



# 2025 **IHIET** International

**14<sup>th</sup> International Conference on  
Human Interaction &  
Emerging Technologies:  
Future Systems and  
Artificial Intelligence  
(IHIET-FS 2025)**

**June 10-12, 2025**

**School of Architecture, Computing &  
Engineering (ACE)**

**University of East London  
London, United Kingdom**

# **Final Program**

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

# IHIET-FS 2025

## Conference Reception

**TUESDAY JUNE 10, 2025 - 18:00 - 22:00**

**RECEPTION LOCATION: FREMANTLE AT CROWNE PLAZA LONDON DOCKLANDS  
ROYAL VICTORIA DOCK, WESTERN GATEWAY, LONDON E16 1AL, UNITED KINGDOM**  
(Dress is business casual, Conference Registered Participants, Photo ID required)

## Conference Organization

### **Honorary Conference Chairs:**

Andrew Arewa, University of East London, United Kingdom  
Seyed Ali Ghorashi, University of East London, United Kingdom

### **Scientific and Technical Session: June 11 - 12, 2025**

Location: Royal Dock Sustainability Centre (RDSC), University of East London (UEL), Faculty of Architecture, Computing and Engineering (ACE)  
Address: Dockland Campus, University Way, London, E16 2RD,  
United Kingdom

### **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:** Wednesday – Thursday, June 11 - 12, 2025  
Location: Royal Dock Sustainability Centre (RDSC) at University of East London  
Faculty of Architecture, Computing and Engineering (ACE)  
Address: Dockland Campus, University Way, London, E16 2RD,  
United Kingdom

## Wednesday - Thursday, June 11 - 12, 2025

#	SESSION TITLE	ROOM	TRACK
Day 1: Wednesday, June 11 - Session Time: 9:00 - 10:00 (GMT+1)			
	Opening Session: The Metavethics of Care: Ethics, Integrity, and AI in the Healthcare	Room 1	All
10:00 - 10:30 • Sessions Break			
Day 1: Wednesday, June 11 - Session Time: 10:30 - 12:00 (GMT+1)			
1	Human-Technology and Future of Work I	Room 1	IHIET 4
2	Artificial Intelligence, Simulation and Intelligent Design	Room 2	IHIET 2
12:00 - 12:30 • Sessions Break			
Day 1: Wednesday, June 11 - Session Time: 12:30 -14:00 (GMT+1)			
4	Applications in Medicine and Healthcare I	Room 1	IHIET 8
5	Human-Technology and Future of Work II	Room 2	IHIET 1
14:00 - 15:00 • Lunch Break			
Day 2: Thursday, June 12 - Session Time: 9:00 - 10:00 (GMT+1)			
6	1st Plenary Speech: Empowering Migrant Care Workers through Emerging Technologies.  2nd Plenary Speech: Turning Lessons into Action: Transforming Incidents into Progress in Oil and Gas	Room 1	All
10:00 - 10:30 • Sessions Break			
Day 2: Thursday, June 12 - Session Time: 10:30 - 12:00 (GMT+1)			
7	Applications in Medicine and Healthcare II	Room 1	IHIET 8
9	Emerging Technologies and Business Applications	Room 2	IHIET 1
12:00 - 13:00 • Lunch Break			



# Detailed Program

## DAY 1

**Plenary**      **Opening Session**  
**Room: 1**



**University of  
East London**

**Wednesday, June 11 - 9:00 - 10:00 (GMT+1)**

### **Welcome and Opening Remarks**

Professor Hassan Abdalla, Provost, University of East London

Professor David B. Tann, Vice Provost (Technology) & Executive Dean of School Architecture, Computing and Engineering (ACE), University of East London

### **Plenary Speech:**

The Metavethics of Care: Ethics, Integrity, and AI in the Healthcare

**Speaker:** Dr. Matteo Zallio, Cambridge University

**Plenary Summary:** As AI-driven avatars, generative worlds, and real-time emotion recognition propel us into an immersive renaissance, the ethical design of virtual environments becomes especially critical in fields like healthcare. From virtual care spaces and therapeutic simulations to AI-assisted diagnostics in immersive settings, we must embed inclusive design, robust DEI frameworks, and sustainable principles to ensure these technologies serve all people equitably. In this session, Dr. Zallio will introduce the Metavethics framework, a convergence of AI ethics, accessibility, and integrity, with a focus on guiding businesses, healthcare innovators, and policymakers in creating transparent, human-centered, and ethically sound Metaverse experiences.



**Speaker Bio:** Dr. Matteo Zallio is an award-winning designer, researcher, and professor dedicated to making emerging technologies accessible and inclusive for everyone. With unique experience helping businesses transform challenges into opportunities, he specializes in researching and developing human-centric technologies. Matteo is an Assistant Professor at the University of Cambridge, founder of the Metavethics Institute, and an Adjunct

Faculty Member at Dublin City University. Previously, he was a Fulbright Research Fellow at Stanford University and an A. Graves Research Fellow at Technological University Dublin. Matteo has also founded a start-up, worked for leading S&P 500 tech companies, including Autodesk and Amazon, and authored several books on design and technology



<b>Wednesday, June 11, 2025</b> <b>10:30 - 12:00 Technical Sessions</b>	
<b>DAY 1</b>	<b>Track: IHiet 4 Room: 1</b>
<b>SESSION 1</b>	<b>Human-Technology and Future of Work I</b>
<b>Wednesday, June 11</b>	<b>Session Chair(s): Lorraine Hagemann, Germany and Mark Tsagas, United Kingdom</b>
10:30 - 12:00 (GMT+1)	Enabling the Transfer of Large Files Across Security Domains in a Multinational Environment Lorraine Hagemann, Philipp Klotz, Dennis Giebel, Germany
	Defining Autonomous Weapon Systems: A Conceptual Overview of Existing Definitory Attempts and the Effectiveness of Human Oversight Mark Tsagas, United Kingdom
	Exploring the Effect of Wearable Digital Devices (WDDs) on Adverse Occupational Health and Safety Practices of High-Risk Workers Oluwafemi Olatoye, Andrew Arewa, United Kingdom
	Evaluating the Effectiveness of Machine Learning Algorithms in Stock Price Prediction Across Different Time Frames Kenneth Y T Lim, Amy Low, Isabella Lim, Singapore
<b>DAY 1</b>	<b>Track: IHiet 2 Room: 2</b>
<b>SESSION 2</b>	<b>Artificial Intelligence, Simulation and Intelligent Design</b>
<b>Wednesday, June 11</b>	<b>Session Chair(s): Seyed Ali Ghorashi and Mabel St Germaine, United Kingdom</b>
10:30 - 12:00 (GMT+1)	AI Mobilisation Implications for Business Strategy - Importance of Data Analytics knowledge at Corporate-Level Mabel St Germaine, United Kingdom
	Transforming Elderly Care with Vision-Based Hand Gesture Recognition: A Deep Learning Framework Seyed Ali Ghorashi, Riazul Islam, United Kingdom
	AI Powered Diabetes prediction using Business Process Modelling Notation (BPMN) and Regression Models Aloysius Dr Edoh, Kenneth Fawole, Saeed Sharif, Nidharshanen Selliah, United Kingdom

	<p>Negotiated agency: the constant deliberation between the player's abilities and developer's permissions Thais Weiller, Mauricio Perin, Pedro Campos, Vanessa Cesário, Finland</p>
	<b>12:00 - 12:30 • Coffee Break</b>
<b>DAY 1</b>	<b>Track: IHiet 8 Room: 1</b>
<b>SESSION 4</b>	<b>Applications in Medicine and Healthcare I</b>
<b>Wednesday, June 11</b>	<b>Session Chair(s): Vikraman Baskaran, United States Ahmed Elgebaly, United Kingdom</b>
12:30 -14:00 (GMT+1)	<p>Architectural Analysis of RFID Integration in Medical Device Logistics: A Healthcare Information Systems Study Vikraman Baskaran, Denny Nguyen, United States</p>
	<p>Integrated U-Net-VGG-16 Architecture for Segmentation and Differential Diagnosis of Retinal OCT Images Ahmed Elgebaly, Rawad Hammad, Mohamed Imam, Hassan Abdalla, Ahmed Althaher, United Kingdom</p>
	<p>A Machine Learning-Powered Decision Tool to Predict Knee Arthroplasty in Patients with Osteoarthritis Ahmed Elgebaly, Atef Abdelrahman, Rawad Hammad, Mohamed Imam, Hassan Abdalla, Ahmed Althaher, United Kingdom</p>
	<p>Skin Cancer Diagnosis Using Machine Learning Techniques Bahlol Jabarkhail, Zainb Dawod, Saeed Sharif, United Kingdom</p>
	<p>Early Detection of Arthritis Using Convolutional Neural Networks and Explainable AI Binta Ade-olusile, Zainb Dawod, Saeed Sharif, United Kingdom</p>
<b>DAY 1</b>	<b>Track: IHiet 1 Room: 2</b>
<b>SESSION 5</b>	<b>Human-Technology and Future of Work II</b>
<b>Wednesday, June 11</b>	<b>Session Chair(s): Lotte Wagner Douglas, Germany and Manuel Delaflor, United Kingdom</b>
12:30 -14:00 (GMT+1)	<p>Enhancing the Viability of Battery-Electric Trucks in Long-Distance Freight Transport: Assessing the User Acceptance of Overhead Line Technology Lotte Wagner-Douglas, Emma Höfer, Regina Linke, Stefan Ladwig, Germany</p>

	<p>Cognitive Science and Information Technologies in Team Sports: Enhancing Performance and Safety  Sebastien Tremblay, Carolane Croteau, Mireille Patry, Helen Hodgetts, Cindy Chamberland, Canada</p>
	<p>Artificial Intelligence as Self-Instantiated, Temporally Continuous, Disturbance-Driven Adaptive World-BUILDER  Manuel Delaflor Rodriguez, Cecilia Delgado Solorzano, Carlos Toxtli, United Kingdom</p>
	<p>Knowledge Evolution and Scientific Breakthroughs triggered by AI Hallucinations - A Paradigm Shift?  Anastasia-Maria Leventi-Peetz, Nikolaos Zacharis, Germany</p>
	<p>Talent Development and Retention in Industry 4.0: Strategy to Overcome Talent Challenges in VUCA Environments and Drive Digital Transformation with Agility  Gabriela Guadalupe Reyes Zárate, Eduardo Arturo Garzón Garnica, Mexico</p>
	<b>14:00 - 15:00 • Lunch Break</b>
<b>DAY 2</b>	<b>Track: IHiet 2 Room: 1</b>
<b>Plenary</b>	<p><b>1st Plenary Speech:</b>  <b>Empowering Migrant Care Workers through Emerging Technologies: Bridging Cultural and Digital Gaps in the Global Care Sector</b></p>
<b>Thursday, June 12</b>	<b>Speaker: Dr. Rashed Khan, University of Salford, United Kingdom</b>
<p><b>Schedule: 9:00 - 9:30 (GMT+1)</b>  <b>Speech Summary:</b> In today's increasingly interconnected world, care systems across the globe are relying on internationally recruited care workers to meet growing demand. These workers often face multiple layers of adjustment: adapting to unfamiliar national cultures, navigating multicultural workplaces, and delivering care to service users from a wide range of cultural and linguistic backgrounds. This workshop explores how emerging technologies—such as AI-powered translation tools, mobile learning platforms, virtual reality, and digital wellbeing apps—can support migrant care workers in their journey toward cultural competence, digital literacy, and confident caregiving. Drawing on early research insights and global care trends, the session invites participants to share perspectives and co-create inclusive, tech-enabled strategies that enhance communication, dignity, and equity in care. Together, we will examine how technology can be leveraged to foster not only effective onboarding, but also the delivery of culturally responsive care in increasingly diverse care environments around the world.</p>	



**Speaker Bio:** Dr Mohammad Rashed Khan is a lecturer in International Business and Marketing at the University of Salford. Before joining Salford, he was a lecturer of Marketing at the Greater Manchester Business School, University of Bolton and Global Banking School, Manchester. He is a member of the Chartered Management Institute (CMI) and the Chartered Institute of Personnel and Development.

## Plenary

**2nd Plenary Speech:**  
**Turning Lessons into Action: Transforming Incidents into Progress in Oil and Gas**

**Thursday,  
June 12**

**Speaker: Dr. Ismaeel Husain , International Association of Oil & Gas Producers (IOGP), United Kingdom**

**Schedule: 9:30 - 10:00 (GMT+1)**

**Speech Summary:** High-level themes of my speech: incident statistic from IOGP, three top themes of why we are not learning from our incidents and way forward.



**Speaker Bio:** Ismaeel has more 20 years of experience in safety and occupational hygiene management, organisational culture, process safety, vocational training, training assessment, training quality and marine engineering. He participated as a speaker, panel discussion moderator and conference steering committee member in more than 70 national and international conferences. His

research interests include human and organisational performance, organising, culture studies, chronic unease, sensemaking and normalising of deviance. Ismaeel is a marine engineer graduated from Southampton Solent University, holds a Master Degree in environment, health and safety from Sunderland University and a Doctorate Degree from Bradford Business School, University of Bradford. Ismaeel is a non-executive board member of Oil Spill Response Limited (OSRL) based in Southampton, currently the Senior Health and Safety Manager at the International Association of Oil and Gas Producers (IOGP) and will assume a new position as Group VP HSSE at Bapco Energies at the end of 2025.

**DAY 2**

**Track: IHiet 8 Room: 1**

**SESSION 7**

**Applications in Medicine and Healthcare II**

**Thursday,  
June 12**

**Session Chair(s): Saeed Sharif and Rawad Hammad, United Kingdom**

**10:30 -  
12:00 (GMT+1)**

**Transforming Mental Health Assessment: Machine Learning for Early Detection and Personalized Care Among College Students**

Madhav Theeng Tamang, Saeed Sharif, Seyed Ali Ghorashi, United Kingdom

**Development Of AI-Powered Modelling To Predict Sports And Exercise-Related Tendinopathies In Youth Athletes (SMART Study)**

Ahmed Elgebaly, Rawad Hammad, Mohamed Imam, Hassan Abdalla, Ahmed Althaher, United Kingdom



Hybrid Deep Learning Healthcare AI Framework for Real-Time Human Pose Estimation and Remote Patient Monitoring to Support TKR Physiotherapy  
Hisham Abougrad, Manasa Yegamati, Mimi Mather, United Kingdom

Development of an Automated System for Cardiomyocyte Activity Using Computer Vision  
Mohammed Noman Mohammed Arif, Qazi Nadeem, Prashant Ruchaya, Mustansar Ali Ghazanfar, United Kingdom

Vision Transformer-Based Image Captioning for the Visually Impaired  
Qazi Nadeem, Indra Dewaji, Nawaz Khan, United Kingdom

**DAY 2**

**Track: IHiet 1 Room: 2**

**SESSION 9**

**Emerging Technologies and Business Applications**

**Thursday,  
June 12**

**Session Chair(s): Olivier Malhomme, France and Shu-hsien Liao, Taiwan**

**10:30 -  
12:00 (GMT+1)**

In-depth analysis of nuclear data flow using graph theory and the Technology, Organization, People Model through the application of betweenness centrality measure and community detection  
Luigui Salazar, Olivier Malhomme, Xianyun Zhuang, Robert Plana, Nicolas Bureau, France

Social media and internet celebrity for social commerce intentional and behavioral recommendations  
Shu-Hsien Liao, Yao-Hsuan Yang, Taiwan

SmartAI: Enhancing Scene Understanding by Combining Different AI Technologies  
Adnan Agbaria, Yael Dubinsky, Israel

Application of Emerging NoSQL Databases in IoT and Cloud Computing  
Noel Bila, Jude Mwamba Nzambi Batubenga, Paul Bombo, Aloysius Adotey Edo, Pierre Motumbe Kasengedia, Eugene Mukendi Mbuyi, Fidele Balibuno Luganga, United Kingdom

**12:00 - 13:00 • Lunch Break**





# Poster Demonstrations

## SESSION A

### Poster Demonstration Session

Wednesday-Thursday, June 11-12 [10:30 - 13:00]

**A-1**

Development of the stages of occupational stress of computer workers using neuro-physiological and neuro-psychological methods

Piia Tint, Viiru Tuulik, Estonia

**A-2**

Assessment of Upper Limb Functional Workspace through Inertial Measurement Units: a Pilot Study

Matteo Iurato, Ronny Stanzani, Mirko Job, Andres Gaggero, Igor Ingegnosi, Marco Testa, Italy

**A-3**

Developing Optimal Affordance Detection Technology Using Genetic Algorithm based on Posture Primitives on Atypical Surfaces

Yun Gil Lee, South Korea

**A-4**

Effectiveness of Knowledge Models for Visual Object Detection

Satoru Inoue, Mark Brown, Taro Kanno, Japan

**A-5**

A versatile data-governance framework leveraging cloud, blockchain and AI for enhanced decision making in UK higher education and beyond

James Jackson, United Kingdom

**A-6**

Implementing Intelligent Automation to improve business processes and operational efficiency in healthcare institutions

Julia Siderska, Aini Suraya, Poland

**A-7**

Transformer-Driven Recognition of Daily Activities from Smartphone In-Pocket IMU Streams

Hossein Shahverdi, Seyed Ali Ghorashi, United Kingdom

**A-8**

Adaptive Behavior Selection for Humanoid Robots via Offline and Online Reinforcement Learning using Individualized User Feedback

Nobuhito Manome, Ung-il Chung, Japan

**A-9**

Environments that promote a better workspace

Selene Margarita Vázquez Soto, Jessica Vianney García Vázquez, Migel Ángel Cruz Domínguez Hernández, Mexico

**A-10**

Social Status Commodity and Social Brain Wave: EEG Analysis Results

Sang Hee Kweon, South Korea

# **Call for Papers**

**Please join us for the**

**16<sup>th</sup> International Conference on  
Human Interaction and  
Emerging Technologies  
(IHIET-AI 2026)**

**Artificial Intelligence &  
Future Applications**

**April 23-25, 2026**

**Universitat Politècnica de València  
Valencia, Spain**

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



# **Call for Papers**

**Please join us for the**

**14<sup>th</sup> International Conference on  
Human Interaction and  
Emerging Technologies  
(IHIET 2025)**

**August 25-27, 2025**

**University of Vienna  
Vienna, Austria**

**[WWW.IHIET.ORG](http://WWW.IHIET.ORG)**