

Proceedings of the First SICSA Workshop on Reasoning, Learning and Explainability: ReaLX 18

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Preface

Reasoning, Learning and Explainability are key to AI systems that must interact naturally to support users in decision making. Systems need to be capable of explaining their output. Regulations increasingly support users rights to fair and transparent processing in automated decision-making systems. Addressing this challenge is steadily becoming more urgent as the increasing reliance on learned models in deployed applications continues to be driven by the recent success of deep learning and other data-driven systems.

Though models learned directly from data offer improved accuracy, mapping these concepts to facilitate human reasoning is difficult. In contrast, reasoning systems can offer transparency through logical alignment of representation and reasoning methods to allow the necessary insight into the decision-making process. This is a core principle behind explainability and is critical if we are to use AI with the intent of improving user performance and experience.

The Event

The Reasoning, Learning and Explainability (ReaLX) Workshop was designed to present a forum for the dissemination of ideas on AI methods. The event was organised into several themed sessions.

- **Session 1** - Applications of AI
- **Session 2** - Learning to Recognise
- **Session 3** - Learning to Reason

The SICSA ReaLX Workshop 2018 was an inspiring success. Despite initially being limited to a Scottish university event, we were fortunate enough to receive approximately 50 attendees on the day, some of whom traveled from Europe. A total of 12 papers were submitted (nine short papers, two position papers and one demo paper) and peer-reviewed. Of those 12, 10 papers appear in these proceedings. There were two invited talks presented over the course of the event. The first, presented by Professor Ehud Reiter (Aberdeen University), examined the terminology we use to communicate data with people. The second, presented by Professor Helen Hastie (Heriot-Watt University), discussed the topic of trustworthy robotics through explainability.

Organising Committee

This workshop was only possible through the hard work and dedication of a number of individuals.

Workshop Chairs

- Prof Nirmalie Wiratunga (Robert Gordon University)
- Prof Leslie Smith (University of Stirling)
- Prof Emma Hart (Edinburgh Napier University)

Local Organisers

- Mr Kyle Martin (Robert Gordon University)
- Dr Sadiq Sani (Robert Gordon University)

Programme Committee

- Dr David Corsar (Aberdeen University)
- Dr Eyad Elyan (Robert Gordon University)
- Dr Chenghua Lin (Aberdeen University)
- Dr Stewart Massie (Robert Gordon University)
- Dr Nir Oren (Aberdeen University)
- Dr Andrei Petrovski (Robert Gordon University)
- Miss Anjana Wijekoon (Robert Gordon University)

The organising committee would also like to thank all of our authors and attendees. Without you, this event could not have happened.