DAO-XAI 2021 Data meets Applied Ontologies in Explainable AI

Proceedings of the 3rd International Workshop on Data meets Applied Ontologies in Explainable AI (DAO-XAI 2021)

Co-located with DL 2021 and BAKS 2021

Bratislava, Slovakia, 18–19 September 2021

Edited by

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PREFACE

This volume contains the papers presented at the 3rd International Workshop on Data meets Applied Ontologies in Explainable AI (DAO-XAI 2021), held in Bratislava, Slovakia, on 18–19 September 2021.

DAO-XAI 2021 was the 3rd edition of the Data meets Applied Ontologies series, a venue that provides opportunities for stakeholders from the academia, industry, and public organisations to present their latest developments in ontology-mediated data integration, data access and analysis techniques, and data-driven applications. This 3rd edition of the workshop series was dedicated to the role played by knowledge representation, ontologies, and knowledge graphs in Explainable Artificial Intelligence, in particular, to build trustworthy and explainable decision support systems. Previous editions were held at JOWO 2017 and JOWO 2019.

The workshop was co-located with the Bratislava Knowledge September (BAKS) 2021, a joint meeting of researchers, students, and industry professionals dealing with various aspects of knowledge processing, which took place in Bratislava, from 18 to 23 September 2021. BAKS hosted the 9th International Conference on Artificial Neural Networks (ICANN 2021) and the 34th International Workshop on Description Logics (DL 2021). Due to the COVID-19 pandemic, DAO-XAI 2021 was held in hybrid mode, with online and in-person participation.

We received 9 submissions out of which 6 papers were accepted as regular papers, and 2 as extended abstracts. DAO-XAI 2021 offered an interesting and diverse program, which in addition to the technical papers, included an invited talk by the leading expert Luciano Serafini (FBK Trento, Italy) on "Learning and Reasoning with Logic Tensor Networks: The Framework and an Application". The invited talk by Luciano Serafini was offered jointly with the 34th International Workshop on Description Logics (DL 2021).

We are very grateful to the European Association for Artificial Intelligence (EurAI) for providing funds for our invited speaker in the face of considerable uncertainties. We are also grateful to the Program Committee for their invaluable efforts in providing helpful and informative reviews for all submissions in a timely fashion. Finally, special thanks go to Martin Homola, the General and Local Chair of DL 2021, for his engagement in the local organisation and constant support during the co-location.

October 2021

Roberto Confalonieri Oliver Kutz Diego Calvanese

ORGANISATION

We list below the people who contributed to the organization of the DAO-XAI 2021 workshop.

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- Roberto Confalonieri, Free University of Bozen-Bolzano, Faculty of Computer Science, Italy
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- Diego Calvanese, Free University of Bozen-Bolzano, Faculty of Computer Science, Italy and Umeå University, Department of Computing Science, Sweden

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