

**5th International Workshop on EXplainable and TRAnsparent AI and Multi-Agent Systems
(EXTRAAMAS)
in conjunction with AAMAS 2023, London, 29 May- 2 June, 2023**



Running since 2019, EXTRAAMAS is a well-established workshop and forum on EXplainable and TRAnsparent AI and Multi-Agent Systems. It aims to discuss and disseminate research on explainable artificial intelligence, with a particular focus on intra/inter-agent explainability and cross-disciplinary perspectives. In its 5th edition, EXTRAAMAS identifies four particular focus topics with the ultimate goal of strengthening cutting-edge foundational and applied research. This of course comes in addition to the main theme of the workshop, focused as usual on XAI fundamentals. The four tracks for this year are:

- **Track 1: XAI in symbolic and subsymbolic AI:** the “AI dichotomy” separating symbolic AKA classical AI from connectionism AI has been persistent for more than seven decades. Nevertheless, the advent of explainable AI has accelerated and intensified the efforts to bridge this gap, since providing faithful explanations of black-box machine learning techniques would necessarily mean combining symbolic and subsymbolic AI. This track aims at discussing the recent works on this hot topic of AI.
 - Track chair: Giovanni Ciatto, University of Bologna, Italy.
- **Track 2: XAI in negotiation and conflict resolution:** Conflict resolution (e.g., agent-based negotiation, voting, argumentation, etc.) has been a prosperous domain within the MAS community since its foundation. However, as agents and the problems they are tackling become more complex, incorporating explainability becomes vital to assess the usefulness of the supposedly conflict-free solution. This is the main topic of this track, with a special focus on MAS negotiation and explainability.
 - Track Chair: Reyhan Aydoğan: Ozyegin University, Turkey
- **Track 3: Explainable Robots and Practical Applications:** Explainable robots have been one of the main topics of XAI for several years. The main interest of this track is to publish the latest works whose focus is notably on (i) the impact of embodiment on explanation, (ii) explainability for remote robots, (iii) how humans receive and perceive explanations by robots, and (iv) practical XAI applications & simulations.
 - Track chair: Yazan Mualla, UTBM, France
- **Track 4: XAI in Law and Ethics:** complying with regulation (e.g. GDPR) is among the main objectives for XAI. The right to explanation is key to ensuring transparency of ever more complex AI systems dealing with a multitude of sensitive AI applications. This track discusses works related to explainability in AI ethics, machine ethics, and AI & Law.
 - Track chair: Rachele Cari, University of Bologna, Italy

This year EXTRAAMAS will feature a keynote entitled “untrustworthy AI” delivered by Jeremy Pitt, Professor of Intelligent and Self-organizing Systems in the Department of Electrical and Electronic Engineering at Imperial College London (UK).

Moreover, EXTRAAMAS will offer a tutorial on reusable explainable technologies given by Dr. Giovanni Ciatto and Mr. Victor Hugo Contreras.

All accepted papers are eligible for publication in the Springer Lecture Notes of Artificial Intelligence conference proceedings (after revisions have been applied).

Important Dates	Submission link
Paper submission: 01/03/2023 Notification of acceptance: 25/03/2023 Workshop: 29/05/2023 Camera-ready (for Springer post-proceedings): 10/06/2023	https://easychair.org/conferences/?conf=extraamas2023

EXTRAAMAS Tracks

<p>Track1: XAI in symbolic and subsymbolic AI</p> <ul style="list-style-type: none"> - XAI for Machine learning - Explainable neural networks - Symbolic knowledge injection or extraction - Neuro-symbolic computation - Computational logic for XAI - Multi-agent architectures for XAI - Surrogate models for sub-symbolic predictors - Explainable planning (XAIP) - XAI evaluation 	<p>Track3: Explainable Robots and Practical Applications</p> <ul style="list-style-type: none"> - Explainable remote robots - Explainability and embodiment - Practical XAI applications - Emotions in XAI - Perception in XAI - Human-Robot Interaction (HRI) studies - Communication and reception of explanations - Agent simulations and XAI
<p>Track2: XAI in negotiation and conflict resolution</p> <ul style="list-style-type: none"> - Explainable conflict resolution techniques/frameworks - Explainable negotiation protocols and strategies - Explainable recommendation systems - Trustworthy voting mechanisms - Argumentation for explaining the process itself - Argumentation for explaining and supporting the potential outcomes - Explainable user/agent profiling (e.g., learning user's preferences or strategies) - User studies and assessment of the aforementioned approaches - Applications (virtual coaches, robots, IoT) 	<p>Track4: (X)AI in Law, and Ethics</p> <ul style="list-style-type: none"> - XAI in AI & Law - Fair AI - XAI & Machine Ethics - Bias reduction - Deception and XAI - Persuasive technologies and XAI - Nudging and XAI - Legal issues of XAI - Liability and XAI - XAI, Transparency, and the Law - Enforceability and XAI - Culture-aware systems and XAI

Workshop Chairs

Dr. Davide Calvaresi, HES-SO, Switzerland

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Prof. Kary Främling, Umeå University Sweden and Aalto University, Finland,

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<p style="text-align: center;">Track Chairs</p> <p>Dr. Giovanni Ciatto, University of Bologna, Italy mail: giovanni.ciatto@unibo.it</p> <p>Prof. Rehyan Aydogan, Ozyegin University, Turkey mail: rehyan.aydogan@ozyegin.edu.tr</p> <p>Rachele Carli, University of Bologna mail: rachele.carli2@unibo.it</p> <p>Prof. Yazan Mualla, University of Technology of Belfort-Montbéliard mail: yazan.mualla@utbm.fr</p>	<p style="text-align: center;">Advisory Board</p> <p>Dr. Tim Miller, University of Melbourne.</p> <p>Prof. Leon van der Torre, University of Luxembourg</p> <p>Prof. Virginia Dignum, Umea University</p> <p>Prof. Michael Ignaz Schumacher</p>
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