

# Preface

Research in medical and service robotics has been continuously growing over the past decade as a logical response to the increasing needs of our evolving society. Research in medical and service robotics covers a large field of domains such as clinical robotics (surgery and diagnosis), robotics for rehabilitation and assistance (exoskeleton and prostheses), service robotics (humanoid and wheeled robots, autonomous surveying and rescue robots), and cognitive robotics, among others. These fields of research require a multidisciplinary approach ranging from mechanism theory and biomechanics to life and social sciences. One of the most important common features in medical and service robotics is probably the strong, intimate link with human. In many cases, human is even placed at the center of important issues involved in the analysis, design, and control of medical and service robots. This is particularly true in elderly and assistive robotics, where the interactions with human must be treated with respect to both physical and cognitive aspects. The place of human has been pointed out during the fourth workshop on Medical and Service Robotics, MeSRob'2015, held at IRCCyN in Nantes, France. In addition to classical scientific presentations, several keynotes have been given to illustrate the increasing need of robotics for elderly people.

This book collects 22 papers that were all presented during MeSRob'2015 and selected on the basis of a peer-review process. They cover classical issues in medical and service robotics but also more rarely discussed questions such as legal aspects. We are grateful to the sponsors of this workshop (IFTToMM, CEA-LIST, BA-Systèmes, CNRS, Région-Pays-de-la-Loire), the authors and reviewers, and the scientific and organizing committees.

MeSRob is now a well-established workshop. The fifth edition will take place in Graz, Austria. We are confident that MesSRob will become more and more attractive.

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New Trends in Medical and Service Robots  
Human Centered Analysis, Control and Design  
Wenger, P.; Chevallereau, C.; Pisla, D.; Bleuler, H.;  
Rodić, A. (Eds.)  
2016, IX, 310 p. 153 illus., Hardcover  
ISBN: 978-3-319-30673-5