



IISA STEERING COMMITTEE

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THE VENUE

IISA2023 will be held in the new building of the Dept. of Electrical and Computer Engineering of the University of Thessaly in Volos, Greece. The first settlements of the city of Volos, remnants of which can still be visited today, date 6,000 years back to the Neolithic Era. In Greek mythology, Volos was the starting point of Jason and the Argonauts' quest for the Golden Fleece in Colchis. Today, Volos is a modern city with a busy port from which ferries depart to the islands of Skopelos, Skiathos and Alonnisos which are internationally-known tourism destinations. Mount Pelion, a short drive to the north of Volos, is full of picturesque villages, forests and some of the most beautiful beaches in Greece. Volos is also reachable by air through the Nea Anchialos National Airport.

The Department of Electrical and Computer Engineering of the University of Thessaly, Greece annually enrolls approximately 200 undergraduate, and 60-70 graduate students. Its mission is to promote the advancement of Electrical, Computer and Communication Engineering through education and research in such areas as Fundamentals and Applications of Computer Science, Software Engineering and Information Systems, Hardware and Computer Architecture, Signals, Telecommunication and Networks, and Energy Systems.

IMPORTANT DATES

Invited sessions/workshop/tutorial proposals:

February 27, 2023

Paper submission: March 27, 2023

Author notification: April 24, 2023

Camera-ready paper submission: May 15, 2023

TREASURER

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INFORMATION CONTACT

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IISA2023 is the fourteenth conference in the IISA series, technically co-sponsored by IEEE, the University of Piraeus and the University of Thessaly. IISA-2023 Proceedings will be published by IEEE and uploaded on IEEEEXPLORE. A small number of selected papers from IISA2023 will be invited for publication in extended form in a special issue of the **Intelligent Decision Technologies Journal**, IOS Press.

The IISA conference series has become an international forum for researchers and professionals in all areas of Information, Intelligence, Systems and Applications. We invite submissions of papers presenting high-quality original research and developments for the conference tracks listed. In IISA-2023, the **Biological & Artificial Intelligence Foundation** will give best student-paper awards.

Information is widely available and accessible, but frequently leads to information overload and overexposure, while the effort for coding, storing, hiding, securing, transmitting and retrieving it may be excessive. **Intelligence** is required to manage information and extract knowledge from it, inspired by biological and other paradigms. **Multimedia Systems and Networks**, with an increasing level of Intelligence, are being developed that incorporate these advances. As a result, new **Technologies, Protocols and Applications** are emerging.

The International Conference on Information, Intelligence, Systems and Applications (IISA) series offers a forum for the constructive interaction and prolific exchange of ideas among scientists and practitioners from different research fields – such as computers, mathematics, physics, biology, medicine, chemistry, experimental psychology, social sciences, linguistics, and engineering – having the goal of developing methodologies and tools for the solution of complex problems in artificial intelligence, biology, neuroscience, security, monitoring, surveillance, healthcare, sustainability in energy sources, governance, education, commerce, automation, robotics, optimization, image, speech and natural languages, and their integration.

SCOPE: TOPICS OF INTEREST INCLUDE, BUT ARE NOT LIMITED TO:

Track I: Information Processing and Intelligence

- Advances in databases
- Information systems
- Information and data management
- Data mining and knowledge extraction
- Recommender systems
- Digital rights management
- Processing of Social and Emotional Interactions
- Biological and artificial neural networks
- Biological and artificial immune systems
- Cognitive science
- Neuroscience
- Computational biology
- DNA computing
- Evolutionary computing and genetic algorithms
- Bayesian networks
- Expert systems & intelligent agents
- Swarm intelligence
- Fuzzy logic systems
- Kernel methods - support vector machines
- Ensemble classifiers
- Emerging machine learning paradigms
- Decision making techniques
- Knowledge-based systems
- Ambient-ubiquitous intelligence
- Robotics and automation
- Affective computing

Track II: Multimedia Systems and Networks

- Multimedia processing
- Signal mining and visualization
- Human-machine interaction
- Multimodal systems
- Multimedia systems
- Autonomous Computing
- Distributed computing

- Quantum computing
- Mobile computing
- Green computing
- Trusted computing
- Proactive computing
- Cloud computing
- Ubiquitous computing
- Networking
- Sensing, sensory systems and sensor networks
- Design and implementation
- Real time systems

Track III: Applications

III.1 Educational Informatics

- Adaptive and personalized learning
- Student modeling
- Intelligent tutoring systems
- E-learning and mobile learning
- Social media and learning
- Educational games
- Computer-supported collaborative learning
- Big data in education and learning analytics
- Smart learning environments
- Virtual and augmented reality in education
- Risk management in education
- Learning management systems
- Content management systems
- Learning technologies for students with special needs

III.2 Cyber Security

- Watermarking, cryptography/analysis, steganography/analysis
- Privacy and authentication
- Malicious software analysis
- Information, computer and network security
- Infrastructure security
- Forensics
- Biometrics

III.3 Smart Energy and Smart Cities

- Assessment of the energy status in smart cities

- Intelligent sensors and data analytics for energy optimization
- Monitoring and control of energy resources
- Smart grid
- Fault detection
- Decision support systems in energy planning and scheduling
- Middleware for urban computing
- Intelligent transportation systems
- Public displays for modern cities
- Impact of urban computing in modern cities
- Case studies and best practices
- Big city data
- Culture for smart cities
- **III.4 Healthcare**
- E-health, mobile health and smart health
- Infrastructure for smart health
- Advanced wearable devices and robotics for smart health
- Ambient intelligence in assisted living
- Health information systems
- Healthcare management
- Case studies
- **III.5 Other**
- E-government and m-government
- E-commerce and m-commerce
- E-entertainment and m-entertainment
- E-legal and m-legal services
- Personalized systems and services
- Enabling technologies, frameworks and standards
- Empirical evaluations
- Simulation and evaluation via simulation
- Case studies
- Applications in culture and heritage
- Applications in tourism
- Applications in natural resource management
- Applications in disabilities and to people at need

