

Salvatore M. Anzalone, Alessandro Farinelli, Alberto Finzi, Fulvio Mastrogiovanni (Eds.)

Proceedings of the  
**AIRO 2017**  
**The 4th Italian Workshop on**  
**Artificial Intelligence and Robotics**

Workshop co-located with AI\*IA 2017 Bari, Italy  
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*Editors' addresses:*

Salvatore Maria Anzalone  
Laboratoire CHArt - THIM (EA4004), Université Paris 8  
2, Rue de la Liberté - 93526 Vincennes-Saint Denis - France  
sanzalone@univ-paris8.fr

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. 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, reasoning and decision, learning, intelligent control, adaptive and social behavior, verification and validation methods, etc. Starting from these diverse -yet intertwined- 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<sup>1</sup>, which was held in Bari, Italy, on November 14-15 2017. This edition of the AIRO workshop accepted 11 papers involving 48 authors. The contributions covered several aspects of AI and Robotics, mainly concerned with the following topics: industrial, assistive, field robotics, human monitoring, activity detection, scene recognition, system assessment and benchmarking.

The program of the workshop was completed by two keynote talks by Prof. Luca Iocchi, from “La Sapienza” Università di Roma, titled *Artificial Intelligence & Human-Robot Interaction* and by Prof. Antonio Chella, from Università degli Studi di Palermo, titled *Towards Robot Consciousness*.

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 2017, 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.

Salvatore M. Anzalone, Alessandro Farinelli, Alberto Finzi, Fulvio Mastrogiovanni  
Workshop Organizers

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<sup>1</sup> <https://airo2017.wordpress.com/>

## Workshop Organization

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Alessandro Farinelli	University of Verona
Alberto Finzi	University of Naples “Federico II”
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