

ISIPTA 2021: Preface

Andrés Cano

Computer Science and Artificial Intelligence, University of Granada, Spain

ACU@DECSAI.UGR.ES

Jasper De Bock

Foundations Lab for imprecise probabilities, FLip, Ghent University, Belgium

JASPER.DEBOCK@UGENT.BE

Enrique Miranda

Statistics and Operations Research, University of Oviedo, Spain

MIRANDAENRIQUE@UNIOVI.ES

Serafín Moral

Computer Science and Artificial Intelligence, University of Granada, Spain

SMC@DECSAI.UGR.ES

The ISIPTA meetings are the primary international forum for presenting and discussing advances in the theory and applications of imprecise probabilities. They are organized once every two years by SIPTA, The Society for Imprecise Probabilities: Theories and Applications. The first edition took place in Ghent in 1999. The upcoming 2021 edition of ISIPTA will be the 12th International Symposium on Imprecise Probabilities: Theories and Applications. It was planned to take place in Granada, Spain, but will now be an essentially virtual event due to the Covid-19 crisis, taking place from 6 to 9 July 2021. Even so, we will uphold the ISIPTA tradition of combining a friendly and cooperative style with a strong emphasis on in-depth discussion and interaction.

A total of 41 papers and 22 poster abstracts will be presented, all of them available at the conference website (<http://www.sipta.org/isipta21>). All papers have been reviewed by at least three members of the ISIPTA 2021 program committee. We would like to thank all 92 committee members for their outstanding job during the selection process. This volume of the Proceedings of Machine Learning Research (PMLR) consists of all the accepted papers. Following the ISIPTA tradition, each contribution will be presented twice, first in a plenary session, and then as a poster in a discussion session to encourage interaction among conference attendees in a more informal atmosphere.

We are pleased that this edition will feature three eminent invited speakers: Elias Bareinboim, Hans Peter Larsen, and Marco Zaffalon. Elias Bareinboim from Columbia University is one of the leading researchers in causal reasoning. His work has strong connections with imprecision, for example, when trying to quantify counterfactual probabilities, when assumptions only allow for a partial identification. Hans Peter Larsen from the University of Chicago is the 2013 recipient of The Sveriges Riksbank Prize in Economics Sciences in Memory of the Alfred Nobel Prize. He has made fundamental advances in quantifying uncertainty and sensitivity analysis in changing and risking environments. His talk will be illustrated by two examples in the context of financial markets and climate change. Finally, Marco Zaffalon from the “Dalle Molle” Institute for AI, is one of the pioneers in imprecise probability and Artificial Intelligence research. In his talk he will express his view of the current status of the field of imprecise probabilities and the importance of exploring the links with new areas such as causal reasoning.

The following prizes will be awarded in the closing session of the conference: The IJAR Young Research Award, sponsored by the International Journal of Approximate Reasoning (Elsevier) and the Best Poster Award, sponsored by Springer and Wiley. We express our gratitude for their support.

The organization of ISIPTA 2021, made all the more difficult by the Covid-19 crisis, would not have been possible without the help of a number of people: Manuel Gómez-Olmedo, Matthias Troffaes, and Marco Zaffalon, for their guidance as members of the steering committee; Joaquín Abellán, Silvia Acid, Manuel Gómez-Olmedo, Serafín Moral-García and Ofelia Retamero, for their help with the local organization; Ryan Martin and Harry Crane, from Researchers.One, for their personal approach and their quick response to our various requests; Ruobin Gong, Erik Quaeghebeur, and Arthur Van Camp, as jury of the Poster Award; and Alessio Benavoli, Denis Mauá, and Ignacio Montes, as jury for the IJAR Young Researcher Award.

Finally, we thank all who have submitted their work to ISIPTA 2021, or will attend the event. They are, in the end, the ones that will make this conference a reality.

Granada, 16 June 2021