Conference Reports

Louise A. Dennis (University of Manchester; louise.dennis@manchester.ac.uk)

This section is compiled from reports of recent events sponsored or run in cooperation with ACM SIGAI. In general these reports were written and submitted by the conference organisers.

18th International Conference on Artificial Intelligence and Law (ICAIL '21)

Online 07/21/2021 - 07/25/2921
https://icail.lawgorithm.com.br
The 18th International Conference on Artificial Intelligence and Law was the first edition of the biennial ICAIL conference held entirely online. This decision was taken by the International Association for Artificial Intelligence and Law Executive Committee, taking into account all considerations related to the overall Covid-19 pandemic situation and the restrictions related to it.

It was decided that due to the choice of the online format, the registration will be free of charge. The total number of registrations was ca. 1380, the highest number ever. The conference expenses were fully covered by sponsorships arranged by the organizers. The total amount of the expenses was ca. 6474 USD (converted from the Brazilian currency, BRL).

The conference had 89 submissions; 17 were selected for publication as full papers (19%), 17 as short papers (19%), 8 as extended research abstracts (9%), 2 as demonstration papers (2%), and 3 as COLIEE papers (3%). The conference offered 11 workshops whose topics were diverse and represented state of the art activities in the field. These were AI and Intelligent Assistance for Legal Professionals in the Digital Workplace; Artificial Intelligence in Jurisdictional Logistics; Competition on Legal Information Extraction/Entailment; Bias, Ethics and Fairness in Artificial Intelligence: Representation and Reasoning; Copyright Regulation of Inputs and Outputs of AI Systems; EXplainable & Responsible AI in Law; Automated Detection, Extraction and Analysis of Semantic Information in Legal Texts; Multilingual Workshop on AI & Law; Artificial Intelligence and Patents; International Workshop on A.I. for Understanding the Legal Business; and Relations in the Legal Domain,

In addition, ICAIL held a Doctoral Consortium, helping emerging researchers to engage with the ICAIL community. It attracted 384 registrations.

1st ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization

Online 10/5/2021-10/9/2021
https://eaamo.org
The inaugural Association for Computing Machinery (ACM) conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO '21) was held virtually from October 5, 2021 to October 9, 2021 on the virtual platform gather.town and Zoom. The conference aimed to highlight work where techniques from algorithms, optimization, and mechanism design, along with insights from the social sciences and humanistic studies, can help improve equity and access to opportunity for historically disadvantaged and underserved communities. The conference is legally and financially sponsored by ACM Special Interest Groups on Artificial Intelligence (ACM SIGAI) and on Economics and Computation (ACM SIGecom), and has received financial support from the Alfred P. Sloan Foundation, MacArthur Foundation and Cell Press Patterns Journal.

ACM EAAMO '21 capitalized on the interdisciplinary workshop series organized by the Mechanism Design for Social Good (MD4SG) initiative, which started back in 2017 as a reading group of 12 people with a mission to bridge principled research and practice aimed at improving access to opportunity for marginalized communities by building interdisciplinary pipelines that use computational tools centering underserved communities at

the core of the research agenda.

The conference had more than 650 participants from over 40 countries. It featured a single-track program including nine keynote talks (eight in English, one in Spanish), forty contributed talks, and forty poster presentations across various fields in addition to three policy and practice sessions as well as several networking and mentoring opportunities.

The conference succeeded in bridging research and practice by intentionally bringing together researchers, policymakers, and practitioners in various government and non-government organizations, community organizations, and industry. To this end, the conference had a "Research" submission track and a "Policy and Practice" submission track and featured various practitioners as keynote speakers and panelists. Overall, more than 70 practitioners from the civic sector participated (with complimentary registration). Overall, almost forty percent of non-students registrations were outside of academia. The conference provided an international forum for presenting research papers, problem pitches, survey and position papers, new datasets, and software demonstrations towards the goal of bridging research and practice. Our keynote speakers spanned practice and research disciplines from Computer Science and Operations Research, to Economics and Sociology. The conference also featured three Policy and Practice sessions to engage practitioners including two thematically-linked panels focusing on Latin America (on Tuesday) and refugees and migration (on Thursday).

We are committed to ensuring geographic and cultural diversity in our participants and speakers, as the goal of the conference is to improve access to opportunity for marginalized and underrepresented communities. To this end, our Call for Participation was available in nine different languages—Arabic, Chinese, English, Farsi, French, Portuguese, Russian, Spanish, and Swahili. We offered live translation between English and Spanish as well as English and French during the keynote presentations and discussions. The conference also featured several keynote speakers and panelists from outside of North America.

We are equally committed to socioeconomic diversity in our participants and speakers. We offered registration fee waivers and data plans for participants who would otherwise be unable to attend. We received more than 140 applications for need-based assistance in the form of registration waivers or data plan grants or both. We were able to grant 70 registration waivers and we sponsored more than 50 data plan grants—almost entirely for graduate students and researchers in the Global South. Overall, the conference has more than 270 students who were able to participate thanks to the lower registration fees for students, the registration waivers, and the data grants.

We are particularly encouraged by the fact that one in four participants identified as belonging to a self-defined, often intersectional, marginalized group. The conference had a near parity in gender with fifty one percent of men among the participants who identified as men or women. We believe these are excellent indicators of our success in creating a conference that welcomes and centers members of marginalized and underrepresented communities.

We received over 160 submissions from over 20 countries around the world and across fields, spanning authorship from researchers, policymakers, as well as other domain experts and professionals. All contributors were united by their interest in improving equity and developing solutions for problems in a variety of application domains such as education, labor, environment, healthcare, algorithmic fairness, and digital platforms. Due to its interdisciplinary nature, the conference attracted a very diverse and large group of members with backgrounds in computer science, AI, operations research, economics, public policy, and humanities, while a great number of papers combined methodologies and insights from multiple fields. Each contributed paper was rigorously peer-reviewed by members of a program committee who were chosen from fields related to the topics of the conference. Eight-nine submissions were accepted as oral or poster presentations.

From the accepted papers, 19 were accepted in the inaugural volume of the archival track of the conference: the 2021 Proceedings of the EAAMO '21: Equity and Access in Algorithms, Mechanisms, and Optimization published by the ACM. We also gave awards in

the following categories: Best Paper, Best Paper with a Student Presenter, Most Popular Poster, New Horizons, and Best Tweet. Each of the five days of the conference featured one or two keynote talks that were thematically linked, followed by a panel with the keynote speakers and a discussant to bridge their perspectives and to lead a discussion of the themes presented. Our keynote talks addressed key themes for the conference: digital and data markets, algorithms for societal allocation, sustainability, education policy, and past and present inequality. The thematically-related multi-disciplinary sessions for contributed talks represented the wide range of topics and application domains of interest to the conference goals, the combination of novel and diverse methodologies as well as the strong connections of many papers to policy design: Data Standards and Datasets, Law and Politics, Policy and Funding, Recommendations and Auditing, Allocation, Transportation, Language and Bias, Access to Healthcare, COVID-19, Labor Markets and Education, Admissions and Representation, Access to Schools, Diversity and Representation, and Justice in Machine Learning.

We believe we succeeded in creating an inclusive conference on how computational tools and algorithms, together with economic approaches and mechanism design, can address equity, access, and other urgent societal challenges.

EAAMO '21 Awards

Best Paper Award Related to the conference theme of bridging research and policy, the award-winning papers highlighted new research directions for policy-oriented work. The winning papers that equally shared the Best Paper Award were:

- Can Shared Service Delivery Increase Customer Engagement? A Study of Shared Medical Appointments. Nazli Sonmez, Kamalini Ramdas and Ryan W. Buell
- Algorithm is Experiment: Machine Learning, Market Design, and Policy Eligibility Rules, Yusuke Narita and Kohei Yata

Best Paper with a Student Presenter Award
The Best Student Paper Award was awarded to two papers with student leading authors:

- Dropping Standardized Testing for Admissions Trades Off Information and Access. Nikhil Garg, Hannah Li and Faidra Monachou
- Mitigating Racial Biases in Toxic Language Detection with an Equity-Based Ensemble Framework. Matan Halevy, Camille Harris, Amy Bruckman, Diyi Yang and Ayanna Howard

New Horizons Awards The New Horizons Award highlights promising, ongoing work in an emerging area of research. Two working papers shared this award:

- Facing an Adult Problem: New Datasets for Fair Machine Learning. Frances Ding, Moritz Hardt, John Miller and Ludwig Schmidt
- Project 412Connect: Bridging Students and Communities. Alex DiChristofano, Michael L. Hamilton, Sera Linardi and Mara F. McCloud

The inaugural ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization produced the following outputs: (i) Articles, and (ii) Website & Web Content. Articles published at EAAMO '21 have the option of being archival or non-archival. Archival articles were published with proceedings in the ACM Digital Library and are available online through the ACM License.

The First International Conference on AI-ML Systems

Hybrid Online, Bangalore, India, 10/21/2021-10/24/2021
https://www.aimlsystems.org/
AIMLSystems is a new conference that targets the research in the intersection of Systems Engineering and Artificial Intelligence and Machine Learning techniques. Through this conference, we plan to examine how immense strides in AI/ML techniques are made possible through advances in the computational systems and how the use of AI/ML can help in the data-driven explorations of the design space of the computational systems. We also investigate how new breeds of AI/ML systems enable new forms of socio-techno-economic systems and they in turn generate new requirements for research in AI/ML techniques.

This conference series is an initiative of the COMSNETS Association, a not-for-profit organization, which has organized the prestigious COMSNETS conference every year since 2009. ACM has awarded it the in- co-operation status and several top-notch institutions are its patrons. AIMLSystems 2021 had ten outstanding Keynote speakers from across the globe. The high quality conference was held in-cooperation with ACM, ACM SIGAI, ACM SIGMOD, ACM SIGKDD. The patrons of the first edition of the conference were MINRO, Amazon, TCS Research and ZenTree Labs. The conference included a Research Track, an Industry Track, Demos and a Doctoral Symposium.

The areas of interest were broadly categorized into the following three streams: (1) Systems for AI/ML, including but not limited to CPU/GPU architectures for AI/ML; Embedded hardware for AI/ML workloads; Data intensive systems for efficient and distributed training; Challenges in production deployment of ML systems; Efficient model training, optimization and inference; Hardware efficient ML methods; Resource-constrained ML, (2) AI/ML for Systems, including but not limited to AI/ML for VLSI and architecture design; AI/ML in compiler optimization; AI/ML in data management - including database optimizations, virtualization, etc.; AI/ML for networks - design of networks, load modeling, etc.; AI/ML for power management - green computing, power models, etc. (3) Applications of AI/ML in Socio-Economic Systems Design, which includes, but not limited to: Computational design and analysis of socio-economic systems; Fair and bias-free systems for social welfare, business platforms; Applications of AI/ML in the design, short-/long-term analysis of cyber-physical systems; Mechanism design for socio-economic systems; Applications of AI/ML in financial systems.

Keynote Talks

1. Sang Cha, SNU, Korea. Data Science for Everyone

2. Juliana Freire, NYU Tandon School of Engineering, USA. Towards Usability and Trust for Data-Driven Models

3. Johannes Gehrke, Microsoft Research, Redmond, USA. ML in Microsoft Teams and The Future of Software

4. Sergei Kuznetsov, HSE University, Moscow, Russia. Learning Rules and Taxonomies for Better Explanation

5. Geoff Webb, Monash University, Australia. Time series classification at scale

6. Gerhard Weikum, Max-Planck-Institut für Informatik, Germany. Knowledge Graphs 2021: Achievements, Challenges and Opportunities

Industry keynotes:

1. Anand Deshpande, Persistent Systems, India. Deploying Machine Learning to help make Better Decisions

2. Daniel Keller, Visable Labs GmbH, Germany. Value creation in Classifieds, E-Commerce and Marketplace business with AI / ML and its challenges.

3. Rajeev Rastogi, Amazon, India. Machine Learning Modeling Best Practices

4. Ananth Krishnan, TCS, India. Scaling AI, Responsibly

Award Winning Papers

Outstanding Application Oriented Research paper Resource Constrained Neural Networks for Direction-of-Arrival Estimation in Microcontrollers. Piyush Ranjan Sahoo

Best Doctoral Work Learning Neural Models for Continuous-Time Sequences. Vinayak Gupta

The proceedings can be found in the ACM Digital Library

17th Annual ACM/IEEE International Conference on Human-Robot Interaction (HRI 2022)

Online 03/07/2022-03/10/2022
https://humanrobotinteraction.org/2022/
The ACM/IEEE International Conference on Human-Robot Interaction (HRI) is the premium venue for publishing and presenting top-quality HRI research. The 17th Annual ACM/IEEE International Conference on Human-Robot Interaction (HRI 2022) took place during March 7-10 as a virtual conference. This was the third time that the HRI research community could not meet in person,

because of the COVID-19 pandemic; originally, we planned and hoped for at least a hybrid conference to be hosted in Sapporo, to finally bring back the conference to Japan.

This year's conference attracted 234 full paper submissions from 30 unique countries in Asia-Pacific, Europe, the Middle East, and North America. Each full paper was aligned with a theme-appropriate subcommittee, and subsequently reviewed through a double-blind process, which was followed by a rebuttal phase, and shepherding where found appropriate by the program committee. As a result of the review process, the program committee selected 57 (24.36%) of the submissions for presentation as full papers at the conference. As the conference is jointly sponsored by IEEE and ACM, papers are archived in both the ACM Digital Library and the IEEE Xplore. Along with the full papers, the conference program and proceedings include Short Contributions, Late-Breaking Reports, Videos & Demos, Alt.HRI, and a Student Design Competition section. Finally, the virtual format allowed us to have 21 workshops framing our conference program, including the HRI Pioneers workshop promoting and highlighting especially the work of early-career researchers in the field.

Our program also included three dynamic keynote speakers, who all break boundaries with their highly trans- and interdisciplinary research: Hiroshi Nittono (Cognitive Psychophysiology Laboratory, Osaka University), Leila Takayama (University of California, Santa Cruz), and Friederike Eyssel (Bielefeld University, Germany).

HRI 2022 was made possible through the significant volunteer efforts of the organizing committee, program committee, reviewers, and steering committee. We thank the keynote speakers, financial supporters, and international reviewers for their support and participation. The conference is sponsored by ACM SIGCHI, ACM SIGAI, IEEE Robotics and Automation Society, and is in cooperation with AAAI and HFES.

Louise Dennis is the Conference Coordination Officer for ACM SIGAI, and a faculty member at the University of Manchester. Her research is in Verification of Autonomous Systems, Cognitive Agents and Machine Ethics. Contact her at louise.dennis@manchester.ac.uk.