

Call For Papers

The Tenth International Workshop on Agent-based Complex Automated Negotiations (ACAN2017)

To be held in conjunction with the 16th International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2017)

<http://www.itolab.nitech.ac.jp/ACAN2017/index.html>

This workshop will have a special session of Automated Negotiating Agents Competition (ANAC).

Important dates

- Submission deadline: February 7, 2017
- Acceptance notification: March 2, 2017
- Camera-ready deadline: March 17, 2017
- ACAN2017: May 8 or 9, 2017

Scope and Background

Complex Automated Negotiations have been widely studied and are one of the emerging areas of research in the field of Autonomous Agents and Multi-Agent Systems. The complexity in an automated negotiation depends on several factors: the number of negotiated issues, dependencies between these issues, representation of the utility, negotiation procedural and protocol, negotiation form (bilateral or multi-party), time constraints negotiation goals, and so on. Complex automated negotiation scenarios are concerned with negotiation encounters where we may have for instance, a large number of agents, a large number of issues with strong interdependencies, real time constraints, concurrent and interdependent negotiation, and etc. Many real world negotiation scenarios present one or more of the mentioned elements. Software agents can support the automation of complex negotiations, by negotiating on the behalf of their owners and providing adequate strategies to their owners to achieve realistic, win-win agreements. In order to provide solutions in such complex automated negotiation scenarios, research has focused on incorporating different technologies including search, CSP, graphical utility models, Bayesian nets, auctions, utility graphs, optimization and predicting and learning methods. The applications of complex automated negotiations could include e-commerce tools, decision-making support tools, negotiation support tools, collaboration tools, as well as knowledge discovery and agent learning tools.

ACAN2017 will discuss, among others, the following aspects and topics of such complex automated negotiations within the field of Autonomous Agents and Multi-Agent Systems,

which have distinct relationships with AAMAS main conference topics:

- Complex Automated Negotiations Frameworks and Mechanisms.
- Bilateral and Multilateral Negotiations, High dimension Multi-Issue Negotiations, Large Scale Negotiations, Concurrent Negotiations, Multiple Negotiations, Sequential Negotiations, Negotiations under Asymmetric Information, and so on
- Prediction of Opponent's Behaviours and Strategies in Negotiations
- Simulation Models and Platforms for Complex Negotiations
- Coordination Mechanisms for Complex Negotiations
- Matchmaking and Brokering Mechanisms
- 2-Sided Matching
- Utility and Preference Representations in Negotiations
- Computational Complexity of Multi-Issue Negotiations
- Real-life Aspects of Electronic Negotiations
- Negotiations with Humans, Negotiations in Social Networks etc.
- Knowledge management in Automated Negotiations.
- Applications for Automated Negotiations (e.g. cloud computing, smart grid, electronic commerce etc.)

A considerable number of researchers in various sub-communities of autonomous agents and multi-agent systems are actively working on these and related issues. They are, for instance, being studied in agent negotiations, multi-issue negotiations, auctions, mechanism design, electronic commerce, voting, secure protocols, matchmaking and brokering, argumentation, co-operation mechanisms and distributed optimization. The goal of this workshop is to bring together researchers from these communities to learn about each other's approaches to the complex negotiation problems, encourages the exchange of ideas between the different areas, and potentially fosters long-term research collaborations to accelerate progress towards scaling up to larger and more realistic applications.

Automated Negotiating Agents Competition (ANAC) Special Session

From 2010, ACAN is tightly cooperating with ANAC (Automated Negotiating Agents Competition). This year, we have an ANAC special session, in which we plan to explain and discuss the research challenges addressed in ANAC 2017.

Submission

<https://easychair.org/conferences/?conf=acan2017>

Submissions should conform to the ACM SIG style

(see <http://www.acm.org/publications/article-templates/proceedings-template.html> for more details) and should not be more than 8 pages long (excluding appendices). The workshop welcomes submissions of original works relevant to the topics described above. This year, the workshop will accept submissions of both full papers (maximum 8 pages) and short papers (maximum 4 pages).

Review Process and Acceptance Standards

For gathering high quality papers, each paper needs to be reviewed by at least three PC members or experts in the field. Acceptance standards include its technical soundness, novelty, impact and readability. The same publication procedure as our previous workshops, we are planning to publish a Post-Workshop book for ACAN2017 in Books Series Studies in Computational Intelligence, by Springer. Also, we will assume that papers accepted should have full-paper quality with small revisions for special issue in a journal (International Journal of Multiagent and Grid Systems, Knowledge-Based Systems journal, Decision Support Systems Journal, and Group Decision and Negotiation Journal- are some possibilities).

The most “visionary paper” will be published by Springer in a book under the Lecture Notes in Artificial Intelligence (LNAI) Hot Topics series. The book will be a compilation of the most visionary papers of the AAMAS2017 Workshops, where one paper will be selected from each AAMAS2017 workshop. Additionally, the “best paper” will be published by Springer in a book under the Communications in Computer and Information Science (CCIS) series. The book will be a compilation of the best papers of the AAMAS2017 Workshops, where one paper will be selected from each AAMAS2017 workshop. Authors of the selected most visionary paper and the best paper are expected to provide their latex files promptly upon request.

Organization

Organizing Committee:

- Prof. Dr. Susel Fernandez Melian (Nagoya Institute of Technology, Japan)
- Prof. Dr. Katsuhide Fujita (Tokyo University of Agriculture and Technology, Japan)
- Prof. Dr. Naoki Fukuta (Shizuoka University, Japan)
- Prof. Dr. Takayuki Ito (Nagoya Institute of Technology, Japan)
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- Dr. Quan Bai (Auckland University of Technology, New Zealand)
- Dr. Fenghui Ren (University of Wollongong, Australia)
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- Prof. Dr. Ivan Marsa Maestre (University of Alcala, Spain)
- Dr. Tim Baarslag (Centrum Wiskunde & Informatica, the Netherlands)
- Prof. Dr. Reyhan Aydoğan (Ozyegin University, Turkey)

Senior Committee Members:

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- Dr. Valentin Robu (Heriot-Watt University, UK)
- Prof. Dr. Tokuro Matsuo (Advanced Institute of Industrial Technology, Japan)
- Prof. Dr. Juan Ramon Velasco Perez (University of Alcala, Spain)
- Dr. Chao Yu (Dalian University of Technology, China)

Tentative Program Committee Members:

- Prof. Dr. Paul Scerri (Carnegie Mellon University's Robotics Institute, USA)

- Dr. Mark Klein (MIT, USA)
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- Dr. Raz Lin (Bar-Ilan University, Israel)
- Prof. Dr. Sarit Kraus (Bar-Ilan University, Israel)
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- Dr. Enrico Gerding (University of Southampton, UK)
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- Prof. Dr. Hirofumi Yamaki (Tokyo Denki University, Japan)
- Dr. Shaheen S. Fatima (Loughborough University, UK)
- Dr. Victor Sanchez-Anguix (Coventry University, United Kingdom)

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