Submit a Contribution
Registration
Camera Ready

Deadlines

Submission:	Feb 05, 2024
Notification:	Feb 23, 2024
Registration:	Mar 09, 2024
Camera ready:	Mar 14, 2024

Deadlines differ for special tracks. Please consult the conference home page for special tracks Call for Papers if any.

Past Events
Sponsors

Publication

Published by IARIA Press Group (ISSN), Xpert Publishing Services

Archived in the Open Access IARIA Publishing Services Library

Printe available at Curran Associates, Inc.

Authors of selected papers will be invited to submit extended versions to a IARIA Journal

Indexing Procedure

Affiliated Journals

FUTURE COMPUTING 2024: Program

Onsite and Online Options: In order to accommodate a large number of situations, we are offering the option for either physical presence or virtual participation (just slides or pre-recorded videos).

For 2024, all events will be held in a hybrid mode with five options: on site or virtual choices (live, prerecorded videos, voiced presentation slides, and .pdf slides).

We hope for better times allowing us to return to the traditional on site scientific events. However, we are ready to adapt any which way the conditions dictate.

ComputationWorld 2024 Congress
Conference will be mixed online and on location at
NOVOTEL VENEZIA MESTRE CASTELLANA
Via Cecchetti 21
30174 VENEZIA MESTRE
ITALY

Note: This event is a mix of online and on site participation. All contributions are posted below; those presenting onsite have their own schedule, as a subset of the entire program.

Opening Welcome

On Site Program

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

Tutorials

T1. Future AI Systems & Temporal Knowledge Graph Completion - On Site
Dr. Steve Chan, VTIRL, VTI-PAC, USA
- presentation slides
- video presentation
- summary
- short bio

Practical Overview

PO1. Where AI Could be Used and Where it Couldn't - On Site
Prof. Dr. Petra Dirs, IARIA, USA/EU
- presentation slides
- video presentation
- summary
- short bio

Keynote Speeches

K1. Production Systems as Cloud-Based Applications - On Site
Prof. Dr. Christoph P. Neumann, Ostbayerische Technische Hochschule Amberg-Weiden, Germany
- presentation slides
- video presentation
- short bio

K2. Combining DevOps and Normalized Systems Toward Software Rejuvenation Factories - On Site
Prof. Dr. Herwig Mannaert, University of Antwerp, Belgium
- presentation slides
- video presentation
- short bio

K3. Counterposing Ambiguity/Uncertainty for AI Systems - On Site
Dr. Steve Chan, VTIRL, VTI-PAC, USA
- presentation slides
- video presentation
- short bio

K4. Urban Air Mobility - A New Frontier - On Site
Prof. Dr. Ramesh Narumalli, University of North Texas, USA
- presentation slides
- video presentation
- short bio

K5. Urban Air Mobility - A New Frontier - On Site
Prof. Dr. Hans-Werner Sehring, NORDAKADEMIE gAG, Germany
- presentation slides
- video presentation
- short bio

Open Discussion

O1. Adapting for a Generative-AI World - On Site
Coordinators:
Dr. Steve Chan, VTIRL, VTI-PAC, USA
Prof. Dr. Hans-Werner Sehring, NORDAKADEMIE gAG, Germany
- presentation slides

Panels

Sunday, April 14 | 3:00pm - 5:00pm
P1. Theme: AI-based Computation Technologies - Benefits and Warnings - On Site
Moderator: Dr. Steve Chan, VTIRL,VTI-PAC, USA
Panelists:
Prof. Dr. Guido Russo, University of Naples Federico II, Italy
Prof. Dr. Henry Chu, University of Louisiana at Lafayette, USA
Dr. Steve Chan, VTIRL,VTI-PAC, USA
Prof. Dr. Petra Dirs, IARIA, USA/EU
- presentation slides

Tuesday, April 16 | 2:00pm-4:00pm
P2. Theme: Systems Vulnerabilities - Software and Hardware Cybersecurity Concerns - On Site
Moderator: Prof. Dr. Andreas Allmuth, Technical University of Applied Sciences OTH Amberg-Weiden, Germany
Panelists:
Lieutenant Colonel Dr. Gerhard Schwarz, Bundeswehr (German Armed Forces), Germany
Dr. Steve Chan, VTIRL,VTI-PAC, USA
Dr. Mika Helsingkoja, Finnish Defence Research Agency, Finland
Prof. Dr. Andreas Allmuth, Technical University of Applied Sciences OTH Amberg-Weiden, Germany
- presentation slides

Tuesday, April 16 | 6:30pm - 8:30pm
P3. Theme: Readiness - Raising of Digital Technologies - On Site
Moderator: Prof. Dr. Herwig Mannaert, University of Antwerp, Belgium
Panelists:
Prof. Dr. Hans-Werner Sehring, NORDAKADEMIE gAG, Germany
Dr. Geert Haerens, Faculty of Applied Economics Antwerp University, Belgium
Dipl. Ing. Andrey Vakolov, Elektro Sincotrone Trieste, Italy
Dr. Steve Chan, VTIRL,VTI-PAC, USA
Prof. Dr. Herwig Mannaert, University of Antwerp, Belgium
- presentation slides

Wednesday, April 17 | 8:30pm - 8:15pm
P4: Theme: Training and Education through Virtual Reality - Boosting Digital Cognition and AI Literacy - On Site
Moderator: Prof. Dr. Hans-Werner Sehring, NORDAKADEMIE gAG, Germany
Panelists:
Dr. Mika Helsingkoja, Finnish Defence Research Agency, Finland
Dr. Yasmina Kebir, University of Lorraine, France
Prof. Dr. Hans-Werner Sehring, NORDAKADEMIE gAG, Germany
Prof. Dr. Petra Dirs, IARIA, USA/EU
- presentation slides

Thursday, April 18 | 10:15am - 12:00pm
P5. Theme: Adaptability at Work - Coping with Systems Complexity, Scalability, and High-Speed Communications - On Site
Moderator: Dr. Melanie Schranz, Lakeside Labs GmbH, Österreich
Panelists:
Prof. Dr. Ramesh Narumalli, University of North Texas, USA
Prof. Dr. Hans-Werner Sehring, NORDAKADEMIE gAG, Germany
Dr. Melanie Schranz, Lakeside Labs GmbH, Österreich
Prof. Dr. Petra Dirs, IARIA, USA/EU
- presentation slides

Special Sessions

AIVR 1 / FAME: Fashion for Metaverse

Introduction
Lorenzo Stacchio, Pasquale Cascarano
- presentation slides / editorial

AI for Enhancing and Preserving Dance Cultural Heritage: a Case Study on Rudolf Nureyev's Costumes
Silvia Garzarella, Pasquale Cascarano, Lorenzo Stacchio
- presentation slides / *full article in Thirteenth Dorital Library*

Photogrammetry and 360° Virtual Tours: Differences, Relevance, and Future Possibilities
Irene Calvi, Eleonora Stacchiotti, Pasquale Cascarano
- presentation slides / *full article in Thirteenth Dorital Library*

CLOUD COMPUTING 1 / AICLOUDSEC I: AI - Curse or Blessing for the Security of Cloud Services?

Introduction
Andreas Allmuth, Sebastian Fischer, Christoph P. Neumann
- *presentation slides* / editorial

Towards Multi-Domain Multi-Tenant Situational Awareness Systems
Tobias Eggendorfer, Gerhard A. Schwarz
- presentation slides / video / *full article in Thirteenth Dorital Library*

Security Enforcement Within Multiple Shared Information Space Environments [PRESENTATION]
Gerhard Schwarz
- presentation slides / *video*

Distinguishing Tor From Other Encrypted Network Traffic Through Character Analysis
Pitjamon Chonnoi, Tobias J. Bauer, Andreas Allmuth
- presentation slides / video / *full article in Thirteenth Dorital Library*

Automated Vulnerability Scanner for the Cyber Resilience Act
Sandro Fafer, Gerald Bruhn, Max Weiss, Sebastian Fischer
- presentation slides / video / *full article in Thirteenth Dorital Library*

CLOUD COMPUTING 2 / AICLOUDSEC II: AI - Curse or Blessing for the Security of Cloud Services?

Vocabulary Attack to Hijack Large Language Model Applications
Patrick Levi, Christoph P. Neumann
- *presentation slides* / video / *full article in Thirteenth Dorital Library*

Task Offloading in Fog Computing with Deep Reinforcement Learning: Future Research Directions Based on Security and Efficiency Enhancements
Amr Rahmeh
- *presentation slides* / video / *full article in Thirteenth Dorital Library*

MAVITRA: Towards a Conceptual Framework for Elevating Cybersecurity Applications Through Privacy-Preserving Cyber Threat Intelligence Sharing
Philipp Fuxen, Murad Hachani, Rudolf Hackenberg, Mirko Ross
- *presentation slides* / video / *full article in Thirteenth Dorital Library*

A Forensic Approach to Handle Autonomous Transportation Incidents within Gaia-X
Linon Ahmedi, Klara Dolos, Conrad Meyer, Andreas Attenberger, Rudolf Hackenberg
- presentation slides / video / *full article in Thirteenth Dorital Library*

PATTERNS 1 / AAA: Agile & Architecture

Introduction
Geert Haerens
- presentation slides / editorial

Systematic Rejuvenation of a Budgeting Application over 10 years: A Case Study
Chetak Kandaswamy, Jan Verelst
- presentation slides / video / *full article in Thirteenth Dorital Library*

Using Normalized Systems Expansion to Facilitate Software Migration - a Use Case
Christophe De Clercq, Jan Verelst
- presentation slides / video / *full article in Thirteenth Dorital Library*

Toward a Rejuvenation Factory for Software Landscapes
Herwig Mannaert, Tim Van Wees, Frederic Hannes
- presentation slides / video / *full article in Thirteenth Dorital Library*

Converging Clean Architecture with Normalized Systems
Gerco Koks
- presentation slides / video / *full article in Thirteenth Dorital Library*

Regular Sessions

ACCSE 2024, The Ninth International Conference on Advances in Computation, Communications and Services

dPIDs - the Emerging Persistent Identification Technology for FAIR and the Digital Era
Andrey Kalaviv, Erik van Winkle, Elisaveta Zhirkova, George Kourousias
- presentation slides / video / *full article in Thirteenth Dorital Library*

Mining Exquisite Itemsets with Multiple Thresholds under the Loose Constraint
Tzung-Pei Hong, Yi-Chen Chiang, Chun-Hsi Wang, Wei-Ming Huang
- presentation slides / video / *full article in Thirteenth Dorital Library*

ADAPTIVE 2024, The Sixteenth International Conference on Adaptive and Self-Adaptive Systems and Applications

Agent-based Modeling in the Edge Continuum using Swarm Intelligence
Melanie Schranz, Ksenia Hanstina, Peter Forgacs, Fred Buining
- presentation slides / video / *full article in Thirteenth Dorital Library*

To ReRobin or not to ReRobin? Towards an AI-based Evaluation System for Power Tool Batteries
Dominique Brechle, Marit Brechle-Mathiszig, Tobias Geger, Nelly Yanick, Robert Werner
- presentation slides / video / *full article in Thirteenth Dorital Library*

CollectMyCycle: Towards an Automated Condition Assessment for Bicycles
Tobias Geger, Dominique Brechle, Marit Brechle-Mathiszig, Nelly Yanick, Robert Werner
- presentation slides / video / *full article in Thirteenth Dorital Library*

A Method for the Runtime Monitoring of AI-based Environment Perception in Automated Driving Systems
Ilyra Aslam, Abhishek Buragohain, Dennis Rathe, Asha Anoobama, Meng Zhang, Andreas Reuter
- *presentation slides* / video / *full article in Thirteenth Dorital Library*

On the Regularization of a Low-Complexity Recurrent Least-Squares Adaptive Algorithm
Cristian-Lucian Stanciu, Cristian Anghel, Camelia Elisei-Iliescu, Laura-Maria Dogariu, Ionut-Dorinel Ficiu, Constantin Paleologu
- presentation slides / video / *full article in Thirteenth Dorital Library*

AICT 2024, The Twentieth Advanced International Conference on Telecommunications

Simulation Based Energy Efficiency Analysis of DUDe 5G Networks
Chrysostomos-Athanasios Katsigiannis, Konstantinos Stamatelis Tsanchlas, Christos Bouras, Vasileios Kokkinos, Philippos Pouyioutas
- presentation slides / video / *full article in Thirteenth Dorital Library*

Study of Income for Companies that Provide Mobile Internet Service in Colombia
Luis Fernando Pedraza, Cesar Augusto Hernandez, Ernesto Cadena Muñoz
- presentation slides / video / *full article in Thirteenth Dorital Library*

Competition Analysis in Cellular Networks: A Colombian Case
Ernesto Cadena Muñoz, Cesar Augusto Hernandez, Luis Fernando Pedraza
- presentation slides / video / *full article in Thirteenth Dorital Library*

Implementation of LETM Neural Networks for Predicting Competition in Telecommunications Markets
Diego Armando Giral Ramirez, Luis Fernando Pedraza-Martinez, Cesar Augusto Hernández-Suarez
- presentation slides / video / *full article in Thirteenth Dorital Library*

AIVR 2024, The First International Conference on Artificial Intelligence and Immersive Virtual Reality

Using Virtual Reality to Assess Communicational Skills During a Collaborative Task with Time Pressure
Yasmina Kebir, Gaelle Nicolas, Samuel Ferreira Da Silva, Pierre Chevrier, Jérôme Dinet, Valérie Saint-Dizier de Almeida
- presentation slides / video / *full article in Thirteenth Dorital Library*

Describing and Predicting the Acceptability of AI and Robotics towards Professional Identity with the Revised 4-A Model
Jerome Dinet, Armand Marchesin, Marie Perchaluk, Hirokazu Kumazawa, Yuichiro Yoshikawa
- presentation slides / video / *full article in Thirteenth Dorital Library*

Work-in-Progress: The Impact of Virtual Reality on Pain Management During Orthodontic Debonding
Ines Bouhlal, Aurelie Mailliez, Jerome Dinet
- presentation slides / video / *full article in Thirteenth Dorital Library*

Basic Senses and Their Implications in Immersive Virtual Reality Design
Jérôme Dinet, Armand Marchesin, Marie Perchaluk, Hirokazu Kumazawa, Marie-Elvire Dy, Marie Gérard
- presentation slides / video / *full article in Thirteenth Dorital Library*

Model-Based Analysis of the Differences in Sensory Perception between Real and Virtual Space : Toward "Adaptive Virtual Reality"
Taichi Nakagawa, Muneo Kitajima, Katsuko T. Nakahira
- presentation slides / video / *full article in Thirteenth Dorital Library*

BUSTECH 2024, The Fourteenth International Conference on Business Intelligence and Technology

Leveraging Data-Driven Approach to Empower Assistive Technology
Sabin Nakarmi, Karim Guezzane, Gohenry N. Sammet Gil, Sanjeev Khanka
- presentation slides / video / *full article in Thirteenth Dorital Library*

Comparing CEM and CRM: A Literature Review Study
Marie-Noëlle Forget, Pierre Hadaya
- *presentation slides* / video / *full article in Thirteenth Dorital Library*

CLOUD COMPUTING 2024, The Fifteenth International Conference on Cloud Computing, GRIDs, and Virtualization

Revolutionizing System Reliability: The Role of AI in Predictive Maintenance Strategies
Michael Bidollahkhani, Julian Kunkel
- *presentation slides* / video / *full article in Thirteenth Dorital Library*

COGNITIVE 2024, The Sixteenth International Conference on Advanced Cognitive Technologies and Applications

Work in Progress: Promoting Self-Regulation for Children with Autistic Spectrum Disorder with Robots
Marie Rychalski, Armand Marchesin, Jérôme Dinet
- presentation slides / video / *full article in Thirteenth Dorital Library*

Restricting In-variance and Co-variance of Representations for Adversarial Defense in Vision Transformers
Chee-Hung Chu, Jeen-Shing Wang-Jeen
- presentation slides / video / *full article in Thirteenth Dorital Library*

Development of Children's Crossing Skills in Urban Areas: Impact of Age and Traffic Density on Visual Exploration
Jordan Sofi, Jerome Dinet, Muneo Kitajima, Aurelie Mailliez, Samuel Ferreira Da Silva, Gaelle Nicolas
- *presentation slides* / video / *full article in Thirteenth Dorital Library*

Practice Stages for a Proficient Piano Player to Complete a Piece Understanding the Process based on Two Minds
Katsuko T. Nakahira, Muneo Kitajima, Makoto Toyoda
- presentation slides / video / *full article in Thirteenth Dorital Library*

A Metadata Model for Harmonising Engineering Research Data Across Process and Laboratory Boundaries
Martin Zimek, Felix Conrad, Kim Feldhoff, Hajo Wiemer, Jens Weber, Steffen Ihlenfeldt
- *presentation slides* / video / *full article in Thirteenth Dorital Library*

COMPUTATION TOOLS 2024, The Fifteenth International Conference on Computational Logics, Algebras, Programming, Tools, and Benchmarking

A Note on a Syntactical Measure of the Complexity of Programs
Emanuele Covino
- presentation slides / video / *full article in Thirteenth Dorital Library*

Contextual Categorization Enhancement through LLMs Latent-Space
Zineddine Bettouche, Anas Safi, Andreas Fischer
- *presentation slides* / video / *full article in Thirteenth Dorital Library*

CONTENT 2024, The Sixteenth International Conference on Creative Content Technologies

Visual Artifacts in Software Engineering Processes
Hans-Werner Sehring
- presentation slides / video / *full article in Thirteenth Dorital Library*

Automatic Semantic Image Tagging at Scale: AI-Powered Command-Line Tool Based on CLIP
Yurij Mikhalevich
- presentation slides / video / *full article in Thirteenth Dorital Library*

Automatic Generation of Illustrations for Children's Fairy Tales From Text: AI-Powered App Based on DALL-E 3
Irina Kogel
- presentation slides / video / *full article in Thirteenth Dorital Library*

FUTURE COMPUTING 2024, The Sixteenth International Conference on Future Computational Technologies and Applications

Big-Data-Oriented Computing on a Mid-Size Data Center: the ADHOC Infrastructure
Augusto Tortora, Massimo Brescia, Stefania Cavuoti, Paolino Guida, Guido Russo, Bernardino Spisso
- presentation slides / video / *full article in Thirteenth Dorital Library*

The Triumvirate of an Adaptive Criteria Weighting Methodology: Isomorphic Comparator Similarity Measure, and Apropos High Dimensional Data Cluster Validation Index Measures for the Ascertainment of Bespoke Dynamic Fuzzy Lists
Steve Chan
- presentation slides / video / *full article in Thirteenth Dorital Library*

ICIW 2024, The Nineteenth International Conference on Internet and Web Applications and Services

Digital Uses and Practices in Secondary School – Achieving Digital Literacy
Hafida Hammadi, Christian Bourret
- presentation slides / video / *full article in Thirteenth Dorital Library*

On the Distribution of the Queue Size in a Packet Buffer
Blaise Ademola, Andrey Chydzinski
- *presentation slides* / video / *full article in Thirteenth Dorital Library*

A Short Survey on Graph Neural Networks Based Stock Market Prediction Models
Lei Zhou, Yuqi Zhang, Jian Yu, Sina Yongcheraon, Samaneh Madanian, Guiling Wang
- presentation slides / video / *full article in Thirteenth Dorital Library*

A Webtool for Hadith Authorship and Verification with Scholarly Expertise
Amina Daoud, Den Kurup, Hamada Al Abol, Jens Weber, Raghad Zaghouani, Saeed Al Marri, Younos Al Mou
- presentation slides / video / *full article in Thirteenth Dorital Library*

MOBILITY 2024, The Fourteenth International Conference on Mobile Services, Resources, and Users

The Philosophy of UAS-to-UAS Communications
Kamesh Namduri, Jaya Sravani Mandapaka, Mahtab Kitzare
- *presentation slides* / video / *full article in Thirteenth Dorital Library*

PATTERNS 2024, The Sixteenth International Conference on Pervasive Patterns and Applications

Warm-Starting Patterns for Quantum Algorithms
Felix Truger, Johanna Barzen, Martin Beisel, Frank Leymann, Vladimir Yussupov
- presentation slides / video / *full article in Thirteenth Dorital Library*

SERVICE COMPUTATION 2024, The Sixteenth International Conference on Advanced Service Computing

A Technical Reference Architecture for Microservices-based Applications in the Insurance Industry
Christin Schulze, Henrik Mayer, Arne Koschel, Andreas Hausotter, Alexander Link, Tim van Dorp
- presentation slides / video / *full article in Thirteenth Dorital Library*

SMART 2024, The Thirteenth International Conference on Smart Cities, Systems, Devices and Technologies

Navigating security issues of Interoperability in the Digital Identity System of a Smart City
Amarilis Koka, Pierre-Martin Tardif
- presentation slides / video / *full article in Thirteenth Dorital Library*

Intelligent Bus Shelter as an Example of the Novel Smart City Technology Integration
Jaroslaw Adamowski, Jakub Adamowski, Jan Kalinowski
- presentation slides / video / *full article in Thirteenth Dorital Library*

Introducing Advanced Comparative Life Cycle Assessment for Evaluating Environmental Conditions and Carbon Opportunity Costs of Energy Production Facilities
Taehyung Kwon, Sunghwan Kim, Juyeong Maeng
- presentation slides / video / *full article in Thirteenth Dorital Library*

SPWID 2024, The Tenth International Conference on Smart Portable, Wearable, Implantable and Disability-oriented Devices and Systems

Rhye It Home – A digital Personal Agent for Chronically Sick in the Home Environment
Chris Schwarz, Björn Naumann, Michela Harris, Nils Lehmann
- presentation slides / video / *full article in Thirteenth Dorital Library*

Farewell Message

Technical Co-Sponsors and Logistic Supporters

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