On site Activities (*preliminary*) Program

**Conference Hotel
Conference Venue Location
Conference will be mixed online and on location at**

Mercure Lisboa
Av Jose Malhoa 23
1099-051 Lisboa
Portugal

NexTech 2025: https://www.iaria.org/conferences2025/ProgramUBICOMM25.html

SoftNet 2025: https://www.iaria.org/conferences2025/ProgramICSEA25.html

Timezone converter: **https://www.worldtimebuddy.com/**

Time slots	Activity

Sunday, Sept 28

Time slots	Activity
11:30am	**Registration starts** The registration desk is in front of the conference rooms The reception is operating during the entire conference.
13:00 - 13:15	**Opening session**
13:15 - 13:45	**Open Discussion I** Theme: AI-based Tools and Überveillance Awareness **Moderator** Prof. Dr. Petre Dini, IARIA, USA/EU
13:45 - 14:00	**Coffee**
14:00 - 15:00	**Tutorial I** **Theme: Business Intelligence & Digital Literacy - Empowering Users with Data Awareness** **Lecturer** CTO Avishay Bason, Thinkwise, Israel **Chair** Petre Dini
15:00 - 15:30	**Coffee Break**
15:30 - 16:30	**Tutorial II** **Theme: Marginal Information and its use for Structure Learning** **Lecturer** Prof. Dr. Sung-Ho Kim, Dept of Mathematical Sciences, KAIST, Daejeon, South Korea **Chair**

	Avishay Bason
16:30 - 16:45	**Break**
16:45 - 17:45	**Tutorial III** **Theme: Spatial Data Management for Analytics** **Lecturer** Prof. Dr. Joseph G Vella, University of Malta, Malta **Chair** Sung-Ho Kim
17:45 - 18:00	**Break**
18:00 - 19:00	**Tutorial IV** **Theme: User Experience Evaluation of Augmented Reality** **Lecturer** Ph.D. Candidate Stefan Graser, Hochschule RheinMain – Wiesbaden, Germany **Chair** Joseph G Vella
19:00 - 20:30	**Welcome Cocktail**

Monday, Sept 29

09:00 - 10:00	**Keynote Speech** Simulation in Action: Designing Robust Urban Energy Strategies in a Changing World **Speaker** Prof. Dr. Mart Verhoog, IU Internationale University of Applied Sciences, Germany **Chair** Marko Jäntti	
10:00 - 10:30	**Coffee Break**	
10:30 - 12:15	**Session 1 [AISys, DATA ANALYTICS, CYBER, AMBIENT]**	**Session 7 [ICSNC, UBICOMM, SIMUL]**
12:15 - 14:00	Lunch on your own	
14:00 - 15:45	**Session 2 [GLOBAL HEALTH, SIMUL]**	**Session 8 [UBICOMM, ADVCOMP]**
15:45 - 16:15	**Coffee Break**	
16:15 - 17:45	**Panel #1** **Theme:** Dynamics in Social Networks - Scalable Monitoring **Moderator** Dr. Erik Hieta-aho, VTT, Technical Research Centre of Finland, Finland **Panelists** Prof. Dr. Mart Verhoog, IU Internationale University of Applied Sciences, Germany Prof. Dr. Sung-Ho Kim, Korea Advanced Institute of Science and Technology (KAIST), South Korea Dr. Rainer Falk, Siemens AG, Germany Prof. Dr. Petre Dini, IARIA USA/EU Dr. Erik Hieta-aho, VTT, Technical Research Centre of Finland, Finland	
17:45 - 18:00	**Coffee**	
18:00 - 19:00	**Session 14 [SOTICS, GLOBAL HEALTH]**	**Session 17 [SIMUL]**

Tuesday, Sept 30

Time		
09:00 - 10:00	**Keynote Speech** Software Engineering Excellence: The Backbone of Modern IT Service Management **Speaker** Prof. Dr. Marko Jäntti, University of Eastern Finland, Finland **Chair** Mart Verhoog	
10:00 - 10:30	**Coffee Break**	
10:30 - 12:15	**Session 3 [CENTRIC, SIMUL]**	**Session 9 [DATA ANALYTICS, INNOV]**
12:15 - 14:00	Lunch on your own	
14:00 - 15:45	**Session 4 [ICSEA]**	**Session 10 [CYBER]**
15:45 - 16:15	**Coffee Break**	
16:15 - 17:45	**Panel #2** **Theme:** Digital Literacy and Users Awareness **Moderator** Prof. Dr. Joseph G Vella, University of Malta, Malta **Panelists** Dr. Lasse Harjumaa, Kokkola University Consortium Chydenius, Finland Ph.D. Cand. Stefan Graser, RheinMain University of Applied Sciences, Germany Avishay Bason, Thinkwise, Israel Prof. Dr. Joshua Ebere Chukwuere, North-West University, South Africa Prof. Dr. Joseph G Vella, University of Malta, Malta	
17:45 - 18:00	**Coffee**	
18:00 - 19:00	**Session 15 [AISyS, GLOBAL HEALTH]**	**Session 18 [SIMUL]**

Wednesday, Oct 1

Time		
09:00 - 10:00	**Keynote Speech** Balancing Safety and Security: A New Approach to Cyber Resilience in Healthcare **Speaker** Prof. Dr. Hiroki Takakura, National Institute of Informatics, Japan **Chair** Sibylle Fröschle	
10:00 - 10:30	**Coffee Break**	
10:30 - 12:15	**Session 5 [ICSEA, SIMUL]**	**Session 11 [AISyS]**
12:15 - 14:00	Lunch on your own	
14:00 - 15:45	**Session 6 [ICSEA, AISyS, SIMUL]**	**Session 12 [EMERGING, AISyS]**
15:45 - 16:15	**Coffee Break**	
16:15 - 17:45	**Panel #3** **Theme**: Trends in Software Simulation and Testing **Moderator** Prof. Dr. Roy Oberhauser, Aalen University, Germany **Panelists** Prof. Dr. Marko Jäntti, University of Eastern Finland, Finland Prof. Dr. Radek Kočí, Brno University of Technology, Czech Republic Mgr Jos van Rooijen, Huis voor Software Kwaliteit, the Netherlands Prof. Dr. Sibylle Fröschle, TU Hamburg, Germany Prof. Dr. Roy Oberhauser, Aalen University, Germany	
17:45 - 18:00	**Coffee**	
18:00 - 19:15	**Session 16 [ICSEA, SIMUL]**	**Session 19 [SIMUL, CYBER]**

19:30 - 23:00	**Conference Dinner**

Thursday, Oct 2

09:00 - 10:00	**Keynote Speech** Conversational AI Agents: The Intricacies of Robust Dialogue Management **Speaker** Dr. Steve Chan, VTIRL, VT, USA **Chair** Hirokazu Hasegawa
10:00 - 10:30	**Coffee Break**
10:30 - 12:15	**Panel #4** **Theme**: Cyber Resilience - Pre-AI vs. AI-Enhanced Approaches **Moderator** Dr. Steve Chan, VTIRL, VT, USA **Panelists** Pr. Res. Masahito Kumazaki, National Institute of Informatics, Japan Dr. Damjan Fujs, University of Ljubljana, Slovenia Dr. Kathy-Ann Fletcher, Abertay University, UK Dr. Gábor György Gulyás, Vitarex Stúdió Ltd., Hungary Dr. Steve Chan, VTIRL, VT, USA
12:15 - 12:45	**Coffee Break**
12:45 - 14:30	**Session 13 [CYBER, VALID, SIMUL]**
14:30 - 14:45	**Coffee Break**
14:45 - 15:30	**Open Discussion II** **Theme: Goals Processing in Agentic Frameworks** **Moderators** Dr. Steve Chan, VTIRL, VT, USA Prof. Dr. Petre Dini, IARIA, USA/EU
15:30 - 16:00	**Farewell & Closing Session & Coffee**

Recommended tourist objectives to be visited on your own:

Sintra
National Palace - Sintra
Pena Palace - São Pedro de Penaferrim
Moorish Castle – Sintra

Lisbon
The Medieval Borough of Alfama
Lisbon's Borough of Belém
Tower of Belém
National Coaches Museum
Monastery of the Jerónimos (Hieronymite Monks, built in 1502)
Panoramic: Commerce Square, Downtown, Rossio Square, Avenue da Liberdade and Campo Grande
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Session 1 [AISyS, DATA ANALYTICS, CYBER, AMBIENT] Monday A - morning
Session Chair: Deepa Chandra Segaran

40021 Evaluation of Event-Triggered Algorithm to Minimise Differences from Real Values to Digital Twin and Balancing Energy Efficiency Applied to Rainfed Crops
Jaime Lloret Mauri, Universitat Politècnica de València, Spain

80022 Risk-Aware HTN Planning Domain Models for Autonomous Vehicles and Satellites
Ebaa Alnazer, University of Stuttgart, Germany

60037 Trigger Injection via Clustering for Backdoor Attacks on Heterogeneous Graphs
Honglin Gao, Nanyang Technological University, Singapore

80054 The Domain Name Life Cycle as an Attack Surface: Systematic Threat Mapping and Defense Recommendations
Thomas Fritzler, Hochschule Darmstadt, Germany

Session 2 [GLOBAL HEALTH, SIMUL] Monday A - afternoon
Session Chair Thomas Fritzler

70081 Global Surgery Practical Course - Assessment of Needs and Outcomes
Deepa Chandra Segaran, Sengkang General Hospital, Singapore

70084 Impact of the COVID-19 Pandemic on Emergency Care for Severe Non-COVID Patients: A Nationwide Retrospective Analysis by Phase
Hyo Jin Kim, National Emergency Medical Center, National Medical Center, Republic of Korea

70092 Postural-Change Detection Before and After Hemodialysis Using MediaPipe
Yasutaka Uchida, Teikyo University of Science, Japan

50017 Highly Modular and Immersive Human-in-the-Loop Driving Simulators Using the CARLA Simulation Environment
Patrick Rebling, Karlsruhe University of Applied Sciences, Germany

Session 3 [CENTRIC, SIMUL] Tuesday A - morning
Session Chair: Katja Karhu

30007 Recommendations and Checklists for Developing More Accessible and Comprehensive Browser Cookie Consent Banners
Joschua Thomas Simon-Liedtke, Norsk Regnesentral, Norway

30011 Identification of Design Recommendations for Augmented Reality Authors in Corporate Training
Stefan Graser, RheinMain University of Applied Sciences, Germany

30017 Obstacles and Solutions to the Standards Landscape for a Self-Sovereign Identity Ecosystem
Erik Hieta-aho, VTT Technical Research Centre of Finland, Finland

50027 Algorithm for Predicting Radioactivity of Decommissioning Nuclear Power Plant

Changyeon Yoon, KHNP Central Research Institute, South Korea

Session 4 [ICSEA] Tuesday A - afternoon
Session Chair: Joschua Thomas Simon-Liedtke

10046 Designing for Quality in IoT: A User-Inclusive Approach to Non-Functional
Lasse Harjumaa, Kokkola University Consortium Chydenius, Finland

10051 Protocol-aware Cloud Gateway with Adaptive Rate Control
Ivana Kovacevic, Faculty of Technical Sciences, Serbia

10059 Barriers and Enablers of AI Adoption in Software Testing: A Secondary Study
Katja Karhu, LUT University, Finland

10065 Software Engineering for Educational AI Applications: Insights from Student Requirements for a VR
Coaching System
Yvonne Sedelmaier, SRH Univiersity of Applied Sciences, Germany

Session 5 [ICSEA, SIMUL] Wednesday A - morning
Session Chair: Lasse Harjumaa

10068 On the keeping models in the system design and implementation
Radek Koci, Brno University of Technology, Czeck Republic

10077 VR-DeltaDebugging: Visualization Support for Delta Debugging in Virtual Reality
Roy Oberhauser, Aalen University, Germany

50052 Introduction of Reinforcement Learning into Automatic Stacking of Wave-dissipating Blocks
Hao Min Chuah, Niigata University, Japan
Tatsuya Yamazaki, Niigata University, Japan

50106 Traditional Statistics and Machine Learning in Social Network Analysis: A Comparative Reanalysis of
Empirical Data
Mart Verhoog, IU International University of Applied Sciences, Germany

Session 6 [ICSEA, AISyS, SIMUL] Wednesday - afternoon
Session Chair: Radek Koci

10015 How Digital Experiments Support Sustainability in a Forest Machine Operator Company: A Case Study
Marko Jäntti, University of Eastern Finland, Finland

10063 Ethical Considerations of Using Generative AI in Software Development
Lasse Harjumaa, Kokkola University Consortium Chydenius, Finland

80033 VR-ANN: Visualization of Artificial Neural Network Models in Virtual Reality
Roy Oberhauser, Aalen University, Germany

50092 Generalizable Spatiotemporal Reinforcement Learning Model for Maritime Search Path Planning
Pengcheng Yang, National University of Defense Technology, China

Session 7 [ICSNC, UBICOMM, SIMUL] Monday B - morning

Session Chair: Antonio Gambale

20011 Field Measurement of Multi-band Maritime 5G Communication Performance in Deep Sea Environments
Yang Kun, Zhejiang Ocean University, China

10013 Low-Power Distributed Acoustic Sensor Network for Autonomous Wildlife Monitoring Using LoRa and AI for Digital Twin
Jaime Lloret Mauri, Universitat Politècnica de València, Spain

20016 Artificial Intelligence-Based Local Weather Forecasting for Agricultural Digital Twins Using Machine Learning and Deep Learning Models
Jaime Lloret Mauri, Universitat Politècnica de València, Spain

50008 Enhancing Building Retrofit Decision-Making: A Synergistic Approach Combining Calibrated Simulations
Navid Shirzadi, Natural Resources Canada, Canada

Session 8 [UBICOMM, ADVCOMP] Monday B - afternoon
Session Chair: Maria-Georgiana Butaru

10005 On the Pseudo-Bayesian Broadcast Control Algorithm for Slotted ALOHA in Multi Packet Reception and under Impaired Channel Conditions
Vicente Casares-Giner, Universitat Politècnica de València, Spain

20008 Orientation Prediction in Robotics: A Study of Trigonometric Decomposition Methods Across Synthetic and Real-World Datasets
Antonio Gambale, Ulster University, Northern Ireland

20006 Implementing a Communications Infrastructure to Optimize Public Services for Communities
Maria-Georgiana Butaru, National University of Science and Technology POLITEHNICA Bucharest, Romania

Session 9 [DATA ANALYTICS, INNOV] Tuesday B - morning
Session Chair: Kathy-Ann Fletcher

60018 Parametric Optimization and Intelligent CAD Automation for Bicycle Frame Design via Multi Agent
Chon Kit Chan, Feng Chia University, Taiwan

70013 A note on structure compatibility for large scale structure learning
Sung-Ho Kim, Korea Advanced Institute of Science and Technology, South Korea

70020 Design, Operation, and Field Testing of MoBI: A Smart Buoy for Coastal Monitoring
Matteo Anedda, University of Cagliari, Italy

60065 Achieving Near Real-Time Data Freshness in Fraud Detection: An HTAP Approach
Joseph G Vella, University of Malta, Malta

Session 10 [CYBER] Tuesday B - afternoon
Session Chair: Matteo Anedda

80074 From Stakeholder Needs to Secure Digital Twin Services: Critical Infrastructure Use Cases within the INTACT Framework

Ilinca-Laura Burdulea, Fraunhofer IPK, Germany

80084 Proposal and Implementation of a Security Enhancement Method using Route Hopping MTD for Mesh Networks
Yuto Ikeda, Graduate School and Faculty of Information Science and Electrical Engineering, Kyushu University, Japan

80087 Integrating Cybersecurity and Digital Marketing Effectiveness: Developing a Cohesive Framework for SME Resilience
Kathy-Ann Fletcher, Abertay University, UK

80093 Temporary Identification Management System Using UNIX Time for IoT Device Privacy Protection
Koki Mizoguchi, The Graduate University for Advanced Studies, Japan

Session 11 [AISyS] Wednesday B - morning
Session Chair: Josefa Gómez

80019 Learner Models — Requirements and Legal Issues for the Development and Application of Learner Models
Dieter Landes, Coburg University of Applied Sciences, Coburg, Germany

80031 Fuzzy agent-based modelling and simulation of autonomous vehicle fleets for automatic baggage handling in 4.0 airports
Alain-Jerome Fougeres, ECAM, France

80100 A Privacy-preserving CCTV Video Processing Pipeline
Gábor György Gulyás, Vitarex Stúdió Ltd., Hungary

Session 12 [EMERGING, AISyS, CYBER] Wednesday B - afternoon
Session Chair: Dieter Landes

50002 Latency Optimization in IoT Networks Using SD-WAN Edge Computing
Nader Mir, San Jose State University in California, USA

50018 A Neural Approach to Ray Tracing for Realistic Wireless Channel Simulation in Indoor and Urban Scenarios
Josefa Gómez, University of Alcala, Spain

80017 A Prospective Monotonic/Non-Monotonic Transition Zone Impediment for Concept Model-Centric Artificial Intelligence Systems
Steve Chan, VTIRL, VT/DE-STEA, USA

80095 A File Access Permission Management System to Realize Task Transfer during Cyber Attacks
Hidetoshi Kawai, The Graduate University for Advanced Studies, Japan

Session 13 [CYBER, VALID, SIMUL] Thursday A - morning
Session Chair: Steve Chan

80061 Selecting Cybersecurity Requirements: Effects of LLM Use and Professional Software Development Experience
Damjan Fujs, University of Ljubljana, Slovenia

Damjan Vavpotič, University of Ljubljana, Slovenia
Tomaž Hovelja, University of Ljubljana, Slovenia

40003 The Future of Software Testing
Jos van Rooyen, Huis voor Software Kwaliteit, the Netherlands

50063 Simulation Modeling of Multi-Agent Coordination in Maritime Emergency Response Systems
Jing Xu, National University of Defense Technology, China

50086 Dynamic Uncertainty Simulation for Path Optimization Maritime Search and Rescue
Yingying Gao, National University of Defense Technology, China

50022 Decision Modeling for Unmanned Swarm Suppression of Enemy Air Defenses Based on Deep Reinforcement Learning
Xiao Hu, College of Systems Engineering, National University of Defense Technology, China

Session 14 [SOTICS, GLOBAL HEALTH] Monday A - late
Session Chair: Sung-Ho Kim

60030 Modeling Quarantine Intervention for Varied Toxic Intensities
Nitin Agarwal, COSMOS Research Center, University of Arkansas at Little Rock; ICSI, University of California, Berkeley, USA

70076 Reimagining Healthcare: A Ghana-U.S. Comparative Lens on Equity, Access, and Policy Reform
Lola Adepoju, University of Houston College of Medicine, United States

Session 15 [AISyS, GLOBAL HEALTH] Tuesday A - late
Session Chair: Joseph G Vella

80013 The disruptiveness of artificial intelligence in higher education: A focus on academic roles, tasks, and creative autonomy
Joshua Ebere Chukwuere, North-West University, South Africa

70116 Comparing the Effect of Digital Health Interventions on Anxiety and Depression in Individuals Facing Cancer: A Systematic Review and Meta-analysis
Aljomaa Seba, Semmelweis University, Hungary

Session 16 [ICSEA, SIMUL] Wednesday A - late
Session Chair: Roy Oberhauser

10048 Performance Evaluation of Software Transactional Memory Implementations
Dániel Urbán, Nokia Bell Labs, Hungary

50035 Maximizing detection efficiency of CZT and Scintillator Detectors - A Monte Carlo Study
Changyeon Yoon, KHNP Central Research Institute, South Korea

50108 A Framework for Demonstrating and Mitigating CAN Injection Attacks in Vector CANoe a Case Study Using ABS
Uma Kulkarni, Hamburg University of Technology, Germany

Session 17 [SIMUL] Monday B - late

Session Chair: Erik Hieta-aho

50056 Building a Deterministic Simulation Environment for Software-Defined Vehicles
Motohiro Shibakawa, DENSO AUTOMOTIVE Deutschland GmbH, Germany

50098 Modular and Reproducible Simulator Architecture for Composable Cloud Systems
Joaquín Entrialgo, Polytechnical University of Madrid, Spain

50032 Feasibility Study of Simplification of Radiation Source Shape Using Monte Carlo N-Particle Transport (MCNP)
Changyeon Yoon, KHNP Central Research Institute, South Korea

Session 18 [SIMUL] Tuesday B - late
Session Chair: Stefan Graser

50063 Simulation Modeling of Multi-Agent Coordination in Maritime Emergency Response Systems
Jing Xu, National University of Defense Technology, China

50081 Advanced Simulation Framework for UAV Path Planning Integrating Monte Carlo Prediction and MAPPO
Yingying Gao, National University of Defense Technology, China

Session 19 [SIMUL, CYBER] Wednesday B - late
Session Chair: Jos van Rooijen

80109 Integrating the Technical Level into a Model-based Safety and Security Analysis: Why it is Necessary and How it Can be Done
Sibylle Fröschle, Hamburg University of Technology, Germany

50086 Dynamic Uncertainty Simulation for Path Optimization Maritime Search and Rescue
Yingying Gao, National University of Defense Technology, China

50068 Distributed Simulation of Multi-Agency Coordination in Maritime Emergencies
Jing Xu, National University of Defense Technology, China