

## TENTATIVE CALL FOR PAPERS



IEEE CS



# 36<sup>th</sup> International Conference on Tools with Artificial Intelligence

October 28 to October 30, 2024, Herndon VA, USA (only in Person)

#### ICTAI Steering Committee Chair

Nikolaos Bourbakis (Founder), BAIF  
[drbourbakis@gmail.com](mailto:drbourbakis@gmail.com)

#### General Chair

Manolis Koubarakis  
University of Athens, Greece  
[koubarak@di.uoa.gr](mailto:koubarak@di.uoa.gr)

#### Co- Program Chairs

Nikolaos Bourbakis, BAIF  
[drbourbakis@gmail.com](mailto:drbourbakis@gmail.com)

#### Jessica Lin

George Mason University, VA, USA,  
[jessica@gmu.edu](mailto:jessica@gmu.edu)

#### Financial-Registration Chair

Michail Alexiou  
Kennesaw State University, GA, USA  
[malexiou@kennesaw.edu](mailto:malexiou@kennesaw.edu)

#### Local Web Chair

Nikolaos Gkorgkolis  
University of Crete, Greece  
[gkorgkolis@csd.uoc.gr](mailto:gkorgkolis@csd.uoc.gr)

#### Publicity Chair

Sachin Sharma  
Kennesaw State University, GA, USA  
[ssharm21@students.kennesaw.edu](mailto:ssharm21@students.kennesaw.edu)

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Anna Esposito, University of Campania, Italy  
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The IEEE International Conference on Tools with Artificial Intelligence (ICTAI) has been a leading IEEE-CS annual scientific meeting for three decades. It provides a major international forum where the creation and exchange of ideas related to artificial intelligence are fostered among academia, industry, and government agencies. The conference facilitates the cross-fertilization of these ideas and promotes their transfer into practical tools, for developing intelligent systems and pursuing artificial intelligence applications. ICTAI encompasses all technical aspects of specifying, developing and evaluating the theoretical underpinnings and applied mechanisms of the AI-based components of computer tools such as algorithms, architectures and languages.

### Topics (but not limited to)

#### AI Foundations

Evolutionary computing, Bayesian and Neural Networks  
Decision/Utility Theory and Decision Optimization  
Search, SAT, and CSP  
Logics and Ontologies

#### AI in Domain-specific Applications

AI in Computational Biology, Medicine & Biomedical Applications  
AI in the Web, Communication, Social Networking, Recommender Systems, Games and E-Commerce  
AI in Finance and Risk Management

#### AI in Computer Systems

AI in Robotics, Computer Vision and Games  
AI in Natural Language Processing  
AI in Software Engineering, Real-Time and Embedded Applications, and Sensor Networks

AI in Cloud Computing, Data-Intensive Applications and Online/Streaming and Multimedia Systems

AI in Web Search and Information Retrieval

AI in Computer Security, Data Privacy, and Information Assurance

#### AI in Data Analytics, Data Mining and Big Data

Visual Analytics for Big Data  
Computational Modeling for Big Data  
Large-scale Recommendation and Social Media Systems  
Cloud/Grid/Stream Data Mining for Big Velocity Data  
Semantic-based Big Data Mining

#### AI in Smart Cities

Healthcare, Traffic, Transportation, Environment, etc.

#### AI Synergistic Models

Bridging AI Models for Advanced AI

#### Machine Learning

Dimension Reduction and Feature Selection  
Learning Graphical Models and Complex Networks  
Active, Cost-Sensitive, Semi-Supervised, Multi-Instance, Multi-Label and Multi-Task Learning  
Transfer/Adaptive, Rational and Structured Learning  
Preference/Ranking, Ensemble, and Reinforcement Learning  
Learn continuous-Incremental Learning

#### Knowledge Representation, Reasoning, Cognition

Knowledge Representation and Reasoning  
Knowledge Extraction, Management and Sharing  
Case-based Reasoning and Knowledge-based Systems  
Cognitive Modelling and Semantic Web

#### AI and Decision Systems

Decision Guidance and Support Systems  
Optimization-based Recommender Systems  
Group, Distributed, and Collaborative Decisions  
Crowd-sourcing and Collective Intelligence Decision-making  
Strategic, Tactical and Operational-level Decisions

#### Uncertainty in AI

Uncertainty and Fuzziness Representation and Reasoning  
Approximate/Exact Probabilistic Inference

#### Natural Language Processing

Natural Language Processing/Understanding  
Large language models  
Dialogue systems and digital assistants/chatbots

#### AI and Societal Impact

AI Fairness, Accountability and Transparency  
AI interpretability and explainability Ethical and Trustworthy AI

### Papers Submission

The submissions should contain original, high quality, not submitted or published elsewhere work. Papers should be submitted electronically (through the ICTAI 2024 web site) in pdf format and should conform to IEEE specifications (single-spaced, double-column, 10-point font size, up to 8 pages).

### Papers Presentation

Each accepted paper should be presented by one of the authors and accompanied by at least one full registration fee payment, to guarantee publication in the proceedings. All accepted papers will be included in proceedings of ICTAI 2024 that will be published by the IEEE Computer Society.

### Special Issues in IEEE & Int. Journals

Extended versions of selected papers from the conference will be reviewed and published in special issues in various IEEE and Int. Journals

### Best ICTAI Papers Recognition Awards

ICTAI provide several financial awards to the top-3 best student papers and to the ICTAI Best Paper Award.

### Additional & Contact Information

#### ICTAI General Chair:

Manolis Koubarakis – [koubarak@di.uoa.gr](mailto:koubarak@di.uoa.gr)

#### ICTAI Co-Program Chairs:

Nikolaos Bourbakis - [drbourbakis@gmail.com](mailto:drbourbakis@gmail.com)

Jessica Lin - [jessica@gmu.edu](mailto:jessica@gmu.edu)

Paper submission: **July 01, 2024**

Paper notification: **Aug. 16, 2024**

Camera ready paper: **Sept. 16, 2024**

**\*Herndon city is next to Dulles Int.**

**Airport, 30 miles from WDC**