

On site Activities (preliminary) Program

NOVOTEL BARCELONA CORNELLÀ
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Updated as of **Oct 9, 2025**

The program will be continuously updated.

NetWare 2025: <https://www.iaia.org/conferences2025/ProgramSECURWARE25.html>

SocSys 2025: <https://www.iaia.org/conferences2025/ProgramMODERNSYSTEMS25.html>

TechWorld 2025: <https://www.iaia.org/conferences2025/ProgramEXPLAINABILITY25.html>

SustainableDigitalization 2025: <https://www.iaia.org/conferences2025/ProgramCOCE25.html>

Timezone converter: <https://www.worldtimebuddy.com>

| Session conference rooms | Room #A | Room #B | Room #C |
|--------------------------|---------|---------|---------|
| Plenaries | Room #A | | |

Sunday, Oct 26

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|---------------|---|
| 11:00 | Registration starts The registration desk is located in front of the conference rooms Open during the entire conference |
| 12:30 - 12:45 | Welcome session |
| 12:45 - 13:30 | Tutorial I Theme: The Anatomy of Agentic Frameworks and Practical Use Cases Speaker Prof. Dr. Petre Dini, IARIA, USA/EU Chair |
| 13:30 - 13:45 | Coffee |
| 13:45 - 14:30 | Session 1 [GREEN] |
| 14:30 - 14:45 | Coffee Break |
| 14:45 - 15:45 | Tutorial II Theme: To be announced Speaker Chair |

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|---------------|---|
| 15:45 - 16:15 | Coffee |
| 16:15 - 17:15 | Tutorial III Theme: Systems Thinking within the Systems Engineering Paradigm Speaker Prof. Paul Martin, University of Maryland, USA / CEO SE-Scholar / INCOSE, USA Chair Aspen Olmsted |
| 17:15 - 17:30 | Coffee |
| 17:30 - 18:45 | Tutorial IV Theme: Secure Software Development Prof. Dr. Aspen Olmsted, Wentworth Institute of Technology, USA Chair Paul Martin |
| 19:00 - 20:00 | Welcome Cocktail |

Monday, Oct 27

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|---------------|--|------------------|-------------------|
| 09:00 - 10:00 | Keynote Speech Theme: Reconnaissance to Resilience: A Threat-Led Kill Chain Perspective on Ransomware and Emerging AI-Driven Threats Speaker Prof. Dr. Alexander Lawall, IU Internationale Hochschule GmbH, Germany Chair Eugen Borcoci | | |
| 10:00 - 10:30 | Coffee Break | | |
| 10:30 - 12:15 | Session 2 | Session 5 | Session 8 |
| 12:15 - 12:30 | Coffee | | |
| 12:30 - 14:00 | Session 3 | Session 6 | Session 9 |
| 14:00 - 15:00 | Lunch on your own | | |
| 15:00 - 16:45 | Session 4 | Session 7 | Session 10 |
| 16:45 - 17:15 | Coffee break | | |
| 17:15 - 19:00 | Panel #1 Theme: Cybersecurity Resilience Challenges Moderator Panelists | | |

Tuesday, Oct 28

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|---------------|--|-------------------|-------------------|
| 09:00 - 10:00 | Keynote Speech Theme: To be announced Speaker Chair | | |
| 10:00 - 10:30 | Coffee Break | | |
| 10:30 - 12:15 | Session 11 | Session 14 | Session 17 |
| 12:15 - 12:30 | Coffee | | |

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|---------------|--|-------------------|-------------------|
| 12:30 - 14:00 | Session 12 | Session 15 | Session 18 |
| 14:00 - 15:30 | Lunch on your own | | |
| 15:30 - 17:00 | Session 13 | Session 16 | Session 19 |
| 17:00 -17:30 | Coffee break | | |
| 17:30 - 19:00 | Panel #2 Theme: Health and Digital Services Moderator Panelists | | |

Wednesday, Oct 29

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|---------------|--|-------------------|-------------------|
| 09:00 - 10:00 | Keynote Speech Theme: To be announced Speaker Chair | | |
| 10:00 - 10:30 | Coffee Break | | |
| 10:30 - 12:15 | Session 20 | Session 22 | Session 24 |
| 12:15 - 12:30 | Coffee | | |
| 12:30 -13:30 | Session 21 | Session 23 | Session 25 |
| 13:30 – 15:00 | Lunch on your own | | |
| 15:00 - 16:45 | Panel #3 Theme: Complex Systems Moderator Panelists | | |
| 16:45 - 17:15 | Coffee break | | |
| 17:15 -19:00 | Open Discussion #1 Theme: Digital and AI Literacy Moderators | | |
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| 19:30 -23:30 | Conference Dinner Novotel Hotel | | |

Thursday, Oct 30

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|---------------|--|--|--|
| 09:00 - 10:00 | Keynote Speech Theme: Path Planning Advances in Multi-UAV Networks Speaker Prof. Dr. Eugen Borcoci, National University of Science and Technology POLITEHNICA Bucharest, Romania Chair Andre Schneider de Oliveira | | |
| 10:30 - 10:30 | Coffee Break | | |
| 10:30 - 12:15 | Panel #4 Theme: Sustainability Moderator Panelists | | |
| 12:15 - 13:45 | Lunch on your own | | |
| 13:45 - 15:30 | Session 26 | | |

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|---------------|---|
| 15:30 - 15:45 | Coffee |
| 15:45 -17:00 | Session 27 |
| 17:00 - 17:30 | Coffee break |
| 17:30 - 18:00 | Open Discussion #2 Theme: Accessibility and AI-based Services Moderators |
| 18:00 – 18:15 | Closing Session Farewell |

Recommended tourist objectives to be visited on your own:

- General information: www.barcelonatourguides.com
- Contact: info@barcelonatourguides.com

Barcelona

Prepare your best places to see in Barcelona: https://youtu.be/XVqpOCPg_Y4

- Park Güell
- Sagrada Familia
- Picasso Museum
- Gaudi Museum
- Museum of Catalan Art
- Montjuic Hill
- La Rambla
- La Marina

Girona

Salvador Dali Museum [one day trip from Barcelona]

Detailed Sessions

Session 1 [GREEN] Room A Sunday - early afternoon

Session Chair:

80014 Brains Without Brawn: Evaluating CPU Performance for Code Generation with Large Language Models
Miren Illarramendi Rezabal, Mondragon Goi Eskola Politeknikoa JMA S.Coop, Spain

Session 2 [SECURWARE] Room A Monday - morning

Session Chair: Sebastian Kraust

30036 Comparison of Password-Authenticated Key Exchange Schemes on Android
Jörn-Marc Schmidt, IU Internationale Hochschule GmbH, Germany

30046 The Balanced Chance & Cyber Risk Card: Extending Reichmann's Multidimensional Controlling Framework for C Level Steering in German SMEs
Maik Drozdzyński, IU International University, Germany

30071 Quantifying Persuasion - A Comparative Analysis of Cialdini's Principles in Phishing Attacks
Alexander Lawall, IU International University of Applied Sciences, Germany

30085 A Comparative Study of Machine Learning and Quantum Models for Spam Email Detection
Fan Wu, Tuskegee University, USA

Session 3 [TBD] Room A Monday - early afternoon

Session Chair:

Session 4 [MODERN SYSTEMS, SENSORCOMM] Room A Monday - afternoon

Session Chair: Maik Drozdowski

10019 Q-Learning Performance on the CartPole Environment Under Observation Noise and Reward Variants
Fan Wu, Tuskegee University, USA

10011 A Group-Based Access Coordination Scheme for Low-Latency and High-Throughput IoT over IEEE 802.11ah

Seung-ha Jee, Sungshin Women's University, Republic of Korea

Il-Gu Lee, Sungshin Women's University, Republic of Korea

10025 A Time-based Sensor Data Analysis for Pre-Fall Prediction using Machine and Deep Learning Approaches

Nazia Pathan, Queen Margaret University, UK

Session 5 [SENSORCOMM] Room B Monday - morning

Session Chair: Mathias Gerstner

10030 Machine Learning-Based Joint TX Power and RX Sensitivity Control for Overlapping Basic Service Set Interference Mitigation in Dense Internet of Things Wireless Networks

Jin-Min Lee, Sungshin Women's University, Republic of Korea

10034 ScreenLeak: Exploiting Screen Savers for Covert Long-Distance Data Exfiltration and Defense
Ye-Rim Jeong, Sungshin Women's University, Republic of Korea

10038 Invisible Watermarking for Image Data Protection in Sensor Network Environments

Seo-Yi Kim, Sungshin Women's University, Republic of Korea

Session 6 [VEHICULAR, PREDICTIONS] Room B Monday - early afternoon

Session Chair: Haadia Amjad

30005 Context-Aware Forecasting of Mobile Network Quality for Autonomous Vehicle Connectivity
Mathias Gerstner, OTH Regensburg, Germany

30006 Prioritization of 9-1-1 Emergency Calls Using Fusion of Audio Signal Analysis and Speech-to-Text

Transcription for Accurate Urgency Classification
Simin Mirzaei, UBC, Canada

Session 7 [EXPLAINABILITY] Room B Monday - afternoon

Session Chair: Atakan Yilmaz

10009 Identifying Confusion Trends in Concept-based XAI for Multi-Label Classification
Haadia Amjad, TUD | Dresden University of Technology, Germany

10012 CAT in the box: A CausalAI - Tsetlin machine duo
Jalpa Soni, Capitole Consulting, Spain

Session 8 [CSRF] Room C Monday - morning

Session Chair: Mohamed Lamine Toure

10052 Agrotourism Gamification for Farmer Empowerment
Pedro Goncalves, Instituto de Telecomunicacoes, Portugal

10064 Efficiency of Rainfed Wheat Production: A Global Assessment Using Data Envelopment Analysis
Amir Dadrasi, Univerzita Karlova, Czech Republic

Session 9 [PANDEMICS ANALYTICS, HEALTHINFO] Room C Monday - early afternoon

Session Chair: Ketil Malde

20005 Stochastic compartment model of epidemic spreading in complex networks with mortality and resetting
Thomas Michelitsch, CNRS/Sorbonne Université, France

20008 Statistical and Predictive Analysis to Identify Risk Factors and Effects of Post COVID-19 Syndrome
Milad Leyli-abadi, IRT SystemX, France

90080 Machine Learning-Driven Support Algorithm for Skin Ulcers Preliminary Diagnosis: A Lightweight Approach for Digital Images Semantic Segmentation and Color-Based Classification
Debora Beneduce, LINKS Foundation, Italy

Session 10 [COCE] Room C Monday - afternoon

Session Chair: Austin Schmidt

30008 Multi-source Constrained Machine Learning for Oceanic Parameters Forecasting
Austin Schmidt, University of New Orleans, USA
Mahdi Abdelguerfi, University of New Orleans, USA

30031 Machine learning using physics-based backscattering modeling for acoustic identification of mesopelagic organisms
Sander Andre Berg Marx, University of Bergen (UIB), Norway

30035 Accelerating HEC-RAS: A Recurrent Neural Operator for Rapid River Forecasting
Edward Holmberg, University of New Orleans, USA

30053 Integrated Design and Field Validation of MoBI: An Intelligent Buoy for Environmental Data Acquisition

Mariella Sole, University of Cagliari, Italy

Session 11 [GREEN, SOCIETY TRENDS, CSRF] Room A Tuesday - morning

Session Chair: Francisco Javier Bermúdez Ruiz

80021 Energy Management of PV-Batteries System for a Rural Micro-Grid Application in Guinea

Mohamed Lamine Toure, Universite Le Havre Normandie, France

80029 Electric behavior characterization of lithium iron phosphate batteries as a function of operating temperature

Ibrahima Toure, Universite Le Havre Normandie, France

40008 Using 2D and 3D Desktop Based Virtual Avatar Environments to weaken Zoom Fatigue in Tertiary Education

Gerhard Hube, University of Applied Sciences Würzburg-Schweinfurt, Germany

10059 Differences in Exit Propagation of by Cuttings for Cistus ladanifer and Cistus Cyprius

Pedro Vicente Mauri Ablanque, Instituto madrileño de Investigación y desarrollo rural, agrario y alimentario (IMIDRA), Spain

Session 12 [HEALTHINFO] Room A Tuesday - early afternoon

Session Chair: Carolin Poschen

90061 Discrimination by Deep Learning of 1Hz Difference in Auditory Cortex using fMRI Activation Patterns

Kyoko Shibata, Kochi University of Technology, Japan

Yoshitaka ooyashiki, Kochi University of Technology, Japan

90067 From Text to Code: Predicting Abbreviated Injury Scale 2015 from Clinical Narratives

Chien-Ming Lee, Kaohsiung Medical University Hospital, Kaohsiung Medical University, Taiwan

90072 Hypothermia and Its Association with Mortality Among Major Trauma Patients in a Tropical Climate: A Retrospective Study from Southern Taiwan

Pei-Ling Lee, Kaohsiung Medical University Hospital, Kaohsiung Medical University, Taiwan

Session 13 [HEALTHINFO] Room A Tuesday - afternoon

Session Chair: Kyoko Shibata

90076 From Hospitals to Researchers: A Data-Trustee Infrastructure to Search and Use FHIR-Data for Retrospective Medical Research

Carolin Poschen, Trier University of Applied Sciences, Germany

90094 Using a Large Data Model Explorer to Maintain a Healthcare Information System

Francisco Javier Bermúdez Ruiz, University of Murcia, Spain

90115 Using Data and Artificial Intelligence to Enable Successful Hospital at Home Programs

Jamie McGlothlin, RSM US LLP, United States

Session 14 [EXPLAINABILITY, SECURWARE] Room B Tuesday - morning

Session Chair: Jyrki Penttinen

10024 RanXplain: Explaining Rankings in Recommendation Systems

Atakan Yilmaz, Trendyol, Turkey

Nuray Eylul Erler, Trendyol, Turkey

Emre Atilgan, Trendyol, Turkey

10030 Bridging the Domain Gap: Evaluating Fact-Grounded Knowledge Graph Narratives for Explainable AI in Clinical Decision Support

Valentin Göttisheim, Furtwangen University, Germany

30061 A Modular and Flexible OPC UA Testbed Prototype for Cybersecurity Research

Sebastian Kraust, OTH Regensburg, Germany

Session 15 [MODERN SYSTEMS, AIVTS] Room B Tuesday - early afternoon

Session Chair: Valentin Göttisheim

10016 An Interference-Aware vCPU Scheduling Framework for Paravirtualized Real-Time Industrial Control Systems

Jessica Müller, Bosch Rexroth AG, Germany

50022 Design Feasibility and Link Budget Assessment of Aerial 5G IoT and eMBB Connectivity

Jyrki Penttinen, Alphacore Inc., USA

50032 Design of Infrastructure-Based Prescriptive Control Use Cases in Cooperative Autonomous Driving

Hye jin LIM, ITS KOREA, South Korea

Session 16 [SECURWARE] Room B Tuesday - afternoon

Session Chair: Logan McMahon

30028 General Conversion Scheme of Card-based Protocols for Two-colored Cards to Updown Cards - The Number of Cards for Computing an Arbitrary Function

Takumi Sakurai, Nagoya University, Japan

Yuichi Kaji, Nagoya University, Japan

30030 From ECU to VSOC: UDS Security Monitoring Strategies

Ali Recai Yekta, Yekta IT GmbH, Germany

30034 DeepAuthVerify - A Modular Framework for Deepfake Detection in Facial Authentication Systems

Kristina Schaaff, IU International University of Applied Sciences, Germany

30049 Supporting the Security Modelling in Operational Technology by identifying capacities of Hidden Channels in ICS protocols

Sönke Otten, Otto-von-Guericke University, Germany

Session 17 [COCE] Room C Tuesday - morning

Session Chair: Anna Wenda-Piesik

30003 Evaluating Hyperparameter Selection Techniques for the Ratio-Coupled Loss Function

Austin Schmidt, University of New Orleans, USA

30016 Simulation-Based Study of Propulsion and Control of an AUV in Current-Affected Environments

Mefti Aymen, Ecole Militaire Polytechniques, Algeria

30021 Operationalizing and Testing Machine Learning Models for Acoustic Target Classification

Nils Olav Handegard, Institute of Marine Research, Norway

30028 Semi-Supervised Object Detection for Marine Life Monitoring using Temporal Information

Ketil Malde, Institute of Marine Research, Norway

Session 18 [CEEE, CSRF] Room C Tuesday – early afternoon

Session Chair: Jacqueline Humphries

40019 Global Energy Transition – Issues and Options

Puja Bhetwal, RIZQ/YUNUS WEFnex Hub AIT, Thailand

Mahmood Ahmad, RKH-WEFnex, Thailand

40023 Comparative Analysis of PM2.5 Air Quality Between Old and Newly Developed Residential Areas in Karbala City Using a Low-Cost Monitoring System

Hussein Abd Ali Hatif Alsaadi, Al-Zahrawi University College, Karbala, Iraq

10045 Effect of Mobile Agrivoltaic Shading on the Growth and Yield of Coriander (*Coriandrum Sativum* L.) under Field Conditions in Poland

Anna Wenda-Piesik, Bydgoszcz University of Science and Technology, Poland

Session 19 [CSRF] Room C Tuesday - afternoon

Session Chair: Edward Holmberg

10014 An Evaluation of the Use of Sensors for the Detection of Emissions in Slurry Management

Jacqueline Humphries, Technological University of the Shannon, Ireland

10023 Cereals Supply-chain Traceability using Blockchain and IoT Technology

George Adamides, Agricultural Research Institute, Cyprus

10047 Induction of Volatile Organic Compounds in Chrysanthemum Plants Following Infection by *Rhizoctonia Solani* [PRESENTATION]

Dariusz Piesik, PBS Bydgoszcz University of Science and Technology, Poland

Session 20 [SECURWARE] Room A Wednesday - morning

Session Chair: Tobias Frauenschläger

30015 Threat-Based Vulnerability Management: Mapping CVEs to the MITRE ATT&CK Framework

Logan McMahon, Queen's University Belfast, Northern Ireland

30018 Secure Software Brownfield Engineering – Sequence Diagram Identification

Aspen Olmsted, Wentworth Institute of Technology, USA

30023 Identification of Dual Processes Using Power Side-channels
Niklas Lindskog, Ericsson, Sweden

Session 21 [SECURWARE] Room A Wednesday - early afternoon

Session Chair: Kévin Touchet

30066 Towards Post-Quantum-Ready Automated Certificate Lifecycle Management in Operational Technology
Ayham Alhulaibi, Maschinenfabrik Reinhausen Regensburg, Germany

30074 A Modified Schnorr Sigma Protocol and Its Application to Isogeny-Based Identification
Mahdi Mahdavi Oliaee, Fundació per a la Universitat Oberta e Catalunya, Spain

30057 Improving Crypto-Agility in Operational Technology through Exchangeable Smart Cards
Tobias Frauenschläger, OTH Regensburg, Germany

Session 22 [SENSORDEVICES, CENICS] Room B Wednesday - morning

Session Chair: Niklas Lindskog

20022 Development of an Artificial Fingertip with a High-Sensitivity 3-Axis Force Tactile Sensor Embedded for Robotic Hands
Bo-Gyu Bok, Korea Research Institute of Standards and Science, Republic of Korea

20026 Fast, Sensitive and Distributed Optical Fiber Detection of Hydrogen Gas [PRESENTATION]
Kévin Touchet, CEA, France

50006 Adaptive Architectures for Forward Error Correction
Sergei Sawitzki, FH Wedel (University of Applied Sciences), Germany

Session 23 [PANDEMICS ANALYTICS/COAI special track] Room B Wednesday - early afternoon

Session Chair: Les Sztandera

Accepted papers to be announced

Session 24 [HEALTHINFO] Room C Wednesday - morning

Session Chair: Yoshitaka Ooyashiki

90119 Leveraging Observational Medical Outcomes Partnership (OMOP) Data to Populate Disease Registries
Jamie McGlothlin, RSM US LLP, USA

90105 Electronic Health Records and the Archival Question: Shared Responsibility as a Panacea
Mehluli Masuku, Sorbonne University Abu Dhabi, United Arab Emirates

Session 25 [TBD] Room C Wednesday - early afternoon

Session Chair:

Session 26 [CADAT, SENSORDEVICES] Room A Thursday - early afternoon

Session Chair: Eugen Borcoci

20014 Advanced Statistical Analysis of Physiological and Spectral Traits for the Early Detection of Xylella fastidiosa in Almond Trees

José Ramón Torres-Martín, Universidad Rey Juan Carlos, Spain

10019 Explainability Analysis for Skill Execution

Khatina Sari, Hochschule Bonn-Rhein-Sieg, Germany

20037 Spectral and Angular Analysis of Reflectance in Mobile Robot Prototypes under Controlled Artificial Lighting

Andre Schneider de Oliveira, Universidade Tecnológica Federal do Paraná, Brazil

Ronnier Frates Rohrich, Universidade Tecnológica Federal do Paraná, Brazil

Session 27 [TBD] Room A Thursday - afternoon

Session Chair:

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