

# 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. The list of all the ACM/SIGAI Autonomous Agents Research Award recipients can be found here: <https://sigai.acm.org/main/the-acm-sigai-autonomous-agents-research-award/>.

**Recipient:** The selection committee for the ACM/SIGAI Autonomous Agents Research Award is pleased to announce that Professor Maria Gini is the recipient of the 2022 award.

**Citation:** Maria Gini is Professor of Computer Science and Engineering at the University of Minnesota. Professor Gini has been a leader in the field of robotics and multi-agent systems for many years, consistently bringing AI into robotics. She contributed novel algorithms to connect the logical and geometric aspects of robot motion and learning, novel robot programming languages to bridge the gap between high-level programming languages and programming by guidance, and pioneering novel economic-based multi-agent task planning and execution algorithms. Professor Gini was influential and actively participated with her students in the Trading Agent Competition for Supply Chain. Her work has spanned both the design of novel algorithms and practical applications in warehouses and hospitals, such as surveillance, exploration, and search and rescue. Professor Gini has been an active member and leader of the agents community since its inception. She is also a consistent mentor and role model, deeply committed to bringing diversity to the fields of AI, Robotics, and Computing, creating a wide spectrum of activities and leading women in computing organizations. Professor Gini is the former President of IFAAMAS.

## 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:** Vince Conitzer and Tuomas Sandholm, Computing the optimal strategy to commit to, *Proceedings of the 7th ACM Conference on Electronic Commerce (EC 06)*, pp 82–90, 2006.

**Citation:** This paper established the algorithmic foundations for the field of Stackelberg security games, including its more recent Green Security Games incarnation. The paper asks a fundamental question: what is the computational complexity of the problem of

commitment to either a pure or a mixed strategy in a Stackelberg game, considering both complete and incomplete information? It set the basis for computing optimal leader strategies in security games which have led to much impactful work with real-world applications, and has helped establish a strong mechanism design community within AAMAS, and beyond.

**Paper:** Jonathan Gratch and Stacy Marsella, A domain-independent framework for modeling emotion, *Cognitive Systems Research* 5.4 (2004): 269–306.

**Citation:** This paper proposed a comprehensive computational process model EMA to capture emotional dynamics that is based on theoretical grounds, and reports on a detailed implementation. EMA is based on appraisal theory and models sophisticated phenomena including appraisal and coping behavior and has been validated through experimental studies. EMA was the first model of complex emotions with high accuracy, and this paper has provided the community with a framework to acknowledge the importance of emotions. It has also influenced the emotional agents community within AAMAS and beyond, with a wide range of applications ranging from affect-aware games to tutoring systems.

## 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.

**Recipient:** The recipient of the 2021 IFAAMAS Victor Lesser Distinguished Dissertation Award, to be presented at AAMAS 2022, is Dr. Bryan Wilder for his Thesis “AI for Population Health: Melding Data and Algorithms on Networks” supervised by Professor Milind Tambe, Harvard University Graduate School of Arts and Sciences.

**Citation:** Dr. Wilder's dissertation makes a pioneering contribution to “AI for Social Impact”. It provides a balance between foundational work on methodologies in social networks, machine learning, and optimization on one side and practical, real-world results for HIV prevention, TB prevention, and COVID-19 modelling on the other. His work has been published in AAMAS, NeurIPS, AAAI, KDD, Proceedings of the National Academy of Science (PNAS), and has been further recognized by a best paper nomination in AAMAS 2018, and a best paper award in the OptMAS 2019 workshop. The entire committee was in agreement that this thesis deserves to be recognised as the winner of the Victor Lesser Dissertation Award.

**Runner-up:** The 2021 Victor Lesser Dissertation Award Runner Up / honorable mention was assigned to Ellen Vitercik for her dissertation “Automated Algorithm and Mechanism Configuration” supervised by Professors Nina Balcan and Tuomas Sandholm.

**Citation:** Dr. Vitercik's dissertation made great progress in laying the foundations of automated algorithm configuration, where data, machine learning, and optimization are used to fine tune an algorithm's performance to the application domain at hand. Furthermore, she analysed configuration problems across diverse domains, including automated mechanism design, integer programming, and computational biology. Her work appeared in venues such as AAAI, ICML, COLT, NeurIPS, and ACM EC (where she was awarded the Exemplary Artificial Intelligence Track Paper Award). The thesis was well written and all of the committee was in agreement that this thesis deserves to be recognised as the runner-up for the Victor Lesser Dissertation Award.

## BEST PAPER AWARDS

Amongst the many excellent submission received, the conference honoured two of the full papers in the main track with awards: the Best Paper Award (for which all papers are eligible) and the Pragnesh Jay Modi Best Student Paper Award (for a paper with a principal author who is a student). The Pragnesh Jay Modi Best Student Paper Award is generously supported by Springer.

### Best paper award

**Recipient:** Ashay Aswale, Antonio Lopez, Aukkawut Ammar-tayakun and Carlo Pinciroli, *Hacking the Colony: On the Disruptive Effect of Misleading Pheromone and How to Defend against It*.

#### Runners-up:

Aleksander Czechowski and Georgios Piliouras, *Poincaré-Bendixson Limit Sets in Multi-Agent Learning*;  
Matthieu Geist, Julien Pérolat, Mathieu Laurière, Romuald Elie, Sarah Perrin, Oliver Bachem, Rémi Munos and Olivier Pietquin, *Concave Utility Reinforcement Learning: the Mean-field Game view-point*.

### Best student paper award

**Recipient:** George Li, Ann Li, Madhav Marathe, Aravind Srinivasan, Leonidas Tsepenekas and Anil Kumar Vullikanti, *Deploying Vaccine Distribution Sites for Improved Accessibility and Equity to Support Pandemic Response*.

**Runner-up:** Aaquib Tabrez, Matthew B. Luebbbers and Bradley Hayes, *Descriptive and Prescriptive Visual Guidance to Improve Shared Situational Awareness in Human-Robot Teaming*.

## 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.

**Recipient:** Davide Grossi, *Social Choice Around the Block: On the Computational Social Choice of Blockchain*.

## VIDEO AND POSTER AWARD

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. 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 PROGRAMME COMMITTEE MEMBER AWARD

AAMAS relies on the contributions of countless members of our community. The conference has decided to highlight this fact by honouring fourteen members of the programme committee and a further thirteen members of the senior programme committee for their outstanding service.

The winners of the Best Programme Committee Member award are Estefania Argente, Kim Baraka, Jen Jen Chung, Timotheus Kampik, Steve Latre, Patrick Lederer, Matteo Luperto, Evangelos Markakis, Neeldhara Misra, Pradeep Murukannaiah, Emma Norling, Mario Paolucci, Viviane Torres da Silva, and Vaibhav Vasant Unhelkar.

The winners of the Best Senior Programme Committee Member award are Reyhan Aydogan, Jiahao Chen, Rem Collier, Stefania Costantini, Louise Dennis, Aris Filos-Ratsikas, Tom Holvoet, Alessio Lomuscio, Maite Lopez-Sanchez, Philippe Mathieu, Fabien Michel, Pedro Sequeira, and Paolo Turrini.