

PRIMA 2015 Call for Papers

Agent-based Computing addresses the challenges in managing distributed computing systems and networks through monitoring, communication, consensus-based decision-making and coordinated actuation. As a result, *intelligent agents* and *multi-agent systems* have demonstrated the capability to use intelligence, knowledge representation and reasoning, and other social metaphors like 'trust', 'game' and 'institution', not only to address real-world problems in a human-like way but also to transcend human performance. This has had a transformative impact in many application domains, particularly in e-commerce, and also in planning, logistics, manufacturing, robotics, decision support, transportation, entertainment, emergency relief & disaster management, and data mining & analytics. As one of the largest and still growing research fields of Computer Science, agent-based computing today remains a unique enabler of inter-, multi- and trans-disciplinary research.

The [PRIMA 2015](#) Program Committee invites submissions of original, unpublished, theoretical and applied work on any such topic, and encourages reports on the development of prototype and deployed agent systems, and of experiments that demonstrate novel agent system capabilities, which include the topics given below. As last year, there will be a **special track** (special focus area) on **applications of multi-agent systems**. The papers for this track would report experiences on using agents in an application domain and also discuss the challenges (resolved and unresolved issues) in deploying them. In general, papers discussing lessons learned and general directions of research using agents are solicited for this track.

All accepted papers will be published in **Springer's LNAI** series. There will be a **best paper award sponsored by Springer-LNAI**. Award winner(s) will also be invited to submit an extended version to a fast track of the **Journal of Autonomous Agents and Multi-Agent Systems**. There will be two special issues: one with **Fundamenta Informaticae** and one with the **Knowledge Engineering Review**.

Topics of Interest

Topics of interest (not limited to the following):

- *Foundations of Agents and Multi-Agent Systems*
 - Logics of Agency
 - Logics of Multi-Agent Systems
 - Normative Systems
 - Computational Game Theory
 - Uncertainty in Agent Systems
 - Agent and Multi-Agent Learning
- *Agent and Multi-Agent System Architectures*
 - Agent Programming Languages and Platforms
 - Multi-Agent System Languages and Platforms

- BDI Architectures and Extensions
 - Normative Multi-Agent Systems
- *Agent-Oriented Software Engineering*
 - AOSE Methodologies
 - Tools for Agent and Multi-Agent System Development
 - Formal Specification and Verification
 - Testing, debugging and evolution
 - Deployed System Case Studies
- *Agent-Based Modeling and Simulation*
 - Simulation Languages and Platforms
 - Artificial Societies
 - Virtual Environments
 - Workflow Simulation
 - Emergent Behavior
 - Modeling System Dynamics
 - Application Case Studies
- *Cooperation/Collaboration, Coordination/Communication*
 - Agent Communication Languages and Protocols
 - Distributed Problem Solving
 - Teamwork Models
 - Coalition Formation
 - Argumentation
 - Negotiation
 - Bargaining
 - Auctions and Mechanism Design
 - Trust and Reputation
 - Computational Voting Theory
- *Hybrid Technologies for Multi-Agent Systems*
 - Agents in Planning
 - Agent-Based Scheduling and Optimization
 - Distributed Constraint Satisfaction
 - Agents and Data Mining
 - Semantic Web Agents
 - Agents and Grid Computing
 - Agents and Service Oriented Computing
 - Agents and Pervasive Computing
 - Robotics and Multi-Robot Systems
 - Ubiquitous computing and ambient intelligence
- *Application Domains for Multi-Agent Systems*
 - Healthcare
 - Transport/Logistics
 - Emergency/Disaster Management
 - Energy/Utility Management
 - Sustainability/Resource Management
 - Games/Entertainment

- e-Business/e-Commerce/e-Government
- e-Research/e-Learning
- Security/Surveillance
- Smart Cities
- Financial markets
- Legal applications
- *Applications of Agents and Multi-Agent Systems*
 - Adaptive Personal Assistants
 - Embodied Conversational Agents
 - Virtual Characters
 - Multi-Modal User Interfaces
 - Autonomous Systems
 - Mobile Agents
 - Human-Robot Interaction
 - Social Recommender Systems
 - Algorithmic trading agents

Important Dates [>> Extended <<]

- **Abstract:** 17th June 2015
- **Submission:** 19th June 2015
- Notification: 24th July 2015
- Camera-ready: 7th August 2015
- **Conference:** 26th-30th October 2015

Submission Instructions

Two types of contributions are solicited:

- *Full papers*, up to **16 pages** in **LNCS format**, should present original theoretical and/or experimental research in any of the areas listed above that has not been previously published, accepted for publication, or is not currently under review by another conference or journal. Note that some full papers may be accepted as short papers (see below).
- *Short papers* (early innovation papers), up to **8 pages** in **LNCS format** showcasing works-in-progress (will be reviewed with an emphasis on novelty/originality of the idea).

Papers are to be submitted through the EasyChair Conference Management System:

<https://easychair.org/conferences/?conf=prima2015>

Both full and short papers will be included in the conference proceedings by Springer in the Lecture Notes in Artificial Intelligence series (LNCS/LNAI). Authors of both types of papers are required to present their work at the conference.

The authors of a selection of best papers will be invited to submit a revised and extended

version of their papers for publication consideration in special issues on international journals. Best paper award winners will be invited to submit an extended version to a fast publication track with JAAMAS. More details about the selected journals will be provided soon.