

XLoKR 2021 Program

Warning: All times are CET. On October 31st (i.e., a couple of days before the workshop), several countries switch from CEST to CET. Some online “world clock calculators”, automatically use CEST instead of CET for their conversions (which is correct at the time of the writing, but will no longer be correct on the workshop date).

Thursday, November 4

13.00 – 14.40 Session 1 (*Chair: Patrick Koopmann*)

- **13.00 – 13.10** *Opening*
- **13.10 – 13.40** Annemarie Borg and Floris Bex. *Necessary and Sufficient Explanations for Argumentation-Based Conclusions*
- **13.40 – 13.10** Markus Ulbricht and Johannes P. Wallner. *Strong Explanations in Abstract Argumentation (extended abstract)*
- **14.10 – 14.40** Kristijonas Cyras, Antonio Rago, Emanuele Albini, Pietro Baroni and Francesca Toni. *Argumentative XAI: A Survey*

Note. Due to a relocation, the accepted paper *Revisiting minimal admissible sets in abstract argumentation* (that was originally scheduled for this session) could not be presented at the workshop. Matthias Thimm did provide The forthcoming coffee break is long enough to watch it, though... Enjoy it here!

14.40 – 15.20 Coffee Break

15.20 – 16.30 Session 2 (Invited Talk) (*Chair: Nico Potyka*)

Speaker: Joe Halpern (*Cornell University*)

Title: Using causal models to define explanation

Abstract: I consider a definition of (causal) explanation that Judea Pearl and I gave. The definition is based on the notion of *actual cause*. Essentially, an explanation is a fact that is not known for certain but, if found to be true, would constitute an actual cause of the fact to be explained, regardless of the agent’s initial uncertainty. I show that the definition handles well a number of problematic examples from the literature, and consider some more recent variants of the definition.

16.30 – 16.50 Coffee Break

16.50 – 18.00 Session 3 (*Chair: Kristijonas Čyras*)

- **16.50 – 17.20** Mohan Sridharan. *An Architecture for Explainable Reasoning and Learning in Robotics*
- **17.20 – 17.40** Leopoldo Bertossi. *Reasoning about Counterfactual Interventions and Responsibility Scores for Classification*
- **17.40 – 18.00** Xinghan Liu and Emiliano Lorini. *How to model classifier and its explanation in modal logic*
- **18.00 – 18.20** Manuel de Sousa Ribeiro and Joao Leite. *On Generating Symbolic Explanations for Recurrent Neural Networks*

18.20 – 18.40 Coffee Break

18.40 – 19.30 Session 4 (*Chair: Jorge Fandinno*)

- **18.40 – 19.10** Tara Koopman and Silja Renooij. *Persuasive Contrastive Explanations*
- **19.10 – 19.30** Stylianos Loukas Vasileiou, William Yeoh, Tran Cao Son and Alessandro Previti. *Explanations as Model Reconciliation via Probabilistic Logical Reasoning*

Friday, November 5

13.00 – 14.10 Session 5 (*Chair: Gabriele Kern-Isberner*)

- **13.00 – 13.30** Christian Alrabbaa, Willi Hieke and Anni-Yasmin Turhan. *Relevant Parts of Counter Models as Explanations for EL Non-Subsumptions (Extended Abstract)*
- **13.30 – 13.50** Patrick Koopmann. *Two Ways of Explaining Negative Entailments in Description Logics Using Abduction*
- **13.50 – 14.10** Thomas Ferguson. *Targeting Explanations by Measuring Conceptual Complexity*

14.10 – 14.20 Coffee Break

14.20 – 15.30 Session 6 (Invited Talk) (*Chair: Francesca Toni*)

Speaker: Sheila McIlraith (*University of Toronto*)

Title: Explaining What, to Whom, Why, and How

Abstract: Explanations take different forms and serve different purposes, depending on the nature of the explainer and explainee, their beliefs, and their cognitive and communication abilities. An explanation may be realized by the sniff of a liquid, by an utterance or image, or by the conveyance of a set of logical formulae. What may serve as an explanation for one agent may not suffice for another. Fundamentally, the form and content of an explanation depends on what is being explained to whom and why. In this talk I revisit a selection of works relating to explanation in symbolic systems. I then present a logical account of explanation that depends on the beliefs of agents and their ability to exercise theory of mind – informally, to reason as if they were the recipient of the explanation. I demonstrate the utility of such a characterization, not only in effectively responding to requests for explanations, but in anticipating and addressing discrepancies that another agent is yet to be aware of.

15.30 – 16.10 Coffee Break

16.10 – 17.30 Session 7 (*Chair: Mohad Sridharan*)

- **16.10 – 16.30** Andre Thevapalan and Gabriele Kern-Isberner. *On Interactively Establishing Fact-Independent Consistency in Answer Set Programs*
- **16.30 – 17.00** Van Nguyen and Tran Cao Son. *Explanation Generation Using ASP and Language Models: A Case Study in Smart Home Scheduling*
- **17.00 – 17.30** Riccardo Bertolucci, Carmine Dodaro, Giuseppe Galata, Marco Maratea, Ivan Porro and Francesco Ricca. *Explaining ASP-based Operating-Room Schedule*

17.30 – 17.40 Coffee Break

17.40 – 19.30 Session 8 (*Chair: Thomas Ferguson*)

- **17.40 – 18.00** Alan Lindsay. *Towards Transparent Planning and Legible Plan Representations — a Rule Based Planning Approach*
- **18.00 – 18.20** Fajar Haifani, Patrick Koopmann and Sophie Touret. *Introducing Connection-Minimal Abduction for EL Ontologies*
- **18.20 – 18.50** Christian Alrabbaa, Stefan Borgwardt, Nina Knieriemen, Alisa Kovtunova, Anna Milena Rothermel and Frederik Wiehr. *In the Hand of the Beholder: Comparing Interactive Proof Visualizations (Extended Abstract)*
- **18.50 – 19.20** Stefan Borgwardt. *Concise Justifications Versus Detailed Proofs for Description Logic Entailments*
- **19.20 – 19.30** *Closing*