

Foreword

Martin Haegele

Head of Department “Robot and Assistive Systems”

Division director “Intelligent Automation and Cleanroom Technologies”; Fraunhofer IPA

Chair “Service Robotics Group” of IFR

Martin.Haegele@ipa.fraunhofer.de



Dear Reader,

Service robotics has been receiving continued mainstream media coverage therefore bringing this new robotics area to a wider public audience. Robots are clearly on the rise: in manufacturing and increasingly in everyday environments. The growing interest in service robotics is partly due to the variety and number of new start-ups (aged less than six years) which account for some 33% of all robot companies. Furthermore, large companies are increasingly investing into robotics, often through the acquisition of the many originating start-ups.

In professional applications, service robots are already having a significant impact in areas such as agriculture, surgery, logistics and underwater applications and are growing in economic importance. Driven by evolving security threats, there is a growing need to monitor everyday environments, which results in increased and difficult-to-manage workloads and data flows. To help meet this need, robots will play an even greater role in the maintenance, security and rescue market.

Robotics in personal and domestic applications has experienced strong global growth with relatively few mass-market products: floor cleaning robots, robo-mowers and robots for edutainment, increasingly referred to as “social robots”. Future product visions point to domestic robots of higher sophistication, capability and value, such as assistive robots for supporting the elderly, for helping out with household chores and for entertainment.

Almost 20 years ago, in 1999, service robots were assessed statistically for the first time through a joint publication by the International Federation of Robotics (IFR) and the United Nations Economic Commission for Europe (UN ECE, Geneva). Prior to this effort, a suitable classification scheme for the heterogeneous domain of service robots and a data collection scheme have been worked out and improved ever since, jointly with ISO-standardisation efforts in robotics.

Today, the IFR World Robotics section on service robotics has established itself as the widely acknowledged reference publication in statistics, forecasts, market analysis, and profitability of robot investments. Robot suppliers, media, government bodies, financial analysts and technology scouts are among its readers.

I am confident that the World Robotics 2018 yearbook will once again offer an exhaustive overview on market data, innovations and examples of entrepreneurial activities. Never before has the yearbook been more detailed and exhaustive on the subject, especially regarding the overview of industrial suppliers worldwide with a much more detailed profile of the numerous service robot suppliers. Furthermore, due to the many hyperlinks pointing to online resources the reader is invited to go into more detail through selected publications and company websites.

Finally, I am indebted to my colleagues at Fraunhofer IPA, particularly Dr. Karin Roehricht, Mrs Luzia Schuhmacher and my former student Mrs Sarah Karadag for their help in once again preparing the report.

In case you have suggestions or questions or any further inquiries related to service robotics, please do not hesitate to contact me!

Best wishes,

Martin Haegele