Call For Papers

26th IEEE International Conference on Tools with Artificial Intelligence

November 10-12, 2014, Limassol, Cyprus

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Venue: St Raphael Resort 5*, Limassol, Cyprus

Aim & Scope

The *annual IEEE* International Conference on Tools with Artificial Intelligence (ICTAI) 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 (not limited to)

AI Foundations
- Evolutionary computing, Bayesian and Neural Networks
- Decision/Utility Theory and Decision Optimization
- Search, SAT, and CSP
- Description Logic and Ontologies

AI in Domain Specific Applications
- AI in Natural Language Processing and Understanding
- AI in Computational Biology, Medicine and Biomedical Applications
- AI in WWW, 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 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 and Big Data
- Visualization 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

Machine Learning and Data Mining
- Data pre-processing, 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

Knowledge Representation, Reasoning and Cognitive Modelling
- Knowledge Representation, 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
- Decision making in social and mobile networks

Uncertainty in AI
- Uncertainty and Fuzziness Representation and Reasoning
- Approximate/Exact Probabilistic Inference
- Knowledge Discovery and Data Mining for Uncertain Data

AI Tools for Manufacturing Innovation
- AI in manufacturing performance evaluation
- AI in manufacturing decision and data analytics
- AI in modeling, simulation and optimization of manufacturing systems
- AI in additive manufacturing
- AI in manufacturing control and planning

Important: BAIF will offer 5 best student-papers awards ($250 each). The selection will take place on the last day after all presentations are finished.

Paper Submission

The submissions should contain original, high quality, not submitted or published elsewhere work. Papers should be submitted electronically (through ICTAI 2014 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 2014 that will be published by the IEEE Computer Society.

IJAIT special issue

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).

Further Information

General Chair
Andreas Andreou, Cyprus University of Technology, Cyprus

Program Chair
George Angelos Papadopoulos, University of Cyprus, Cyprus

Paper submission: June 30, 2014
Paper notification: July 30, 2014
Camera ready paper: August 30, 2014