

# **Detailed program of the International Conference on AI and Sustainability Advances (ICASA 2026)**

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**University of East London,  
School of Architecture, Computing and Engineering,  
Docklands Campus, University Way,  
E16 2RD, London, United Kingdom**

Note that all times are in BST (British Summer Time) Zone

# Wednesday 3<sup>rd</sup> June 2026

## Workshops

**08:30 – 09:00**      **Registration & Arrival Coffee**      **Location: RDCS Entrance**

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**09:00 – 13:00**

### **Workshop #1**

**FPGAs for AI: Build & Deploy Your Own Edge AI Accelerator**

Organisers: Prof Amirali Baniasadi, Dr Meisam Abdollahi

### **Workshop #3**

**Machine Learning Applications in Turbulent Flows**

Organisers: Prof Sergey Karabasov, Dr Nick Zang, Dr Elnaz Naghibi, Dr Vasily Grayzev

### **Workshop #4**

**The AI-WEB3 Crucible: Build, Break, Heal**

Organisers: Dr Mohammad Hashem Haghghat, Dr Katayoun Nozari, Mohammadali Mirzaei

### **Workshop #7**

**FROM DATA TO DEPLOYMENT: END-TO-END AI WITH MINIMAL CODE USING MATLAB**

Organiser: James Drummond (MathWorks)

### **Workshop #9**

**AI Co-Design**

### **Workshop #10**

**From Rules to Emergence - Shape Grammars in the Age of AI**

### **Workshop #11**

**Innovative Restoration of Heritage Sites using Robotics and 3D Printing**

**13:00 – 13:30**      **Lunch Break**

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**13:30 – 17:30**

### **Workshop #2:**

**From Data to Models: Reproducible AI for Next-Generation Traffic Simulation**

Organisers: Dr Davide Andrea Guastella, Dr Yijing Li, Dr Natalia García-Colín

### **Workshop #5**

**Rethinking the Assessment of Ageing Concrete Infrastructure: From Code-Based Methods to Alternative Approaches and AI-Enhanced Assessment**

Organisers: Dr Demitrios M. Cotsovos, Dr Sandhya Patidar

### **Workshop #6**

**Agentic AI for Sustainable Applications**

Organisers: Dr Mahdi Jelodari, Shamim Akbari Bavani

### **Workshop #8**

**FROM PROTOTYPE TO EDGE**

**DESIGN, OPTIMIZE, & DEPLOY AI MODELS USING MATLAB & SIMULINK**

Organisers: Akhil Gopinath (MathWorks)

**Workshop #9**

**AI Co-Design**

**Workshop #10**

**From Rules to Emergence - Shape Grammars in the Age of AI**

**Workshop #11**

**Innovative Restoration of Heritage Sites using Robotics and 3D Printing**

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**Thursday 4<sup>th</sup> June 2026**  
**Conference Day 1**

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**08:30 – 09:00**                      **Registration & Arrival Coffee**                      **Location: WB.G.01**

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**09:00 - 09:30**                      **Opening Session, Welcome**                      **Location: WB.G.02**

Prof. David Tann, Dean of ACE and UEL Vice-Provost (Technology)

Prof. Hasan Abdalla, UEL Vice-President

Prof. Matt Belgard, Pro-Vice Chancellor Impact & Innovation

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**09:30 - 10:00**                      **Morning Keynote Address 1**                      **Location: WB.G.02**

Prof. Nic Lane, University of Cambridge, UK

Title: (TBA)

**10:00 - 10:30**                      **Morning Keynote Address 2**                      **Location: WB.G.02**

Dr Lisa Cameron, Former Member of Parliament, UK

Title: "Engaging in Frontier Technology for Community Leaders"

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**10:30 - 11:00**                      **Morning Tea & Networking Break**                      **Location: WB.G.01**

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<b>11:00 - 12:30</b> <b>Location: WB.G.01</b> <b>Paper Presentation Morning Sessions</b> Session Chairs: Dr Ravindra Jayaratne Dr Komali Kantamaneni, University of Lancashire	<b>11:00 - 12:30</b> <b>Location: WB.G.02</b> <b>Paper Presentation Morning Sessions</b> Session Chairs: Dr Amin Karami Dr Mustansar Ghazanfar
<b>11:00 - 11:15</b> <b>Location: WB.G.01</b> <b>Paper ID: 58 -Track 5</b> <b>Title: Field Measurements for Agent-Based Evacuation Model Calibration in the Canadian Arctic: Supporting Data Driven Modelling Approaches</b> Authors: Calum Mackenzie, Joseph Kim, Ioan Nistor, Amir Ali Khan, Abolghasem Pilechi	<b>11:00 - 11:15</b> <b>Location: WB.G.02</b> <b>Paper ID: 14 -Track 1</b> <b>Title: Optimizing the Plastic Recycling Chain in Smart Cities: A Quantitative Approach Using YOLOv8 and Smart Contracts</b> Authors: Ana Paula Oliveira da Nobrega Costa, Lucas De Sa Gomes Licio, Claudia Jacy Barenco Abbas

<p><b>11:15 - 11:30</b>      <b>Location: WB.G.01</b>  <b>Paper ID: 84 -Track 5</b></p> <p><b>Title: Data-Centric Geotechnics: Explainable Tabular AI to Reconstruct Soil Parameters for Digital Ground Models</b></p> <p>Authors: Nikita Tishin , Sergei Chipeev , Oleg Ozmidov , Andrey Proletarskii</p>	<p><b>11:15 - 11:30</b>      <b>Location: WB.G.02</b>  <b>Paper ID: 12 -Track 1</b></p> <p><b>Title: Mechanistic Analysis of Rubber Particle Coagulation in Industrial Wastewater Using Computer Vision</b></p> <p>Authors: Nguyen Pham Hong Dao</p>
<p><b>11:30 - 11:45</b>      <b>Location: WB.G.01</b>  <b>Paper ID: 181 -Track 5</b></p> <p><b>Title: Bayesian Reliability Analysis of Heterogeneous Coal Tip Slopes under Rainfall Infiltration by Integrating Field Observations and Spatial Variability</b></p> <p>Authors: Honghu Jie, Guotao Ma, Mohammad Rezanian, Shuihua Jiang</p>	<p><b>11:30 - 11:45</b>      <b>Location: WB.G.02</b>  <b>Paper ID: 52 -Track 1</b></p> <p><b>Title: ENERGY-EFFICIENT ANTI-JAMMING ACCESS IN COGNITIVE RADIO NETWORKS: A DECEPTION-BASED TRANSFORMER-DDQN APPROACH</b></p> <p>Authors: ÖMER FARUK Dikmen, Burak Dikmen, Hasari Çelebi</p>
<p><b>11:45 - 12:00</b>      <b>Location: WB.G.01</b>  <b>Paper ID: 149 -Track 5</b></p> <p><b>Title: Toward a Unified Dimensionless Equation for Plunging Jet Scour Using Machine Learning</b></p> <p>Authors: Nilakshan Balasubramaniam, Thalasang Tshireletso, Ravindra Jayaratne, Meghdad Bagheri, Taeksang Kim, Jeremy Bricker</p>	<p><b>11:45 - 12:00</b>      <b>Location: WB.G.02</b>  <b>Paper ID: 143 -Track 1</b></p> <p><b>Title: Probabilistic AI for Smarter and Healthier Cities: A Case Study of Crime Prediction with Uncertainty in Birmingham</b></p> <p>Authors: Chulwoong Park, Mohammad Mayouf, Muhammad Afzal</p>
<p><b>12:00 - 12:15</b>      <b>Location: WB.G.01</b>  <b>Paper ID: 122 -Track 5</b></p> <p><b>Title: Interpretable Machine Learning for Predicting Rainfall-Induced Settlement in Unsaturated Slopes</b></p> <p>Authors: Meghdad Bagheri, Arya Assadi-Langroudi, Zahra Owjinezhad</p>	<p><b>12:00 - 12:15</b>      <b>Location: WB.G.02</b>  <b>Paper ID: 56 -Track 1</b></p> <p><b>Title: <i>Focal-Modulated Channel Attention in YOLOv8 for Underwater Fish Detection</i></b></p> <p>Authors: Dilip Bhakadiwal, Sunita Dhavale</p>
<p><b>12:15 - 12:30</b>      <b>Location: WB.G.01</b>  <b>Paper ID: 131 -Track 5</b></p> <p><b>Title: Trade-Offs in Machine Learning Approaches to Latent Rheological-Mechanical Associations in Heterogeneous Clays</b></p> <p>Authors: Arya Assadi-Langroudi, Meghdad Bagheri, Kasra Assadi-Langroudi, Sonia Isabel Davis</p>	<p><b>12:15 - 12:30</b>      <b>Location: WB.G.02</b>  <b>Paper ID: 21 -Track 1</b></p> <p><b>Title: Evaluating Diffusion-based Synthetic Images for Post-earthquake Structural Damage Classification</b></p> <p>Authors: Kaveesh Guwanindu Abeyesuriya, Mihaela Anca Ciupala, Seyed Ali Ghorashi, Alper Ilki</p>



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**15:30 - 16:00**                      **Afternoon Tea Break**                      **Location: WB.G.01**

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**16:00 - 17:30**                      **Panel Discussion**                      **Location: WB.G.02**

Moderator: Dr Nicola Hogan (UEL)  
Panellists: Sebastian Sahlender & Till Krumbholz (Siemens)  
Akhil Gopinath (MathWorks), Prof. Anusha Shah (Plan for Earth), Dr Anwar Khan (UEL), Prof. Keeley Crockett (Manchester Metropolitan university).

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**17:30 - 17:45**                      **Day 1 Closing Remarks/Announcements**                      **Location: WB.G.02**

Prof. David Tann, Dean of ACE and UEL Vice-Provost (Technology)  
Dr Seyed Ali Ghorashi, Director of Impact & Innovation, ACE

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**Friday 5<sup>th</sup> June 2026**  
**Conference Day 2**

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**08:30 - 09:00**                      **Arrival Coffee**                      **Location: WB.G.01**

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**09:00 - 09:30**                      **Morning Keynote Address 1**                      **Location: WB.G.02**

Prof. Ioan Nistor, University of Ottawa, Canada  
Title: "Tsunami Impacts and Effects: From Forensic Engineering, to Research Breakthroughs, to Development of Design Standard; a +two decades journey"

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**09:30 - 10:00**                      **Morning Keynote Address 2**                      **Location: WB.G.02**

Mr Ambarish Mitra, Greyparrot, UK  
Title: "Making waste visible with AI - the untapped opportunity of the shadow economy"

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**10:00 - 10:30**                      **Morning Tea & Networking Break**                      **Location: WB.G.01**

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<b>10:30 - 12:30</b> <b>Location: WB.G.01</b> <b>Paper Presentation Morning Sessions</b>  Session Chairs: Dr Antigoni Memou Dr Anastasia Karandinou	<b>10:30 - 12:30</b> <b>Location: WB.G.02</b> <b>Paper Presentation Morning Sessions</b>  Session Chairs: Dr Ameer Al-Nemrat Dr Ali Abbas
<b>10:30 - 10:45</b> <b>Location: WB.G.01</b> <b>Paper ID: 41 -Track 5</b>  <b>Title: Advanced Forecasting in Road Infrastructure Planning Using Machine Learning Approaches</b>  Authors: Sami Khairi, Ali Abbas, Alex Apeageyi, Saeed Sharif	<b>10:30 - 10:45</b> <b>Location: WB.G.02</b> <b>Paper ID: 43 -Track 2</b>  <b>Title: Journalism under Digital Repression: AI-Driven Surveillance and Cybersecurity as Professional Self-Defense in the MENA Region</b>  Authors: Miral AlAshry, Ketan Bhatt, Vibhu Johar, Dilip Kumar, Abhishek Dubey, Claudia Seabra

<p><b>10:45 - 11:00</b>      <b>Location: WB.G.01</b>  <b>Paper ID: 177 -Track 5</b></p> <p><b>Title: Experimental investigation of coastal structure vulnerability to sea level rise.</b></p> <p>Authors: Hasan Uz Zaman Limon</p>	<p><b>10:45 - 11:00</b>      <b>Location: WB.G.02</b>  <b>Paper ID: 99 -Track 2</b></p> <p><b>Title: Dynamic Load Balancing in Hybrid Quantum-Classical Systems: A Quantum-Aware Reinforcement Learning Approach</b></p> <p>Authors: Hashir Ansari, Shahzaib Abdul Mateen Asad, Jawad Hussain Awan, Shahzad Memon</p>
<p><b>11:00 - 11:15</b>      <b>Location: WB.G.01</b>  <b>Paper ID: 103 -Track 6</b></p> <p><b>Title: A Bibliometric Analysis of AI Trends in the AEC Industry</b></p> <p>Authors: BUKOLA ADEWALE, Luana Parisi, Vincent Ene, Clinton Ohis Aigbabova</p>	<p><b>11:00 - 11:15</b>      <b>Location: WB.G.02</b>  <b>Paper ID: 64 -Track 2</b></p> <p><b>Title: Media-Driven AI Fear and Its Implications for Sustainable AI Governance: A Temporal Computational Analysis</b></p> <p>Authors: Rahime Belen Saglam, Laureen Zuzarte</p>
<p><b>11:15 - 11:30</b>      <b>Location: WB.G.01</b>  <b>Paper ID: 38 -Track 6</b></p> <p><b>Title: Oil &amp; gas pipeline critical points estimation using deep reinforcement learning algorithm</b></p> <p>Authors: Mazin ALAVAD , Shoorangiz Shams Shamsabad Farahani , Roohollah Barzamini , Mohammad Arabian , Vahid Behnamgol , Vahid Hassani</p>	<p><b>11:15 - 11:30</b>      <b>Location: WB.G.02</b>  <b>Paper ID: 57 -Track 3</b></p> <p><b>Title: Fairness-Aware and Explainable Machine Learning for Predicting Incomplete Childhood Immunisation: Evidence from Nigeria</b></p> <p>Authors: KOBLOOBASE USANI, Augustus Osborne, Bobola Ajibola</p>
<p><b>11:30 - 11:45</b>      <b>Location: WB.G.01</b>  <b>Paper ID: 74 -Track 6</b></p> <p><b>Title: Use of Artificial Intelligence as Co-Design assistant: Design exploration in education</b></p> <p>Authors: Isaie Bloch, Teoman Ayas, Deborah Benros</p>	<p><b>11:30 - 11:45</b>      <b>Location: WB.G.02</b>  <b>Paper ID: 26 -Track 5</b></p> <p><b>Title: Optimising Temporary Accommodation Placement Across London with AI-Powered SaaS in E-Governance Systems</b></p> <p>Authors: Hankun He, Jordan Richards, Gopal Netuveli, Kumar Aniket, Ramya Panchatcharam, Binta Adelusile, Nathan Nagaiah, Matt Bellgard</p>
<p><b>11:45 - 12:00</b>      <b>Location: WB.G.01</b>  <b>Paper ID: 75 -Track 6</b></p> <p><b>Title: Restoration of historical ruins through 3d printing: 3d printing, structural filling and artificial intelligence</b></p> <p>Authors: Isaac Cobo Displas, Deborah Benros</p>	<p><b>11:45 - 12:30</b>      <b>Location: WB.G.02</b>  <b>Invited Talk</b></p> <p>Dr Fragkoulis Kanavaris, Arup</p> <p><b>Title: "Sustainability in materials and structures: cases and opportunities for a sustainable built environment"</b></p>
<p><b>12:00 - 12:30</b>      <b>Location: WB.G.01</b>  <b>Invited Talk</b></p> <p>Dr Nicola Hogan, Vincy Kannatheri Valsan (UEL),</p> <p><b>Title: "Sustainability at UEL"</b></p>	

**12:30 – 13:30**

**Lunch Break**

**Location: WB.G.01**

<p><b>13:30 - 15:00</b>      <b>Location: WB.G.01</b> <b>Paper Presentation Afternoon Sessions</b></p> <p>Session Chairs: Dr Sohrab Donyavi Dr Luana Parisi</p>	<p><b>13:30 - 15:00</b>      <b>Location: WB.G.02</b> <b>Paper Presentation Afternoon Sessions</b></p> <p>Session Chairs: Dr Jaswinder Lota (UEL) Dr Elaheh Homayounvala (London Metropolitan University)</p>
<p><b>13:30 - 13:45</b>      <b>Location: WB.G.01</b> <b>Paper ID: 115 -Track 6</b></p> <p><b>Title: Preventing Stakeholder-Driven Scope Creep in BIM-Enabled Megaprojects: A Process Framework and an AI Early-Warning Extension for Regenerative Outcomes</b></p> <p>Authors: Mohsen Jamshidi, Sohrab Donyavi</p>	<p><b>13:30 - 13:45</b>      <b>Location: WB.G.02</b> <b>Paper ID: 72 -Track 4</b></p> <p><b>Title: Smart Optimization of EV Charging for Peak Impact Mitigation and User Satisfaction in Campus Microgrid</b></p> <p>Authors: Mohamed Ibrahim Abdi</p>
<p><b>13:45 - 14:00</b>      <b>Location: WB.G.01</b> <b>Paper ID: 130 -Track 6</b></p> <p><b>Title: Evaluating Practical Constraints in Robotic 3D Concrete Printing: Lessons from Laboratory-Scale Fabrication</b></p> <p>Authors: Mohan Dungrani, Arman Hashemi, Deborah Do-Rosario-Benros, Fulvio Wirz</p>	<p><b>13:45 - 14:00</b>      <b>Location: WB.G.02</b> <b>Paper ID: 9 -Track 4</b></p> <p><b>Title: Real-time Accident Severity Detection and Classification Using Deep Neural Networks and Edge Computing</b></p> <p>Authors: Rashed Mustafa, Miskat Sultana</p>
<p><b>14:00 - 14:15</b>      <b>Location: WB.G.01</b> <b>Paper ID: 132 -Track 6</b></p> <p><b>Title: Enhancing Construction Supply Chain Efficiency Through Integrated AI, BIM, and Robotics: A Lifecycle Digital Framework</b></p> <p>Authors: Zohreh Alijani, Sohrab Donyavi</p>	<p><b>14:00 - 14:15</b>      <b>Location: WB.G.02</b> <b>Paper ID: 105 -Track 2</b></p> <p><b>Title: Post-Quantum Cryptography in Healthcare IoT: A Systematic Review of Deployment Constraints, Architectures, and AI-Based Security Practice</b></p> <p>Authors: Mustak Ahmed</p>
<p><b>14:15 - 14:30</b>      <b>Location: WB.G.01</b> <b>Paper ID: 24 -Track 6</b></p> <p><b>Title: A Hybrid Large Language Model–TOPSIS Agent for Intelligent, Context-Aware Façade Material Selection with Environmental Impact Focus</b></p> <p>Authors: Elahehsadat sedighianastaneh, Sohrab Donyavi</p>	<p><b>14:15 - 14:30</b>      <b>Location: WB.G.02</b> <b>Paper ID: 97 -Track 2</b></p> <p><b>Title: Accountability in AI Driven Cyber Incident Response: A Leadership Decision Framework</b></p> <p>Authors: Adekunle Alabi, Elias Eze, Ameer Al-Nemrat, Opeyemi Adepoju</p>

<b>14:30 - 14:45</b> <b>Location: WB.G.01</b> <b>Paper ID: 44 -Track 6</b>  <b>Title: Integrating Blockchain, Smart Contracts, and BIM for Sustainable Construction: A Comprehensive Review</b>  Authors: Sayed Erfan Kazem, Sohrab Donyavi, Seoung Wook Whang	<b>14:30 - 15:00</b> <b>Location: WB.G.02</b> <b>Invited Talk</b>  Dr Komali Kantamaneni University of Lancashire, UK  <b>Title: Coastal Vulnerability and Climate Resilience: Emerging Perspectives on People, Processes, and AI Insights</b>
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**15:00 - 15:30**                      **Afternoon Tea Break**                      **Location: WB.G.01**

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**15:30 - 16:00**                      **Afternoon Keynote Address 1**                      **Location: WB.G.02**  
 Prof. Roger Flanagan, University of Reading, UK.  
 Title: "From bytes to benefits: digital transformation for managing construction"

**16:00 - 16:30**                      **Afternoon Keynote Address 2**                      **Location: WB.G.02**  
 Dr Imran Latif  
 Johnson Controls International, USA  
 Title: AI Helping AI: Agentic Thermal Intelligence for Sustainable AI Factories

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**16:30 - 17:00**                      **Closing Remarks & Awards Ceremony**                      **Location: WB.G.02**  
 Prof. Matt Belgard, Pro-Vice Chancellor Impact & Innovation  
 Prof. David Tann, Dean of ACE and UEL Vice-Provost (Technology)  
 Dr Seyed Ali Ghorashi, Director of Impact & Innovation, ACE

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**\*The posters will be on display on the ground floor of the RDCS building.**