

## Preface

It is our great pleasure to hold the 2008 International Conference on Machine Automation at Awaji Yumebutai International Conference Center. The conference is held every 2 years in Finland and Japan by turns, and this is the 7th conference sponsored by Kansai University and the Japanese Council of International Federation for Theory of Machines and Mechanism, in cooperation with 6 academic societies and 2 institutes and organizations.

In a society with declining birth rate and rapidly aging population, even the senior citizen need to take up active roles in daily life and social activities. In order to provide a safe living environment for them, and for those who are handicapped, new technologies that can support their activities adequately are required. Furthermore, in order to facilitate coexistence between man and machine, the design and application of systems that take into account human psychology and movement need to be considered. The shape and movement of the support robots that assist human beings in daily life must be designed with judgment on the effects of their applications on human psychology. While more detailed surveillance are required for monitoring system that monitor the daily life of human beings and the safety of the society, it is also important that such systems do no overburden those being monitored. In addition to those, mechatronics is also highly applicable in the area of reconstruction works after disasters, and restoration works on polluted or abandoned environment due to chemical substances, land mines or other factors. In production plant, it is expected the workers' burden can be reduced by implementing autonomous distributed or unmanned factory. Simply put, in order to ensure peace and safety to human society, the next generation robotics and mechatronics systems are required to systematically analyze human psychology and movement, and based on these results new system and machines will be developed.

This conference focuses on the topics and applications of such service robotics and mechatronics, and 79 papers are accepted after careful screening for the presentation in 18 technical sessions including rehabilitation, medical applications, robot, manufacturing, sensor, control, simulation, etc. Finally, two key note papers and 66 papers are selected to publish the book titled "Service Robotics and Mechatronics" after the conference.

We would express our sincere appreciation and thanks to all the members of the Advisory Committee, the Organizing Committee, the Program Committee, the reviewers, the chairs, and the staffs as well as the participants for their good contribution and supports to hold this exciting conference.

Keiichi Shirase and Seiji Aoyagi  
General Co-Chairs

Service Robotics and Mechatronics

Selected Papers of the International Conference on  
Machine Automation ICMA2008

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2010, XII, 392 p., Hardcover

ISBN: 978-1-84882-693-9