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Andrea Omicini · Reyhan Aydogan ·
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Editors

Explainable and Transparent AI and Multi-Agent Systems

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Revised Selected Papers

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Preface

AI research has made several significant breakthroughs that has boosted its adoption in several domains, impacting our lives on a daily basis. Nevertheless, such widespread adoption of AI-based systems has raised concerns about their foreseeability and controllability and led to initiatives to "slow down" AI research. While such debates have mainly taken place in the media, several other research works have emphasized that achieving trustworthy and responsible AI would necessitate making AI more transparent and explainable.

Not only would eXplainable AI (XAI) increase acceptability, avoid failures, and foster trust, but it would also comply with relevant (inter)national regulations and highlight these new technologies' limitations and potential.

In 2023, the fifth edition of the EXplainable and TRAnsparent AI and Multi-Agent Systems (EXTRAAMAS) continued the successful track initiated in 2019 in Montreal and followed by the 2020 to 2022 editions (virtual due to the COVID-19 pandemic circumstances). Finally, EXTRAAMAS 2023 was held in person and proposed bright presentations, a stimulating keynote (titled "Untrustworthy AI" given by Jeremy Pitt, Imperial College London), and engaging discussions and Q&A sessions.

Overall, EXTRAAMAS 2023 welcomed contributions covering areas including (i) XAI in symbolic and subsymbolic AI, (ii) XAI in negotiation and conflict resolution, (iii) Explainable Robots and Practical Applications, and (iv) (X)AI in Law and Ethics.

EXTRAAMAS 2023 received 26 submissions. Each submission underwent a rigorous single-blind peer-review process (three to five reviews per paper). Eventually, 16 papers were accepted and collected in this volume.

Each paper was presented in person (with the authors' consent, they are available on the EXTRAAMAS website[1]). Finally, The Main Chairs would like to thank the special track chairs, publicity chairs, and Program Committee for their valuable work, as well as the authors, presenters, and participants for their engagement.

June 2023

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[1] https://extraamas.ehealth.hevs.ch/.

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Contents