

.The 24th IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2012)
November 7-9, 2012
Piraeus-Athens, Greece

Call for Papers

The IEEE International Conference on Tools with Artificial Intelligence (ICTAI) is a premier international research forum which stimulates and fosters the exchange of ideas for artificial intelligence-related applications in academia, industry, and government agencies. ICTAI seeks to advance all technical, theoretical, and practical aspects of Artificial Intelligence-based components of tools, including algorithms, applications, software, systems, and services. This year's conference solicits original research findings, innovative designs, practical development experiences, and real-world case study materials.

Topics

Representative issues to be addressed include, but are not limited to:

Artificial Intelligence Foundations:

- Evolutionary Computing, Bayesian Networks, and Neural Networks
- Decision/Utility Theory and Sequential Decision Making
- Search, SAT, CSP: Evaluation and Analysis
- Description Logics and Ontologies

Artificial Intelligence in Domain Specific Applications:

- AI in Robotics, Computer Vision, and Sensor Networks
- AI in Multimedia Computing and Multimedia Systems
- AI in Software Engineering and Computer Security
- Natural Language Processing/Understanding and Information Retrieval
- AI in E-commerce, Games, and Information Assurance
- AI in Computational Biology, Biomedicine, and Biomedical Applications
- AI in Online/Streaming Systems
- AI in Web, Communication, Social Networking, and Recommendation Systems
- AI in Cloud Computing and Data Intensive Applications
- AI in Data Privacy, Security, and Risk Management

Artificial Intelligence and Agent Systems:

- Intelligent Internet Agents and Intelligent Interface Agents
- Hybrid Intelligent Systems
- AI in Real-time and Embedded Applications
- Collaborative Software Agents

AI in Knowledge Representation, Reasoning, and Cognitive Modeling: -

- Knowledge Representation, Reasoning, and Knowledge-based Systems -
- Knowledge Extraction, Management, and Sharing
- Case-Based Reasoning
- Cognitive Modeling and Constraint Programming

Machine Learning and Data Mining:

- Data Pre-processing, Data Reduction, Feature Selection
- Learning Graphical Models and Complex Networks
- Active Learning, Cost-Sensitive Learning, and Semi-Supervised Learning
- Multi-Instance Learning, Multi-Label Learning, and Multi-Task Learning
- Transfer/Adaptive Learning
- Rational Learning, Structured Learning, and Learning Preferences/Rankings - Ensemble Learning, Reinforcement Learning
- Data Fusion Techniques and Technologies

Uncertainty in Artificial Intelligence:

- Reasoning Under Fuzziness or Uncertainty
- Approximate/Exact Probabilistic Inference
- Uncertainty Representations
- Knowledge Discovery and Data Mining for Uncertain Data

Affective Computing

- Recognition and synthesis of human affect
- Analysis of human behaviour
- Relevant insights from psychology
- Empirical studies in human affect recognition
- Face recognition
- Speech recognition
- Facial expression and emotion categorisation
- Speech emotion categorisation
- Gesture analysis and recognition
- Gesture emotion categorisation
- Keyboard stroke pattern categorisation
- Affective databases, evaluation and annotation tools
- Affective visual recognition
- Affective voice recognition
- Affective linguistic recognition
- Affective paralinguistic recognition
- Affective multimodal recognition

- Affective multimodal interfaces
- Affective agents
- Affect-sensitive applications
- Applications

Paper Submission and Presentation

Each submission should contain original, high quality work which has not been previously submitted or published elsewhere. Papers should be submitted electronically, through the ICTAI 2012 submission system, in PDF format. All submissions should conform to the IEEE proceedings specifications (single-spaced, double-column, 10-point font size, up to 8 pages). For detailed instructions, please refer to the IEEE website.

Each accepted paper should be presented at the conference 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 the Proceedings of ICTAI 2012, which will be published by the IEEE.

Special Issue Publication

Extended versions of the best papers at the conference will be invited for publication in a special issue of the International Journal on Artificial Intelligence Tools (IJAIT) (SCI Indexed). The organizing committee is also working to finalize a special issue with a second journal.

ICTAI 2012 will organize workshops that focus on new research directions and initiatives relevant to artificial intelligence and related areas. All accepted workshop papers will be included in a separate Workshop Proceedings published by the IEEE Computer Society Press. Selected workshop papers will also be invited for publications in a journal special issue.

Important Dates

Paper Submission Date: June 11, 2012
Paper Notification Date: August 6, 2012

Camera Ready Submission: August 27, 2012

Points of Contact

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