Alessandro Farinelli, Alberto Finzi and Fulvio Mastrogiovanni (Eds.)

Proceedings of the
AIRO 2016
The Third Italian Workshop on
Artificial Intelligence and Robotics

Editors' addresses:
Alessandro Farinelli
Dipartimento di Informatica, Università degli Studi di Verona,
Ca Vignal 2, Strada le Grazie 15 - 37134, Verona, Italy
alessandro.farinelli@univr.it

Alberto Finzi
DIETI, Università degli Studi di Napoli Federico II
via Claudio 21- 80125 Napoli, Italy
alberto.finzi@unina.it

Fulvio Mastrogiovanni
DIBRIS, Università degli Studi di Genova
Via All'Opera Pia, 13 - 16145 Genova - Italy
fulvio.mastrogiovanni@unige.it

Preface

The goal of the Italian workshop series on Artificial Intelligence and RObotics (AIRO) is to present, discuss and assess recent advances in the deployment of Artificial Intelligence (AI) methods in Robotics. Indeed, AI principles and methods play a crucial role in several areas of the robotics research (e.g. field, service, social robotics, etc.) and are pervasively exploited at various levels of robot architectures for different purposes: sensing and perception, human-robot interaction, intelligent control, cognition, behavior and reasoning models, distributed knowledge representation and computational ontologies, engineering tools, software architectures, and fast-prototyping techniques, learning, real-time systems and robot morphology. Starting from these diverse research fields, the AIRO workshop series aim at providing an established long-term Italian forum where the AI community and the Robotics community may find an interesting and stimulating common ground. This volume contains the proceedings of the third edition of the AIRO workshop[1], which was held in Genova, Italy, the 28nd of November 2016. This edition of the AIRO workshop accepted 15 papers involving 48 authors. The contributions covered several aspects of AI and Robotics, mainly concerned with the following topics: multi-robot communication and coordination; adaptive human-robot collaboration; social robotics; task, path, motion planning and execution; perception and interaction.

The program of the workshop was completed by two keynote talks by Prof. Alessandro Saffiotti, from University of Örebro, titled *Towards proactive robots for elder care* and by Prof. Sandro Mussa-Ivaldi, from Northwestern University, titled *Motor primitives: a physical symbol system for action and learning*.

The research topics and the results collected in these proceedings illustrate the work of an active and multidisciplinary research community and confirm the growing interest for a forum where AI and Robotics researchers can find a common ground.

Among the numerous people that contributed to the success of AIRO 2016, we would first of all thank the people that submitted their research papers to the workshop and attended to the event. Moreover, we sincerely thank the program committee members for their important work on the reviewing process.

Alessandro Farinelli, Alberto Finzi, Fulvio Mastrogiovanni
Workshop Organizers

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[1] https://airo2016.wordpress.com/

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