

Awards

AUTONOMOUS AGENTS RESEARCH AWARD

The *ACM/SIGAI Autonomous Agents Research Award* is an annual award for excellence in research in the area of autonomous agents. The award is intended to recognise researchers in autonomous agents whose current work is an important influence on the field. It is an official ACM award, funded by an endowment created from the proceeds of the Autonomous Agents conferences.

Recipient: The selection committee for the ACM/SIGAI Autonomous Agents Research Award is pleased to announce that Vincent Conitzer is the recipient of the 2021 award.

Citation: Professor Conitzer is the Distinguished University Professor of New Technologies and Professor of Computer Science, Professor of Economics, and Professor of Philosophy at Duke University, as well as Head of Technical AI Engagement at the Institute for Ethics in AI, and Professor of Computer Science and Philosophy, at the University of Oxford. His highly cited work in multiagent systems spans interdisciplinary areas in game theory, social choice, and economics. Specifically, he has made seminal contributions to the field of computational social choice, helped to define the field of automated mechanism design, and provided complexity results on Nash equilibrium as well as leader-follower games. Professor Conitzer has served the autonomous agents research community in a variety of capacities, including as AAMAS program chair, EC program chair, AIES program chair, and AAI program chair. He was also a founding editor of the *ACM Transactions on Economics and Computation*.

INFLUENTIAL PAPER AWARD

The *IFAAMAS Influential Paper Award* seeks to recognise publications that have made influential and long-lasting contributions to the field. Candidates for this award are papers that have proved a key result, led to the development of a new subfield, demonstrated a significant new application or system, or simply presented a new way of thinking about a topic that has proved influential.

This year's award committee selected two papers (not ordered) to be recognised with an IFAAMAS Influential Paper Award.

Paper: Rajeev Alur, Thomas A. Henzinger, and Orna Kupferman. Alternating-time Temporal Logic. *Journal of the ACM*, Vol. 49, No. 5, pp. 672–713, September 2002. Preliminary version published in the proceedings of the 38th Annual Symposium on the Foundations of Computer Science (FOCS-1997).

Citation: This paper introduced the first computational framework for formally reasoning about multiagent systems, a topic that has become central to AAMAS, with multiple papers each year. The original framework provided three critical ingredients: a temporal logic syntax (ATL) that explicitly talks about agents, a semantics (alternating transition systems) that captures the capabilities of individual agents, and a practical algorithm that extended classical model checking (enumerative and symbolic). Since its introduction

in 1997, ATL has become the standard specification formalism for multiagent systems, with more than 2,000 citations and numerous applications in Formal Methods (especially reactive synthesis), Discrete-Event Control, and Artificial Intelligence (especially planning). Many of the issues raised and debated there, including the difficulty of strategising under incomplete information, are still with us 20 years after its publication.

Paper: Cynthia Breazeal. Emotion and Sociable Humanoid Robots. *International Journal of Human-Computer Studies*, Vol. 59, Issues 1–2, pp. 119–155, July 2003.

Citation: This paper pioneered work at the intersection of autonomous agents, affect theory, and human-robot interaction that helped spawn the field of Social Robotics and Human-Robot Interaction. This article is one of the most highly cited papers in the field (over 1,300 citations). The paper provided a notable contrast to the design of then-contemporary embodied conversational agents that focused primarily on language and gesture, but generally avoided the important role of emotion and affect in bi-directional communication with people. This paper is seminal, having positioned as a new research direction the field of Autonomous Social Robotics, and setting forth computational models of emotion and motivation to support collaborative, goal-directed, mutually-regulated, and natural face-to-face interaction between humans and robots.

DISSERTATION AWARD

The *Victor Lesser Distinguished Dissertation Award* is given for dissertations in the field of autonomous agents and multiagent systems that show originality, depth, impact, as well as quality of writing, supported by high-quality publications.

The recipient of the 2020 IFAAMAS Victor Lesser Distinguished Dissertation Award is Dr. Noam Brown, whose thesis entitled “Equilibrium Finding for Large Adversarial Imperfect-Information Games” was supervised by Prof. Tuomas Sandholm at Carnegie Mellon University. The selection committee also decided to recognise two further nominees (not ordered), namely Dr. Yuan Deng for his thesis “Dynamic Mechanism Design in Complex Environments” supervised by Prof. Vincent Conitzer at Duke University, and Dr. Hang Ma for his thesis “Target Assignment and Path Planning for Navigation Tasks with Teams of Agents” supervised by Prof. Sven Koenig at the University of Southern California.

BEST PAPER AWARDS

Amongst the many excellent submission received, the conference will honour three of the full papers in the main track with awards: the *Best Paper Award* (for which all papers are eligible), the *Pragnesh Jay Modi Best Student Paper Award* (for a paper with a principal author who is a student), and the *Best Application Paper Award* (for a paper describing an application of agent-based technologies).

The eight papers listed below are finalists for at least one of these awards. The winners will be announced during the closing session.

- Felix Brandt, Martin Bullinger and Patrick Lederer. On the Indecisiveness of Kelly-Strategyproof Social Choice Functions.
- Shushman Choudhury, Jayesh Gupta, Peter Morales and Mykel Kochenderfer. Scalable Anytime Planning for Multi-Agent MDPs.
- Xueguang Lyu, Yuchen Xiao, Brett Daley and Christopher Amato. Contrasting Centralized and Decentralized Critics in Multi-Agent Reinforcement Learning.
- Ramona Merhej, Fernando P. Santos, Francisco S. Melo and Francisco C. Santos. Cooperation between Independent Reinforcement Learners under Wealth Inequality and Collective Risks.
- Nieves Montes and Carles Sierra. Value-Guided Synthesis of Parametric Normative Systems.
- Han Ching Ou, Haipeng Chen, Shahin Jabbari and Milind Tambe. Active Screening for Recurrent Diseases: A Reinforcement Learning Approach.
- Manon Prédhumeau, Lyuba Mancheva, Julie Dugdale and Anne Spalanzani. An Agent-Based Model to Predict Pedestrians Trajectories with an Autonomous Vehicle in Shared Spaces.
- Aditya Shinde, Prashant Doshi and Omid Setayeshfar. Cyber Attack Intent Recognition and Active Deception using Factored Interactive POMDPs.

The Pragnesh Jay Modi Best Student Paper Award is generously supported by Springer.

BLUE SKY IDEAS AWARD

The focus of the Blue Sky Ideas track is on visionary ideas, long-term challenges, new research opportunities, and controversial debate. It serves as an incubator for innovative, risky, and provocative ideas, and it aims at providing a forum for publishing and presenting such ideas without being constrained by the result-oriented standards followed for the main track of the conference.

At the conference, one of the papers submitted to this special track will receive the *Blue Sky Ideas Award*. A further two papers will be recognised with special mentions.

The Blue Sky Ideas track is generously supported by the Computing Community Consortium (CCC).

VIDEO AND POSTER AWARDS

The *Most Engaging Video Award* will be conferred upon the authors of one of the papers presented at the conference by means of a video. Eligible are all full papers in the main track, as well as all papers in the Blue Sky Ideas and the JAAMAS tracks.

The *Best Poster Design Award* will be conferred upon the authors of one of the extended abstracts in the main track, all of which will be presented at the conference by means of posters.

Both awards are generously supported by Cambridge University Press. The winners will be announced during the closing session.

BEST DEMO AWARD

The *Best Demo Award* will be bestowed upon the authors of the most innovative and interesting contribution to the Demonstration track. The winner will get announced during the closing session.

BEST PC AND SPC MEMBER AWARDS

AAMAS relies on the contributions of countless members of our community. The conference has decided to highlight this fact by honouring three members of the Programme Committee and a further three members of the Senior Programme Committee for their outstanding service.

The winners of the *Best PC Member Award* are:

- Jen Jen Chung (ETH Zürich)
- François Durand (Nokia Bell Labs France)
- Ed Durfee (University of Michigan)

The winners of the *Best SPC Member Award* are:

- Felipe Meneguzzi (PUCRS)
- Catherine Pelachaud (CNRS, Sorbonne University)
- Piotr Skowron (University of Warsaw)