



2026

IHIET

International

17th International Conference on

Human Interaction & Emerging Technologies: Future Systems and Design Applications (IHIET-FS 2026)

June 22-24, 2026

Kodolányi University
Budapest, Hungary

Final Program

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IHIET-FS 2026

Conference Reception

MONDAY JUNE 22, 2026 - 19:00-22:00

**RECEPTION LOCATION: HILTON BUDAPEST
BUDAPEST, HESS ANDRÁS TÉR 1-3, 1014 HUNGARY**

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

Conference Organization

Host Conference Chair:

Tibor Barath, Hungary

Organizing Chair

Tareq Ahram, USA

Scientific and Technical Session: June 23-24, 2026

Location: Kodolányi János University - Budapesti Nemzetközi Campus

Address: Budapest, Prielle Kornélia u. 47-49, 1117 Hungary

CONFERENCE ADMINISTRATOR:

ADMIN@IHIET-FS.ORG

CONFERENCE SUPPORT:

SUPPORT@IHIET.ORG

Scientific Tracks

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



Conference at a Glance

Scientific and Technical Session: June 23-24, 2026
 Location: Kodolányi János University - Budapesti Nemzetközi
 Address: Budapest, Prielle Kornélia u. 47-49, 1117 Hungary



Tuesday – Wednesday, June 23-24, 2026

#	SESSION TITLE	ROOM	TRACK
Day 1: Tuesday June 23, 2026 - Session Time: 9:00 - 10:00 GMT+1			
1	Opening Session: Human–Artificial Intelligence Partnership in Education: Cloud Based Adaptive Learning Spaces and the New Norms of Teaching and Learning	Auditorium	All
10:00 - 10:30 • Sessions Break			
Day 1: Tuesday June 23, 2026 - Session Time: 10:30 - 11:30 GMT+1			
2	Human-centered Design I	1	IHIET 1
3	Future Systems and Emerging Technologies	2	IHIET 10
11:30 - 12:00 • Sessions Break			
Day 1: Tuesday June 23, 2026 - Session Time: 12:00 -13:00 GMT+1			
5	Augmented, Virtual and Mixed Reality Simulation I	1	IHIET 3
6	Discussion Group: Emerging Technology and Future Trends	2	IHIET 7
7	Human-Centred Healthcare	3	IHIET 6
End of Day 1 Sessions			
Day 2: Wednesday June 24, 2026 - Session Time: 9:00 - 10:00 GMT+1			
8	Plenary Title: Personalized Learning Through Digital Nudge Applications in the AI Era	Auditorium	IHIET 5
10:00 - 10:30 • Sessions Break			
Day 2: Wednesday June 24, 2026 - Session Time: 10:30 - 11:30 GMT+1			
9	Human–computer Interaction Applications	1	IHIET 5
10	Human-centered Design II	2	IHIET 1
11	Emerging Technologies and Business Applications	3	IHIET 8
11:30 - 12:00 • Sessions Break			
12	Augmented, Virtual and Mixed Reality Simulation II	1	IHIET 3
13	Human-Technology and Future of Work	2	IHIET 7
14	Human-centered Design III	3	IHIET 1
End of Day 2 Sessions			



Detailed Program

DAY 1

Welcome Remarks and Opening Session

Room: Auditorium

Opening SESSION

Opening Remarks:

Dr. László Kovács, Vice-rector for Education

Kodolanyi Janos University (KJU), Budapest, Hungary

Plenary Session Chair(s):

Tibor Barath, Hungary and Tareq Ahram, USA

Tuesday, June 23 9:00 - 10:00 GMT+1

Plenary Speech: Human–Artificial Intelligence Partnership in Education: Cloud Based Adaptive Learning Spaces and the New Norms of Teaching and Learning

Speaker: Prof. György Molnár, Óbuda University, Hungary



Speaker Bio: Prof. Dr. György Molnár, full professor, former dean of the Kálmán Kandó Faculty of Electrical Engineering at Óbuda University, head of teacher education at the Ágoston Trefort Centre for Engineering Education, programme director of the engineering teacher training, head of the Centre's academic unit, and former senior expert and professional developer at the Educational Authority. He is also a professor at Széchenyi István University.

He holds degrees as an electrical engineer–engineering teacher and biomedical engineer, and is a Doctor of Education (PhD), as well as a certified public education leader. He is an active member of numerous scientific and professional committees (MTA, MAB, SZIT, MPT, HERA, IKT). He has been a recipient of the János Bolyai Research Scholarship and the ÚNKP Scholarship, and is a Master Teacher Gold Medal awardee. He is an active member of several national and international scientific organisations. Since 2001, he has been continuously involved as a university lecturer in teaching and research issues in the higher education system. In addition to his core ICT-based research topics, he has been involved in the role of informatics and engineering education, methodological and technological innovation in vocational education and training, and the use of digital pedagogy, experiential pedagogy and artificial intelligence, which have also given him the opportunity to research new modern, atypical and electronic teaching-learning pathways.

DAY 1	IHIET 1	Room: 1
SESSION 2	Human-centered Design I	
Tuesday June 23	Session Chair(s): Ana Sofia Colim, Portugal and Hironao Yamada, Japan	
10:30 - 11:30 (GMT+1)	Enhancing Operability of Glove-Type Power-Assist Systems: Descent-Assist Mechanism based on Human Centered Design Hironao Yamada, Japan	
	Towards an Ergonomic Assessment Framework for Innovative Digital Interfaces: A Multimethod Approach with a Smart-Building Use Case Ana Colim, André Cardoso, Filipe Moreira, Manuel Alves, Ricardo Rodrigues, Rosana Alexandre, Portugal	
	Human-Centered Assessment Methods for Smart Building Systems: A Systematic Review of Ergonomics and Human Interaction André Cardoso, Rosana Alexandre, Filipe Moreira, Ana Colim, Portugal	
	Empowering Nursing Mothers: A Bioinspired Wearable Breast Pump Fostering Emotional and Physiological Well-being. Gabriela Duran-Aguilar, Alberto Rossa-Sierra, Mariel Garcia-Hernandez, Fabiola Cortes-Chavez, Alejandro Emmanuel Perez Lopez, Fernando Dávalos Hernández, Mexico	
DAY 1	IHIET 10	Room: 2
SESSION 3	Future Systems and Emerging Technologies	
Tue June 23	Session Chair(s): Letizia Artioli, Italy and Bo-cheng Huang, Taiwan	
10:30 - 11:30 (GMT+1)	Deep-Learning Assisted Digital Twin of Stereo Camera for non-Invasive Underwater Fish Biomass Estimation Hsun Yu Lan, Bo-Cheng Huang, Shyi-Chyi Cheng, Taiwan	
	Environmental Digital Twins: a review of challenges and opportunities Letizia Artioli, Giovanni Borga, Pietro Costa, Italy	
	Methodical Approach for the Development of Multi Domain Testing Environments for Stable Operation Under Impulse Excitation Sascha Hasenoehrl, Johannes Klotz, Patric Grauberger, Sebastian Zimprich, Niklas Bargaen-Herzog, Jiahang Li, Marcus Geimer, Sven Matthiesen, Germany	
	E-learning Design for Visually Impaired Students Theresa Lobo, United States	
	11:30 - 12:00 • Sessions Break	

DAY 1	IHIET 3	Room: 1
SESSION 5	Augmented, Virtual and Mixed Reality Simulation I	
Tue June 23	Session Chair(s): Agnieszka Rek-Lipczyńska, Poland and Alan Liu, USA	
12:00 -13:00 (GMT+1)	The Wide Area Virtual Environment (WAVE): Advances in Immersive Medical Team Training Alan Liu, United States	
	Virtual Reality Simulation as a Tool for Salutogenic and Multisensory Interior Design: A Human-Centric Well-Being Approach Agnieszka Rek-Lipczyńska, Poland	
	Virtual Reality for Safe Integration of Collaborative Robots Gabin Personeni, Daniil Danilovskii, Adriana Savescu, France	
	Presenting ADS-B Labels in a Conventional and in a Remote Virtual Tower Environment: Beneficial or Disruptive? Jörn Jakobi, Julia Schön, Sara Bagassi, Tommaso Fadda, Italy	
DAY 1	IHIET 7	Room: 2
SESSION 6	Discussion Group: Emerging Technology and Future Trends	
Tue June 23 12:00 -13:00 (GMT+1)	Session Chair(s): Pedro Agua, Portugal Scope of Round Table Session: This round table gather researchers and leaders in different fields to discuss current and future trends in Emerging Technologies.	
DAY 1	IHIET 6	Room: 3
SESSION 7	Human-Centred Healthcare	
Tue June 23	Session Chair(s): C Donald Combs, United States and Marco Rocchetti, Italy	
12:00 -13:00 (GMT+1)	Challenges of Moving Beyond Digital Twins to Digital Patients C Donald Combs, United States	
	Structural Risk Recalibration and Stochastic Stationarity in Localized Large-Scale Health Data: An Intelligent Difference-in-Differences Framework Marco Rocchetti, Italy	
	Design and development of an electronic oral medication dispenser for older adults Alberto Rossa-Sierra, Mariel Garcia-Hernandez, Gabriela Duran-Aguilar, Fabiola Cortes-Chavez, David Vidaña-Zavala, Mexico	
	End of Day 1 Sessions	

PLENARY SESSION

Day 2 Plenary Session: Human-computer Interaction

Wed June 24

Plenary Session Chair(s): Tibor Barath, Hungary and Tareq Ahram, USA**9:00 - 10:00
(GMT+1)****Plenary Title:** Personalized Learning Through Digital Nudge Applications in the AI Era
Speaker: Chei Sian Lee, Nanyang Technological University, Singapore

Speech Summary: This presentation examines the role of digital nudging applications in personalizing learning. Digital nudging, a concept based on behavioral economics, can be understood as informational cues and signals that positively influence online behaviors. Informed by ongoing research initiatives, this presentation explores how digital nudge applications can be embedded in digital learning environments to guide learners, with implications for practical application in the AI era. The talk further explores human-computer interaction, user perceptions, acceptability, ethical considerations, and future directions for digital nudges in both research and practice, focusing on how digital nudges can be responsibly designed to foster personalized and meaningful online experiences in the era of AI.



About Speaker: Chei Sian Lee is currently Professor of Information at the Wee Kim Wee School of Communication and Information at Nanyang Technological University (NTU) in Singapore, where she is also the Associate Chair for Faculty and the Chair of the NTU Teaching Council. She heads the Laboratory for Online Information Research and Education, where she conducts research on human-computer interaction and information practices, and digital nudging for learning. Widely recognized for her impactful contributions, she has been ranked on the Stanford-Elsevier World's Top 2% Scientists List and is frequently invited as a keynote speaker at major conferences. She received a PhD from the University of Illinois at Chicago, Liautaud Graduate School of Business, as well as an M.Sc. and a B.Sc. in Computer and Information Science from the National University of Singapore.

10:00 - 10:30 • Sessions Break

SESSION 9

Human-computer Interaction Applications

Wed June 24

Session Chair(s): Chao-his Cheng, Taiwan and Samuel Silva, Portugal**10:30 - 11:30
(GMT+1)**Multimedia Web Content Generation Using Large Language Models with Chain-of-Thought Reasoning Strategy
Cheng Chao-Hsi, Shyi-Chyi Cheng, Hsun Yu Lan, TaiwanBEHOLD: An Extensible Eye-Tracking Infrastructure Supporting Multimodal, Multi-Device Interaction Evaluation
Hugo Correia, Samuel Silva, Bernardo Marques, Liliana Vale Costa, PortugalHuman-AI Collaborative Learning: AI-Enhanced Project-Based Learning for Future Technology Prototyping in Higher Education
Rabaa Alabdulrahman, Saudi Arabia**Continue...**

SESSION 9		Human-computer Interaction Applications	
Continue...			
Emotional Interfaces and Sensorimotor Skill Learning in Interactive Training Systems Amic Ho, P. W. Chau, Hong Kong SAR China			
Low-SNR Signal Classification Using Raw I/Q Learning in MATLAB Robert Sandor Kovacs, Hungary			
DAY 2		IHIET 1	Room: 2
SESSION 10		Human-centered Design II	
Wed June 24	Session Chair(s): Mehmet Erçin Okursoy, Turkey and Omar Alsaleh, Saudi Arabia		
10:30 - 11:30 (GMT+1)	Designing a Wearable Mental Health Tracker: A Seven-Week Collaboration with a Health-Tech Startup Mehmet Erçin Okursoy, Turkey		
	Advanced Digitization and CAD Simulation: Technological Convergence, Skills, and Innovation for a Circular Fashion Industry Teresa Raquel Barata, Marta Bicho, Sandra Ferreira, Nuno Monteiro, Nuno Belino, Rui Miguel, Madalena Pereira, Portugal		
	Bridging Traditional Islamic Scholarship and Modern AI: A Human-Centered Voice Recognition System for Quran Reciter Identification Omar Alsaleh, Saudi Arabia		
DAY 2		IHIET 8	Room: 3
SESSION 11		Emerging Technologies and Business Applications	
Wed June 24	Session Chair(s): Hsun Yu Lan, Taiwan and Hiroyuki Hasegawa, Japan		
10:30 - 11:30 (GMT+1)	Formulating Cybersecurity Strategies in Corporate Management: Business Strategy and Cybersecurity Hiroyuki Hasegawa, Kenji Watanabe, Ichiro Koshijima, Masahiro Arakawa, Japan		
	Design of an Intelligent Agent for Offshore Cage Aquaculture Based on a Cold-Damage Early-Warning Model Hsun Yu Lan, Chi-Lin Tsai, Shyi-Chyi Cheng, Taiwan		
	Acceptance of Social Robots in Institutional Reception Services: Findings from a Focus Group Study Using Temi Selin Sengül, Brigitte Meier, Chantal Meier, Pascal Meier, Marc Zeugin, Oliver Christ, Switzerland		
	Interpretable Analysis of Rainfall-Runoff Forecasting Using MLP and Perturbation-based Approach in the Sisaony River, Madagascar Hanitriniaina Marielle Rakotozanany, Pierre Nicolle, Josué Ratovondrahona, Bob Saint-Fleur, Andry Razakamanantsoa, Samuel Razanaka, Mahatody Thomas, Olivier Payrastre, Madagascar		
	11:30 - 12:00 • Sessions Break		

DAY 2

IHIET 3

Room: 1

SESSION 12

Augmented, Virtual and Mixed Reality Simulation II

Wed June 24

Session Chair(s): Fabio Barros and Bernardo Marques, Portugal

**12:00 -13:00
(GMT+1)**

An Adaptive XR Platform for Multimodal Public Speaking Training and Performance Assessment
Lia Cardoso, Hugo Correia, Bernardo Marques, Paulo Dias, Samuel Silva, Beatriz Sousa Santos, Portugal

Designing Together at a Distance: Mediating Industrial Remote Co-Design Through eXtended Reality Technologies
Fábio Barros, Pedro Reisinho, Bernardo Marques, João Alves, Mariana Leite, Tiago Coelho, Jorge Neves, Jorge Figueiredo, Duarte Almeida, Carlos Ferreira, Paulo Dias, Beatriz Sousa Santos, Portugal

The contribution of artificial intelligence for optimization pattern cutting plan to reducing textile industry waste in fashion design solutions
Sandra Ferreira, Rui Miguel, Teresa Raquel Barata, Marta Bicho, Joaquim Trindade, Madalena Pereira, Portugal

Mixed Reality–Driven Rehabilitation Using a Robotic Exoskeleton and an Immersive Game-Based Interface
David González, Guillermo Aguilera, Jeronimo Rueda Giraldo, Iván Mondragón, Wilson Hernandez, Catalina Alvarado, Diego Mendez, Julian Colorado, Colombia

DAY 2

IHIET 7

Room: 2

SESSION 13

Human-Technology and Future of Work

Wed June 24

Session Chair(s): Johannes Klotz, Germany and Abiodun Afolayan Ogunyemi, Estonia

**12:00 -
13:00 (GMT+1)**

Design of a Hydraulic Substitute Base for Demolition Hammers
Johannes Klotz, Sascha Hasenoehrl, Sven Matthiesen, Marcus Geimer, Germany

Mapping Knowledge Creation in Digital and Workplace Environments: A Data-Driven Scoping Review of Triological Learning
Abiodun Afolayan Ogunyemi, Estonia

User Acceptance and Perceptions of IoT-Based Smart Trash Bin Systems for Smart Waste Management
Rabaa Alabdulrahman, Shubashini Velu, Saudi Arabia



Budapest

SESSION 14

Human-centered Design III

Wed June 24

Session Chair(s): Sedef Süner-Pla-Cerdà , Turkey and Siyuan Gu, China**12:00 -13:00
(GMT+1)**Balancing Automation with Designerly Autonomy: A UX-Driven Design Intervention
Sedef Süner-Pla-Cerdà, TurkeyDesign Strategy of Identity Information Management for Selective Self-Presentation (SSP) in Computer Mediated Communication (CMC)
Siyuan Gu, ChinaDesigning for Emotional Memory: Affective User Interfaces for Learning
Amic Ho, Hong Kong SAR ChinaHuman-Centered Design: A Playful Tool for Teaching HCD in the Design Process
Fabiola Cortes-Chavez, Mariel Garcia-Hernandez, Elvia Luz Gonzalez Muñoz, Gabriela Duran-Aguilar, Alberto Rossa-Sierra, Mexico

Poster Demonstrations

Tue - Wed, June 23-24, 2026 [9:00 - 13:00]

- A-1** Challenges in the integration of Artificial Intelligence (AI) in the construction safety and health management
Antonio López Arquillos, María Del Carmen Rey Merchán, Jesús Gómez-De-Gabriel, Spain
- A-2** Comparative Analysis of Injury Severity in Crashes Involving Drivers Undergoing Driving Fitness Evaluations and Control Drivers
Sangsu Kim, Younshik Chung, South Korea
- A-3** Selection and Application of Representative Urban Road Links for Carbon Emission
Choongheon Yang, Jinguk Kim, South Korea
- A-4** Traffic Flow Analysis in Mixed Environments with Autonomous and Human-Driven Vehicles
Maftuh Ahnan, Dukgeun Yun, South Korea
- A-5** Neural Differentiation of Social Status Commodities and General Goods: Insights from EEG Analysis
Sang Hee Kweon, Boyoung Kang, South Korea
- A-6** Crash Severity Mechanisms Among Older At-Fault Drivers: Evidence from Age-Stratified Structural Equation Models
Borim Choi, Younshik Chung, South Korea

Call for Papers

Please join us for the

19th International Conference on

Human Interaction and Emerging Technologies (IHIET-AI 2027)

**Artificial Intelligence &
Future Applications**

April 5-7, 2027

**Palma de Mallorca
Spain**

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Call for Papers

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**18th International Conference on
Human Interaction and
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August 26-28, 2026

**Università Iuav di Venezia
Venice, Italy**

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