

Welcome Message from the Chairs

Welcome to AAMAS 2023, the 22nd edition of the International Conference on Autonomous Agents and Multiagent Systems!

AAMAS is the largest and most influential conference in the area of agents and multiagent systems, bringing together researchers and practitioners in all areas of agent technology and providing an internationally renowned high-profile forum for publishing and finding out about the latest developments in the field. AAMAS is the flagship conference of the non-profit International Foundation for Autonomous Agents and Multiagent Systems (IFAAMAS).

This edition of the conference was held in London, United Kingdom, and follows three events that were held virtually due to the COVID-19 pandemic. Previous editions were held in Bologna (2002), Melbourne (2003), New York (2004), Utrecht (2005), Hakodate (2006), Honolulu (2007), Estoril (2008), Budapest (2009), Toronto (2010), Taipei (2011), Valencia (2012), Saint Paul (2013), Paris (2014), Istanbul (2015), Singapore (2016), São Paulo (2017), Stockholm (2018), Montréal (2019), Auckland (2020, online), London (2021, online) and Auckland (2022, online).

We invited the submission of technical papers describing significant and original research on all aspects of the theory and practice of autonomous agents and multiagent systems. For the main track of the conference, the authors of each submission were requested to select one of the following ten areas of interest:

- Coordination, Organisations, Institutions, and Norms (COIN)
- Markets, Auctions, and Non-Cooperative Game Theory (MA&NCGT)
- Social Choice and Cooperative Game Theory (SC&CGT)
- Knowledge Representation, Reasoning, and Planning (KRRP)
- Learning and Adaptation (LEARN)
- Modelling and Simulation of Societies (SIM)
- Humans and AI / Human-Agent Interaction (HUMAN)
- Engineering Multiagent Systems (EMAS)
- Robotics (ROBOT)
- Innovative Applications (APP)

We worked with a three-tier programme committee, consisting of 21 area chairs, 109 senior programme committee members, and 436 regular programme committee members. Their work was supported by a substantial number of auxiliary reviewers.

For the main track, we received a total of 1015 submissions. Thirty seven submissions were desk-rejected (mostly due to anonymity violations and similar infringements of the rules laid down in the Call for Papers). The programme committee then reviewed the remaining 978 submissions. Each submission received at least three reviews, as well as a meta-review summarising the assessment of the programme committee. Authors had the opportunity to respond to initial versions of their reviews during a rebuttal phase.

Authors had the option of submitting supplementary material together with their papers, and we introduced clear rules that papers

should only reference supplementary material submitted through the official channel (and not, e.g., by means of an ‘anonymous link’). As IFAAMAS does not publish supplementary material, we advised authors to (i) ensure that their published papers are sufficiently complete in their coverage and (ii) make their supplementary material publicly and permanently available by the time of the publication of these proceedings. We also attempted to provide clear guidelines regarding best practices when posting variants of submitted papers to preprint servers and the like. This is a complex issue that is central both to the integrity of the peer reviewing system (posting a preprint can undermine double-blind reviewing), and its efficiency (not posting a preprint can hinder the timely dissemination of results). This is a point that certainly deserves further attention from future programme chairs.

The programme committee accepted 237 submissions as full papers and a further 227 as extended abstracts, resulting in an acceptance rate of 23.3% for full papers and an overall acceptance rate of 45.7%. Most of the accepted contributions are included in this volume of proceedings (some extended abstracts were later withdrawn by their authors). The submission numbers (N), acceptance rates for full papers (FP), and overall acceptance rates (FP+EA) for each area of interest are as follows:

Area	N	FP	FP+EA
COIN	47	28%	51%
MA&NCGT	106	24%	47%
SC&SCT	135	33%	59%
KRRP	118	25%	46%
LEARN	326	21%	40%
SIM	61	18%	43%
HUMAN	55	27%	62%
EMAS	20	35%	55%
ROBOT	74	23%	49%
APP	36	19%	53%

While the differences in submission numbers across areas reflect recent trends in the field, it is worth pointing out that the differences in acceptance rates are not statistically significant. It also is worth noting that many of the papers submitted to the conference straddle two or more areas, so the association with a single area made by the authors at submission time may be somewhat arbitrary.

In addition to the main track, the conference had four special tracks—the Blue Sky Ideas track, the Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS) track, and the Demonstration track—as well as a Doctoral Consortium.

The focus of the Blue Sky Ideas track, chaired by Gal Kaminka and Elizabeth Sklar, was on visionary ideas, long-term challenges, new research opportunities, and controversial debate. The JAAMAS track, chaired by Sanmay Das and Sven Koenig, offered authors of papers recently published in JAAMAS that have not previously appeared as full papers in an archival conference the opportunity to present their work at AAMAS. The Demonstration track, chaired

by Rym Zalila-Wenkstern and Dengji Zhao, allowed participants from both academia and industry to showcase their latest work in agent-based and robotic systems. Finally, the Doctoral Consortium, chaired by Ulle Endriss and Maria Gini, provided doctoral candidates with an opportunity to receive feedback on their research, to interact closely with senior figures in their area of specialisation, and to broaden their professional network.

The accepted contributions for each of these tracks are included in these proceedings: 8 accepted papers out of 45 submissions to the Blue Sky Ideas track; extended abstracts of 15 papers recently published in JAAMAS; 11 accepted summaries out of 21 submissions to the Demonstration track; and summaries of 40 student participants in the Doctoral Consortium.

Outstanding contributions to the technical tracks of the conference were honoured with awards, which were announced during the conference. In addition, three annual awards were presented at the conference, as reported below in the section on awards.

The first two days of the conference, on the 29th and 30th of May 2023, consisted of a variety of satellite workshops, a programme of tutorials, and the Doctoral Consortium.

The main conference ran from the 31st of May to the 2nd of June 2023. During this time, the authors of contributions to the main track, the Blue Sky Ideas track, the JAAMAS track, and the Demonstration track presented their work. Participants also attended a panel session on “Agents and the Industry” as well as keynote addresses by Yejin Choi, Iain Couzin, Edith Elkind, and Karl Tuyls. The keynote address by Edith Elkind was linked to an award bestowed upon her in recognition of her outstanding achievements

in research in the area of autonomous agents (as detailed in the section on awards). The conference also featured an opening reception, a conference banquet, and the annual IFAAMAS Community Meeting.

Let us conclude these opening words with a big “thank you” to the countless people who have helped make the conference a success. For starters, this includes everyone who supported AAMAS by submitting their work for review and everyone who agreed to present at the conference. But most importantly, it includes everyone on the programme committee, the additional reviewers, the organisers of the satellite workshops, the tutorial presenters, and our colleagues on the organising committee (listed elsewhere in this volume). Throughout this past year, many of you again had to perform your duties towards the research community in between online teaching and home-schooling your children, while also being worried about the health and well-being of people close to you. Thank you! Two people who deserve a special mention here are Enrico Gerding and Long Tran-Thanh for their efforts in leading and coordinating the local organization effort. Finally, we are grateful to all sponsors of the conference for their support of AAMAS.

We wish you a great conference and, as we write this, we are looking forward to meeting everyone once again in person!

Alessandro Ricci & William Yeoh
AAMAS 2023 Programme Chairs

Noa Agmon & Bo An
AAMAS 2023 General Chairs