Welcome Message from the Chairs

Welcome to AAMAS-2021, the 20th 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, just like the 2020 edition, will be held as a virtual event 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), and Montréal (2019).

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 (GT)
- Social Choice and Cooperative Game Theory (SCT)
- Knowledge Representation, Reasoning, and Planning (KRRP)
- Learning and Adaptation (LEARN)
- Modelling and Simulation of Societies (SIM)
- Humans and AI / Human-Agent Interaction (HUM)
- Engineering Multiagent Systems (EMAS)
- Robotics (ROBO)
- Innovative Applications (APP)

We worked with a three-tier programme committee, consisting of 21 area chairs, 71 senior programme committee members, and almost 600 regular programme committee members. Their work was supported by a substantial number of auxiliary reviewers. When composing the committee, we followed the tradition of AAMAS of not having anyone serve in a senior programme committee or area chair role for more than two years in a row, and we were pleased to see that many senior colleagues accepted our invitation to serve as regular programme committee members.

For the main track, we received a total of 628 submissions. A few of these ended up getting 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 612 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. The length of final reviews came to just over 600 words on average.

Authors had the option of submitting supplementary material together with their papers, and we introduced clear rules about not referencing any other supplementary material not submitted through the official channel (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 to (*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 not only to the integrity of the peer reviewing system (posting a preprint can undermine double-blind reviewing), but also to 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 152 submissions as full papers and a further 94 as extended abstracts, resulting in an acceptance rate of 25% for full papers and an overall acceptance rate of 40%. Most of these contributions are included in this volume of proceedings (three papers were later withdrawn by their authors). The submission numbers (N), acceptance rates for full papers (FP), and overall acceptance rates (FP+EA) per area of interest are as follows:

	N	FP	FP+EA		N	FP	FP+EA
COIN	41	17%	29%	SIM	36	19%	39%
GT	74	26%	38%	HUM	31	19%	42%
SCT	87	30%	41%	EMAS	16	25%	50%
KRRP	97	28%	44%	ROBO	27	22%	37%
LEARN	171	23%	41%	APP	32	31%	38%

While the differences in submission numbers across areas reflect recent trends in the field, it is worth pointing out that the differences in acceptances 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 is often somewhat arbitrary.

In addition to the main track, the conference has three special tracks—the Blue Sky Ideas track, the JAAMAS track, and the Demonstration track—as well as a Doctoral Consortium.

The focus of the Blue Sky Ideas track, which this year is chaired by Yves Lesperance and Katia Sycara, is on visionary ideas, long-term challenges, new research opportunities, and controversial debate. The JAAMAS track, chaired by Fei Fang and Brian Logan, offers authors of papers recently published in the *Journal of Autonomous Agents and Multiagent Systems* (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 Felipe Meneguzzi and Lavindra de Silva, allows participants from both academia and industry to showcase their latest developments in agent-based and robotic systems. Finally, the Doctoral

Consortium, chaired by Hau Chan and Emiliano Lorini, provides doctoral candidates with an opportunity to receive feedback on their research, to interact closely with senior figures in their own area of specialisation, and to broaden their professional network.

The accepted contributions for all of these tracks are included in these proceedings as well: 12 accepted papers out of 43 submissions to the Blue Sky Ideas track; extended abstracts of 12 recent papers published in JAAMAS; 15 accepted summaries out of 23 submissions to the Demonstration track; and 22 accepted summaries out of 25 submissions to the Doctoral Consortium.

Several contributions to both the main track and some of the special tracks will be honoured with awards. For details we refer to the dedicated section on awards in these proceedings.

The first two days of the conference, on the 3rd and 4th of May 2021, will consist of a variety of satellite workshops, a programme of tutorials, and the Doctoral Consortium.

The main conference will run from the 5th to the 7th of May 2021. During this time the authors of contributions to the main track, the Blue Sky Ideas track, the JAAMAS track, and the Demonstration track will present their work. We furthermore are looking forward to a panel session on "20 Years of AAMAS" as well as keynote addresses by Cynthia Breazeal, Noam Brown, Vincent Conitzer, Orna Kupferman, and Shimon Whiteson. Most of these keynote addresses are linked to awards bestowed upon the speakers in recognition of outstanding achievements (as detailed in the section on awards). The conference will also feature a social event, a series of informal discussion sessions organised around specific topics, 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 had to perform your duties towards the research community in between getting to grips with online teaching and homeschooling your children, while also being worried about the health and well-being of people close to you. Thank you! Someone who deserves a special mention here is Long Tran-Thanh, for his heroic efforts in coordinating the work of the local organisers—from putting together a proposal for hosting AAMAS-2021 in London, all the way to keeping the ship afloat once it became clear that we had to move everything online. We also would like to take this opportunity to thank Ronald de Haan for his help with assigning programme committee members to submissions based on their reviewing preferences, and Simon Rey for his help with grouping papers into sessions based on the paper similarity judgments reported by authors. Finally, we are grateful to all sponsors of the conference for their support of AAMAS.

We wish you a great conference and are looking forward to meeting everyone once again in person at the next edition!

Ulle Endriss & Ann Nowé
AAMAS-2021 Programme Chairs

Frank Dignum & Alessio Lomuscio
AAMAS-2021 General Chairs