



# 2022 **IHIET** International

8<sup>th</sup> International Conference on  
**Human Interaction and  
Emerging Technologies**

**August 22-24, 2022**  
**Université Côte d'Azur, Nice, France**



# **Final Program**

**WWW.IHIET.ORG**

# Opening Plenary Session and Keynote Address

17:30-18:30, August 22, 2022

Location: **Hotel Aston La Scala**

Address: 12 Av. Félix Faure, 06000 Nice, France

Chair: Redha Tairar, France

## THE PROMISE OF ARTIFICIAL INTELLIGENCE IN MULTIMODALITY MEDICAL IMAGING

**Prof. Habib Zaidi**

Geneva University Hospital, Switzerland



### Summary:

Positron emission tomography (PET), x-ray computed tomography (CT) and magnetic resonance imaging (MRI) and their combinations (PET/CT and PET/MRI) provide powerful multimodality techniques for in vivo imaging. This talk presents the fundamental principles of multimodality imaging and reviews the major applications of artificial intelligence (AI), in particular deep learning approaches, in multimodality medical imaging. It will inform the audience about a series of advanced development recently carried out at the PET instrumentation & Neuroimaging Lab of Geneva University Hospital and other active research groups. To this end, the applications of deep learning in five generic fields of multimodality medical imaging, including imaging instrumentation design, image denoising (low-dose imaging), image reconstruction quantification and segmentation, radiation dosimetry and computer-aided diagnosis and outcome prediction are discussed. Deep learning algorithms have been widely utilized in various medical image analysis problems owing to the promising results achieved in image reconstruction, segmentation, regression, denoising (low-dose scanning) and radiomics analysis. This talk reflects the tremendous increase in interest in quantitative molecular imaging using deep learning techniques in the past decade to improve image quality and to obtain quantitatively accurate data from dedicated standalone (CT, MRI, SPECT, PET) and combined PET/CT and PET/MRI imaging systems. The deployment of AI-based methods when exposed to a different test dataset requires ensuring that the developed model has sufficient generalizability. This is an important part of quality control measures prior to implementation in the clinic. Novel deep learning techniques are revolutionizing clinical practice and are now offering unique capabilities to the clinical medical imaging community. Future opportunities and the challenges facing the adoption of deep learning approaches and their role in molecular imaging research are also addressed.

### About the Speaker:

Habib Zaidi is Chief physicist and head of the PET Instrumentation & Neuroimaging Laboratory at Geneva University Hospital and full Professor at the medical school of Geneva University. He is also a Professor of Medical Physics at the University of Groningen (Netherlands), and Adjunct Professor of Medical Physics and Molecular Imaging at the University of Southern Denmark. His academic accomplishments in the area of quantitative PET imaging have been well recognized by his peers and by the medical imaging community at large since he is a recipient of many awards and distinctions among which the prestigious 2010 Kuwait Prize of Applied sciences (known as the Middle Eastern Nobel Prize) given by the Kuwait Foundation for the Advancement of Sciences (KFAS) for "outstanding accomplishments in Biomedical technology".

# Conference

## Reception/Banquet

**MONDAY , AUGUST 22, 2022 AT 18:30 - 22:00**

**HOTEL ASTON LA SCALA**  
**ADDRESS: 12 Av. FÉLIX FAURE, 06000 NICE, FRANCE**

(Dress is business casual, Conference Registered Participants, Photo ID required)

# Conference

## Organization

**Scientific and Technical Session: August 23-24, 2022**  
**Location: Université Nice Sophia-Antipolis - St Jean d'Angély, Nice, France**  
**Address: 24 Avenue des Diables Bleus, 06300 Nice, France**

**CONFERENCE ADMINISTRATOR:**  
ADMIN[AT]IHiet.ORG

## Conference Tracks

ACRONYM	TRACK
IHIET 1	Human-centered Design
IHIET 2	Artificial Intelligence, Computing and Intelligent Design
IHIET 3	Augmented, Virtual and Mixed Reality Simulation
IHIET 4	Wearable Technologies, Social and Affective Computing
IHIET 5	Human-computer Interaction
IHIET 6	Human-Technology and Future of Work
IHIET 7	Emerging Technologies and Business Applications
IHIET 8	Applications in Medicine and Healthcare
IHIET 9	Management, Training and Business Applications
IHIET 10	General

# PlanerySpeech

9:00-10:30, August 23, 2022

Location: Université Nice Sophia-Antipolis - St Jean d'Angély

Address: 24 Avenue des Diabes Bleus, 06300 Nice, France

Session Chair: Redha Taiar, France



## **EMPOWERING SENIORS WITH VIRTUAL REALITY AND AUGMENTED REALITY TRAINING SYSTEMS FOR ACTIVE AGEING**

**Dr. Younbo Jung**

Nanyang Technological University, Singapore

### **Summary:**

Emerging technologies are designed to help citizens in urban cities to have more convenient daily lives with automated services using AI and automation. Despite the good intention, however, there are marginalized groups, such as seniors who fell behind the rapid changes in various technological advancement, indicating a new wave of digital divide. Although there are several technological innovations that are designed to help seniors who are weak and frail, this stereotypical image of frail seniors is hardly an accurate description of many seniors who want to lead an active life with dignity and autonomy. As such, an essential approach is to support seniors' acquisition of the appropriate capacities to take advantage of technologies so that they can flourish in fast-changing smart cities. In this talk, I present a research project that utilizes virtual reality technology to train seniors on how to use daily automated tasks as a way to empower seniors to live independently and with dignity in the envisioned smart nation of Singapore. The speech will include the results from focus-group interviews, a survey, and field experiments investigating the effectiveness of various pedagogical approaches. The effectiveness of various pedagogical approaches for senior education, such as constructivism and scaffolding in teaching and learning will be discussed.

### **About the Speaker:**

Dr. Younbo Jung is Associate Professor and Associate Chair - Academic at the Wee Kim Wee School of Communication and Information, Nanyang Technological University, Singapore. Dr. Jung earned his Ph.D. at the Annenberg School for Communication and Journalism at the University of Southern California. In teaching, Dr. Jung received four teaching-related awards at NTU, including Nanyang Education Award (University) – Bronze in 2014. He is the inaugural Fellow of Teaching Excellence Academy since 2014. In research, his interests include socio-psychological effects of interactive media such as video games, virtual reality systems, human-robot interaction, and their applications in education and medical aids. For example, his research examined the use of virtual reality and haptics-enhanced systems for learning motor functions in stroke rehabilitation, patient/clinician distribution platform with tele-rehabilitation application, the Internet and computer training for seniors, the effect of social robots' embodiment on their meaningful social interaction with humans, and the use of video games and social TV for seniors' subjective well-being and intergenerational bonding. Dr. Jung supports interdisciplinary research and has successfully collaborated on many research projects with scholars in computer science, electrical engineering, physical therapy, and social work.

# Conference at a Glance

**Scientific and Technical Session:** August 23-24, 2022  
 Location: Université Nice Sophia-Antipolis - St Jean d'Angély  
 Address: 24 Avenue des Diables Bleus, 06300 Nice, France

## Monday, August 22

#	TITLE	ROOM	TRACK
1	17:30-18:30- Plenary Session and Keynote Address	Auditorium	ALL

## Tuesday - Wednesday, August 23-24, 2022

#	TITLE	ROOM	TRACK
<b>Tuesday August 23, 2022 - Session Time: 9:00 - 10:30</b>			
2	Plenary Speech	Auditorium	ALL
<b>10:30 - 11:00 • Sessions Break</b>			
<b>Tuesday August 23, 2022 - Session Time: 11:00 - 12:30</b>			
3	Human-centered Design I	1	IHIET 1
4	Artificial Intelligence, Computing and Intelligent Design I	2	IHIET 2
5	Intelligence, Technology and Analytics I	3	IHIET 3
6	Wearable Technologies, Social and Affective Computing	4	IHIET 6
<b>12:30 - 13:30 • Lunch Break</b>			
<b>Tuesday August 23, 2022 - Session Time: 13:30 -15:00</b>			
7	Human-computer Interaction I	1	IHIET 5
8	Human-Technology and Future of Work I	2	IHIET 8
9	Emerging Technologies and Business Applications I	3	IHIET 7
10	Discourse Models for Interaction Design [Tutorial] Speaker: Prof. Hermann Kaindl, Austria	4	IHIET 2
<b>15:00 - 16:00 • Sessions Break</b>			
<b>Wednesday August 24, 2022 - Session Time: 9:00 - 10:30</b>			
11	Applications in Medicine and Healthcare I	1	IHIET 8
12	Management, Training and Business Applications I	2	IHIET 9
13	Applications and Future Trends I	3	IHIET 10
14	Human-centered Design II	4	IHIET 1
<b>10:30 - 11:00 • Sessions Break</b>			
<b>Wednesday August 24, 2022 - Session Time: 11:00 - 12:30</b>			
15	Human-computer Interaction II	1	IHIET 5
16	Human-Technology and Future of Work II	2	IHIET 6
17	Applications in Medicine and Healthcare II	3	IHIET 8
18	Human-centered Design III	4	IHIET 1
<b>12:30 - 13:30 • Sessions Break</b>			
<b>Wednesday August 24, 2022 - Session Time: 13:30 - 15:00</b>			
19	Human-computer Interaction III	1	IHIET 5
20	Human-centered Design IV	2	IHIET 1
22	Human-centered Design V	4	IHIET 1

# Detailed Technical Program

Monday, August 22

Monday, August 22

<b>1</b>	<b>Plenary Session and Keynote Address</b> Chair: Redha Taiar, France
17:30-18:30	<p><b>Keynote Title: The Promise of Artificial Intelligence in Multimodality Medical Imaging</b> Speaker: Prof. Habib Zaidi, Geneva University Hospital, Switzerland, Switzerland</p>

Tuesday, August 23

Tuesday, August 23

<b>2</b>	<b>Plenary Speech</b> Chair: Redha Taiar, France
9:00 - 10:30 - ROOM 1	<p><b>Title: Empowering Seniors with Virtual Reality and Augmented Reality Training Systems for Active Ageing</b> Speaker: Dr. Younbo Jung, Nanyang Technological University, Singapore</p>
<b>3</b>	<b>IHIET 1: Human-centered Design I</b> Co-Chairs: Ambra Ferrari , Italy and Eleni Mangina , Ireland
11:00 - 12:30 - ROOM 1	<p><b>Development of a usability-optimised design concept in the context of an e-learning application for students in the field of data science</b> Susan Labude, Dominik Breck, Max Schlosser, Alexander Marbach, Christian Roschke, Germany</p> <p><b>How easy is it to eXtend Reality? A Usability Study of Authoring Toolkits</b> Santawat Thanyadit, Matthias Heintz, Effie L Law, Eleni Mangina, Ireland</p> <p><b>Working Together with a Collaborative Robot Arm: The Insights from a First Round of Quasi Experiments</b> Milan Romeo Wolffgramm, Stephan Corporaal, Maarten Van Riemsdijk, Netherlands</p> <p><b>E-commerce product image design - An example of Shopeee</b> Yu Chun Liu, Chiung Fen Wang, Taiwan</p> <p><b>Ludonarrative Dissonance in The Last of Us Part II: Attempting to Create Empathy with a Villain</b> Ambra Ferrari, Paolo Soraci, Italy</p> <p><b>Interaction Design of a Smart Helmet for Micro-Mobility Riders</b> Yongjae Sohn, Haeun Lee, Yelim Lee, Taeyun Kim, Youkeun Oh, Dokshin Lim, South Korea</p> <p><b>Parametric Scaling of a Lower Limb Model According to Body Height in OpenSim</b> Sebastian Helmstetter, Susanne Sutschet, Carina Spengler, Felix Möhler, Michael Herzog, Thorsten Stein, Sven Matthiesen, Germany</p>

<p><b>4</b></p>	<p><b>IHIET 2: Artificial Intelligence, Computing and Intelligent Design I</b> Co-Chairs: Khazar Dargahi Nobari, Germany</p>
<p>11:00 - 12:30 - ROOM 2</p>	<p><b>Generalized model for driver activity recognition in automated vehicles using pressure sensor array</b> Khazar Dargahi Nobari, Torsten Bertram, Germany</p> <p><b>The analysis of the lobbying actors regarding the adoption and implementation of the AI Policy in Poland</b> Sylwia Stefaniak, Poland</p> <p><b>Curve fitting optimization for French electricity exports using recurrent neural networks</b> Marwan Ashour, Iman Amer Hameed Dahhan, Iraq</p> <p><b>Kyra ChatBot</b> Roberto Carlos Medina, Raffaele Fiorillo Junior, Sónia Rodrigues, Cape Verde</p> <p><b>Choosing the optimal and safe path for multiple robots</b> Zhanna Gabbassova, Kazakhstan</p> <p><b>Multi-Agent Strategies for Diverse Teams</b> Michael Franklin, United States</p>
<p><b>5</b></p>	<p><b>IHIET 3: Intelligence, Technology and Analytics I</b> Co-Chairs: Salvatore Di Dio, Italy and Joelle Zimmermann, United States</p>
<p>11:00 - 12:30 - ROOM 3</p>	<p><b>Gamification or Game Design? A case study in the field of sustainable commuting.</b> Domenico Schillaci, Salvatore Di Dio, Mauro Filippi, Francesco Massa, Italy</p> <p><b>Human Interface Guidelines for Interaction Zones in AR</b> Joelle Zimmermann, Karen Bredenkamp, John Hwong, Ketki Jadhav, United States</p> <p><b>Immersive virtual spacewalking in stakeholder workshops: the effect of immersive, BIM-driven design and interaction tools on human sense of presence</b> Oliver Christ, Andreas Papageorgiou, Pascal Meier, Andreas Urech, Andreas Boroch, Melissa Huang, Christian Eichhorn, Switzerland</p> <p><b>Effectiveness of self-competitive gamification designs in VR exergames. Pilot study results from a 6-week training intervention with senior users.</b> Ilona Buchem, Susan Vorweg, Oskar Stamm, Germany</p> <p><b>Addressing new cyber risks in immersive reality</b> Alessandro Calabrese, Luisa Franchina, Tommaso Ruocco, Giulia Inzerilli, Italy</p> <p><b>Using Augmented Reality to reinforce the learning of installation of electrical equipment and machines</b> Janio Jadán-Guerrero, Myrian Zurita Mena, Ecuador</p> <p><b>Rating the sense of presence in surgical training using Augmented Reality</b> Marino Menozzi, Switzerland</p> <p><b>The age effect on visual attention performance in virtual reality</b> Ying-yin Rudy Huang, Taiwan</p>

<b>6</b>	<p><b>IHIET 6: Wearable Technologies, Social and Affective Computing</b> Co-Chairs: Sergio Staab , Germany and Yujie Zhu , Hong Kong</p>
11:00 - 12:30 - ROOM 4	<p>Prediction accuracy comparison between deep learning and classification algorithms in the context of human activity recognition Sergio Staab, Ludger Martin, Johannes Luderschmidt, Simon Krissel, Germany</p> <p><b>Meaningful Smart Health Data: A Design Guide for Transparent Data to Enhance Self-Reflection</b> Yujie Zhu, Kun Pyo Lee, Lie Zhang, Stephen Jia Wang, Hong Kong</p> <p><b>A shared service model for the elderly based on the concept of distributed economies (DE)</b> Shuang Liang, Min Zhou, Stefano Follesa, Peian Yao, China</p> <p><b>User Emotional Experience Assessment Method of Product's Intentional Sound</b> Yuzhun Huang, Miaodi Hu, Jun Zhang, China</p> <p><b>AVATAR: Realistic customized virtual agents as emotional tutors for children with ASD</b> Luis Guerrero, Darwin Duchi, Juan Delgado, Pablo Campoverde, Maryury Ojeda, Ecuador</p>
12:30 - 13:30 • Lunch Break	
<b>7</b>	<p><b>IHIET 5: Human-computer Interaction I</b> Co-Chairs: Waldemar Titov, Germany and Haseena Alkatheeri, United Arab Emirates</p>
13:30-15:00 - ROOM 1	<p><b>Evaluation of a Mobile and Seamless Travel Companionship in Smart Public Transport</b> Waldemar Titov, Seyedehfatemeh Ayoubi, Carl Friedrich Gerlach, Thomas Schlegel, Germany</p> <p><b>User-centered chatbot-based advising systems in higher education institutions</b> Haseena Alkatheeri, Mohammad Kuhail, United Arab Emirates</p> <p><b>A Model-based Environment for building and running Situation-aware Interactive Applications</b> Christian Martin, Jürgen Engel, Christian Herdin, Germany</p> <p><b>Neural decision-making application of Internet product interaction design based on EEG</b> Jianping Yang, Lixia Hua, China</p> <p><b>Enhancing the Learning of Special Educational Needs children with Dynamic Content Annotations</b> Zainb Dawod, David Bell, United Kingdom</p> <p><b>The effect of topic-shift characteristics in daily conversation on identification of recognition errors</b> Yotaro Iida, Hikaru Nishida, Yumi Wakita, Japan</p>

8	<p><b>IHIET 8: Human-Technology and Future of Work I</b>                  Co-Chairs: Anthony Savidis, Greece and Angelo Compierchio, Sweden</p>
13:30-15:00 - ROOM 2	<p><b>Rapid Interactive Software-Architecture Design with Split-n-Join Actions</b>                  Anthony Savidis, Anthony Peris, Greece</p> <p><b>Quantum Reality perspectives in Dyadic Interactions</b>                  Angelo Compierchio, Phillip Tretten, Sweden</p> <p><b>Technical Requirements to Design a Personal Medical History Visualization Tool for Doctors</b>                  Forhad Hossain, Rafiqul Islam, Mostafa Taufiq Ahmed, Ashir Ahmed, Japan</p> <p><b>Understanding Challenges of Integrating Automation Solutions for Underground Mining in a Sociotechnical System: A Qualitative Interview Study</b>                  Yemao Man, Joakim Åström, Dawid Ziobro, Sweden</p> <p><b>Comparative Analysis of Public Transportation Development in Developing and Developed Countries</b>                  Irham Maulida, Achmad Nurmandi, Indonesia</p>
9	<p><b>IHIET 7: Emerging Technologies and Business Applications I</b>                  Co-Chairs: Shuichi Fukuda, Japan and Dominik Raeck, Germany</p>
13:30-15:00 - ROOM 3	<p><b>Team Formation and Operations Using Instinct</b>                  Shuichi Fukuda, Japan</p> <p><b>Trajectory forecast for cyclists in cooperative interactions with automated vehicles</b>                  Dominik Raeck, Timo Pech, Klaus Mößner, Germany</p> <p><b>3D virtual learning environments to reinforce stock market competences</b>                  Janio Jadán-Guerrero, Voroshilov Hern, Ecuador</p> <p><b>Implementation of Automation and Industry 4.0 Technologies in Automotive Manufacturing Companies</b>                  David Smolka, Zuzana Papulova, Slovakia</p>
10	<p><b>IHIET2: DISCOURSE MODELS FOR INTERACTION DESIGN [TUTORIAL]</b>                  Speaker: Prof. Hermann Kaindl, Austria</p>
13:30-15:00 - ROOM 4	<p><b>Summary:</b>                  This tutorial has the primary objective that participants will learn about an open and fully implemented approach to model interaction design with discourse models that we developed for specifying (classes of) dialogues, and to automated GUI generation from such models. The content includes Communicative Acts as the basic elements, as well as Adjacency Pair and RST relations for constructing the discourse models using these elements. It also includes an iterative-incremental process of user-interface generation using such models. The target audience can be students or educators primarily of software or systems engineering, or information systems. They can also be practitioners creating software, embedded systems or information systems with a user interface.</p> <p><b>About the Speaker:</b>                  Hermann Kaindl is the head of the organizational unit entitled "Software-intensive Systems" of the Institute of Computer Technology, and a Vice Chairman of the Senate at TU Wien. He joined this institute in early 2003 as a full professor. Prior to moving to academia in early 2003, he has gained nearly 25 years of industrial experience at Siemens Austria. Kaindl is a Senior Member of the IEEE and a Distinguished Scientist Member of the ACM.</p>
<p>15:00 - 16:00 • Social Event and Sessions Break</p>	

11	<b>IHIET 8: Applications in Medicine and Healthcare I</b> Co-Chairs: Zewei Yao, United States and Hongmei Chi, United States
9:00 - 10:30 - ROOM 1	<p><b>An Affordable and Standard Digital Healthcare management as a Service (HaaS) for Small Clinics in Developing Countries</b>          Ashir Ahmed, Muhammad Asyraf Danial Bin Karim, Rafiqul Islam, Mostafa Taufiq Ahmed, Naoki Nakashima, Japan</p> <p><b>Solution based on Mobile Web Application to detect and treat patients with mental disorders</b>          Chaimae Taoussi, Imad Hafidi, Abdelmoutalib Metrane, Morocco</p> <p><b>Design and study of two applications controlled by a Brain-Computer Interface exploiting Steady-State Somatosensory-Evoked Potentials</b>          Jimmy Petit, Jose Rouillard, Francois Cabestaing, France</p> <p><b>A Pedagogy of COVID-19: Facts from 30 Pandemic Months</b>          Marco Rocchetti, Italy</p>
12	<b>IHIET 9: Management, Training and Business Applications I</b> Co-Chairs: Thomas Berger, Germany and Svenja Korder, Germany
9:00 - 10:30 - ROOM 2	<p><b>Human Resource Risk Management Concepts</b>          Thomas Berger, Germany</p> <p><b>Towards a Work-Related Turnover Risk Management in Manufacturing SMEs</b>          Svenja Korder, Dominik Breuherr, Gunther Reinhart, Germany</p> <p><b>Sustainability of Craft Communities in the Cosmopolitan Localism</b>          Min Zhou, Shuang Liang, Giuseppe Lotti, Jiangang Zhu, China</p> <p><b>Projection of the Future of the Green Savings Account Product in a Financial Institution</b>          Omar Paul Páez Almeida, Ana Alvarez Sanchez, Alexis Suarez Del Villar Labastida, Ecuador</p> <p><b>How does the participatory design in the brand construction helps?</b>          Carlos Marcelo Borja-Galeas, Hugo Arias-Flores, Ecuador</p> <p><b>Implementation of lean practices in an automobile parts manufacturing Industry- A case study.</b>          Skanda Moda Gururajaroo, Vajram Ramesh, Arun Kumar Doreswamy, India</p> <p><b>Improving the level of service through an inventory management model for a spare parts marketing company</b>          Jhordan Salazar, Erick Salinas, Alberto Flores, Jose C Alvarez, Narat Hasachoo, Peru</p>
13	<b>IHIET 10: Applications and Future Trends I</b> Co-Chairs: Didzis Rutitis, Latvia and Luis Guerrero Vasquez, Ecuador
9:00 - 10:30 - ROOM 3	<p><b>The impact of digital transformation on corporate identity management</b>          Didzis Rutitis, Eduards Aksjonenko, Latvia</p> <p><b>Methodology Based On Avatars for Therapeutic Interventions in Children With Autism Spectrum Disorder And Auditory Hypersensitivity</b>          Luis Serpa-Andrade, Luis Guerrero, Silvana Maldonado Merchan, Ecuador</p> <p><b>Playful strategies to enhance teaching-learning and the inclusion of children with Down syndrome</b>          Steven Guerrero Granda, Luis Serpa-Andrade, Luis Guerrero, Ecuador</p> <p><b>Women as a Muted group in the Mbojo tribe, Indonesia</b>          Nurbayti Nurbayti, Indonesia</p> <p><b>Usability and Design Issues of Whatsapp for Older Adults</b>          Hasham Taswar, Germany</p> <p><b>Challenges and Benefits of e-Learning Methods in a South African Emerging University in the Context of COVID19</b>          Khulekani Yakobi, Siphokazi Makhanda, Godwin Kaisara, Sulaiman Olusegun Atiku, Francis Kwahene, South Africa</p> <p><b>Analysis of a passenger bus driver's visibility based on Mexico City and Colombia Standards</b>          Jaime Gomez, Enrique Herrera, Francisco Gonzalez-madariaga, Mexico</p> <p><b>Data Visualization of user interaction and movement through Bluetooth beacon tracking technology</b>          Jun Bum Shin, United States</p>

<p><b>14</b></p>	<p><b>IHIET 1: Human-centered Design II</b> Co-Chairs: Paul Fink, United States and Eusébio Conceição, Portugal</p>
<p>9:00 - 10:30 - ROOM 4</p>	<p><b>Human Design, Comfort and Discomfort Evaluation</b> Eusébio Conceição, Maria Inês Conceição, Maria Manuela Lúcio, João Gomes, Hazim Awbi, Portugal</p> <p><b>Usability Engineering for Medical Apps using the Example of an App for Epilepsy Self-Management with a Neurosensing System</b> Jana-sophie Effert, Birgitta Esser, Michael Buschermoehle, Jasmin Henze, Maren Warnecke, Rainer Surges, Salima Houta, Germany</p> <p><b>Designing intelligence amplification: a design canvas for practitioners</b> Jean Paul Sebastian Piest, Maria Eugenia Iacob, Marcel Wouterse, Netherlands</p> <p><b>Partial plan for the environmental conservation and historical and tourist development of the Peñón del Río hill, Durán, 2022</b> Lisse Llerena Sandoya, Gabriela Vega, Ecuador</p> <p><b>A case study of motivating care workers for cooperation with a long-term co-creation project</b> Masayuki Ihara, Hiroki Murakami, Hiroko Tokunaga, Shinpei Saruwatari, Kazuki Takeshita, Akihiko Koga, Takashi Yukihiro, Shinya Hisano, Japan</p> <p><b>Ergonomic and Design Research of the Auxiliary Furnishings in High School of Education in the City of Varna</b> Darina Dobрева, Tihomir Dovramadjiev, Tsena Murzova, Momchil Tachev, Iliya Iliiev, Kremena Cankova, Ginka Jecheva, Mariana Murzova, Galina Staneva, Bulgaria</p>
<p>10:30 - 11:00 • Sessions Break</p>	
<p><b>15</b></p>	<p><b>IHIET 5: Human-computer Interaction II</b> Co-Chairs: Ole Goethe, Norway and Mia T, United States</p> <p><b>The Emotional and Behavioral Impact of Parental Phubbing</b> Xiangyun Tang, Gaofei Li, Xiaochun Xie, United States</p> <p><b>The neuroscience behind perception and risk management in complex sociotechnical workplaces</b> Josue Franca, Sweden</p> <p><b>Towards Reliable Tactile Mid-Air Interfaces: Analysis of Influencing Factors of the Perception of Tactile Mid-Air Feedback</b> Max Bernhagen, Angelika C Bullinger, Germany</p> <p><b>The Function of Social Media in Creating Participatory Based Government Policies in Indonesia</b> Latif Nur Indra, Filosa Gita Sukmono, Danang kurniawan, Indonesia</p> <p><b>Interactive HMI for Qualification and Programming in Process Automation EduBrain 4.0</b> Sebastian Schmitz, Germany</p>
<p>11:00 - 12:30 - ROOM 1</p>	<p><b>16</b></p> <p><b>IHIET 6: Human-Technology and Future of Work II</b> Co-Chairs: Eusébio Conceição, Portugal and Jordan Scoliege, France</p> <p><b>Heat Transfer in a Pine Tree Trunk</b> Eusébio Conceição, João Gomes, Maria Manuela Lúcio, Domingos Viegas, Teresa Viegas, Portugal</p> <p><b>Design of an Integrated Aero-Thermal Building</b> Eusébio Conceição, João Gomes, Maria Inês Conceição, Maria Manuela Lúcio, Hazim Awbi, Portugal</p> <p><b>Understanding the supervision activity to design a non-existent control system for automated driving through prospective ergonomics</b> Jordan Scoliege, France</p> <p><b>Generative Adversarial Network Algorithms in Art: Machine Vision in Generation of Collage Art</b> Lai Man Tin, Hong Kong</p>
<p>11:00 - 12:30 - ROOM 2</p>	

Wednesday, August 24

<b>17</b>	<p><b>IHIET 8: Applications in Medicine and Healthcare II</b>                  Co-Chairs: Ana Alvarez Sanchez, Ecuador and Despoina Petsani, Greece</p>
11:00 - 12:30 - ROOM 3	<p><b>Ergonomic risk reduction in the balance unloading area in a poultry microenterprise</b>                  Ana Alvarez Sanchez, Alex Geovanny Farinango Tupiza,                  Alexis Suarez Del Villar Labastida, Eric Martínez, Ecuador</p> <p><b>Clinical and social well-being for older adults: a personalised product-service assignment based on user's needs</b>                  Agnese Brunzini, Manila Caragiuli, Alessandra Papetti, Michele Germani, Italy</p> <p><b>Multidimensional Assessment of Elderly People's Health for The Development of a Fall Risk Index</b>                  Manila Caragiuli, Agnese Brunzini, Alessandra Papetti, Michele Germani,                  Pietro Scendoni, Chiara Mazzoni, Italy</p> <p><b>Classification of Thoracic Pathologies by Using Convolutional Neural Networks</b>                  Pooyan Vajar, Alagan Anpalagan, Canada</p> <p><b>Respiratory Effects of Coronavirus Vaccine on Individuals with Asthma: A Case Study</b>                  Ellie Abdi, United States</p> <p><b>Hydro-mechanical Dampers for Testing high Cyclic Shock Loads in Preventive Health Protection</b>                  Sebastian Zimprich, Benjamin Anstotz, Sven Matthiesen, Germany</p> <p><b>Investigation of Whole Body Vibration Transmissibility through Fork Lift Truck Seat</b>                  Amandeep Singh, Jagmeet Singh, Canada</p>
<b>18</b>	<p><b>IHIET 1: Human-centered Design III</b>                  Co-Chairs: Yuyan Qiu, China and Hugo Arias-Flores, Ecuador</p>
11:00 - 12:30 - ROOM 4	<p><b>Human Centered Design Framework for Managing User Experience of Smart Cockpit Systems</b>                  Yuyan Qiu, China</p> <p><b>How virtual reality can help address and prevent bullying and cyberbullying?</b>                  Hugo Arias-Flores, Alexandra Bermeo, Ecuador</p> <p><b>Optimization Strategy of Community Public Living Space Based on Emotional Interaction</b>                  Fuyong Liu, Xun Gao, Yong Li, Wanying Cheng, China</p> <p><b>Evaluation of usability and accesibility of the interactive tool for psychopedagogical recovery Titiapp</b>                  Andrés Caicedo, Jacqueline Gordón, Ecuador</p> <p><b>Creation of a Children's Application to Prevent Cyberbullying</b>                  Carlos Ramos Galarza, Mónica Bolaños Pasquel, Jorge Cruz Cárdenas,                  Priscila Cedillo, Ecuador</p> <p><b>Cyberbullying prevention through video clips in social media platforms</b>                  Janio Jadán-Guerrero, Priscila Cedillo, Patricia Acosta Vargas, Ecuador</p> <p><b>Pedestrian corridor for the integration of the administrative, financial, and commercial center in the city Esmeraldas, Ecuador</b>                  Darwin Nevárez, Blanca Indaburo, Ecuador</p>
12:30 - 13:30 • Sessions Break	

<p><b>19</b></p>	<p><b>IHIET 5: Human-computer Interaction III</b> Co-Chairs: Freddy Paz , Peru and Janio Jadán-Guerrero, Ecuador</p>
<p>13:30 - 15:00 - ROOM 1</p>	<p><b>A comparison between usability evaluation methods: A case study in the E-Commerce domain</b> Freddy Paz, Freddy Asrael Paz, Peru</p> <p><b>Motivation to read through mobile educational resources</b> Janio Jadán-Guerrero, Ana P, Ecuador</p> <p><b>From literary narrative to video game narrative</b> Miguel Cobos, Patricia Salvador, Ecuador</p> <p><b>How system failures and ransomwares affect drivers' trust and attitudes in an automated car? A simulator study</b> William Payre, Jaume Perelló-March, Giedre Sabaliauskaite, Hesamaldin Jadidbonab, Siraj Shaikh, Stewart Birrell, United Kingdom</p> <p><b>Intelligent interactive accompaniment ecosystem using parameterizable tools to raise awareness among people who interact in the field of inclusion.</b> Luis Serpa-Andrade, Roberto Garcia'Velez, Ecuador</p> <p><b>The use of multi-sensory technological tools as a motivation contribution for children with intellectual disabilities</b> Richard Paccha - Lapo, Luis Serpa-Andrade, Andres Viscaino - Quito, Roberto Garcia'Velez, Ecuador</p> <p><b>Understanding human decision-making when controlling UAVs in a search and rescue application</b> Sophie Hart, Vicky Banks, Seth Bullock, Jan Noyes, United Kingdom</p> <p><b>Trends and Challenges in Healthcare in Context of Industry 4.0 and New Emerging Technologies</b> Zuzana Papulova, David Smolka, Silvester Krčméry, Slovakia</p>
<p><b>20</b></p>	<p><b>IHIET 1: Human-centered Design IV</b> Co-Chairs: Sari Tappura, Finland and Axel B. Classen, Germany</p> <p><b>Designing a Future City – Applying Design Fiction with High School Students</b> Marie Sjölander, Jonas Söderberg, Sweden</p> <p><b>PANDEMIC SIM – Impact analysis and improvement potentials for airport security processes</b> Martin Jung, Axel B. Classen, Germany</p> <p><b>The integrated system scientia Atque usus (sAu): an user-centered project management environment</b> Luca Toschi, Marco sbardella, Lisa Capitini, Viola Davini, Ilaria Marchionne, Alfoso Musci, Eugenio Pandolfini, Italy</p> <p><b>Multi-stage Brain-machine-interfaces for enhanced human performance</b> Miriam Reiner, Israel</p> <p><b>Influence of control size on personnel performance under ship long voyage</b> Ziang Chen, Chao Yang, Kaili Yin, Jin Liang, Ning Li, Xiaoyi Zhou, Zhanshuo Zhang, China</p> <p><b>The influence of character display size on personnel discrimination performance under long ship sailing background</b> Chao Yang, Ziang Chen, Kaili Yin, Jin Liang, Xiaoyi Zhou, Hongyu Wang, Tiancheng Huang, China</p> <p><b>A Comparison of Three Different NeuroTag Visualization Media: Brain Visual Stimuli by Monitor, Augmented and Virtual Reality Devices</b> Federico Manuri, Andrea Sanna, Matteo Bosco, Francesco De Pace, Italy</p> <p><b>Human Centered Design for Innovative Solutions for an Accessible Toilet to All</b> Sandeep Sankat, India</p>

<b>22</b>	<p><b>IHIET 1: Human-centered Design V</b>                  Co-Chairs: Priyadarshini Dasgupta, USA and Mauricio Salas Roman, Colombia</p>
<b>13:30 - 15:00 - ROOM 4</b>	<p><b>Urban green network for the urban area of Milagro, Guayas, Ecuador</b>                  Diego Maruri, Gabriela Vega, Ecuador</p> <p><b>Mitigation strategies for the environmental impact of informal settlements over the papagayo protective forest in the northwest of Guayaquil city.</b>                  Ricardo Zapata, Gabriela Vega, Ecuador</p> <p><b>Sustainable Transport Development Strategy in Developed and Developing Countries</b>                  Nita Aribah Hanif, Achmad Nurmandi, Indonesia</p> <p><b>Smart Technology Based on Smart Homes for Older People</b>                  Sandeep Sankat, India</p> <p><b>Inclusive Built Environment in Urban Residences for Indian Elderly</b>                  Sandeep Sankat, India</p>
<b>15:00 - 16:00 • Sessions Break</b>	

# Interactive Poster Demonstrations

**TUESDAY, AUGUST 23**  
**Poster Demonstration: 10:30 - 15:30**  
**Room: Foyer**

- A1. Factors Affecting Customer Stickiness and Interface Design of Online Bookstores  
 Chiung Fen Wang, Pei En Yang, Yu Chun Liu, Taiwan
- A2. Human driving behavior in mixed traffic with automated vehicles and Infrastructure to Vehicle connectivity on motorways with variable speed limits  
 Nagarjun Reddy, Jitse Wiersma, Haneen Farah, Netherlands
- A3. The design of a gamified platform for verifying fake news using a crowdsourcing ecosystem for citizens, journalists, and experts: The case of CALYPSO  
 Catherine Sotirakou, Constantinos Mourlas, Theodoros Paraskevas, Greece
- A4. Guidelines for the Development of Common Ground-Based Relational Agents for Brazilian Elderly  
 Thiago Gama, Andressa Ferreira, Francisco Oliveira, Brazil
- A5. Determining distinctive features for IT and medical devices hardware interfaces based on compromising emissions  
 Rafał Przesmycki, Marek Bugaj, Poland
- A6. Smart Transportation Development: Success Strategy in China, United States, United Kingdom, and India  
 Wiyono Wiyono, Achmad Nurmandi, Indonesia
- A7. What is the strategy for creating "City Resilience" during the COVID-19 Pandemic?  
 Indragus Pangestu, Achmad Nurmandi, Indonesia
- A8. Determination of Power Harassment Expressions in Conversational Speech Using Natural Language Processing  
 Sasaki Hinari, Yoshihisa Nakatoh, Hideaki Kawano, Japan
- A9. Determination of Footstep Sounds for Elderly Fall Prevention  
 Keiho Nagano, Yoshihisa Nakatoh, Hideaki Kawano, Japan
- A10. Designing intelligence amplification: organizing a design canvas workshop  
 Jean Paul Sebastian Piest, Maria Eugenia Iacob, Marcel Wouterse, Netherlands
- A11. The measurement of baseband frequency range for military satellite terminals  
 Marek Bugaj, Rafał Przesmycki, Poland
- A12. Gaze Behavior as an Objective Measure to Assess Social Presence During Immersive Mediated Communication  
 Ivo Stuldreher, Linsey Roijendijk, Maarten Michel, Alexander Toet, Netherlands

# Interactive Poster Demonstrations

**TUESDAY, AUGUST 23**

**Poster Demonstration: 10:30 - 15:30**

**Room: Foyer**

- B1. The research of Multi-purpose small modular reactor (ACP100) SVDU function design and implementation  
Songlin Liu, Jing Li, China
- B2. Designing trustworthy IoT systems: critical challenges and approaches for generating value and building trustworthy IoT systems.  
Boyeun Lee, Adrian Gradinar, Rachel Cooper, Paul Coulton, United Kingdom
- B3. Controlar-Freeze: New Approach in Visual Screen Security  
Noura Altamimi, United Arab Emirates
- B4. Promotional Strategies of Local Governments in Improving Tourists' Post Pandemic Experience: Case Study in Yogyakarta, Indonesia  
Wafie Anisah, Filosa Gita Sukmono, Indonesia
- B5. Algorithmic Government Framework to Support Government Data Disclosure  
Adibah Dhivani Gusmi, Achmad Nurmandi, Indonesia
- B6. Personal Authentication Method Using Geometrical Features of External Auditory Canal  
Yuki Muramoto, Yoshihisa Nakatoh, Hideaki Kawano, Japan
- B7. Utilizing Social Media in Tourism Industry Sustainability Strategy in Indonesia Post COVID-19 Pandemic  
Tasya Nurian Afifah, Erwan Sudiwijaya, Aly Aulia, Indonesia
- B8. The success of E-Participation in Supporting the development of Smart Cities in Spain, Italy, United States and Germany  
Nur Hidayatullah, Achmad Nurmandi, Indonesia
- B9. Analysis of the Objectivity of Mass Media during the COVID-19 Pandemic in Indonesia  
Roro Cahya Antika Putri, Fajar Junaedi, Indonesia
- B10. Covid-19 Pandemic Influence on University Students' Mental Health and Well-Being: The Case of Saudi Students  
Yousif Abdelrahim, Saudi Arabia

**SATURDAY, AUGUST 24**

**Poster Demonstration: 10:30 - 15:30**

**Room: Foyer**

- C1. Contributing to Chronemics - Multievents for Haptic Communication  
Nils-Krister Persson, Sweden
- C2. The effects of tactile stimulation and its imagery on sensorimotor EEG rhythms: incorporating somatic sensations in brain-computer interfaces  
Lev Yakovlev, Artemiy Berkmush Antipova, Nikolay Syrov, Maksimov Iaroslav, Daria Petrova, Matvey Bulat, Mikhail Lebedev, Alexander Kaplan, Russia
- C3. Can blockchain technology solve the counterfeit problem within the high-fashion and luxury resale industry?: A systematic review  
Vida Pashaei, Pouya Pashaei, United States
- C4. Traffic Density Estimation Using Vehicle ADAS Data  
Jisun Lee, South Korea



# 2023 IHIET-AI International

9<sup>th</sup> International Conference on

## Human Interaction & Emerging Technologies: Artificial Intelligence & Future Applications

April 21-23, 2023

Lausanne, Switzerland



[WWW.IHIET-AI.ORG](http://WWW.IHIET-AI.ORG)