

Joint Event

Global Conclave on

# ROBOTICS & AUTOMATION



# ADVANCED SATELLITE COMMUNICATIONS

OCTOBER 17-18, 2024  
London, UK

## SCIENTIFIC PROGRAM

AUTOROBO 2024 & ADV. SATELLITE 2024

# DAY 1

OCTOBER 17, 2024

# Scientific Program

**08:30-09:00** Registrations

**09:00-09:10** Opening Ceremony

**Moderator** Don Kulasiri, *Lincoln University, New Zealand*

**Chair** Ravandran Muttiah, *AIMST University, Malaysia*

Topics: Robotics | Artificial Intelligence Integration in Robotics | Space Robotics | Automation | Medical and Surgical Robotics | Satellite and Education | Space Missions | Mobile Satellite Communication Networks | Satellite Engineering | Wireless Satellite and Broadcasting

## Distinguished Speaker Talks

**09:10-09:35** Title: AI in wine quality prediction: A case study on Pinot Noir in New Zealand  
Don Kulasiri, *Lincoln University, New Zealand*

**09:35-10:00** Title: Satellite onboard transmitter design with spread spectrum MIMO antenna for 5G wireless networks  
Ravandran Muttiah, *AIMST University, Malaysia*

**10:00-10:25** Title: Presenting fabrics in digital environment: Fashion designers' perspectives on communicating tactile qualities of the fabrics  
Jisoo Ha, *Seoul National University, Republic of Korea*

**10:25-10:50** Title: The role of art in smart cities research and making  
Faten Mostafa Hatem, *UWE-BRISTOL, UK*

**10:50-11:15** Title: Concept architecture for a rendezvous and capture robotics system for active debris removal  
Preksha Sanjay Madhva, *Kall Morris Inc, USA*

**Group Photo 11:15-11:20**

**Refreshment Break 11:20-11:35**

**11:35-12:00** Title: Mangrove monitoring and change analysis with Landsat images in Pearl River Estuary (China)  
Yuanzhi Zhang, *Nanjing University of Information Science and Technology, China*  
*City University of Hong Kong, Hong Kong*

12:00-12:25	<p><b>Title: Satellite technology, the observation of the deep universe and the problems of modern cosmology</b></p> <p><b>Yves Gaspar</b>, <i>University of Cambridge, UK</i></p>
12:25-12:50	<p><b>Title: A new measuring instrument was developed for measuring the viscosity of liquids</b></p> <p><b>Matyakubova Parakhat Meyliyevna</b>, <i>Tashkent State Technical University named after I. Karimov, Uzbekistan</i></p>
12:50-13:15	<p><b>Title: Does Tofua volcano represent an early version of Hunga Tonga volcano? Implications for cataclysmic volcanic eruptions</b></p> <p><b>Román Alvarez</b>, <i>Universidad Nacional Autónoma de Mexico, Mexico</i></p>
<b>Group Photo 13:15-13:20</b>	
<b>Lunch Break 13:20-14:05</b>	
14:05-14:30	<p><b>Title: The art of blurring the lines: From passive spectatorship to activating immersion for innovative and inclusive climate- neutral and smart cities</b></p> <p><b>Faten Mostafa Hatem</b>, <i>UWE-BRISTOL, UK</i></p>
14:30-14:55	<p><b>Title: Robotics in education: Engaging young students in Robotics, Coding &amp; AI</b></p> <p><b>Lori Towle</b>, <i>Code &amp; Circuit, Inc.   Full Circle Classrooms, USA</i></p>
14:55-15:20	<p><b>Title: The 2D drone swarm system for lab sample transfer</b></p> <p><b>Pascal Miéville</b>, <i>EPFL Swiss Cat+, Switzerland</i></p>
15:20-15:45	<p><b>Title: Optimizing radio resource allocation for Low Earth Orbit-Space Integrated Ground Networks (LEO-SIGNs) to maximize overall network performance</b></p> <p><b>Muhammad Aurangzeb</b>, <i>Southeast University, China</i></p>
15:45-16:10	<p><b>Title: A decentralised academic reviewers' incentive digital platform: An initial proof of concept</b></p> <p><b>Bilyaminu Auwal Romo</b>, <i>University of East London, UK</i></p>
16:10-16:35	<p><b>Title: Secondary mandibular reconstruction with patient specific 3D printed implant</b></p> <p><b>Harsimran Singh</b>, <i>C.K. Birla Hospital, India</i></p>
<b>Refreshment Break 16:35-16:50</b>	
16:50-17:15	<p><b>Title: Diagnosing early stage of Parkinson's disease using JAN Net</b></p> <p><b>S. Anita</b>, <i>St. Anne's College of Engineering and Technology, India</i></p>
17:15-17:40	<p><b>Title: E-Governance in Pakistan: A tool for sustainable development or myth</b></p> <p><b>Aisha Rizwan</b>, <i>University of the Punjab, Pakistan</i></p>

**17:40-18:05** Title: Optimal Sensor Geometry analysis for 3D TDOA based source localization  
Suman Agrawal, *DSP-DRDO, India*

**18:05-18:30** Title: Joint cognition of remote autonomous robotics agent swarms in collaborative decision-making & remote human-robot teaming  
Kaya Kuru, *University of Central Lancashire, UK*

**18:30-18:55** Title: A micro-economic model of the market uptake of truck platooning  
El Mehdi Aboulkacem, *Université Gustave Eiffel, France*

**18:55-19:20** Title: CFx\_MnO<sub>2</sub> hybrid cathode for lithium primary batteries used in landers  
Katia Guérin, *Université Clermont Auvergne, CNRS, France*

**19:20-19:45** Title: Interior structural change detection using a 3D model and LiDAR segmentation  
Hang Zhao, *The University of Melbourne, Australia*

**19:45-20:10** Title: Educational robotic for a sustainable future  
Um Albaneen Yusuf Jamali, *Hajer Primary Girls School, The Kingdom of Bahrain*

**Panel Discussion**

**End of Day 1**



# DAY 2

OCTOBER 18, 2024

# Scientific Program

09:55-10:00 Introduction

Topics: Robotics | Artificial Intelligence Integration in Robotics | Space Robotics | Automation | Medical and Surgical Robotics | Satellite and Education | Space Missions | Mobile Satellite Communication Networks | Satellite Engineering | Wireless Satellite and Broadcasting

## Distinguished Speaker Talks

10:00-10:25

Title: Coexistence of satellite telecommunication services in the 12.75-13.25 GHz band for the uplink

**Camilo A. Maldonado**, *Universidad Escuela Colombiana de Ingeniería Julio Garavito, Colombia*

10:25-10:50

Title: From algorithms to grants: Leveraging machine learning for research and innovation fund allocation

**Rebecca Lupyani**, *The University of Zambia, Zambia*

10:50-11:15

Title: Metacognition for military robots

**Bonnie Johnson**, *Naval Postgraduate School, USA*

11:15-11:40

Title: Evaluating the skills of the CMIP5 global climate models using multicriteria decision making analysis

**Endalkachew Tesfaye Deme**, *Addis Ababa University, Ethiopia*

11:40-12:05

Title: Sudan between hammer of the armed war and anvil of the fall armyworm invasion: Unveiling a climate change scenario

**Seif Eldin A. Mohammed**, *National Center for Research, Sudan*

## Panel Discussion

End of Day 2



**DAY 2**

OCTOBER 18, 2024

**Scientific**  
P r o g r a m

**Exclusively for  
Virtual Speakers**

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2<sup>nd</sup> Global Conclave on  
**Robotics  
& Automation**



3<sup>rd</sup> Global Congress on  
**Advanced Satellite  
Communications**

**October 2025 | Berlin, Germany**



Virtual Event

Global Conclave on

**ROBOTICS &  
AUTOMATION**

**&**

**ADVANCED  
SATELLITE  
COMMUNICATIONS**

**OCTOBER 18, 2024**

**SCIENTIFIC PROGRAM**

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**AUTOROBO 2024 & ADV. SATELLITE 2024**

# 2024

OCTOBER 18 | FRIDAY

# Scientific Program

BST (British Summer Time)

06:55-07:00 Opening Ceremony

Topics: Robotics | Artificial Intelligence Integration in Robotics | Space Robotics | Automation | Medical and Surgical Robotics | Satellite and Education | Space Missions | Mobile Satellite Communication Networks | Satellite Engineering | Wireless Satellite and Broadcasting

Distinguished Speaker Talks

07:00-07:20

**Title: Mangrove monitoring and change analysis with Landsat images in Pearl River Estuary (China)**

**Yuanzhi Zhang**, *Nanjing University of Information Science and Technology, China*  
*City University of Hong Kong, Hong Kong*

07:20-07:40

**Title: E-governance in Pakistan: A tool for sustainable development or myth**

**Aisha Rizwan**, *University of the Punjab, Pakistan*

07:40-08:00

**Title: From algorithms to grants: Leveraging machine learning for research and innovation fund allocation**

**Rebecca Lupyani**, *The University of Zambia, Zambia*

08:00-08:20

**Title: Toward the development of Intelligent Interactive Robots**

**Kaoru Sumi**, *Future University Hakodate, Japan*

08:20-08:40

**Title: Extended MB logic and its automatic deduction**

**Sen Xu**, *Shenyang University of Chemical Technology, China*

08:40-09:00

**Title: Interior structural change detection using a 3D model and LiDAR segmentation**

**Hang Zhao**, *The University of Melbourne, Australia*

09:00-09:20

**Title: Strategy for the economic development of the digital society with Intellectual revolution and gravitational effects**

**Vladimir Cherny**, *Independent Researcher, Russia*

09:20-09:40

**Title: Need of adaptive equalization in satellite communication**

**Shital Ganorkar**, *SRPCE Nagpur, India*

09:40-10:00

**Title: Recurrent neural network based model predictive control for multiagent system using switching topologies**

**Piyush Chaubey**, *Pandit Deendayal Energy University, India*

## Refreshment Break 10:00-10:15

10:15-10:35

**Title: A hybrid approach for solving a two level location allocation and a static dial-a-ride problem**

**Kirti Sharma**, *K.R. Mangalam University, India*

10:35-10:55

**Title: Worldview-3 satellite imagery for mineral mapping in sparsely vegetated South Purulia Shear Zone**

**Pankajini Mahanta**, *Fakir Mohan University, India*

10:55- 11:15

**Title: The effect of mixing components on mechanical properties of eco-friendly Strain Hardening Cementitious Composites**

**Shirin Maleki**, *Isfahan University of Technology (IUT), Iran*

11:15-11:35

**Title: Educational robotic for a sustainable future**

**Um Albaneen Yusuf Jamali**, *Hajer Primary Girls School, The Kingdom of Bahrain*

11:35-11:55

**Title: Alphabet sign Language recognition for Arabic and American language**

**Fatma Zohra CHELALI**, *University of Science and technology Houari Boumediene (USTHB), Algeria*

11:55-12:15

**Title: The role of AI in transforming modern Robotics: Challenges and opportunities**

**Naga Siva Jyothi Kompalli**, *Sreenidhi Institute of Science and Technology, India*

## Lunch Break 12:15-12:40

12:40-13:00

**Title: An extensive analysis of satellite imagery for Deepfake detection**

**Preeti Sharma**, *DIT University, India*

13:00-13:20

**Title: A Methodology for Transformation Between Geodetic Datums Used in Syria**

**Shaza Al-Kasem**, *Aleppo University, Syria*

13:20-13:40  
(Video  
Presentation)

**Title: High-throughput organo-on-pillar (high-TOP) array system for three-dimensional ex vivo drug testing**

**Jin-Ku Lee**, *Medical Research Center | Seoul National University College of Medicine, South Korea*

13:40-14:00

**Title: Problems and peculiarities of correction of satellite water level measurements based on the results of in-situ observations (lakes and reservoirs of Russia as a case study)**

**Valery Vuglinsky**, *Russian Federation, Russia*

14:00-14:20  
(Video  
Presentation)

**Title: A Privacy-preserving federated learning framework with lightweight and fair in IoT**

**Yuan Ping**, *Xuchang University, China*

## Refreshment Break 14:20-14:35

14:35-14:55	<p><b>Title:</b>CFx_MnO<sub>2</sub> hybrid cathode for lithium primary batteries used in landers</p> <p><b>Katia Guérin</b>, <i>Université Clermont Auvergne, CNRS, France</i></p>
14:55-15:15 (Video Presentation)	<p><b>Title:</b> Calculation of thermal-hydraulic efficiency of porous direct-flow steam generators with Freon-12 coolant in the turbulent area of motion at the channel input and under boundary conditions of the third kind</p> <p><b>Anatoly P. Lukisha</b>, <i>M.S. Poliakov Institute of Geotechnical Mechanics of the National Academy of Sciences of Ukraine, Ukraine</i></p>
15:15-15:35	<p><b>Title:</b> Considering caring as a safeguard in Artificial Intelligence</p> <p><b>Russell Suereth</b>, <i>Salve Regina University, USA</i></p>
15:35-15:55	<p><b>Title:</b> Robotics in education: Engaging young students in Robotics, Coding &amp; AI</p> <p><b>Lori Towle</b>, <i>Code &amp; Circuit, Inc.   Full Circle Classrooms, USA</i></p>
15:55-16:15	<p><b>Title:</b> Securing the Autonomous future: Navigating data privacy and Security in Robotics</p> <p><b>Taha Sajid</b>, <i>Xecurity Pulse, USA</i></p>
16:15-16:35	<p><b>Title:</b> Early Identification of conflicts in the Chilean Fisheries and Aquaculture sector <i>via</i> text mining and machine learning techniques</p> <p><b>Mauricio Figueroa Colarte</b>, <i>Fundación Instituto Profesional Duoc UC, Chile</i></p>
16:35-16:55	<p><b>Title:</b> Bioelectric signal acquisition and classification system to generate intelligent prostheses</p> <p><b>David Tinoco Varela</b>, <i>Facultad de Estudios Cuautitlán (FESC-UNAM), México</i></p>
16:55-17:15	<p><b>Title:</b> A report on the study for rational and reliable pattern mining</p> <p><b>Tongyuan Wang</b>, <i>TechEngine Plus Com, Montreal, Canada</i></p>
17:15-17:35	<p><b>Title:</b> Zero Trust security for 5G Service-Based Architectures: A cloud-native approach</p> <p><b>Milind Gunjan</b>, <i>Amazon, USA</i></p>
17:35-17:55	<p><b>Title:</b> Artificial Intelligence and Machine Learning in cybersecurity</p> <p><b>Anvesh Gunuganti</b>, <i>Change Healthcare, USA</i></p>
17:55-18:15	<p><b>Title:</b> Machine Learning and AI in Endpoint Security: Advancements in threat detection and prediction</p> <p><b>Srikanth Mandru</b>, <i>Cisco Systems, USA</i></p>

**Panel Discussion**

**Closing Remarks**



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