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Guodong Long · Xinghuo Yu · Sen Wang (Eds.)


AI 2021: Advances in Artificial Intelligence

34th Australasian Joint Conference, AI 2021
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Proceedings

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Preface

This volume contains the papers presented at the 34th Australasian Joint Conference on Artificial Intelligence (AI 2021). Due to the COVID-19 pandemic, the conference was virtually held during February 2–4, 2022, and was hosted by the University of Technology Sydney, Australia. This annual conference is one of the longest running conferences in artificial intelligence, with the first conference held in Sydney in 1987. The conference remains the premier event for artificial intelligence in Australasia, offering a forum for researchers and practitioners across all subfields of artificial intelligence to meet and discuss recent advances.

AI 2021 received 120 submissions with 398 authors from 30 countries and more than 100 different institutions. Each submission was reviewed by at least three Program Committee (PC) members or external reviewers. After a thorough discussion and rigorous scrutiny by the reviewers and the dedicated members of the Senior Program Committee, 64 submissions were accepted for publication as full papers. Moreover, 40 papers were presented as oral presentations and 23 papers were presented as poster presentations in the conference.

AI 2021 had three keynote talks by the following distinguished scientists:

- Liz Sonenberg, University of Melbourne, Australia, on February 2, 2022.
- Jon Whittle, CSIRO’s Data61, Australia, on February 3, 2022.
- Elizabeth Croft, Monash University, Australia, on February 4, 2022.

There are a number of important aspects to the AI 2021 conference worth mentioning. First, due to the impact of COVID-19, the conference date was postponed from December 2021 to February 2022 to allow for in-person gathering and networking. However, the new outbreak of the Omicron variant in December 2021 changed the conference format from hybrid to full virtual. Second, we have witnessed an overwhelming trend of deep learning that has profoundly influenced or reshaped many research and application domains; thus, many submissions in AI 2021 explored deep learning technology to redefine and solve AI problems.

We thank the authors for submitting their research papers to the conference, preparing videos, and presenting their work online to cope with the consequences of the COVID-19 pandemic. We are grateful to authors whose papers are published in this volume for their cooperation during the preparation of the final camera-ready versions of the manuscripts. We especially appreciate the work of the members of the Program Committee and the external reviewers for their expertise and tireless effort in assessing the papers within a strict timeline. We are very grateful to the members of the Organizing Committee for their efforts in the preparation, promotion, and organization of the conference, especially the general chairs for coordinating the whole event. We acknowledge the assistance provided by EasyChair for conference management.

To celebrate the diversity of talent working with, developing, and educating for emerging technology, the Women in Artificial Intelligence (WAI) committee worked in

conjunction with the IEEE Women in Computational Intelligence (WCI) subcommittee and Women in Big Data (WiBD) to present three events. The panel event, Perspectives on Trust and Intelligence, brought together experts to discuss the diversity required to realize ethical and capable technology. The WAI/WCI keynote event focused on career experiences and development tips for all emerging AI/CI professionals. Finally, the WAI/WiBD event provided an opportunity for anyone within AI, CI, or data to pitch their achievements and goals, whether working in research, industry, or academia.

Lastly, we thank Springer, the National Committee for Artificial Intelligence of the Australian Computer Society, the University of Technology Sydney (UTS), the University of New South Wales (UNSW), the Royal Melbourne Institute of Technology (RMIT), CSRIO's Data61, Business Events Sydney, and Finity for their sponsorship and Springer for the professional service provided by the LNCS editorial and publishing teams.

December 2021

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