

IEEE International Symposium on on Emerging Metaverse (ISEMV)

21 October 2024 • Greater Seattle Area, WA, USA



Time	Topic/Title	Speaker(s) / Author(s)
8:25 - 8:35 AM	Opening Remarks	Cecilia Metra , <i>ISEMV General Chair and IEEE Metaverse Co-chair</i> Louis Nisiotis , <i>ISEMV Technical Program Chair</i>
8:35 - 8:40 AM	Welcome Message	Kathy Hayashi , <i>IEEE Director Region 6</i>
8:40 - 8:45 AM	Welcome Message	Jyotika Athavale , <i>IEEE Computer Society President</i>
8:45 - 9:05 AM	Keynote: The Industrial Metaverse: Supercharging Industrial Efficiencies Towards Sustainability	Gerhard Kress , <i>Siemens</i>
9:05 - 9:25 AM	Keynote: We need a Super Cockpit for the Mind	Tom Furness , <i>University of Washington, Virtual World Society</i>
9:25 - 9:45 AM	Keynote: Challenges of Metaverse Silicon Health	Yervant Zorian , <i>Synopsys</i>

9:45 - 10:00 AM	Invited Talk: The Metaverse as a Hypothetical Exercise	Mar Gonzalez Franco , <i>Google</i>
10:00 - 10:15 AM	Coffee break & Poster Session	
10:15 - 11:15 AM	<p style="text-align: center;">Panel: Metaverse for Education</p> <p style="text-align: center;">Organizer and Moderator: Arnold Pears, <i>KTH Royal Institute of Technology</i></p>	<p>Stephen T. Frezza, <i>Franciscan University of Steubenville</i></p> <p>Tomi Kauppinen, <i>Aalto University</i></p> <p>May Dongmei Wang, <i>Georgia Institute of Technology, Emory University</i></p>
11:15 - 11:30 AM	<p style="text-align: center;">Technical Paper: TwinVAR: Digital Twin Visualization with Virtual and Augmented Reality</p> <p style="text-align: center;">Presented by: Pavana Prakash</p>	Pavana Prakash, Aditya Dhakal, Pedro Bruel, Sai Rahul Chalamalasetti, Ninad Hogade, Gourav Rattihalli, Rolando P. Hong Enriquez, Cullen Bash, and Dejan Milojevic
11:30 - 11:45 AM	<p style="text-align: center;">Technical Paper: MPAI Metaverse Model - A standards approach to metaverse interoperability</p> <p style="text-align: center;">Presented by: Leonardo Chiariglione</p>	Leonardo Chiariglione, Gérard Chollet, Stephen Dukes, Panos Kudumakis, and Paolo Ribeca

11:45 - 12:00 PM	<p>Technical Paper: A System Architecture for AI-Driven Interactive Systems Within a CPSS Framework for Metaverse Applications</p>	Louis Nisiotis
12:00 - 12:15 PM	<p>Technical Paper: Hovering Over the Key to Text Input in XR</p> <p>Presented by: Mar Gonzalez-Franco</p>	<p>Mar Gonzalez-Franco, Diar Abdlkarim, Arpit Bhatia, Stuart Macgregor, Jason Alexander Fotso-Puepi, Eric J Gonzalez, Hasti Seifi, Massimiliano Di Luca. and Karan Ahuja</p>
12:15 - 1:15 PM	Lunch Break	
1:15 – 2:15 PM	<p>Panel: Digital Twins and the Metaverse</p> <p>Organizer and Moderator: Dejan Milojicic, Hewlett Packard Labs</p>	<p>Carrie Dossick, <i>University of Washington</i></p> <p>Amit Dubey, <i>Agilent Technologies</i></p> <p>Larry Kaplan, <i>Hewlett Packard Enterprise</i></p> <p>L. Ruby Leung, <i>Pacific Northwest National Laboratory</i></p>
2:15 - 2:30 PM	<p>Technical Paper: Building a University Digital Twin</p> <p>Presented by: Jeffrey Price</p>	<p>Jeffrey Price, Hamida Khatri, Chris Gauthier, Brandon Coffey, and Jacqueline Garza</p>

2:30 - 2:45 PM	Technical Paper: Interoperability is a Fundamental Requirement for the Open Metaverse	Christine Perey
2:45 - 3:00 PM	Technical Paper: Scoping Sustainable Collaborative Mixed Reality Presented by: Yasra Chandio	Yasra Chandio, Noman Bashir, Tian Guo, Elsa Olivetti, and Fatima M. Anwar
3:00 - 3:15 PM	Technical Paper: AI for Cyberattacks' Detection in the Metaverse Presented by: Martin Omana	Martin Omana, Federica Cantagallo, Fabrizio Finelli, and Cecilia Metra
3:15 - 3:30 PM	Coffee break & Poster Session	
3:30 - 4:30 PM	Panel: Technological Challenges to enable the Emerging Metaverse Organizer and Moderator: Jyotika Athavale, Synopsys	Bala Kumaravel, Microsoft Anna Mary Mathew, Microsoft Dejan Milojicic, Hewlett Packard Labs
4:30 - 4:45 PM	Invited Talk: A Path for a Metaverse Standard	Leonardo Chiariglione, Cedeo.net

<p>4:45 - 5:45 PM</p>	<p>Panel: Standards for the Metaverse</p> <p>Organizer and Moderators: Stephen Dukes, <i>Imaginary Universes, LLC</i> Nikolai Leung, <i>Qualcomm</i></p>	<p>Leonardo Chiariglione, <i>Cedeo.net</i> Christine Perey, <i>PEREY Research & Consulting, Metaverse Standards Forum</i> Neil Trevett, <i>NVIDIA, Metaverse Standards Forum, The Khronos Group</i></p>
<p>5:45 - 6:00 PM</p>	<p>Technical Paper: FAST Design Methodology for Swift XR Prototyping: An Interior Design System Example</p> <p>Presented by: Sławomir Tadeja</p>	<p>Sławomir Tadeja, Andrzej Filipowski, Marek Frankowski, Magdalena Igras-Cybulska, Thomas Bohné, and Per Ola Kristensson</p>
<p>6:00 - 6:15 PM</p>	<p>Technical Paper: Digital Framework for Urban Air Mobility Simulation</p> <p>Presented by: Pratik Pradhan</p>	<p>Pratik Pradhan, Jeffery Omorodion, Mohsen Rostami, Aditya Venkatesh, Jafer Kamoonpuri, and Joon Chung</p>
<p>6:15 - 6:30 PM</p>	<p>Technical Paper: Exploring Metaverse-Based Remote Work</p>	<p>David Jiwon Hong</p>
<p>6:30 - 6:45 PM</p>	<p>Technical Paper: A Graph Theoretic Approach to Analyze the Developing Metaverse</p>	<p>Anirudh Dash</p>

6:45 - 7:00 PM

Closing Remarks

Cecilia Metra, *ISEMV General Chair and IEEE Metaverse Co-chair*
Louis Nisiotis, *ISEMV Technical Program Chair*
Jeewika Ranaweera, *IEEE Metaverse Co-chair*

POSTER SESSIONS Will be held between **10:00 - 10:15 AM** and **3:00 - 3:15 PM**.

**Metaverse of Academic Nexus for Global Opportunities (MANGOs):
A Virtual Education Ecosystem**

Mazhar Ali, Halim Budi Santoso, Mitsunori Makino, Pruk Sasithong, Suebphong Noisri, Lunchakorn Wuttisittikulij, Somrudee Deepaisarn, Budianto Tandianus, Aruna Ishara Gamage, Pisit Vanichchanunt, Muhammad Saadi, Khamxay Leevangtou, Piya Kovintavewat, Virach Sornlertlamvanich, and Mujeeb Ali Khan

**Building a Unified Transportation Digital Twin: Integrating Rapidex
for Next-Gen 3D Traffic Modeling and Road Scene Generation**

Nayab Durre, Sakshi Atul Charde, Pallavi Mohan, Waller Steven Travis, and **Tomasz Bednarz**

**Hokusai's Woodcut-Inspired Immersive Art: Studying Immersion
Levels & Emotional Impact Across Image, Film, & Virtual Reality**

Maria Kurpios, **Slawomir Tadeja**, Thomas Bohné, and Magdalena Igras-Cybulska

For any questions or concerns, please contact isemv@ieee.org. To learn about the IEEE Metaverse Initiative and discover future events visit metaverse.ieee.org.