

# The Third International Adaptive and Sustainable Science, Engineering and Technology (ASSET) Conference



16–18 July 2024, Manchester, UK

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Venue(s): Manchester Met University, UK

## Call for Papers

### Background

The ASSET Council facilitates interactions amongst experts and professionals from communities of interest on developing and deploying adaptive and sustainable science, engineering and technology and applications for national security and socio-economic development. The council embraces the disciplines of applied science, engineering and technology, focusing on the total integrated complex systems effectiveness of national and global significance. The applications base is sustained through knowledge transfer partnerships and multidisciplinary research and development collaborations.

### Conference Objectives

This conference serves as an interactive forum for the advancement of the practice of adaptive and sustainable systems across the multiple disciplines and specialty areas involved with the science, engineering and technology of integrated entities, complex systems and networks. The conference will provide an avenue for ASSET practitioners, researchers, managers, developers, analysts, educators and users to exchange innovative ideas, concepts, applications and lessons learned in addressing domain-specific problems, applications-oriented topics, methodologies, standards and multidisciplinary research opportunities and findings relating to ASSET systems.

### Scope of the Conference includes:

#### Mobile and Satellite Communications

- RF / Microwave / Millimetrewave Communications Devices and Systems
- Satellite Systems, Applications, Missions and Operations
- Antennas and Propagation Engineering
- Wireless Sensors and Mobile Communications Networks
- Metamaterials and Metasurfaces

#### Internet of Things, Artificial Intelligence and Big Data

- Smart IoT Sensors Design, Integration and Applications
- Cyber Security and Information Encryption
- Robotics and Human-Machine Systems
- Big Data Analytics
- AI/Machine Learning Algorithms and Applications

#### Sustainability, Environment and Climate Action

- Smart Cities and Sustainable Infrastructure Design
- Pollution-free Environments
- Security, Safety and Surveillance
- Precision Agriculture/Smart Farming
- Circular Economy and Product Life Cycle Analysis

#### Adaptive and Complex Systems

- Adaptive Systems Development and Operation
- Complex Infrastructure Systems Management
- Systems Design, Modelling and Engineering
- 3D Printing and Additive Manufacturing

#### Renewable Energy Generation, Transmission & Utilisation

- Renewable Energy Harvesting Techniques
- Energy Grid Management and Sustainability
- On-demand Renewable Energy Networks
- Smart Power Line Communications

#### Healthcare and Medical Applications

- Bioengineering and Biomedical Technology Applications
- Biosensors for Healthcare Applications
- Sustainable Digital Transformation in Healthcare
- Bio-based Chemical Manufacturing Processes

#### Education, Entrepreneurship and Governance

#### General and Multidisciplinary Topics

Full Paper Submission Deadline  
21 May 2024

Acceptance Notification  
05 June 2024

Camera-ready Submission Deadline  
20 June 2024

### Technical Sponsors:



#### Keynote Speakers

Prof Mark Sterling, *Manchester Met University, UK*  
Prof Peter Aaen, *Colorado School of Mines, Illinois, USA*  
Prof Jaume Anguera, *Ignion, Barcelona, Spain*  
Engr Paul Sheedy, *Unifi.id, UK*  
Prof Liangxiu Han, *Manchester Met University, UK*  
Prof Zhipeng Wu, *The University of Manchester, UK*

#### Keynote Speakers

Prof Nick Brook, *Manchester Met University, UK*  
Engr Stephen Alabi, *SmOp Cleantech UK*  
Prof Sang Choi, *NASA Langley Research Centre, Virginia, USA*  
Balaji Perumal, *Anya Consulting Services, UK*  
Stephen Muldowney, *Hewlett Packard Enterprise, UK / Europe*  
Prof Keeley Crockett, *Manchester Met University, UK*

The conference serves both practitioners and academics. Accepted and presented papers will be archived in the ASSET® database and SpringerLink®. Authors of accepted papers will have the option to submit an extended version of their paper(s) for review and publication in the ASSET journal.

#### Paper Formatting Requirements

The allowed paper length is seven (7) pages in a single-column format. Submitted papers should be formatted for printing on 21x29.7-cm A4-size paper and should strictly follow the ASSET conference paper template style information posted at the ASSET website.

#### Paper Submission Procedure

Papers are required in Adobe Acrobat format (\*.PDF) and must be submitted through the Online Conference Service OCS system at <https://assetgrp.org/>.

#### Important Dates

Initial Full <u>Paper Submission</u>	21 May 2024
Notification of Acceptance	05 June 2024
<u>Camera-ready Submission</u>	20 June 2024

#### Registration

Starts	30 May 2024
Ends	16 July 2024

#### Fees

\$250.00*	Up to two (2) papers and \$50.00 for an extra paper(s)
\$100.00*	Students

\*There is a concessionary registration for academics and students from the developing and the under-developed countries.

#### Best Paper Awards

The best five (5) presented papers at the ASSET conference will receive an award of \$100.00 each.

#### Steering Committee

Peter Aaen, *Colorado School of Mines, Illinois, USA*; Quan Liu, *Wuhan University of Technology, China*; Zhipeng Wu, *The Univ. of Manchester, UK*; MfonObong Charles Uko, *MMU, UK*; Sunday Enahoro, *MMU, UK*; Olawole Kuti, *MMU, UK*; Daniel Nwandu, *DCLM, Inc., UK*; Joseph Essien, *Lagos, Nigeria*; Perpetual Eze-Idehen, *The Univ. of Manchester, UK*; Alan Lawrenson, *Sony Europe, UK*; Arslan Altaf, *MMU, UK*; Isaac Oluwatayo, *Uni. of Venda, South Africa*

#### Organising Committee

General Chairs	Technical Programme Chairs	Short Courses Chairs	Exhibit Chairs	Local Organising Committee Chairs	Best Paper Award Chairs
Sunday Cookey Ekpo <i>Manchester Met University, UK</i>	Imeh Okop <i>Akwa Ibom State University, Nigeria</i>	Ayodeji Sunday <i>Keysight Technologies UK Ltd</i>	Tshitso Mosolodi <i>Snake Nation, South Africa</i>	Itoro Udo <i>University of Uyo, Nigeria</i>	Muhammad Ijaz <i>Manchester Met University, UK</i>
Umar Raza <i>Manchester Met University, UK</i>	Kolawole <i>Olasunkanmi, SmOp Cleantech, UK</i>	Samik Chakraborty <i>Regent Edu. &amp; Research Foundation, India</i>	Ubong Ukommi <i>Akwa Ibom State University, Nigeria</i>	Gloria Iyawa <i>University of Salford, United Kingdom</i>	Jagadeesh V. K. <i>National Institute of Tech., Calicut, India</i>

Publicity Chairs: Fanuel Elias, *MMU, UK*; Rahul Unnikrishnan, *SmOp Cleantech Ltd*; Aniebiet Kingsley Inyang, *MMU, UK*