

## Preface

This volume of proceedings gathers papers from the 1st 1st International Workshop on Application of Semantic Web technologies in Robotics (AnSWeR '17), which was held on May 29, 2017 during the 14th ESWC Conference in Portoroz, Slovenia.

It has been decided to hold this workshop after a reflection on the status of works in the Robotics area which make use of any sort of Knowledge Representation. Therefore, it has been natural to ask if and how the Semantic Web community, which worked in the last decade to set standards for Knowledge Representation and Reasoning, can contribute (and benefit at the same time) with respect to this nowadays emerging field of Robotics. Robots are slowly spreading outside the industrial and research environment, to approach our everyday life. As this happen, robots will need to expose an increasing capability to deal with different sources of knowledge about the world, to accomplish complex task involving Planning, Computer Vision, Natural Language Processing and so on. The need for integrating robots with Knowledge Bases to provide them with a basic understanding of semantics has been already noticed by the Robotics community, and is testified by research projects such as KnowRob and Robobrain.

It is therefore natural to think about whether and how the Semantic Web can have a role in this context. In recent years, the Semantic Web community has studied how to model, mine, manage and exploit knowledge from and for the Web, promoting in parallel the adoption of standards for knowledge representation. In this sense, Robotics appears as a key application domain for Semantic Web technologies, whose findings can be applied, adapted and further developed, as also showed by projects such as RoboEarth.

It is therefore important to understand how the Semantic Web community is interfacing with Robotics, and whether it can be actually beneficial. To this end, the aim of this workshop is to promote and strengthen the dialogue between the two communities that are working on such connected topics, in order to find answers to the posed questions (and hopefully to ask new questions). The stimulated debate should then serve as a background in fostering, on one hand, the application of Semantic Web standards and techniques in problems common to Robotics, while on the other, in highlighting Robotics as a fertile application field for the Semantic Web community.

Seven paper have been accepted in this first edition of AnSWeR; all of these are presented in this volume, equally distributed between full papers of mature and validated research and short papers of early research, positions and demos.

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