

CALL FOR PAPERS



IEEE CS



33rd International Conference on Tools with Artificial Intelligence

November 01-03, 2021, USA (VIRTUALLY)

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The IEEE International Conference on Tools with Artificial Intelligence (ICTAI) is 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. The 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

1. Evolutionary computing, Bayesian and Neural Networks
2. Decision/Utility Theory and Decision Optimization
3. Search, SAT, and CSP
4. Description Logic and Ontologies

AI in Domain-specific Applications

1. AI in Computational Biology, Medicine and Biomedical Applications
2. AI in WWW, Communication, Social Networking, Recommender Systems, Games and E-Commerce
3. AI in Finance and Risk Management

AI in Computer Systems

4. AI in Robotics, Computer Vision and Games
5. AI in Natural Language Processing
6. AI in Software Engineering, Real-Time and Embedded Applications, and Sensor Networks
7. AI in Cloud Computing, Data-Intensive Applications and Online/Streaming and Multimedia Systems
8. AI in Web Search and Information Retrieval
9. AI in Computer Security, Data Privacy, and Information Assurance

AI in Data Analytics and Big Data

1. Visual Analytics for Big Data
2. Computational Modeling for Big Data
3. Large-scale Recommendation and Social Media Systems
4. Cloud/Grid/Stream Data Mining for Big Velocity Data
5. Semantic-based Big Data Mining

AI in Smart Cities

Healthcare, Traffic, Transportation, Environment, etc.

Machine Learning and Data Mining

6. Pre-processing, Dimension Reduction and Feature Selection
7. Learning Graphical Models and Complex Networks
8. Active, Cost-Sensitive, Semi-Supervised, Multi-Instance, Multi-Label and Multi-Task Learning
9. Transfer/Adaptive, Rational and Structured Learning
10. Preference/Ranking, Ensemble, and Reinforcement Learning

Knowledge Representation, Reasoning and Cognitive Modelling

1. Knowledge Representation, Reasoning
2. Knowledge Extraction, Management and Sharing
3. Case-based Reasoning and Knowledge-based Systems
4. Cognitive Modelling and Semantic Web

AI and Decision Systems

1. Decision Guidance and Support Systems
2. Optimization-based Recommender Systems
3. Group, Distributed, and Collaborative Decisions
4. Crowd-sourcing and Collective Intelligence Decision-making
5. Strategic, Tactical and Operational-level Decisions
6. Decision-making in Social and Mobile Networks

Uncertainty in AI

1. Uncertainty and Fuzziness Representation and Reasoning
2. Approximate/Exact Probabilistic Inference
3. Knowledge Discovery and Data Mining for Uncertain

Paper Submission

The submissions should contain original, high quality, not submitted or published elsewhere work. Papers should be submitted electronically (through ICTAI 2021 web site) in pdf format and should conform to IEEE specifications (single-spaced, double-column, 10-point font size, up to 8 pages).

Paper 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 2021 that will be published by the IEEE Computer Society.

IJAIT special issues

Extended versions of the best papers of the conference will be invited for publication in a special issue of the International Journal on Artificial Intelligence Tools (IJAIT) (SCI Indexed).

Best Student Papers Awards

ICTAI & BAIF provide financial awards to the top-5 best student papers and to the Best Paper Award.

Further Information email Chairs

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Paper notification: Aug. 30, 2021
Camera ready paper: Sept. 20, 2021

