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Jixue Liu · James Bailey (Eds.)

# AI 2019: Advances in Artificial Intelligence

32nd Australasian Joint Conference  
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Proceedings

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# Preface

This volume contains the papers presented at the 32nd Australasian Joint Conference on Artificial Intelligence 2019 (AI 2019), which was held during December 2–5 2019, in Adelaide, Australia, hosted by the University of South Australia. This annual conference remains the premier event for artificial intelligence in Australasia, which provides a forum for researchers and practitioners across all subfields of artificial intelligence to meet and discuss recent advances. AI 2019 received 115 submissions with authors from 22 countries. Each submission was reviewed by at least three Program Committee members or external reviewers. Subsequent to a thorough discussion and rigorous scrutiny by the reviewers and the dedicated members of the Senior Program Committee, 48 submissions were accepted for publication as full papers. The acceptance rate was 42%.

AI 2019 had five keynote talks by the following distinguished scientists:

- Albert Bifet, University of Waikato, New Zealand, and Télécom ParisTech, France, on “Machine Learning for Data Streams”
- Dale Lambert, Defence Science and Technology (DST) Group, Australia, on “Artificial Intelligence: Past, Present, Future”
- Kate Smith-Mile, University of Melbourne, Australia, on “Instance Spaces for Objective Assessment of Algorithms and Benchmark Test”
- Anton van den Hengel, University of Adelaide, Australia, on “Visual Question Answering, and why we’re asking the wrong questions”
- Xin Yao, Southern University of Science and Technology, China, and University of Birmingham, UK, on “Forgotten Questions in Brain-inspired Computing”

AI 2019 was featured with a workshop, a special session, and three tutorial sessions:

- Workshop: “Interpretability: Methodologies and Algorithms,” organized by Inna Kolyshkina and Simeon Simoff. The workshop proceedings were managed separately from this book.
- Special session: “AI in Defence,” organized by Asanka Kekirigoda, Zhuoyun Ao, and Kin Ping Hui.
- Tutorial: “Deep Learning Methods, Practices, and Applications,” by Ehsan Abbasnejad from the University of Adelaide.
- Tutorial: “Deep Learning Security: Adversarial Attack and Defense,” by Sarah Erfani and Xingjun Ma from the University of Melbourne.
- Tutorial: “From Statistical to Causal Learning,” by Mingming Gong from the University of Melbourne.

AI 2019 would not have been successful without the support of authors, reviewers, and organizers. We thank the authors for submitting their research papers to the conference. 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 specially appreciate the work of the members of the Program Committee and the external reviewers for their expertise and timeliness in assessing the papers within a short timeline. We also thank the organizers of the workshop, the DST session, and the tutorial speakers for their commitment and dedication. 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. Lastly, we thank the DST Group, Springer, The National Committee for Artificial Intelligence of the Australian Computer Society, and the University of South Australia for their sponsorship, and the professional service provided by the Springer LNCS editorial and publishing teams.

November 2019

Jixue Liu  
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