South Africa	ETBA
13:00-14:00 (HST) AHFE 7: IOLANI SUITE VII	<p>Disability management and sustainable return to work practices in small and medium enterprises Iuliana Nastasia, Romain Rives, Canada</p> <p>Drivers influencing the adoption of innovative building materials (IBM) for sustainable construction in Nigeria Modupe Cecilia Mewomo, K. Francis Bondinuba, Emmanuel Aboagye-Nimo, Yewande Sonayon Abraham, South Africa/Ghana/UK/USA</p> <p>Application of architectural appearance design process in front area of fossil fuel power plants based on AIGC collaboration Mengying Tang, Jie Jiang, Chen Xi, China</p> <p>An evaluation of capabilities, benefits, and challenges of developing digital twin models for sustainable development Congjun Jin, Rui Liu, USA</p> <p>Feasibility and properties of cement boards with waste tyre textile fibre for non-structural applications Anuoluwapo Kolade, Ismael Aina, Bamidele Dahunsi, Bolanle Ikotun, Damilola Oyejobi, South Africa</p> <p>Enhancing the structural properties of mortar with treated rubber crumb Abiodun Kilani, Bolanle Ikotun, Rasheed Abdulwahab, Nigeria</p>	

<p>22</p>	<p>Human-Technology and Future of Work I Co-Chairs: Mia Laine, Finland and Armin Moghadam, USA</p>	<p>HTFW</p>
<p>8:30-9:30 (HST) AHFE 1: IOLANI SUITE I</p>	<p>Self-efficacy and self-regulation variation in different modes of work Jussi Okkonen, Reetta Oksa, Edward White, Mia Laine, Finland</p> <p>Automated method for quantitative measurement of underground construction sites using iPhone LiDAR Point Cloud Data Tsukasa Mizutani, Shunsuke Iwai, Japan</p> <p>Enhancing wafer detection in semiconductor manufacturing through synthetic data and YOLOv9: a human-centered approach to quality assurance Armin Moghadam, Ramon Sanchez, Aadit Kapoor, USA</p> <p>Frugal innovation - how to leverage the power of SME collaboration Liza Wohlfart, Germany</p> <p>Facilitating technology diffusion: Unveiling the dynamics of emerging technologies on construction project sites Samuel Adekunle, Beauty John, Andrew Ebekoziem, Clinton Aigbavboa, South Africa</p> <p>Design and testing of a drone pilot training system using mixed reality Antoni Kopyt, Poland</p> <p>Towards holistic work system design: Concept for a method to analyze, represent and evaluate industrial, sociotechnical work systems Roland Hall, Simon Schumacher, Thomas Bauernhansl, Germany</p>	
<p>23</p>	<p>Transportation: Comfort and Safety II Co-Chairs: Vijaya Gopu and Jangwoon Park, USA</p>	<p>TRAN</p>
<p>8:30-9:30 (HST) AHFE 2: IOLANI SUITE II</p>	<p>Measurements of preferred heated seat temperatures for providing thermal comfort for drivers Jangwoon Park, Hongwei Hsiao, Hoang Wong, Baekhee Lee, Kang Yen Lee, Joo Hwan Son, USA</p> <p>Data acquisition and processing for the optimization of an algorithm for vehicle safety objective rating metrics and injury severity prediction Katelyn Williams, USA</p> <p>Exploring the influence of transportation equity factors on pedestrian crashes in Louisiana Milhan Moomen, Julius Codjoe, Vijaya Gopu, USA</p> <p>Expectations of emergency communications systems in autonomous bus shuttles Cindy Mayas, Rozita Sheibani, Matthias Hirth, Germany</p>	
<p>24</p>	<p>User Experience Design and Usability Evaluation II Co-Chairs: Shuichi Fukuda, Japan and Vanessa Nasr, USA</p>	<p>HCI</p>
<p>8:30-9:30 (HST) AHFE 3: IOLANI SUITE III</p>	<p>Development of a single usability metric that accounts for accessibility (SUMA) Vanessa Nasr, Maryam Zahabi, USA</p> <p>The impact of resolution and material selection on a prototype assessment Vitor Pais, Álvaro M. Sampaio, Nelson Costa, António J. Pontes, Portugal</p> <p>Active learning for disinformation with human machine teaming Emily Kemp, Madison Salmon, Elizabeth Morris, USA</p> <p>From interface to interaction Shuichi Fukuda, Japan</p> <p>Interface design of vehicle AR-HUD based on user needs Yi Fan Chen, China</p> <p>DMGR: Divisible multi-complex gesture recognition based on word segmentation processing Yuncheng Ge, Yewei Huang, Ye Julei, Huazixi Zeng, Hechong Su, Zengyao Yang, China</p>	

25	Computation and Intelligent Design Co-Chairs: Varit Intrama, Thailand and Sanghyun Lee, USA	CID
8:30-9:30 (HST) AHFE 4: IOLANI SUITE IV	Ergonomic problem and solution identification by applying image captioning with embedded ergonomic knowledge Gunwoo Yong, Quan Miao, Meiyin Liu, Sanghyun Lee, USA Digital transformation readiness level of Royal Thai Air Force Varit Intrama, Thailand Innovative AI-driven product design: Leveraging language models and AI image generators - A case study on insole design for high-heeled shoes Zun-Hwa Chiang, Wei-Wei Su, Ming-Hsien Chuang, Taiwan Organisational change and building human-tech resilience in Industry 5.0 Daniel Rukare, Nikhil Soi, Asmita Singh Bisen, UK Contemporary innovative application of ancient glaze craft under the perspective of non-heritage revitalization Yuxi Yuan, Yan Luo, China Use of computational fluid dynamics in the design and analysis of heat exchange devices Bobby Mathew, Fadi Alnaimat, UAE	
26	Education and Training Co-Chairs: Jihoon Shin, China and Michael Oetken, USA	TLS
8:30-9:30 (HST) AHFE 5: IOLANI SUITE V	Education and training using digital twin in hazardous chemical manufacturing plants Jihoon Shin, Juhung Son, China Using media equation theory to assess anthropomorphism of intelligent virtual reality training systems in organizational settings Michael Oetken, USA Enhancing flight deck resilience and optimizing risk mitigation: A sociotechnical approach Kimberly Perkins, USA Analysis of student perceptions of the use of business process modelling in improving organisational operations Małgorzata Oleś-Filiks, Poland Recommendations and discussions on the use of role play in online social studies teaching for elementary school students Yifeng Zhong, Johan Chang, China Education and training in the technological era: Adopting the head, heart, and hand approach for effective social media usage Fortune Aigbe, Clinton Aigbavboa, Lekan Amusan, Ayobami Idowu, South Africa	
27	Human-Centered Design and Design for Inclusion I Co-Chairs: Sara Rudder, USA and Na Tian, China	HCD
8:30-9:30 (HST) AHFE 6: IOLANI SUITE VI	Using a model-based systems engineering framework for human-centric design Sarah Rudder, USA Self-adapting, integrated apparel robot for responsive wearable comfort utility Minji Lee, Eric Matson, USA Design and development of wearable fashion accessories with anxiety-relieving function for onychophagia patient Zongyuan Wang, Xiaolu Li, China Ming Dynasty shipbuilding technology from the Chronicle of Longjiang Shipyard Na Tian, China Interaction design of youth community in the context of service design Li Jie Zeng, Xin Hu, China How user-platform interactions influence continuance intention in augmented reality mobile platforms Zian Kabir, Kyeong Kang, Australia	
REFRESHMENTS: 9:30-10:00 (HST) • LOCATION: FOYER		

29	Human-Centered Design and Human-Computer Interaction II Co-Chairs: Stig O. Johnsen, Norway and Bethany Lowndes, USA	HCD
10:00-11:30 (HST) AHFE 1: IOLANI SUITE I	<p>Scientific structure for human centered implementation and change management for healthcare innovation: Iterative participatory design Bethany Lowndes, Callista Sibilia, Kara Tomlinson, Breanna Hetland, USA</p> <p>Creating emotionally resonant user experiences in response to ever-evolving challenges in open distance e-Learning institutions Petra le Roux, Corne Van Staden, South Africa</p> <p>Participant experience evaluation in digital rural poetry activities: A sentiment analysis case study of Mingyue Village in China Jiaman Li, Kin Wai Michael Siu, Hong Kong SAR China</p> <p>Flexible and inclusive housing: Adaptation to the changing needs of inhabitants Daniela Bosia, Giulia Marchiano, Italy</p> <p>The human-centered design approach for operational workflow re-design: A case study in safety for agricultural automotive industry Marialaura Delvecchio, Francesco Tesauri, Roberto Montanari, Silvia Chiesa, Italy</p> <p>A comparative study of visual culture in tourism apps Zhiyuan Zheng, Xin Hu, China</p> <p>How multi-sensory can help the visually impaired better play the instruments: An inclusive design practice Qian Jiang, Kin Wai Michael Siu, Hong Kong SAR China</p>	
30	Creativity, Innovation and Entrepreneurship Co-Chairs: Steffen Jansing, Germany and Yasmine Alaoui, Morocco	CIE
10:00-11:30 (HST) AHFE 2: IOLANI SUITE II	<p>Citizen participation: A lever for the success of major events Yasmine Alaoui, Khatib Majda, Morocco</p> <p>Meeting practical requirements for assessing competencies: A framework for a multi-dimensional, layer-based and dynamic model Steffen Jansing, Julian Schallow, Paula Danhausen, Nele Schulte-Uebbing, Gerrit Hoeborn, Jochen Deuse, Germany</p> <p>Development of NFT secondary market model considering scarcity effect Tomohisa Hayakawa, Japan</p> <p>Team creativity and innovation: What matters? Daniel Badro, Xiaowen Fang, Olayele Adelakun, USA</p> <p>New challenge to creativity: Impact and complexity of artificial intelligence on art and design Jun Bum Shin, USA</p> <p>The awakening role of design in social innovation Zhaoyi Kang, Yijun Liu, Mengfei Liu, China</p>	
31	Human-Technology and Future of Work II Co-Chairs: Wilhelm Bauer, Germany and Khanssa Lagdami, Sweden	HTFW
10:00-11:30 (HST) AHFE 3: IOLANI SUITE III	<p>Colleague, copilot, companion, controller – Roles of AI in work systems Udo-Ernst Haner, Wilhelm Bauer, Germany</p> <p>Technostress and the future of work at sea Khanssa Lagdami, Sweden</p> <p>The emerging technology-related stressors scale: Assessing the impact of ICTS in the hybrid context Georgia Libera Finstad, Gabriele Giorgi, Matteo Curcuruto, Valentina Sommivigo, Italy</p> <p>Enhancing communication transparency and teaming in human-autonomy systems: Integrating large language models for on-site construction operations Di Liu, Rui Liu, USA</p> <p>A semantic matchmaking approach to empower human decision-making in manufacturing-as-a-service scenarios Frauke Schuseil, Michael Hertwig, Joachim Lentjes, Nikolas Zimmermann, Katharina Hölzle, Germany</p> <p>AutoGen-based AI assistant for improving the interactions between BIM and project teams for design coordination Yaxian Dong, Zijun Zhan, Yuqing Hu, Daniel M. Doe, Zhu Han, USA</p>	

32	User Experience Design and Usability Evaluation III Co-Chairs: Nikolay Simakov and Joy Borgardt, USA	HCI
10:00-11:30 (HST) AHFE 4: IOLANI SUITE IV	<p>HPCMod: Agent-based modeling framework for modeling users on high-performance computing resources Nikolay Simakov, USA</p> <p>The in-home advantage: Usability research and participatory design where it matters most Trevor Johnson, Joy Borgardt, USA</p> <p>Development of a dynamic visual acuity training software based on baseball situations to improve users' dynamic visual ability Yu-Hsiu Hung, Bo-Wei Chen, Taiwan</p> <p>An approach to system architecture design through usability heuristics Duha Ali, Preston Myers, USA</p> <p>Revisiting the brief nuclear usability measure: a preliminary evaluation of its validity and reliability using licensed operators Casey Kovesdi, USA</p> <p>Human-centric analysis of a pallet loading process: User Journey Map and Design Thinking for needs assessments Isabel Varajão, Rosane Sampaio, Iara Margolis, Emanuel Sousa, Sérgio Monteiro, Luis Louro, Nuno Ribeiro, Rafael Pedro, Estela Bicho, Portugal</p>	
	33	Applications in Learning Sciences and Education I Co-Chairs: Kim-Phuong L. Vu and Erin Arruda, USA
10:00-11:30 (HST) AHFE 5: IOLANI SUITE V	<p>Investigating the use of Chatbots as an educational tool Krystal Cachola, Kim-Phuong L. Vu, USA</p> <p>Research-infused courses are effective for online and in-person education Erin H. Arruda, Arturo R. Zavala, Panadda Marayong, Jesse Dillon, Chi-Ah Chun, Kim-Phuong L. Vu, USA</p> <p>Pre-Professor Program: A virtual training program to improve faculty diversity Laura Henriques, David J. Whitney, Chi-Ah Chun, Kim-Phuong L. Vu, Arturo R. Zavala, USA</p> <p>An interactive virtual assistant for flexible just-in-time training Glenn Taylor, Jeffrey Craighead, Kortney Menefee, Logan Lebanoff, Christopher Ballinger, Stephen McGee, USA</p> <p>The relationship between climate change and global inequality as perceived by university students Barbara Tomaszewska, Iwona Ocetkiewicz, Poland</p> <p>Investigating Reading Behaviors of Elementary School Students in Oman Using Eye-Tracking: A Study on Familiar and Unfamiliar Arabic Content Hilal Al-maqbali, Bader Alsinani, Ali Alriyami, Ruqaiya Alshezawi, Hala Alfaliti, Oman</p>	
	34	Human-Centered Design and Design for Inclusion II Co-Chairs: Wenshu Sun, China and Shuichi Fukuda, Japan
10:00-11:30 (HST) AHFE 6: IOLANI SUITE VI	<p>Inclusive design of smart landscape in community parks for the migrant elderly Wenshu Sun, Yeshan Qiu, Bingqin Yu, Yun Wang, China</p> <p>Designing for inclusion: Storytelling as a tool in the sense-friendly classroom makeover journey Beata Fabisiak, Robert Kłos, Anna Jankowska, Aleksandra Cierpiszewska, Poland</p> <p>Development of an inclusive superhero sensory garden for children: Ideation matrix and design specifications to accommodate diverse needs Robert Kłos, Beata Fabisiak, Adrianna Oset, Poland</p> <p>Explainable AI solutions for the U. S. Coast guard command center: A human-centered collaboration Audrey Haque, Anthony Lapadula, Jessamyn Liu, Sara Falkson, Karli Blanchard, Richard Coleman, Amna Greaves, USA</p> <p>Creating empathetic world Shuichi Fukuda, Japan</p> <p>Hollywood regency: American design under the influence of Chinoiserie Ellen Zhu, China</p>	
	REFRESHMENTS: 11:30-12:00 (HST) • LOCATION: FOYER	

36	Applications in Learning Sciences and Education II Co-Chairs: Lake Crowell and Daniel Olivares, USA	TLS
12:00-13:00 (HST) AHFE 1: IOLANI SUITE I	<p>Determination of women patentees and their impact on participatory ergonomics Lake Crowell, Quintin Williams, Irina Buhimschi, Heather Weinreich, USA</p> <p>Improved teaching and education of engineering students using computational fluid dynamics Fadi Alnaimat, Bobby Mathew, UAE</p> <p>Innovation and trends in human resources: Analysis of improvement strategies in graduation projects from a master's in hr and human talent management Nelson Lay, Luis Felipe Vergara Maldonado, Paula Riquelme, Andres Rubio, Chile</p> <p>A framework for developing collaborative community building tools for novice computer science students Daniel Olivares, Jakob Kubicki, Katie Imhof, USA</p> <p>Advanced chunking and search methods for improved retrieval-augmented generation (RAG) system performance in e-Learning Daniel Danter, Heidrun Mühle, Andreas Stöckl, Austria</p> <p>Determining factors of adherence to psychological therapy in a Chilean university context: A multinomial logistic analysis Nelson Lay, Eduardo Busto, Hanns de la Fuente-Mella, Luis Felipe Vergara, Catalina Ojeda, Macarena Norambuena, Chile</p>	
37	Application of Emerging Technologies Co-Chairs: Ahmad Turki, Saudi Arabia and Serpil Aytaç, Turkey	AET
12:00-13:00 (HST) AHFE 2: IOLANI SUITE II	<p>Sick building syndrome and its relationship with work stress as a psycho social risk: A shopping mall example Serpil Aytaç, Şahamet Bülbül, Husre Gizem Akalp, Turkey</p> <p>Procedural justice in human-machine interaction: An ethical approach to designing the use of medical algorithms Andreas Wolkenstein, Georg Marckmann, Germany</p> <p>Non-contact physiological monitoring of heart rate, facial temperature, and respiratory rate with thermal and RGB cameras Mickael Causse, Nourhen Amdouni, Rodríguez Ginés, Christophe Hurter, France</p> <p>Using actual data for the analytics of proximity safety of motorcycles Albert Chen, Taiwan</p> <p>Design and comparative evaluation of IPG against PPG, Sphygmomanometer and Finapres for cuffless blood pressure monitoring Ahmad Turki, Enas Raml, Arwa Ibrahim Raml, Saudi Arabia</p> <p>Body positivity perception and fashion Özlem Kaya, Turkey</p>	
38	User Experience Design and Usability Evaluation IV Co-Chairs: Sara Amani and Matthew Wisniewski, USA	UUE
12:00-13:00 (HST) AHFE 3: IOLANI SUITE III	<p>Enhancing the onboarding experience with wearable technology for research applications Sara Amani, Noor Obeidat, Thomas Ferris, Kristi Shryock, USA</p> <p>When hearing protection makes you worse at your job: Objective measurement of decrements in sensorimotor tracking Matthew Wisniewski, USA</p> <p>Bridging the gap: Enhancing mobility and usability in industrial devices for operational efficiency Bahar Khayamian Esfahani, Souleymane Boundaouda Camara, Rita Bourma, UK</p> <p>Understanding stress responses: Exploring facial expressions in the context of individual performance and automated agents Lokesh Singh, Sarvapali Ramchurn, Yi Dong, UK</p> <p>Mapping the evolution of tangible user interface: A bibliometric analysis and future trends Zhitao Yu, China</p> <p>Information availability and accessibility regarding ecological products offered in online stores – a case of retail chains Natalia Kozik, Bartłomiej Kabaja, Dainora Gedvilaitė, Poland</p>	

39	Transportation: Autonomous and Automated Vehicles Co-Chairs: Christoph Stocker, Austria and Kenneth Nemire, USA	TRAN
12:00-13:00 (HST) AHFE 4: IOLANI SUITE IV	<p>Advanced sustainable mobility: A novel human-machine interaction approach supporting energy efficient driving Christoph Stocker, Alexander Kreis, Mario Hirz, Austria</p> <p>Evaluation of the risky behaviors of AV Rideshare vehicles in San Francisco Kenneth Nemire, USA</p> <p>Assistive technology system for highly automated vehicles to support people with mild cognitive impairment: A human-centered design approach Alexandra Kondyli, Andrew Davidson, Christopher Depcik, John Haug, Lyndsie Koon, Sanaz Motamedi, Mahtab Eskandar, Wayne Giang, Boyi Hu, Eakta Jain, Heng Yao, Xilei Zhao, Abiodun Akinwuntan, Shelley Bhattacharya, Hannes Devos, USA</p> <p>The expectation of intention expression in autonomous driving scenarios Hanxi Pan, Xiang Ji, Qi Gao, Xinyu Zhang, Bofan Wang, Yili Yin, Yanfang Liu, Zaifeng Gao, China</p> <p>Auto-generating road trip vlogs while safe-driving: A human-vehicle-environment system for capturing and editing scenic views en route Zichun Guo, Xianning Meng, Haiqing Xu, Zumeng Liu, Lingkan Wang, Jiawei Chen, Yaxin Zhu, Canyuqiu Wang, China</p> <p>Usability factors and guidelines for climate control interfaces using big data from vehicles Jeewon Han, South Korea</p>	
40	Methodological Offers of Innovative Agonology Co-Chairs: Roman Maciej Kalina and Artur Kruszewski, Poland	SIPOR
12:00-13:00 (HST) AHFE 5: IOLANI SUITE V	<p>Preventive medicine: The most prestigious profession of the near future Roman Maciej Kalina, Poland</p> <p>Methodological and mental distance to the dissemination of vertical test fight between girls and boys Michał Kruszewski, Wojciech Niedomagala, Jarosław Klimczak, Artur Litwiniuk, Poland</p> <p>Measurement of motivation and qualitative effects of physical effort during two motor learning sessions with multifaceted variation of goals, methods, measures and tools – example of violin playing and safe fall Elizabeth Waszkiewicz, Artur Kruszewski, Poland</p> <p>The relationship between the cognitive and behavioral potential of young adults resistant to motor modifications and the effects of learning safe falling techniques Bartłomiej Gąsienica-Walczak, Artur Kalina, Poland</p>	
41	Human-Centered Design and Human-Computer Interaction III Co-Chairs: Ziting Gong and Jia Wang, Japan	HCD
12:00-13:00 (HST) AHFE 6: IOLANI SUITE VI	<p>Impact of audience presence on pressure and running performance: The potential of AR presence Ziting Gong, Hideaki Kanai, Japan</p> <p>Exploring the path of city image communication through IP image design: A comparative study of China and Japan Yuexi Qiao, China</p> <p>Public Perception of Built Environment in Urban Street: A Text Emotion Analysis Approach Lingyue Li, Lie Wang, Yiwen Chen, China</p> <p>My tool my rule: User-participatory design of an angle grinder Yiwei Zhao, Mengshi Yang, Ruchen Hu, China</p> <p>Comparative study of signage design in inclusive playgrounds and public parks guidelines Jia Wang, Yasuyuki Hirai, Melanie Sarantou, Yunkyu Lee, Japan</p> <p>Design of a smart interactive system for pet dogs from the context-aware perspective Xuan Ding, Xin Hu, Macau SAR China</p> <p>Meta-picture and Chindōgu: Design explorations to inspire the visual experience Jing Zhang, Qixin Chen, Liangliang Qiang, China</p>	

46	Augmented, Virtual and Mixed Reality Simulation IV Co-Chairs: Scott Ledgerwood and Md Abdullah, USA	AVM
13:00-14:00 (HST) AHFE 4: IOLANI SUITE IV	<p>Performance of Fire Fighters in a Multiple-Sensory VR Pump Panel Training Simulation Scott Ledgerwood, Erika Gallegos, USA</p> <p>Human factors issues in augmented reality-assisted manual order picking Md Abdullah, Mahmudur Rahman, USA</p> <p>Student opinions when viewing 360-degree virtual reality content via flat screen displays versus head mounted displays: A pilot study Brian Mihalik, Ali Iskender, Aisha Haynes, Linda Mihalik, USA</p> <p>Artificial-Intelligence police E-instructor delivered through ergonomically advanced augmented reality eyewear Jayfus Doswell, Marcus Messam, Brandon Brockington, Arthur Chinery, Saboor Salaam, USA</p> <p>Effects of daylight intensity on emotion regulation in a virtual healing space Han Zhang, Diyu Zhou, China</p>	
47	Human-Centered Design and Design for Inclusion III Co-Chairs: Stefania Camplone and Alessandra Scarcelli, Italy	HCD
13:00-14:00 (HST) AHFE 5: IOLANI SUITE V	<p>Color impressions in images of decorated interiors and furniture are influenced by differences in color vision Atsushi Kido, Toshikazu Kato, Takashi Sakamoto, Japan</p> <p>Circular materials for eco-craftsmanship - development of a wool-based biocomposite for 3D printing of Abruzzo region craft products Stefania Camplone, Giuseppe Di Bucchianico, Gabriella Petrucci, Italy</p> <p>Adaptive fashion experience: A methodological approach for inclusive outerwear dressing Alessandra Scarcelli, Annalisa Di Roma, Italy</p> <p>Guidelines for the design of digital platforms for wellness and inclusion: Shaping future community of citizens Annalisa Di Roma, Giulia Annalinda Neglia, Alessandra Scarcelli, Italy</p> <p>Houses on 4 Greek islands: A contribution to sustainable architecture: material and immaterial Fernando Hipólito, Helena Botelho, Portugal</p> <p>Artifacts as a means to investigate alternate and future realities Nishanth Srikanth, USA</p> <p>Human-Centered approach in design curriculum development Scott Shim, USA</p>	
48	Trend of Human Error Incidents Analysis Used by AI Co-Chairs: Yuriko Imura and Joohyun Lee, Japan	HCD
13:00-14:00 (HST) AHFE 6: IOLANI SUITE VI	<p>Development of a near-miss event analysis support system for different types of human error using AI technology Joohyun Lee, Yusaku Okada, Japan</p> <p>Human error prevention activities in manufacturing sites based on information from normal work Taisei Kiryu, Chikori Ino, Yusaku Okada, Japan</p> <p>Development of a support system to improve the ability to analyze incident reports in hospitals using generative AI Yuriko Imura, Yusaku Okada, Japan</p> <p>Methods of measuring the effectiveness of on-site human error response training based on employee engagement indicators Yu Shibuya, Yusaku Okada, Japan</p> <p>Exploring the impact of error feedback methods on user experience in voice interaction Tongtong Xie, Meng Li, Yinyin Bai, Xie Jieren, Zhu Aibin, Zengyao Yang, China</p>	

Interactive Poster Demonstrations

POSTER/DEMONSTRATION SESSIONS, MONDAY, DECEMBER 9, 2024

Time: 10:00-14:00 (HST)

Room: Foyer

Virtual Room: AHFE Posters

- A1. **Interdisciplinary application of fractal algorithms-based Zodiac symbol graphic design in product packaging**
Shengdong Zhou, Eakachat Joneurairatana, Veerawat Sirvesmas, Yan Wang, Thailand
- A2. **Differential scrubbing of toxic volatile organic compounds from BBQ smoke leaving desirable compounds behind**
Ronald Gruber, Nikolas Kalamas, USA
- A3. **Dynamic information compression for lifelong robot learning**
Nobuhito Manome, Shuji Shinohara, Shunji Mitsuyoshi, Ung-il Chung, Japan
- A4. **User experience approach based on the agreement of software usage rules**
Shinichi Fukuzumi, Japan
- A5. **The relationship between aesthetic evaluation of product design and purchase intention in 100-Yen shops - Focusing on uniqueness, humor, and unexpected**
Mikako Tsurugasaki, Namgyu Kang, Japan
- A6. **Investigation of the contemporary value of dialects and proposals for their utilization – Possibility of maintaining cultural identity and regional promotion**
Sato Gai, Namgyu Kang, Japan
- A7. **CatMapper: User interface support for large complex categories and semantic data exploration**
I-Han Hsiao, Harsha Kasi, Daniel J. Hruschka, Robert Bischoff, Matt Peeples, USA
- A8. **Creative collaborator: AI-facilitated UI for creating engaging and insightful memes**
Romeo Nickel, Sharon Hsiao, USA
- A9. **Human-centered design based on the Double Diamond Model for optimizing hybrid game design**
Risheng Liang, Sauman Chu, Debra Lawton, Guobin Pan, USA
- A10. **Ultra-flexible textile-based glove system for rehabilitation and robotics**
Joelle Beauchamp, Mahendran Balasubramanian, Thamizhisai Periyaswamy, USA
- A11. **Comparison of floor-dragging methods with courier services**
Hong-in Cheng, Jun Jie Deng, South Korea
- A12. **Correlation between intelligence, surveillance, and reconnaissance experience and processing, exploitation, and dissemination efficacy: ISR assessment**
Justin Nelson, USA
- A13. **Autonomous behavior of bipedal robot by learning time-series camera images**
Manabu Motegi, Japan
- A14. **Analysis of distracted pedestrians crossing behavior: an immersive virtual reality application**
Methusela Sulle, USA
- A15. **Cognitive and behavioral dynamics in AI integration within human resource management**
Karin Reinhold, Estonia
- A16. **Boosting the learning of football tactics with a gamified and intelligent mobile application**
Sébastien Tremblay, Vicky Bacon, Steven Thomas, Alexandre Lemay, Cindy Chamberland, Canada
- A17. **Training the powered-lift evaluation pilot**
Michael Feary, Loran Haworth, John Kaneshige, Kimberlee Shish, Thomas Lombaerts, Kevin Monk, Amber Villa, Mieczyslaw Steglinski, Nelson Iwai, John Archdeacon, Barth Baron, Jr., USA
- A18. **Topological data analysis for driver behavior classification driven by vehicle trajectory data**
Debbie Indah, Judith Mwakalonge, Gurcan Comert, Saidi Siuhi, Hannah Musau, Eric Osei, Paul Omulokoli, USA
- A19. **Immersive educational content for 3D printing simulation**
Seul-hee Kwon, Minwoo Cho, Dongwook Hwang, South Korea

Interactive Poster Demonstrations

POSTER/DEMONSTRATION SESSIONS, MONDAY, DECEMBER 9, 2024

Time: 10:00-14:00 (HST)

Room: Foyer

Virtual Room: AHFE Posters

- A20. **Dexterity-based assessment tool for hand tracking**
Minwoo Cho, Dongwook Hwang, South Korea
- A21. **Evaluation of new measures of spatial ability and attention control for selection of naval flight students**
Joseph Coyne, Christopher Draheim, Ciara Sibley, Cyrus Foroughi, Sarah Melick, Nicholas Armendariz, Alexander Burgoyne, Randall Engle, USA
- A22. **Understanding bicyclist behavior and perception of B2X advanced warning messages within virtual reality**
Austin Angulo, Ye Wang, USA
- A23. **Statistical analysis on safety culture awareness of regulatory institute for nuclear facilities**
Jitae Kim, South Korea
- A24. **An empirical examination of money illusion in large language model-based behavioral modeling agents within a stochastic simulation framework**
Yongjian Xu, Evangelos Markopoulos, Akash Nandi, UK/USA
- A25. **Emotion regulation strategies and the innovative design of AIGC interactive healing images**
Xingyi Wen, Jianmin Wang, Yu Shu, Xi Ji, China
- A26. **The elderly's response for choice reaction and movement time**
Kwangtae Jung, Yejin Lee, South Korea
- A27. **Comparison of AI model serving efficiency: Response time and memory usage analysis**
Ji Yeon Kim, Seong Hyeon Jo, Ki Hwan Kim, Young Jin Kang, Seok Chan Jeong, South Korea

POSTER/DEMONSTRATION SESSIONS, TUESDAY, DECEMBER 10, 2024

Time: 10:00-14:00 (HST)

Room: Foyer

Virtual Room: AHFE Posters

- B1. **Comparison of race walking and power walking at varying paces by expressing movement in the frequency domain**
Tomoki Inoue, Kyoko Shibata, Japan
- B2. **Timbre estimation of compound tones from an auditory cortex by deep learning using fMRI: Sound pressure levels detection of specific frequency**
Junnosuke Kusumoto, Kyoko Shibata, Hironobu Satoh, Japan
- B3. **Air conditioner operating system based on the concept of Benefit of Inconvenience (BoI)**
Haruki Tanaka, Kodai Furumachi, Haruaki Kobayashi, Namgyu Kang, Japan
- B4. **User experience design of poultry welfare courses**
Laura Huisinga, Katy Tarrant, USA
- B5. **Analysis of human factors in container ships' marine accidents**
Nermin Hasanspahić, Vlado Frančić, Marko Strabić, Ivan Krivokapić, Croatia
- B6. **Impact of warning information provision systems under autonomous vehicle vulnerable situation in urban mixed traffic conditions**
Songha Lee, Hojae Kim, Nuri Park, Juneyoung Park, South Korea
- B7. **Is virtual reality for retail marketing research? Research opportunities and methods**
Jung Eun Lee, Wi-Suk Kwon, USA
- B8. **Examination of evaluation indices for micro-influencers considering community structure and post contents**
Kohei Otake, Ryo Morooka, Japan

Interactive Poster Demonstrations

POSTER/DEMONSTRATION SESSIONS, TUESDAY, DECEMBER 10, 2024

Time: 10:00-14:00 (HST)

Room: Foyer

Virtual Room: AHFE Posters

- B9. **Computational design of a naval unit for rapid intervention in case of marine ecosystem disaster**
Alexandra Gabriela Ene, Carmen Mihai, Romania
- B10. **Advanced numerical simulations for seakeeping performance analysis of a floating architecture based on textile structure**
Alexandra Gabriela Ene, Carmen Mihai, Romania
- B11. **The impact of augmented display and information density on driving experience in autonomous vehicles**
Minwoo Cho, Dongwook Hwang, South Korea
- B12. **A user-centered design approach in the development of a modular AI-system for detection of cerebral palsy in infants**
Natalie Jankowski, Vivian Waldheim, Katharina Lorenz, Christina Mittag, Germany
- B13. **Evaluation of UAV-induced driver distraction using Eye Tracker and EEG**
Zainab Afzali Kusha, Sahar Ghanipoor Machiani, Reza Akhavian, USA
- B14. **Collecting anthropometric data from the perspective of ergonomics. A learning experience for industrial engineering students**
Stephanie Daphne Prado Jimenez, John Rey-Galindo, Rosa Rosales-Cinco, Carlos Aceves-Gonzalez, Mexico
- B15. **Evaluation of the learning effectiveness of a smart TRX and functional fashion workshop**
Hsin-rong Hsieh, Ying-Chia Huang, Yu-jen Chen, Peng-cheng Hsu, Ya-chun Chang, Jui-yun Hung, Taiwan
- B16. **Optimizing AI system security: An ecosystem recommendation to socio-technical risk management**
Kitty Kioskli, Antonios Ramfos, Steve Taylor, Leandros Maglaras, Ricardo Lugo, Netherlands
- B17. **Comparative experiment of context-awareness-based visualization schemes for focused information on target search mission posture**
Qiuyu Liu, Li Bing, Bei Zhang, Shuang Liu, Yuqing Dang, China
- B18. **The impact of physical conditions on workers psychologically and organically industrial noise as a model- An applied study in the BMS ELECTRIC company in Algiers**
Bayoub Aissa, Wahiba Houda Falahi, Algeria
- B19. **Understanding drivers' perceptions and usage of advanced driver assistance systems**
Hannah Musau, USA
- B20. **Empowering surgeons by mitigating musculoskeletal disorders and advancing needle holder design for optimal performance**
Ahmed Basager, Quintin Williams, Sai Arasada, Luis Hernandez, Kaliah Linear, Angelica Mangahas, Heather Weinreich, USA
- B21. **User perception in interaction with augmented reality prototypes for product assembly assistance**
Eugenia Cornils Monteiro da Silva, Sanderson Cesar Macedo Barbalho, Leonardo Luna, Marcelo Becker, Brazil
- B22. **The impact of AI on business ecosystem development**
Olga Shvetsova, South Korea
- B23. **Grip and finger strength of dementia patients: A comparative analysis**
Dae Min Kim, South Korea
- B24. **The influence of sex differences and the number of operators on physical and psychological load by roll containers use**
Nozomi Sato, Japan
- B25. **Sweat and sacrifice: Occupational drudgery in the lives of sugarcane farmers in India**
Neelesh Kohli, India



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