

## On site Activities (preliminary) Program

NOVOTEL VENEZIA MESTRE CASTELLANA  
Via Ceccherini 21  
30174 Venezia Mestre, Italy

Updated as of **April 21, 2023 - 9:30am Standard Pacific Time**  
The program will be continuously updated.

DigitalWorld: <https://www.aria.org/conferences2023/DigitalWorld23.html>

NexComm: <https://www.aria.org/conferences2023/NexComm23.html>

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

Session conference rooms	Room #1	Room #2	Room #3
Plenaries		Room #1	

### Monday, April 24

12:00	<b>Registration starts</b> The registration desk is located in front of the conference rooms Open during the entire conference	
13:15	<b>Welcome session</b>	
13:30 - 14:30	<b>Tutorial Lecture</b> <b>How Pandemic Changed Critical Care Telemedicine</b> Prof. Dr. Vitaly Herasevich, M.D., Ph.D., Mayo Clinic, USA Chair: Petre Dini	
14:30 – 15:00	<b>Coffee</b>	
15:00 - 17:00	<b>Session 1B [GEOProcessing, ICDS, SMART ACCESS]</b>	<b>Session 2B [eTELEMED, ALLSENSORS]</b>
17:00 - 17:30	<b>Coffee</b>	
17:30 - 18:30	<b>Keynote Speech</b> <b>Enhancing Mission Support with New Communications Capabilities in the NASA Deep Space Network</b> Timothy T Pham, Jet Propulsion Laboratory, NASA, USA Chair: Pascal Lorenz	
18:30 - 18:45	<b>Coffee</b>	
18:45 – 20:00	<b>Panel #1: Health Hour!</b> Theme: <b>Challenges with Digital Health</b> <b>Moderator</b> Prof. Dr. Monika K. Gullstett, Norwegian Centre for EhealthResearch, Norway	

	<b>Panelists</b> Prof. Dr. Vitaly Herasevich, M.D., Ph.D, Mayo Clinic, USA Prof. Dr. Niels Frederik Garmann-Johnsen, University of Agder, Norway Prof. Dr. Olga Levina, Technische Hochschule Brandenburg, Germany Dipl.-Ing. Dr. techn. Gerold Hoelzl, University of Passau, Chair of Embedded Systems, Germany
20:00 - 21:00	<b>Welcome Cocktail</b> You must have your badge to attend the cocktail

## Tuesday, April 25

09:00 - 10:00	<b>Keynote Speech</b> <b>Leveraging Collaborative Metaprogramming for Sustainable Innovation and Co-Creation</b> Prof. Dr. Herwig Mannaert, University of Antwerp, Belgium Chair: Luigi Lavazza		
10:00 - 10:30	<b>Coffee Break</b>		
10:30 - 12:15	<b>Session 3B [ICDS, GEOProcessing]</b>	<b>ACHI-COCREATE I</b>	<b>Session 1A [ICONS. ALLSENSORS]</b>
12:15 - 13:45	Lunch on your own		
13:45 - 15:30	<b>Session 4B [ACHI]</b>	<b>DASAIT</b>	<b>Session 2A [ICN]</b>
15:30 - 15:45	<b>Coffee</b>		
15:45 - 16:45	<b>Keynote Speech</b> <b>How to Attract new Generations to Science, Technology, Engineering and Mathematics (STEM) by using IoT, Robotics and Drones?</b> Prof. Dr. Lasse Berntzen, University of South-Eastern Norway, Norway Chair: Herwig Mannaert		
16:45 - 17:15	<b>Coffee break</b>		
17:15 - 19:00	<b>Session 5B [eKNOW]</b>	<b>ACHI-COCREATE II</b>	<b>Session 3A [ICDT, MMEDIA, ACHI, ICONS]</b>
19:00 - 19:15	<b>Coffee</b>		
19:15 - 20:30	<b>Panel #2: Knowledge Hour!</b> <b>Theme: Deriving Useful Information from Huge Data</b> <b>Moderator</b> Prof. Dr. Herwig Mannaert, University of Antwerp, Belgium <b>Panelists</b> Prof. Dr. Paulo E. Cruvinel, Ph.D., Embrapa Instrumentation, Brazil Prof. Dr. Martijn Zoet, Zuyd University of Applied Sciences, Sittard, the Netherlands Lect. Dr. rer. nat. Uwe Riss, OST - Eastern Switzerland University of Applied Sciences, Switzerland		

Prof. Dr. Guadalupe Ortiz Bellot, Universidad de Cádiz, Spain

**Wednesday, April 26**

09:00 - 10:00	<p align="center"><b>Keynote Speech</b>  <b>AI-aided Diagnosis and Virtual AI Imaging with Small-Data Deep Learning</b>          Prof. Dr. Kenji Suzuki, Tokyo Institute of Technology, Japan          Chair: Lasse Berntzen</p>		
10:00 - 10:30	<p align="center"><b>Coffee Break</b></p>		
10:30 - 12:15	<p align="center"><b>Session 6B</b> [eTELEMED]</p>	<p align="center"><b>Session 7B [ACHI]</b></p>	<p align="center"><b>Session 4A</b> [SPACOMM]</p>
12:15 - 13:45	<p align="center">Lunch on your own</p>		
13:45 - 15:30	<p align="center"><b>Session 8B [ACHI]</b></p>	<p align="center"><b>SATAE</b></p>	<p align="center"><b>Session 5A [SOFTENG, ALLDATA]</b></p>
15:30 - 15:45	<p align="center"><b>Coffee</b></p>		
15:45 - 17:30	<p align="center"><b>Session 9B [ACHI]</b></p>	<p align="center"><b>CO-PAR-23</b></p>	<p align="center"><b>Session 6A [SOFTENG, eTELEMED]</b></p>
17:30 - 18:00	<p align="center"><b>Coffee break</b></p>		
18:00 - 19:00	<p align="center"><b>Keynote Speech</b>  <b>A Systems Approach to Digital Transformation</b>          Prof. Dr. Mo Mansouri, Stevens Institute of Technology, USA   University of South-Eastern Norway, Norway          Chair: Erik Buchmann</p>		
19:00 - 19:15	<p align="center"><b>Coffee</b></p>		
19:15 - 20:15	<p align="center"><b>Keynote Speech</b>  <b>Potentials of Directional Antennas for Indoor Positioning Systems in Dense Multipath Environments</b>          Prof. Dr. Oliver Michler, TU-Dresden, Germany          Chair: Mo Mansouri</p>		
20:30 - 23:30	<p align="center"><b>Conference dinner</b></p>		

**Thursday, April 27**

09:00 - 10:00	<p align="center"><b>Keynote Speech</b>  <b>Big and Small Data Processing for Context-aware Smart Cities</b>          Prof. Dr. Guadalupe Ortiz Bellot, Universidad de Cádiz, Spain          Chair: Oliver Michler</p>		
10:00 - 10:30	<p align="center"><b>Coffee Break</b></p>		
10:30 - 12:15	<p align="center"><b>ISELI</b></p>	<p align="center"><b>DA I</b></p>	<p align="center"><b>Session 13B</b> [GEOProcessing]</p>
12:15 - 13:45	<p align="center">Lunch on your own</p>		
13:45 - 15:30	<p align="center"><b>Session 10B [ACHI, ICDS]</b></p>	<p align="center"><b>DA II</b></p>	<p align="center"><b>Session 7A [ALLDATA, eTELEMED]</b></p>

15:30 – 15:45	<b>Coffee</b>		
15:45 – 17:15	<b>Session 11B [eLmL]</b>	<b>DA III</b>	<b>GEOSA</b>
17:15 - 17:45	<b>Coffee break</b>		
17:45 - 20:00	<b>Session 12B [eLmL]</b>	<b>Session 14B [GEOProcessing]</b>	<b>Session 15B [ALLSENSORS]</b>

## Friday, April 28

09:00 - 10:30	<p align="center"><b>Panel #3: AI Hour</b>  <b>Theme: AI: 360 Degrees around ChatGPT</b>  <b>Moderator</b>  Prof. Dr. Kenji Suzuki, Tokyo Institute of Technology, Japan</p> <p align="center"><b>Panelists</b>  Prof. Dr. Gerald Penn, University of Toronto, Canada  Prof. Dr. Katharina Frosch, Brandenburg University of Applied Sciences, Germany  Pr. Lect. Dr. Lodewijk Arntzen, The Hague University of Applied Sciences, The Netherlands</p>
10:30 - 11:00	<b>Coffee</b>
11:00 -12:30	<p align="center"><b>Panel # 4: Systems Resilience Hour!</b>  <b>Theme: Cohabitation of Humanized AI and Humans for Critical Systems Resilience</b>  <b>Moderator</b>  Prof. Dr. Lasse Berntzen, University of South-Eastern Norway, Norway</p> <p align="center"><b>Panelists</b>  Prof. Dr. Oliver Michler, TU-Dresden, Germany  Nadine-Christine Wessel, Technische Hochschule Brandenburg, Germany  Prof. Dr. Petre Dini, IARIA, USA/EU</p>
12:30 - 13:00	<b>Coffee Break</b>
13:00 – 14:30	<p align="center"><b>Panel #5: Education Hour!</b>  <b>Theme: Education Analytics / Enhanced Learning</b>  <b>Moderator</b>  Prof. Dr. Susanne Stigberg, Østfold University College, Halden, Norway</p> <p align="center"><b>Panelists</b>  R&amp;D Manager Daniela Pellegrini, R&amp;D Manager, Piazza Copernico srl. , Italy  Sen. Lect. Dr. Samuel Kosolapov, Braude College of Engineering KARMIEL (R.A.), Israel  Assoc Lect. Dr. Martha Hubertz, University of Central Florida, USA  Prof. Dr. Monika Maria Möhring, Technische Hochschule Mittelhessen, Gießen Germany  Dr. Flavio Manganello, ITD-CNR, Italy</p>

	R&D Manager, Giannangelo Boccuzzi, Hypex srl - Monopoli, Italy
14:30 - 15:00	<b>Farewell Coffee</b>
Afternoon	Social Meeting in Piazza San Marco

**Saturday, April 29**

**Recommended tourist objectives to be visited on your own:**

**Note:** There is a bus from Novotel Venezia-Mestre Castellana to Piazzale Roma (twice/hour)  
Updated timetable is provided by the hotel.

**From: Piazzale Roma**

*(i) via public transportation*

Grand Canal by public Vaporetto Lines

*(ii) by Walking (narrow streets)*

Scuola Grande di San Rocco

Frari Church

Rialto Bridge

Food Market of Rialto

Former Financial District of Venice

Fenice Opera House

Church of San Marco

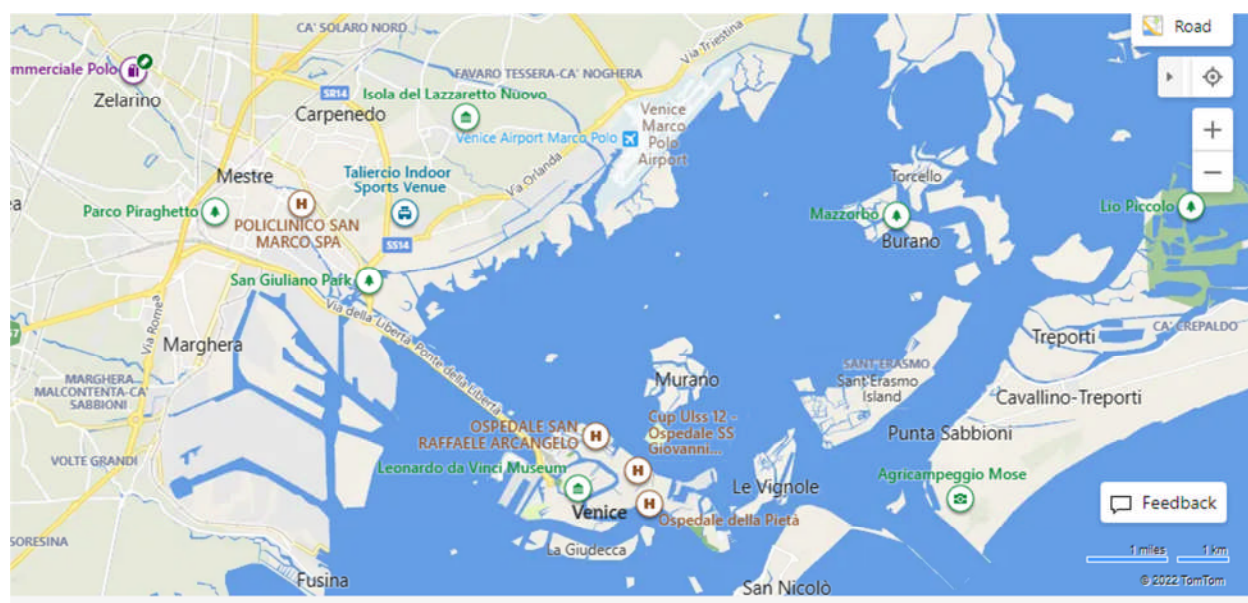
Dodges' Palace

San Marco Belltower

San Marco Piazza

*(iii) Recommended*

From San Marco Plaza – three islands: Murano, Burano, Torcello



## **REGULAR TRACKS**

### **Session 1A [ICONS, ALLSENSORS]**

Session Chair: Andrzej Chydzinski

Transformative Computing for Cyber-Security Protocols

*Marek Ogiela, AGH University of Science and Technology, Poland*

Software Engineering Project Management with the Community of Practice Approach: Toward Changes in Software Engineering Education

*Charlie Shim, Kutztown University of Pennsylvania, USA*

Decentralized cooperative intersection management based on connected autonomous vehicles for urban unsignalized intersections

*Jie Zhang, Ostfalia university of applied sciences, Germany*

Strategy for the Deployment of Water Internet of Things (WIoT) in Taiwan

*Chen Yang Hsu, Industrial Technology Research Institute, Taiwan*

### **Session 2A [ICN]**

Session Chair: Charlie Shim

Higher-order Statistics of Series of Packet Losses

*Andrzej Chydzinski, Silesian University of Technology, Poland*

Personalized Protocols for Data Hiding in Cloud-to-Things Applications

*Urszula Ogiela, AGH University of Science and Technology, Poland*

Use cases and 6G architecture: new needs and challenges

*Francine Oliveira, Instituto de Pesquisas Eldorado, Brazil*

Strategies for Minimization of Energy Consumption in Data Centers

*Simon Friis, Technical University of Denmark, Denmark*

### **Session 3A [ICDT, MMEDIA, ACHI, ICONS]**

Session Chair: Francine Oliveira

On the Performance of a Low-Complexity Data-Reuse RLS Algorithm for Stereophonic Acoustic Echo Cancellation

*Cristian-Lucian Stanciu, University Politehnica of Bucharest, Romania*

*Ionut-Dorinel Ficiu, University Politehnica of Bucharest, Romania*

Co-occurring word determination used for estimating best times for viewing seasonal organisms

*Yusuke Takamori, Polytechnic University, Japan*

*Masaki Endo, Polytechnic University of Japan, Japan*

Protecting User Privacy in Online Settings via Supervised Learning  
*Brooke Lampe, Technical University of Denmark, Denmark*

A Five-Factor Market Approach For Long-Term Product Development: A Result of Systems Thinking  
*Andy Mattuulat Filipovic, NTNU - Norwegian University of Science and Technology, Norway*

**Session 4A [SPACOMM]**

Session Chair: Timothy T Pham

Large Scale Space Network Simulator for Performance Optimized DTNs  
*Nadia Kortas, NASA Glenn Research Center, USA*  
*Timothy Recker, NASA, USA*

Review on Recent Trends and Applications of Vivaldi Antenna in the Range of 1 GHz – 40 GHz  
*Nitin Muchhal, Fraunhofer IIS, Germany*

Characteristics and performance of Algerian Satellite Based Augmentation System (AL-SBAS)  
*TABTI Lahouaria, Algerian Space Agency, Algeria*

Design of High Gain Corrugated Antipodal Vivaldi Antenna With [] Shaped Metamaterial for SATCOM Applications  
*Nitin Muchhal, Fraunhofer IIS, Germany*

**Session 5A [SOFTENG, ALLDATA]**

Session Chair: Camilo Correa Restrepo

Lightweight Sample Code Recommendation System to Support Programming Education  
*Yoshihisa Udagawa, Tokyo University of Information Sciences, Japan*

Taxonomy of Requirements Specification Templates  
*Hiba Hnaini, ENSTA Bretagne, France*

Estimating Functional Size of Software with Confidence Intervals  
*Luigi Lavazza, Universita degli Studi dell'Insubria, Italy*

Software Monitoring of an IoT Chain Communicating over LoRaWAN  
*Mohamed El-Kharroubi, UPEC university, France*

**Session 6A [SOFTENG, eTELEMED]**

Session Chair: Luigi Lavazza

Projects VS Continuous Product Development - Does it Affect Benefits Realization?  
*Sinan Sigurd Tanilkan, Simula Metropolitan Center for Effective Digitalization of the Public Sector, Norway*

A Model Library Tool for Holistic Embedded Software Design  
*Sven Jacobitz, Ostfalia university of applied sciences, Germany*

A Lightweight Method to Define Solver-Agnostic Semantics of Domain Specific Languages for Software Product Line Variability Models  
*Camilo Correa Restrepo, University of Paris 1 Pantheon-Sorbonne, France*

Valkyrie: A Distributed Service-Oriented Architecture for Coordinated Healthcare Services  
*Terje Solvoll, Norwegian Centre for E-health Research, Norway*

**Session 7A [ALLDATA, eTELEMED]**

Session Chair: Sinan Sigurd Tanilkan

An Industrial Manufacturing Dataset together with Anomaly Detection Results integrated in an Open Stand-Alone Sharing Platform for Sustainable Replication  
*Gerold Hoelzl, University of Passau, Chair of Embedded Systems, Germany*

Seeking Higher Performance in Real-Time Data Processing through Complex Event Processing  
*Alfonso García de Prado, University of Cádiz, Spain*

Small dataset acquisition for machine learning analysis of industrial processes with possible uncertainties  
*Xukuan Xu, TU Dresden/TH Aschaffenburg, Germany*

Measuring C-Reactive Protein using Microring Resonators  
*Lodewijk Arntzen, The Hague University of Applied Sciences, The Netherlands*  
*Daan Boesten, The Hague University of Applied Sciences, The Netherlands*

**Session 1B [GEOProcessing, ICDS, SMART ACCESSIBILITY]**

Session Chair: Erik Buchmann

SODASENSE: An intelligence platform for micro-mobility, micro-climate and agriculture  
*Spiros Skiadopoulos, University of the Peloponnese, Greece*

CryptoPad: Dedicated Device for Convenient and Secure Wallet  
*Jione Choi, Korea University, South Korea*

Inclusive and Accessible Homes for Older People: The preparation of Guidelines for Home Design  
*Sandeep Sankat, School of Planning and Architecture, India*

Web Accessibility of Irish Local Government Websites  
*Jennifer Kennedy, Dublin City University, Ireland*

The Aggregator as a Trust Builder in a Renewable Energy System  
*Lasse Berntzen, University of South-Eastern Norway, Norway*



## **Session 2B [eTELEMED, ALLSENSORS]**

Session Chair: Vitaly Herasevich

Adolescents Experiences with Video Consultations in Specialized Mental Health Services in Norway

*Henriette Lauvhaug Nybakke, Norwegian Centre for E-health Research, Norway*

*Monika K. Gullslett, Norwegian Centre for E-health Research, Norway*

Electronic Health Records User Satisfaction: Experience after implementation of a new system in Northern Norway

*Espen Nordheim, Norwegian Centre for E-health Research, Norway*

*Ove Lintvedt, Norwegian Centre for E-health Research, University Hospital of North Norway*

Assessing Well-Being in Spain in the Post-COVID era: A Population Study Using Mobile Sensors and Experience Sampling

*Oresti Banos, University of Granada, Spain*

MRI-Compatible Cascaded Blood Pressure Microsensor

*Lodewijk Arntzen, The Hague University of Applied Sciences, The Netherlands*

*Nils Boertjes, The Hague University of Applied Sciences, The Netherlands*

## **Session 3B [ICDS, GEOProcessing]**

Session Chair: Spiros Skiadopoulos

Implementation of Cyber Security Act in Public Financial institutions What are the Constraints and Enabling factors?

*Emmanuel Awuni Kolog, University of Ghana, Ghana*

Long-Term Risks of IoT Devices: The Case of the Smart Fridge

*Erik Buchmann, Universität Leipzig, Germany*

The Open Government Data Digital Disconnect: Observations on Open Data Support by Local Government

*Jennifer Kennedy, Dublin City University, Ireland*

Improving Digital Literacy and Bridging the Digital Divide Among Vulnerable Groups with the DIGI-SCENA Project in Slovenia

*Pika Škerlj, Center Korak, Kranj, Slovenia*

The Role of Food Sharing Applications (FSAs) in Supporting Food Waste Mitigation in Cities: Examples from Poland and Czechia

*Mateusz Rusin, Jagiellonian University, Poland*

*Magdalena Pączek, Jagiellonian University, Poland*

*Filip Bolicki, Jagiellonian University, Poland*

## **Session 4B [ACHI]**

Session Chair: Ramona Tolas

Rethinking Usability Heuristics for Modern Biomedical Interfaces

*Stefan Röhrl, Technische Universität München, Germany*

Marcus: A Chatbot for Depression Screening Based on the PHQ-9 Assessment

*Panagiotis Apostolellis, University of Virginia, USA*

Effects of saliency of an agent's input information on estimation of mental states toward the agent

*Yuki Ninomiya, Nagoya University, Japan*

Distinct Characteristics between "Anshin" and Feeling of Safety Evaluations

*Shota Matsubayashi, Nagoya University, Japan*

### **Session 5B [eKNOW]**

Session Chair: Gerald Penn

Commenter Behavior Characterization on YouTube Channels

*Shadi Shajari, University of Arkansas at Little Rock, USA*

Uncovering the Dynamic Interplay of YouTube Co-commenter Connections through Contextual Focal Structure Analysis

*Mustafa Alassad, University of Arkansas at Little Rock, USA*

Mining User Behavior: Inference of Time-boxed Usage Patterns from Household Generated Data

*Ramona Tolas, Technical University of Cluj Napoca, Romania*

Tools Based on Word Embedding to Make Easy the Analysis of Emotions in Text

*Claudia Martínez Aranedo, UCSC, Chile*

Prediction Pipeline on Time Series Data Applied for Usage Prediction on Household Devices

*Raluca Portase, Technical University of Cluj-Napoca, Romania*

### **Session 6B [eTELEMED]**

Session Chair: Oresti Banos

A population-based study from electronic health records on the comorbidities of dementia older adults in Hong Kong

*Junpei 'Joni' Zhong, The Hong Kong Polytechnic University, China*

Mastering the Telehealth Musculoskeletal Examination

*Edward R. Laskowski, Mayo Clinic Sports Medicine, USA*

Designing Nudges in eHealth

*Niels Frederik Garmann-Johnsen, UiA, Norge*

Ethereum Blockchain in Healthcare: An Improved Framework  
*Miss Laiha Binti Mat Kiah, Universiti Malaya, Malaysia*

Co-designing Assistive Technology with and for Persons Living with Dementia  
*Dympna O Sullivan, TU Dublin, Ireland*

### **Session 7B [ACHI]**

Session Chair: Raluca Portase

e2Logos: A Novel Software for Evaluating Online Student Project Reports  
*Panagiotis Apostolellis, University of Virginia, USA*

Reassessing the Effect of Videoconferencing Features on Trust in Triadic Negotiation  
*Gerald Penn, University of Toronto, Canada*

A User-centred Design and Feasibility Analysis of the WiGlove - A Home-based Rehabilitation Device for Hand and Wrist Therapy after Stroke  
*Vignesh Velmurugan, University of Hertfordshire, UK*

Involving Users in the Development of AI-Supported CAM Systems by Co-Creation Methods  
*Nina Rußkamp, RWTH Aachen University, Germany*  
*Lorena Niebuhr, RWTH Aachen University, Germany*

### **Session 8B [ACHI]**

Session Chair: Nina Rußkamp

Using Language Model for Implementation of Emotional Text-To-Speech  
*Jie Zhu, Shanghai Jiao Tong University, China*

Analysis of EEG microstates During Execution of a Nine Hole Peg Test  
*Shadiya Alingam Meethal, University of Hertfordshire, UK*

Usability of An Immersive Authoring Tool: An Experimental Study for the Scenarization of Interactive Panoramic Videos  
*Daniel, Xuan Hien MAI, Université d'Evry, France*

How Can Intelligent Persona Features Support Online Advertising Work?  
*Joni Salminen, University of Vaasa, Finland*

### **Session 9B [ACHI]**

Session Chair: Jie Zhu

Deep Learning for Condition Detection in Chest Radiographs: A Performance Comparison of Different Radiograph Views and Handling of Uncertain Labels  
*Mubashir Ahmad, University of Hertfordshire, UK*

User Perceptions and Attitudes in the Data Economy and their Contradictions  
*Uwe Riss, OST - Eastern Switzerland University of Applied Sciences, Switzerland*

How Should We Define Voice Naturalness  
*Sajad Shirali-Shahreza, Amirkabir University, Iran and University of Toronto, Canada*

**Session 10B [ACHI, ICDS]**

Session Chair: Uwe Riss

Validating Usability Heuristics for Augmented Reality Applications for Elderly Users  
*Anna Nishchyk, Oslo Metropolitan University, Norway*

The Role of a Human Host onboard Urban Autonomous Passenger Ferries  
*Leander Pantelatos, NTNU, Norway*

Protecting User Privacy in Online Settings via Supervised Learning  
*Brooke Lampe, Technical University of Denmark, Denmark*

The Coloniality of Accessibility Links: From Universal Design to a Decolonial Model of (Dis)Ability  
*Lorenzo Dalvit, Rhodes University, South Africa*

**Session 11B [eLmL]**

Session Chair: Rachel Van Campenhout

Back to Normality - Changes in Time-Effective Logistics of Project-Based Course Electronic Instrumentation after COVID-19 limitations  
*Samuel Kosolapov, Braude College of Eengineering KARMIEL (R.A.), Israel*

Architectural Design of an Adaptive, Structure-Aware Intelligent Tutoring System  
*Sebastian Kucharski, Dresden University of Technology, Germany*

Enhancing Digital Learning: A User Management and Access System for Remote Laboratories  
*Marek Achilles, Hochschule Mittweida, Germany*

**Session 12B [eLmL]**

Session Chair: Sebastian Kucharski

Leveraging Learning by Doing in Online Psychology Courses: Replicating Engagement and Outcomes

*Rachel Van Campenhout, VitalSource, USA*  
*Martha Hubertz, University of Central Florida, USA*

Promoting interactive learning using 5G networks and synchronous immersive contents: the DI5CIS project

*Flavio Manganello, ITD-CNR, Italia*  
*Giannangelo Boccuzzi, Prodea Group Spa, Italia*

Scan to Learn: A Lightweight Approach for Informal Mobile Micro-Learning at the Workplace  
*Katharina Frosch, Brandenburg University of Applied Sciences, Germany*

**Session 13B [GEOProcessing]**

Session Chair: Lasse Berntzen

Dynamic Integration of Climate Properties with Geospatial Data for Energy Applications  
*Lassi Lehto, Finnish Geospatial Research Institute (FGI), Finland*

Visualization System for the Positioning of Sunken Vessels using Underwater Acoustic Devices  
*Dohyeong Kim, ENGSOFT Inc., South Korea*  
*Sang-Hyeok Nam, ENGSOFT Inc., South Korea*

**Session 14B [GEOProcessing]**

Session Chair: Erik Buchmann

Towards accurate traceability of water reaching the reservoirs  
*Lidia Ortega, Universidad de Jaén, Spain*

Using a Social Network for Road Accidents Detection, Geolocation and Notification – A Machine Learning Approach  
*Cláudio de Souza Baptista, Federal University of Campina Grande, Brazil*

Field validation of the Near Infrared (NIR) SENSOR for Vegetation Fire Detection using an Unmanned Aerial Vehicle (UAV)  
*Edwin Magidimisha, Council for Scientific and Industrial Research, South Africa*

**Session 15B [ALLSENSORS]**

Session Chair: Nitin Muchhal

Implementation of underwater position tracking devices using underwater acoustic sensor and spread spectrum communication technology  
*Miheung Choe, Kyungwon Industry Co., Ltd Research Institute, South Korea*

Rapid and Accurate Time Synchronization using Visible Light for Mobile Sensing"  
*Masanori Sugimoto, Hokkaido University, Japan*

Printed humidity sensors and their application  
*Zhiyi Zhang, National Research Council Canada, Canada*

Designing and Manufacturing of Multifunctional Nanosensors using Ultrafast Laser Processing  
*Yury Ryabchikov, HiLASE Centre, Institute of Physics of the Czech Academy of Sciences, Czech Republic*

Using a Silicon Drift Detector to Improve an Agricultural Compton Tomograph for Soil Compaction Analysis

*Paulo Estevão Cruvinel, Embrapa Instrumentation, Brazil*

## **SPECIAL TRACKS**

**ACHI-COCREATE I: Design Practices for Co-Creation and Learning**

Chair: Susanne Stigberg,

Introduction

*Susanne Stigberg, Østfold University College, Norway*

*Joakim Karlsen, Østfold University College, Norway*

Reflections on Participatory Design Application in Public Sector IT Project Management

*Klaudia Carcani, Østfold University College, Norway*

Making Technology Matter for Processes of Co-creation and Innovation in Cross-sectorial Collaborations

*Fahd Bin Malek Newaz, University of Oslo, Norway*

Participatory Design Fictions: Supporting Ethical Awareness in the Digitalisation of Smart Cities' Critical Infrastructure

*Joakim Karlsen, Østfold University College, Norway*

**ACHI-COCREATE II: Design Practices for Co-Creation and Learning**

Chair: Joakim Karlsen

Unveiling the Potential of Digital Fabrication in Arts and Crafts Education: A Future Workshop Approach for Technology-Enhanced Teaching

*Susanne Stigberg, Østfold University College, Norway*

Lunde Exploring Medical Practitioners Abilities to Use Visual Programming to Code Scenarios for Virtual Simulations

*Bjørn Arild Lunde, Østfold University College, Norway*

Finding Common Ground: Design Cards Supporting Mutual Learning in Co-design

*Tina Helene Bunæs, Østfold University College, Norway*

Open Discussion and Closing Remarks

*Moderators: Susanne Stigberg, Joakim Karlsen*

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**SATAE: Sensors and Actuators for Agricultural Decision Making and Knowledge in Engineering**

Chair: Paulo E. Cruvinel

Introduction

*Paulo E. Cruvinel*

Characterization of an IoT Stereo Image Sensor System for Weed Control

*Bruno Moraes Moreno, Federal University of São Carlos, Brazil*

Developing Affordable Sensors in Agriculture Based on Results Obtained at Embrapa Instrumentation

*Paulo S de Paula Herrmann Jr., Embrapa Instrumentation, Brazil*

A Model Based on Intelligent Sensor to Control Sprinklers in Spray Actions

*Elmer Peñaloza, Federal University of Pelotas, Brazil*

New Design for Thermo-formed Piezoelectret Accelerometer

*Igor Nazareno Soares, University of São Paulo*

Open Discussion and Closing Remarks

*Moderator: Paulo E. Cruvinel*

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**CO-PAR-23: Continuum Paradigm**

Chair: Eric J.H.J. Mantelaers

Introduction

*Eric J.H.J. Mantelaers, Zuyd University of Applied Sciences, the Netherlands*

Computational Grounded Theory - An Experiment: Human versus Machine

*Clint Wolfs, Zuyd University of Applied Sciences, the Netherlands*

Technological Support for Correcting Exams: The Continuum Paradigm Next Step Forward to Build a Holistic Continuous Audit Model

*Ed Curfs, Zuyd University of Applied Sciences, the Netherlands*

Usage of Audit Data Analytics within the accountancy sector

*Lotte Verhoeven, Zuyd University of Applied Sciences & RSM Netherlands Accountants N.V., the Netherlands*

Cloud based Continuous Monitoring: An Implementation of Channel Stuffing Detection Framework

*Miklos Vasarhelyi, Rutgers University, USA*

Open Discussion and Closing Remarks

*Moderator: Eric J.H.J. Mantelaers*

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**ISELI: Innovative Solutions on Emerging Learning Needs**

Chair: Daniela Pellegrini

Introduction

*Daniela Pellegrini, Piazza Copernico srl, Italy*

Active Learning in Teaching Digital Tourism Courses: preliminary results through Online Travel Business Simulation

*Michele Angelaccio, University of Rome Tor Vergata, Italy*

Sustainability and Metaverse in Education and Training: Barriers, Opportunities and Environmental Impact

*Cinzia Mezzetti, Piazza Copernico srl, Italy*

Learning Time Patterns: Many Study Times to Consider When Designing Digital Learning

*Sara Zuzzi, Piazza Copernico srl, Italy*

Accessibility in e-Learning: From Inclusive Choice to Universal Training

*Saverio Santulli Sanzo, Piazza Copernico srl, Italy*

Open Discussion and Closing Remarks

*Moderator: Daniela Pellegrini*

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**GEOSA: Geospatial and Earth Observation Systems Applications**

Chair: Rouhollah Nasirzadehdizaji

Introduction

*Rouhollah Nasirzadehdizaji, Yüksel Proje Inc., Department of Water and Environment, Turkey*

Application of InSAR Method to Estimate the Surface Deformation of the May Embankment Dam, Turkey

*Rouhollah Nasirzadehdizaji, Yüksel Proje Inc., Department of Water and Environment, Turkey*

Geo-processing Approaches for Urban Water Supply and Drainage Systems' Data Rehabilitation

*Cagri Cimen, Yüksel Proje Inc., Department of Water and Environment, Turkey*

Development of Web-Based Geospatial Application for Efficient Spatial Data Management

*Rouhollah Nasirzadehdizaji, Yüksel Proje Inc., Department of Water and Environment, Turkey*

Development of Data Quality Improvement Method for Hydrodynamic Model of Urban Drainage System Using GIS Capabilities

*Anil Olgac, Yüksel Proje Inc., Department of Water and Environment, Turkey*



Open Discussion and Closing Remarks  
*Moderator: Rouhollah Nasirzadehdizaji,*

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**DASAIT: Design and Application of Socially-aware IT**  
Chair: Olga Levina

Introduction

*Olga Levina, TH Brandenburg, University of Applied Science, Germany*

Taking the Matter in their own Hands – Can Business Unit Developers Fulfill their Digital Demands with Low-Code Development Platforms

*Olga Levina, TH Brandenburg, University of Applied Science, Germany*

Decision-Support Systems and Decision Making: Managing Decisional Deskilling in Human-DSS Interaction in Organizations. A Quantitative Study

*Nadine-Christine Wessel, TH Brandenburg, University of Applied Science, Germany*

Mobile Instant Messaging and User Interface Design- Different Age Groups, Different Requirements

*Olga Levina, TH Brandenburg, University of Applied Science, Germany*

Open Discussion and Closing Remarks

*Moderator: Olga Levina*

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**DA I: Digital Accessibility I**  
Chair: Monika Maria Möhring

Introduction

*Monika Maria Möhring, Technische Hochschule Mittelhessen, BliZ, Germany*

Digital Accessibility in Multinational Enterprises: A Meta Study

*Andreas Deitmer, Instituto Universitário de Lisboa (ISCTE-IUL), Portugal and Technische Hochschule Mittelhessen (THM) - University of Applied Sciences, Germany*

Digital Audio-Tactile Graphics for Inclusion in Education, the Workplace and Everyday Life

*Sahin Görenekli, Technische Hochschule Mittelhessen, BliZ, Germany*

Booth: Digital Audio- and Voice-Based Tools for Inclusion in Education and Everyday Life

*Zeki Öztürk, THM Giessen (BliZ), Germany*

**DA II: Digital Accessibility II**  
Chair: Monika Maria Möhring

An Audible Handheld Ultra-Sonic-Sonar (AHRUS) to Support Human Echo Location

*Michael Kreutzer, THM, Germany*

A Framework for Developing Modular Mobility Aids for People with Visual Impairment- An Indoor Navigation Use Case

*Michael Kreutzer, THM, Germany*

Design of an Accessible VR-Escape Room for Accessibility Education

*Saba Mateen, studiumdigitale, Germany*

How to create a Campaign to raise Awareness about digital Barriers

*Sanja Grimminger, Goethe University Frankfurt, Germany*

**DA III: Digital Accessibility III**

Chair: Monika Maria Möhring

Proof of Concept: Utilizing Smartphone Modules for Accessibility at Physical Conferences

*Linda Rustemeier, Goethe University Frankfurt, Germany*

The Tension Field of Digital Teaching from the Perspective of Teachers

*Sarah Voß-Nakkour, Goethe University Frankfurt, Germany*

UEmbed: An Authoring Tool to Make Game Development Accessible for Users Without Knowledge of Coding

*Imran Hossain, Goethe University Frankfurt, Germany*

Open Discussion and Closing Remarks

*Moderator: Monika Maria Möhring*

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