On site Activities Program

Conference Hotel
Conference Venue Location

Hotel Novotel Porto Gaia
Rua Martir Sao Sebastiao, Afurada,
4400-499 Vila Nova de Gaia
Phone: +351 22 772 8700
Porto, Portugal

Updated as of September 21st, 2023.

The program will be continuously updated.

NexTech 2023: https://www.iaria.org/conferences2023/NexTech23.html

NetWare 2023: https://www.iaria.org/conferences2023/NetWare23.html

TrendNews: https://www.iaria.org/conferences2023/TrendNews23.html

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

Time slots	Activity

Monday, September 25

Time slots	Activity
10:30am	**Registration starts** The registration desk is located in front of the conference rooms The reception is operating during the entire conference
12:15 - 12:30	**Opening session** Prof. Dr. Petre Dini
12:30 - 14:00	**Tutorial Lecture** Breaking Barriers: A Deep Dive into Bypassing Next-Gen 2FA and MFA Security Measures **Lecturer** Dr. Muhammad Shahmeer Amir, CEO of Younite/Veiliux/Authiun, Pakistan **Chair** Petre Dini
14:00 - 14:30	**Coffee Break**
14:30 - 16:30	**Session 1 [SECURWARE]**
16:30 - 16:45	**Coffee**
16:45 - 17:45	**Keynote Speech** 6G Networks: Challenges and Research Directions **Speaker**

	Dr. Richard Li, Chief Scientist &VP, Futurewei Technologies Inc., USA **Chair** Petre Dini
18:00 - 19:30	**Welcome Cocktail**

Tuesday, September 26

09:00 - 10:00	**Keynote Speech** Big Data Analytics and AI Approaches for Advancing Biomedical Research and Personalized Healthcare **Speaker** Prof. Dr. Hesham Ali, University of Nebraska at Omaha, USA **Chair** Evgeniy Krastev
10:00 - 10:30	**Coffee Break**
10:30 - 12:15	**Session 2 [AFIN, FASSI]**	**Session 3 [DIGITAL]**
12:15 - 13:00	Lunch on your own
13:00 - 14:15	**Session 4 [GLOBAL HEALTH]**
14:15 - 14:30	**Coffee**
14:30 - 16:15	**Panel #1** **Theme**: Achievements and Challenges of AI on Medicine and Healthcare **Moderator**: Prof. Dr. Evgeniy Krastev, Sofia university St. Kliment Ohridski, Bulgaria **Panelists** Prof. Dr. Hesham Ali, University of Nebraska at Omaha, USA Prof. Dr. Yasutaka Uchida, Teikyo University of Science, Japan Prof. Dr. Sung Ho Cho, Hanyang University, South Korea
16:15 - 16:30	**Coffee**
16:30 - 18:15	**Session 5 [UBICOMM]**	**Session 6 [ADVCOMP, SEMAPRO]**
18:15 - 18:45	**Coffee Break**
18:45 - 20:45	**Panel #2** **Theme**: Security Challenges in Cyber-Systems **Moderator**: Dr. Ing. Eric Veith, Carl von Ossietzky University Oldenburg, Germany **Panelists** Dr. Rainer Falk, Siemens AG, Technology, Germany Prof. Dr. Joshua Sipper, US Air Force Air Command and Staff College, USA Dr. Kate-Riin Kont, Estonian Academy of Security Sciences, Estonia Prof. Dr. Anders Fongen, Norwegian Defence University College, Norge Prof. Dr. Dirceu Cavendish, Kyushu Institute of Technology/UCLA, Japan/USA

Wednesday, September 27

09:00 - 10:00	**Keynote Speech** Analyzing and Resiliently Operating Cyber-Physical Systems with Extended Deep Reinforcement Learning Architectures **Speaker** Dr. Ing. Eric Veith, Carl von Ossietzky University Oldenburg, Germany **Chair** Dirceu Cavendish
10:00 - 10:30	**Coffee Break**

10:30 - 12:15	Session 7 [CYBER]	Session 8 [EMERGING, DATA ANALYTICS]
12:15 - 14:00	Lunch on your own	
14:00 - 15:45	Session 9 [CYBER]	
15:45 - 16:15	Coffee Break	
16:15 - 18:15	**Panel #3** **Theme**: Security of Electric Grids **Moderator**: Prof. Dr. Dirceu Cavendish, Kyushu Institute of Technology/UCLA, Japan/USA **Panelists** Dr. Tiago Espinha Gasiba, Siemens AG, Germany Prof. Dr. Hajime Shimada, Nagoya University, Japan, Dr. Ing. Eric Veith, Carl von Ossietzky University Oldenburg, Germany Prof. Dr. Michael Massoth, Hochschule Darmstadt - University of Applied Sciences, Germany	
18:15 -18:30	Coffee	
18:30 - 19:15	**Open Discussion** **Theme**: Where AI Could be Used and Where it Shouldn't *A View from the Education and Research Perspective* **Coordinator**: Prof. Dr. Petre Dini, IARIA, USA/EU	
19:30 - 23:30	**Conference Dinner** **Novotel Hotel**	

Thursday, September 28

09:00 - 10:00	**Keynote Speech** Data Science and Management as a driving Force for the Commonwealth of Pennsylvania Industrial Hemp Engine Initiative **Speaker** Prof. Dr. Les Sztandera, Thomas Jefferson University - Philadelphia, USA **Chair** Karsten Böhm	
10:00 - 10:30	**Coffee Break**	
10:30 - 12:15	**Session 10 [CYBER, SECURWARE]**	**Session 11 [SENSORDEVICES]**
12:15 - 14:00	Lunch on your own	
14:00 - 15:45	**Panel #4** **Theme**: Challenges of AI-driven Computation and Data Analytics **Moderator**: Prof. Dr. Les Sztandera, Thomas Jefferson University - Philadelphia, USA **Panelists** Prof. (FH) Karsten Böhm, FH Kufstein Tirol Bildungs GmbH, Austria Prof. Dr. Claudia Hess, IU International University of Applied Sciences, Germany Dr. Alice E. Koniges, University of Hawai'i at Mānoa, USA Prof. Dr. Erik Buchmann, Leipzig University, Germany	
15:45 - 16:15	Coffee	
16:15 - 18:00	**Session 12 [ICQNM, SENSORDEVICES, GREEN]**	
18:00 - 18:30	**Coffee break**	
18:30 - 20:30	**Panel #5**	

	Theme: Sensing in the AI Era Moderator: Prof. Dr. Manuela Vieira, CTS-UNINOVA, Portugal **Panelists** Prof. Dr. Paula Louro, ISEL/CTS/UNINOVA, Portugal Prof. Dr. Erik Buchmann, Leipzig University, Germany Dr. Eng. Joon Kyung Lee, ETRI, South Korea Dr. Giuseppe Giannino, Isotta Fraschini Motori (a Fincantieri company), Italy

Friday, September 29

09:00 - 10:00	**Keynote Speech** Human-inspired Security in Smart Manufacturing Systems **Speaker** Dr. Rui Pinto, University of Porto, Portugal **Chair** Petre Dini
10:00 - 10:30	**Coffee**
10:30 - 11:30	**Session 13 [DIGITAL, FASSI]**
11:30 - 12:00	**Coffee Break**
12:00 - 13:00	**Keynote Speech** Manufacturing is Becoming Digital: Challenges and Opportunities **Speaker** Prof. Dr. Gil Gonçalves, Universidade do Porto (FEUP), Portugal **Chair** Petre Dini
13:00 - 13:15	**Farewell and Coffee** Closing session: Petre Dini

Recommended tourist objectives to be visited on your own:

Details: https://www.iaria.org/conferences2022/TouristICDS22.html

Unique: **Porto wine caves:**

Caves Cálem: https://www.tripadvisor.com/Attraction_Review-g580268-d243625-Reviews-Porto_Calem-Vila_Nova_de_Gaia_Porto_District_Northern_Portugal.html
Caves Calém at Gaia waterfront is one of the most famous and most visited cellars for **wine** tours in **Porto**. Visits to **Caves** Calém include a guided tour to the cellar and its ancient traditions, followed by a tasting of **Port wine** - white and special reserve.

Burmester Porto Wine Cellars and Wine Tasting: https://sogevinus.com/tourism/burmester-cellars/
Burmester wine cellars are located in Gaia by the bottom deck of Luiz I bridge. There are guided tours of the cellars, filled with history and interesting stories.

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Session 1 [SECURWARE]
Session Chair: Muhammad Shahmeer Amir

30021 Lightweight fine-grained access control mechanism based on Zero Trust in CPS
Nakul Ghate, NEC, Japan

30025 ChatIDS: Explainable Cybersecurity Using Generative AI
Erik Buchmann, ScaDS.AI, Leipzig University, Germany

30064 AI-driven Approach for Access Control List Management
Nader Shahata, National Institute of Informatics, Japan

30089 Leveraging Attack Graphs in Automotive Threat Analysis and Risk Assessment
Abbassi Mera, Obuda University, Hungary

Session 2 [AFIN, FASSI]
Session Chair: Erik Buchmann

40005 Use of Augmented Reality and Virtual Reality in E-Commerce [PRESENTATION ONLY]
Saurabh Kumar, Indian Institute of Management Indore, India

40015 Design of an Intelligent Location-Aware Architecture for Mobile Computing Environments
Santipong Thaiprayoon, FernUniversität in Hagen, Germany

70002 A Machine Learning-based Impact Analysis Tool and its Improvement Using Co-occurrence
Relationships
Teppei Kawabata, Shibaura Institute of Technology, Japan

Session 3 [DIGITAL]
Session Chair: Sung Ho Cho

20026 Deep Learning for Billboard Classification
Sayali Avinash Chavan, Ulster University, United Kingdom

20007 Could ChatGPT be your new project management assistant? Using AI chatbots to support project
management tasks
Claudia Hess, IU International University of Applied Sciences, Germany

20022 A Foveated Approach to Automated Billboard Detection
Sayali Avinash Chavan, Ulster University, United Kingdom

20017 Teachers, reload your toolboxes: Using a task design framework and ChatGPT to generate motivational
exercises for female learners in computer science
Sibylle Kunz, IU Internationale Hochschule, Germany

Session 4 [GLOBAL HEALTH]
Session Chair: George Rizos

70069 Considerations for Applying MediaPipe to Gait Analysis
Yasutaka Uchida, Teikyo University of Science, Japan

70084 Common Data Model for Interoperability of Observational Health Data: Bulgarian Diabetes Register
Pharmacology Case Study

Evgeniy Krastev, Sofia University St. Kliment Ohridski, Bulgaria
70097 Towards Personalized Wellness: Detection and Analysis of Homogeneous Communities in Multi-Modal Biomedical Networks
Hesham Ali, University of Nebraska at Omaha, USA

Session 5 [UBICOMM]
Session Chair: Rainer Falk

10012 Using Environmental Contexts to Model Restrictions on Sensor Capabilities
Martin Richter, Chemnitz University of Technology, Germany

10017 Deep Learning based Indoor Positioning Approach using WiFi CSI/RSSI Fingerprints Technique
Wiem Fekih Hassen, University of Passau, Germany, Germany

10021 Location and Object-Based Mobile Applications - Development based on Use Case Templates and Visual Programming
Martin Zimmermann, Offenburg University, Germany

10024 WiFi CSI/RSSI Fingerprints Positioning based on Data Augmentation Technique
Wiem Fekih Hassen, University of Passau, Germany, Germany

Session 6 [ADVCOMP, SEMAPRO]
Session Chair: Anders Fongen

20007 Design and implementation highly adaptive numerical code to creation of new simulation tools to support the design of new technologies (PRESENTATION ONLY)
Marcin Hojny, AGH University of Science and Technology, Poland

30031 DYNAMO: Dynamic Ontology Extension for Augmenting Chatbot Intelligence through BabelNet
Thanassis Mavropoulos, Centre for Research and Technology Hellas, Greece

30034 Semantically augmented documents for the use in Higher Education Institutions
Karsten Böhm, FH Kufstein Tirol Bildungs GmbH, Austria

Session 7 [CYBER]
Session Chair: Martin Zimmermann

80021 Physical-World Access Attestation
Rainer Falk, Siemens AG, Technology, Germany

80029 You Are Doing it Wrong - On Vulnerabilities in Low Code Development Platforms
Tiago Espinha Gasiba, Siemens AG, Germany

80031 I think this is the beginning of a beautiful friendship - On the Rust Programming Language and Secure Software Development in the Industry
Tiago Espinha Gasiba, Siemens AG, Germany

80004 Cyber and Space: Information Warfare and Joint All Domain Effects in the Youngest Domains
Joshua Sipper, US Air Force Air Command and Staff College, United States

Session 8 [EMERGING, DATA ANALYTICS]
Session Chair: Karsten Böhm

50007 Data Sharing Services in a Space Information Network
Anders Fongen, Norwegian Defence University College, Norway

60018 Employing HDF5 file format for Marine Engine Systems data storage
Giuseppe Giannino, Isotta Fraschini Motori (a Fincantieri company), Italy

Session 9 [CYBER]
Session Chair: Joshua Sipper

80035 Towards Explainable Attacker-Defender Autocurricula in Critical Infrastructures
Eric Veith, Carl von Ossietzky University Oldenburg, Germany

80037 Next Generation Artificial Intelligence-Based Learning Platform for Personalized Cybersecurity and IT Awareness Training: A Conceptual Study
Michael Massoth, Department of Computer Science, Hochschule Darmstadt (h_da) University of Applied Sciences Darmstadt, Germany

80048 Cyber Situational Awareness of Critical Infrastructure Security Threats
Fatemeh Movafagh, Simon Fraser University, Canada

80050 Raising Awareness in the Industry on Secure Code Review Practices
Andrei-Cristian Iosif, Siemens AG, Germany

Session 10 [CYBER, SECURWARE]
Session Chair: Paula Louro

80054 Challenges in Medical Device Communication: A Review of Security and Privacy Concerns in Bluetooth Low Energy (BLE)
George Rizos, Centre for Research and Technology Hellas (CERTH), Greece

80056 Higher education institutions as targets for cyber attacks: measuring employees and students cyber security behaviours in Estonian Academy of Security Sciences
Kate-Riin Kont, Estonian Academy of Security Sciences, Estonia

30040 Heterogeneous Network Inspection in IoT Environment with FPGA-based Pre-Filter and CPU-based LightGBM"
Zhenguo Hu, Nagoya University, Japan

30036 Electric Vehicle Authentication and Secure Metering in Smart Grids
Yutaka Yamaguchi, Kyushu University, Japan

Session 11 [SENSORDEVICES]
Session Chair: Tiago Espinha Gasiba

20009 Autocorrelation Average Based Sensing Technique for Cognitive Radio Networks
Djamal Teguig, Polytechnic Military School, Algeria

20029 Smarter Intersections with Cooperative Vehicular Visible Light Communication
Manuel Vieira, CTS-ISEL, Portugal

20034 Self-location, Routing and Navigation through Visible Light Communication
Manuela Vieira, ISEL-ADEETC ; CTS-UNINOVA; DEE-FCT-UNL, Portugal

20049 Heat and current annealing effects on magnetic properties of Fe-rich glass-coated amorphous microwires with different radius
Álvaro González, University Basque Country, Spain

20057 Multi Human Posture Classification Using MIMO FMCW Radar Point Cloud and Deep Learning
Sung Ho Cho, Hanyang University, South Korea

Session 12 [ICQNM, SENSORDEVICES, GREEN]
Session Chair: Álvaro González

20070 Automated Guidance Vehicles based on indoors Visible Light Communication
Paula Louro, ISEL/CTS/UNINOVA, Portugal

60002 Investigation of cell interaction with the regular periodic structure of polyethylene naphthalene
Klaudia Hurtuková, UCT Prague, Czech Republic

60004 Polysaccharide-based materials with antibacterial properties
Anna Kutová, UCT Prague, Czech Republic

80014 Comparable Machine Learning Efficiency: Metrics for NLP
Daniel Schönle, Furtwangen University, Germany

Session 13 [DIGITAL, FASSI]
Session Chair: Eric Veith

20012 Verifiable Labels for Digital Services: A Practical Approach
Maël Gassmann, Bern University of Applied Sciences, Switzerland, Switzerland

70012 Leveraging Digital Twins for Condition Monitoring in Railway Infrastructure
Lucas Rocha, Faculdade de Engenharia da Universidade do Porto, Portugal