On site Activities (*preliminary*) Program

Novotel Barcelona Sant Joan Despi
Carrer de la TV3, 2
08970 Sant Joan Despi
Spain

Updated as of March 13, 2023.

The program will be continuously updated.

InfoWare 2023: https://www.iaria.org/conferences2023/InfoWare23.html

InfoSys 2023: https://www.iaria.org/conferences2023/InfoSys23.html

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

Time slots	Activity

Monday, March 13

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** Chair: Prof. Dr. Petre Dini
12:30 - 13:30	**Tutorial** **Theoretical Explanation and Case Studies of Shapley Values in Machine Learning Regression** **Lecturers** Prof. Dr. Yukari Shirota, Gakushuin University, Japan Prof. Dr. Basabi Chakraborty, Dean and Distinguished Professor, School of Computing, Madanapalle Institute of Technology and Science (India), and Professor Emeritus of Faculty of Software and Information Science, Iwate Prefectural University, Japan Chair: Petre Dini
13:30 - 13:45	**Coffee**
13:45 - 14:45	**Session 1A [DBKDA]**
14:45 - 15:15	**Coffee break**
15:15 - 16:15	**Keynote Speech** **Honeypots, Platform Security and about Trustworthiness of Cars - Highlights for German-Japanese Cooperation Securing Automated Vehicles (SAVE)** Prof. Dr.-Ing. Reiner Kriesten, Karlsruhe University of Applied Sciences, Germany Chair: Petre Dini
16:15 - 16:30	**Coffee**

16:30 - 18:45	**Session 2A [ENERGY]**
19:00 - 20:00	**Welcome Cocktail**

Tuesday, March 14

09:00 - 10:00	**Keynote Speech** **Challenges and Trends in DBMS - Ten Years After** Emeritus Prof. Dr. Fritz Laux, Reutlingen University, Germany and Emeritus Prof. Dr. Malcolm Crowe, Emeritus, University of the West of Scotland, UK Chair: Petre Dini
10:00 - 10:15	**Coffee**
10:15 - 11:15	**Session 3A [SIGNAL]** **Session 1B [HUSO]**
11:15 - 11:45	**Coffee Break**
11:45 - 12:45	**Keynote Speech** **Embedding Neuroscientific Connectomic Synapsis with a Dynamic Neuron Onto a Solid State Device** Prof. Dr. Rory Lewis, University of Colorado at Colorado Springs, USA Chair: Petre Dini
12:45 - 13:00	**Coffee**
13:00 - 14:00	**Keynote Speech** **"Destroy Your Power Grid as a Service" — How Novel Grid Analysis Improves Grid Expansion Planning** Dr.-Ing. Eric MSP Veith, OFFIS e.V. — Institute for Information Technology, R&D Division Energy -Oldenburg, Germany Chair: Lasse Berntzen
14:00 - 15:00	Lunch on your own
15:00 - 16:00	**Session 4A [SIGNAL]** **Session 2B [ICCGI, ICAS]**
16:00 - 16:15	**Coffee**
16:15 - 17:15	**Panel** Resilient Co-Operation of Critical National Infrastructures: Human-AI Closed Loop Cooperation of Critical Infrastructures Operation **Organizer** Dr.-Ing. Eric MSP Veith, OFFIS e.V. — Institute for Information Technology, R&D Division Energy, Germany **Panelists** Prof. Dr. Rory Lewis, University of Colorado at Colorado Springs, USA Prof. Dr. Lasse Berntzen, University of South-Eastern Norway, Norway Emeritus Prof. Dr. Fritz Laux, Reutlingen University, Germany Emeritus Prof. Dr. Malcolm Crowe, Emeritus, University of the West of Scotland, UK
17:15 - 17:45	**Coffee Break**
17:45 - 18:45	**Keynote Speech** **Smart Grids and Aggregators** Prof. Dr. Lasse Berntzen, University of South-Eastern Norway, Norway Chair: Rory Lewis
18:45 - 19:00	**Coffee**
19:00 - 20:15	**Session 5A [BIOTECHNO]** **Session 3B [COLLA + WEB]**

Wednesday, March 15

09:00 - 10:00	**Keynote Speech** **Light Field Technology: A Quest for the Perfect Picture** Prof. Dr. Panos Nasiopoulos, University of British Columbia, Canada Chair: Petre Dini
10:00 - 10:15	**Coffee**
10:15 - 12:00	**Session 6A [DBKDA, ICAS]** · **Session 4B [VEHICULAR]**
12:00 - 12:30	**Coffee Break**
12:30 - 13:30	**Keynote Speech** **Influence of Pre-Crash Vehicle Maneuvers on Occupant Safety Performance Response** Prof. Dr. Costin Untaroiu, Virginia Tech, USA Chair: Panos Nasiopoulos
13:30 - 14:30	Lunch on your own
14:30 - 15:30	**Keynote Speech** **Large Scale LEO Satellite Network for Future Internet - Routing and Solution** Dr. Lin Han, Futurewei, USA CS&VP Dr. Richard Li, Futurewei, USA Chair: Costin Untaroiu
15:30 - 15:45	**Coffee**
15:45 - 17:00	**Session 7A [ICNS]** · **Session 5B [VEHICULAR, ICWMC]**
17:00 - 17:15	**Coffee**
17:15 - 18:15	**Keynote Speech** **Teaching Critical Thinking in (Software) Engineering** Prof. Dr. Juho Mäkiö, Hochschule Emden/Leer, Emden, Germany Chair: Malcolm Crowe
18:15 - 18:30	**Coffee Break**
18:30 - 20:15	**Session 10B [BRAININFO]** · **Session 6B [INTERNET]**
20:15 - 23:00	**Conference Dinner** **Novotel Hotel**

Thursday, March 16

09:00 - 10:00	**Keynote Speech** **An Open Blockchain Development Platform: DevLeChain Introduction and Application** Prof. Dr. Weizhi Meng, Technical University of Denmark (DTU), Denmark Chair: Ilkay Wunderlich
10:00 - 10:15	**Coffee**
10:15 - 12:00	**Session 7B [VEHICULAR, ICAS]** · **Session 9A [ICAS]**
12:00 - 12:30	**Coffee Break**
12:30 - 13:30	**Keynote Speech** **Architecting Digital Ecosystems** Prof. Dr. ir. Tekinerdogan, Bedir, Wageningen University & Research, Wageningen, The Netherlands Chair: Lasse Berntzen
13:30 - 14:30	Lunch on your own

14:30 - 15:30	**Keynote Speech** **The Future of Data-centric Computing** Dr. Alexey Cheptsov, TIK/University of Stuttgart, Germany Chair: Petre Dini	
15:30 - 15:45	**Coffee**	
15:45 - 17:30	**Session 8B [INTELLI]**	**Session 10A [ICAS]**
17:30 - 17:45	**Coffee**	
17:45 - 18:45	**Keynote Speech** Air Traffic Management Security: ADS-B as an Example Prof. Dr. Thabet Kacem, University of the District of Columbia, USA Chair: Fritz Laux	
18:45 - 19:00	**Coffee Break**	
19:00 - 20:45	**Session 9B [HUSO, ENERGY]**	**Session 8A [ICNS]**

Friday, March 17

09:00 - 10:30	**Open discussion (tentative]** **AI-Challenges: Sentience and Consciousness** **Moderator:** Prof. Dr. Petre Dini **Guests:** Prof. Dr. Ahmed Kamel, Concordia College **-** Moorhead, USA Dipl.-Ing. Ilkay Wunderlich, Technical University of Dresden, Germany Prof. Dr. Fernanda Eliott, Grinnell College, USA Emeritus Prof. Dr. Malcolm Crowe, Emeritus, University of the West of Scotland, UK Dr.-Ing. Eric MSP Veith, OFFIS e.V. — Institute for Information Technology, R&D Division Energy -Oldenburg, Germany Prof. Dr. ir. Tekinerdogan, Bedir, Wageningen University & Research, Wageningen, The Netherlands
10:30 - 11'00	**Coffee**
11:00 - 12:30	**Open Discussion (tentative)** **Electric Chargers and Follow-cars Energy Distribution Models** **Moderator**: Petre Dini **Guests:** Prof. Dr. Lasse Berntzen, University of South-Eastern Norway, Norway Dr.-Ing. Eric MSP Veith, OFFIS e.V. — Institute for Information Prof. Dr. Dirceu Cavendish, Kyushu Institute of Technology/UCLA, Japan/USA
12:30 - 13:00	**Farewell and Coffee** Closing session: Petre Dini

Recommended tourist objectives to be visited on your own:

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

Barcelona
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]

=============

Session 1A [DBKDA]
Session Chair: Fritz Laux

Football Teams Sustained Growing by Academy Training - Proposal of Shapley-based Measurement
Seiji Matsuhashi, Gakushuin University, Japan
Yukari Shirota, Gakushuin University, Japan

An Efficient Ensemble of Deep Neural Networks for Detection and Classification of Diabetic Foot Ulcer Images
Basabi Chakraborty, Iwate Prefectural University, Japan

Session 2A [ENERGY]
Session Chair: Jaime Lloret

Implementation of a Fully-automated Optimized Fog-computing-based IoT-controlled PV Network
Mohammad Abdel-Rahman, Princess Sumaya University for Technology, Jordan

An Architecture for Reliable Learning Agents in Power Grids
Eric Veith, Carl von Ossietzky University Oldenburg, Germany

Business Model Considerations for a Solution to Optimize and Diagnose Solar Panel Installations
Lasse Berntzen, University of South-Eastern Norway, Norway

The Implementation of the Automatic Dispatching System (ADS) to Support the Smart Grid Pilot Project for Distribution Grid Improvement in Sumba Island, Indonesia
Dimas Fiddiansyah, PLN, Indonesia

Session 3A [SIGNAL]
Session Chair: Florent Crozet

Requirements for Piano Lesson Support System
Naoki Morita Tokai University, Japan
Chiharu Nakanishi, Kunitachi College of Music, Japan

Development of Score Click Playback System
Motoya Wakiyama, School of Information Telecommunication Engineering Tokai University, Japan

In-video Searching of Melody In Piano Lesson Video

Tatsuya Oshiro, Tokai University, Tokyo, Japan

Session 4A [SIGNAL]
Session Chair: Mohammad Abdel-Rahman

Informational Analysis of MODIS Satellite Evapotranspiration Satellite Data of Vegetation Cover: A Method to Reveal the Presence of Plant Disease
Luciano Telesca, IMAA-CNR, Italy

Divergence-Based Regularization for End-to-End Sensing Matrix Optimization in Compressive Sampling Systems
Roman Jacome, Universidad Industrial de Santander, Colombia

Supervised Spatial Divide-and-Conquer Applied to Fish Counting
Gianna Arencibia-Castellanos, Alejandro González-Fernández, María Castillo-Moral, Rubén Fraile, Juana M. Gutiérrez-Arriola, Fernando Pescador

Session 5A [BIOTECHNO]
Session Chair: Lasse Berntzen

Machine Learning in the Identification of Key Residues of Variants in the Interaction of ACE2 and TMPRSS2 Proteins with Spike of SARS-CoV2
Silvana Giuliatti, University of Sao Paulo, Brazil

Analyzing Switch Regions of Human Rab7a and Rab10 by Molecular Dynamics Simulations
Levy Bueno Alves, University of Sao Paulo, Brazil

Altering the Behavior of the Catostylus mosaicus Jellyfish using Electromagnetic Fields
Lorena Parra

Session 6A [DBKDA, ICAS]
Session Chair: Yukari Shirota

On a Weight Representation for Partial Fuzzy Measure AHP
Shin-ichi Ohnishi, Hokkai-Gakuen University, Japan

Memory Efficient Data-Protection for Database Utilizing Secure/Unsecured Area of Intel SGX
Masashi Yoshimura, Nara Institute of Science and Technology, Japan

Graph Data Models and Relational Database Technology
Malcolm Crowe, University of the West of Scotland, United Kingdom, Scotland

Utilizing Continuous Kernels for Processing Irregularly and Inconsistently Sampled Data with Position-Dependent Features
Birk Martin Magnussen, Opsolution GmbH, Germany

Session 7A [ICNS]
Session Chair: Poonam Garg

A Parallel Processing Method of Large-scale System Level Simulator for Advanced 5G System
Megumi Shibuya, KDDI Research, Inc., Japan xmu-shibuya@kddi.com

A Topology Aggregation-based Approach for the Unsplittable Shortest Path Routing Problem
Hamza Ben-Ammar, Orange, France

VPN user authentication using centralized Identity Providers
Contact
Duarte Mortágua, University of Aveiro, Portugal

Development of a Low-cost Sensor to Optimise the use of Fertilisers in Irrigation Systems
Lorena Parra

Session 8A [ICNS]
Session Chair: Hamza Ben-Ammar

Host Migration Transparency Architecture by Cooperation between Multipath Transmission Control and VPN
Kohta Ohshima, Tokyo University of Marine Science and Technology, Japan
Naoya Kitagawa, National Institute of Informatics, Japan

Security Analysis on Social Media Networks via STRIDE Model
Weizhi Meng, Technical University of Denmark, Denmark

Session 9A [ICAS]
Session Chair: Zhaid Iqbal

A Multi-modal AI Approach For AGVs: A Case Study On Warehouse Automated Inventory
Ferran Gebellí Guinjoan, Flanders Make, Belgium

Mobile 3D LiDAR-based Object and Change Detection in Production and Operations Management
Taru Hakanen, VTT Technical Research Centre of Finland, Finland

Multi-Agent Planning Method Using Affordances from Environment
Sawako Tajima, Keio University, Japan
Daiki Takamura, Keio University, Japan
Satoshi Kurihara, Keio University, Japan

MATLAB/Simulink-based modeling for industrial Electric Vehicle design
Mouna Samaali, Université de Bourgogne Franche-Comté - DRIVE Laboratory, France

Session 10A [ICAS]
Session Chair: Taru Hakanen

Quantifying Autonomous Vehicle Sensor performance during Adverse Weather Conditions
Imran Mohamed, National Physical Laboratory, United Kingdom

Autonomous Vehicle Sensor Assurance Framework: Testbed Demonstrator
Hsun Yang, National Physical Laboratory, United Kingdom

Moderate Loads Handling & Transportation by COBOTs and AMRs: Discussion of different Architectures to
Increase Payload & Reach and to Improve Operators Ergonomics
Abdellatif Bey Temsamani, Flanders Make, Belgium

Session 1B [HUSO]
Session Chair: Ahmed Kamel

Leveraging Topic Modeling and Toxicity Analysis to understand China-Uyghur Conflicts
Nitin Agarwal, COSMOS Research Center, UA - Little Rock, USA

Examining Content and Emotion Bias in YouTube's Recommendation Algorithm
Obianuju Okeke, University of Arkansas at Little Rock, USA

Comparing Toxicity Across Social Media Platforms for COVID-19 Discourse
Nahiyan Bin Noor, University of Arkansas at Little Rock, USA

Session 2B [ICCGI, ICAS]
Session Chair: Obianuju Okeke

Smart Call Routing Utilizing a Multi-Agent Architecture
Ahmed Kamel, Concordia College, Moorhead, MN, USA,

Examining the relationship of Digitalization on Business performance: A study from Indian Manufacturing
Sector
Poonam Garg, Institute of Management Technology, Ghaziabad, India

Simulated Ant-agent Aspects for Defining an Ant-bots Ontology
Colin Chibaya, Sol Plaatje University, South Africa

Session 3B [COLLA, WEB]
Session Chair: Nahiyan Bin Noor

Stay Committed - On the Role of Organizational Commitment for Virtual Collaboration in SMEs
Juni Mohos, University of Siegen, Germany

Collaborative Works in the Construction Project in Cambodia: Toward a Workflow Scenario Identification
Kannary Keth, Université Libre de Bruxelles, Institute of Technology of Cambodia, Belgium

A Personalized Scoring Method for Rental Property Search Considering the Surrounding Environment
Ruman Suyama, Kyoto Sangyo University, Japan

Session 4B [VEHICULAR, ICWMC]
Session Chair: Costin Untaroiu

Intentional Binding in Direct and Indirect Manipulation for Pointing Task
Kazuhisa Miwa, Nagoya University, Japan

An Efficient YOLOv7x Based Automated Street Parking Space Detection for Smart Cities
Tala Bazzaza, University of British Columbia, Canada tbazzaza@gmail.com

Secure-by-Design Methodology using Meet-in-the-Middle Design Flow for Hardware Implementations of
ECC-based Passive RFID Tags
Vincent Beroulle, Univ. Grenoble Alpes, France

Session 5B [VEHICULAR, ICWMC]

Session Chair: Vincent Beroulle

Towards Cross-Cultural Intelligent Vehicles: A Review
Imane Taourarti, Renault Group / Ensta Paris, Institut polytechnique de Paris, France

A Numerical Investigation of Rider Injury Risks Caused by E-scooter Traffic Accidents [presentation only]
Costin Untaroiu, Virginia Tech, USA

A Neural Network-Based Estimation of Tire Self-Aligning Torque
Younesse El Mrhasli, Ensta Paris, France

A Sound Event Detection and Localization System based on YAMNet Model and BLE Beacons
Miguel Angel Quintana Suarez, University of Las Palmas de Gran Canaria, Spain

Session 6B [INTERNET]
Session Chair: Juho Mäkiö

Transfer of Session State Between Satellites in a Space Information Network
Anders Fongen, Norwegian Defence University College, Norway

On the Study of Internet Ossification and Solution
Lin Han, Futurewei Technologies, Inc., USA

A review of Next Generation Internet Architecture Open-source Software Projects
Rita Madsen, Aarhus University, Denmark

BBR Performance over Variable Delay Paths on Multipath TCP Video Streaming
Masayoshi Kondo, Kyushu Institute of Technology, Japan
Dirceu Cavendish, Kyushu Institute of Technology/UCLA, Japan/USA

Session 7B [VEHICULAR, ICAS]
Session Chair: Tala Bazzaza

Baseline Selection for Integrated Gradients in Predictive Maintenance of Volvo Trucks' Turbocharger
Peyman Sheikholharam Mashhadi, Halmstad University, Sweden
Mahmoud Rahat, Halmstad University, Sweden

Approach to Modeling Energy Consumption of Auxiliary Consumers in Electric Vehicles
Tuyen Nguyen, University of Applied Sciences Karlsruhe, Germany

Simulation environment for validation of Automated Lane-Keeping System
Michal Sojka, Czech Technical University in Prague, Czech Republic

MATLAB/Simulink-based Modeling for Industrial Electric Vehicle Design
Mouna Samaali, Université de Bourgogne Franche-Comté - DRIVE Laboratory, France

Session 8B [INTELLI]
Session Chair: Fernanda Eliott

A Novel Diagnosis Concept for Verification of Neural Networks on the Target Hardware
Ilkay Wunderlich, Technical University of Dresden, Germany

Video-based Object Detection using Voice Recognition and YoloV7
Thabet Kacem, University of the District of Columbia, USA

Intelligent Motion Planning in Human-Robot Collaboration Environments
Zhaid Iqbal, DIGI2, SYSTEC, FEUP, Portugal

Session 9B [HUSO, ENERGY]
Session Chair: Fritz Laux

Digital practices and uses in secondary schools: Achieving digital literacy?
Hafida Hammadi, Gustave Eiffel University, France

Complex Behavior vs. Design - Interpreting AI: Reminders from Synthetic Psychology
Fernanda Eliott, Grinnell College, USA

Development of occupants' behavior model in urban scale using DTW and PSO algorithms based on national lifetime survey
Hengxuan Wang, Kyushu University, Japan

PIV of Flow Convection Induced by Solar Sphere to Generate Power
Hassan Abdulmouti, HCT, United Arab Emirates

Session 10B [BRAININFO]
Session Chair: Ilkay Wunderlich

90026 Recruiting Neural Field Theory for Motor Imagery Data Augmentation
Daniel Polyakov, Ben-Gurion University, Israel

Social context impacts brain activation pattern during visual perception of Movement: an fMRI Study
Alexandra Morozova, Third Faculty of Medicine, Charles University, Czech
Marie Chudožilov Bendová, Third Faculty of Medicine, Charles University, Czech Republic

A Postulate: Connectome Development is the Driving Factor of Brain Growth
Rory Lewis, University of Colorado Colorado Springs, USA