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**Title:**

**Technological Gateway to the Era of Robots**

**Abstract:**

We are facing a fantastic era of robotic research and development all over the world. Concerning the advancement of technology, we are achieving daily improved results in perception, navigation, manipulation, learning and integration methods using Open Source software. Where marketability is concerned, the need for automation and manufacturing, especially in emerging countries like China, is increasing significantly, and the need for service robots in automation at home, in hospitals and in education etc. remains a long-term challenge. For robot researchers it is very important to consider these real requirements and those of commercialisation and to get the industry involved by increasing the Technology Readiness Level in their research. Dependability, adaptability, making the robots easy to use, a good benefits-cost-ratio, etc. are the main factors for bringing the research results to the market. I will share our preliminary experiences of developing market-oriented robot systems for industrial automation as well as for home surveillance, rehabilitation and elderly care. I will also summarize the future challenges of realising large-scale applications of diverse intelligent robot systems.

**Biography:**

Jianwei Zhang is professor and head of TAMS, Department of Informatics, University of Hamburg, Germany. He received both his Bachelor of Engineering (1986, with distinction) and Master of Engineering (1989) at the Department of Computer Science of Tsinghua University, Beijing, China, his PhD (1994) at the Institute of Real-Time Computer Systems and Robotics, Department of Computer Science, University of Karlsruhe, Germany, and Habilitation (2000) at the Faculty of Technology, University of Bielefeld, Germany. His research interests are cognitive robotics, sensor fusion, service robotics and multimodal machine learning, etc. In these areas he has published about 300 journal and conference papers, technical reports, four book chapters and three research monographs. He holds over 20 patents on robot components and systems. He is the coordinator of the Sino-German International Research Training Group CINACS and the EU FP6 MING-T Project and FP7 project RACE. He has received several awards, including the IEEE ROMAN Best Paper Award in 2002, the IEEE AIM Best Paper Award 2008 and the IEEE ROBIO Best Conference Paper Award 2013. He is the General Chairs of IEEE MFI 2012 and IROS 2015, IEEE RAS AdCom (2013-2015).