The 4th Workshop on Ontologies for Autonomous Robotics – RobOntics 2023

Preface

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Now at its fourth edition, RobOntics is establishing itself as a venue where the communities of knowledge representation/ontology engineering and robotics can meet and exchange challenges and ideas. For this edition, colocated with the IEEE RO-MAN conference on human robot interaction, the workshop organizers selected as the main focus that of modelling cultural aspects that would be relevant for robots through the use of knowledge representation.

About half of the accepted papers tackled issues pertaining to this topic, or to interaction between humans and robots more generally. The other half treated topics pertaining to the improvement of robotic manipulation skills through knowledge-based approaches. By design, RobOntics papers cover a spectrum from position and conceptual papers on the one hand to papers which showcase work at various stages of maturity.

Two invited speakers also provided their insights via a pair of keynotes. Alessandra Sciutti presented her research into cognitive robotics with a focus on enabling interaction: techniques that would allow a robot to understand human intentions and to behave in a way that a human would consider understandable. Alessandro Umbrico presented formal aspects of combining ontologies with timeline-based task planning techniques and how this integration is applicable in robotics domains such as collaborative manufacturing and healthcare assistance.

The workshop took place on the 28th of August as a hybrid, but mostly in-person, session.

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