Preface

On behalf of 2013 International Conference on Applied Mechanics, Mechatronics and Intelligent System (AMMIS2013) Organizing Committee, I would like to welcome you to participate in the 2013 International Conference Applied Mechanics, Mechatronics and Intelligent System in Changsha, China.

AMMIS2013 provided a forum for academic scientists, leading engineers, industry researchers and scholar students to exchange and share their experiences and research results. AMMIS2013 aims to cover the recent advancement and trends in the area of Applied Mechanics, Mechatronics and Intelligent System to facilitate knowledge sharing and networking interactions on emerging trends and new challenges.

This book tends to collect the latest research results and applications on Applied Mechanics, Mechatronics and Intelligent System. It includes a selection of 57 papers from 198 papers submitted to the conference from universities and industries all over the world. All of accepted papers were subjected to strict peer-reviewing by 2-4 expert referees. The papers have been selected for this volume because of quality and the relevance to the conference.

The editor hopes that this book will provide readers a broad overview of the latest advances on Applied Mechanics, Mechatronics and Intelligent System. The editor also believes this book would be a good reference for academic researchers and industrial professionals in the fields of Applied Mechanics, Mechatronics and Intelligent System.

AMMIS2013 would like to express our sincere appreciations to all authors for their contributions to this book. We would like to extend our thanks to all the referees for their constructive comments on all papers; especially, we would like to thank to organizing committee for their hard working. Finally, we would like to thank the Trans Tech Publications for producing this volume.

Prof. Guojin Chen, Hangzhou Dianzi University
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AMMIS2013
2013 International Conference on
Applied Mechanics, Mechatronics and Intelligent System
(AMMIS2013)

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AMMIS2015 focuses on seven main areas, namely, applied mechanics, control and automation, intelligent systems, computer technology, electronics engineering, electrical engineering, and materials science and technology. Experts in this field from all over the world contributed to the collection of research results and development activities. AMMIS2015 provides an excellent international exchange platform for researchers to share their development works and results in these areas. All papers selected for this proceeding were subjected to a rigorous peer-review process.

Contents: Applied and Comp Mechatronics, which is also called mechatronics engineering, is a multidisciplinary branch of engineering that focuses on the engineering of both electrical and mechanical systems, and also includes a combination of robotics, electronics, computer, telecommunications, systems, control, and product engineering. As technology advances over time, various subfields of engineering have succeeded in both adapting and multiplying. The intention of mechatronics is to produce a design solution that unifies In contemporary mechatronics systems, the complexity of the mechanical and electronics parts imposes intelligence embedded to the system. The advancement in mechatronics design urges for sophisticated control laws as well as advanced feedback from smart sensors. Recent developments in artificial intelligence and machine vision allow the use of advanced algorithms into a variety of applications in order solve problems that arise when implementing sophisticated mechatronics systems. This Special Issue will accept contributions where the concepts of mechatronics, machine vision, and artificial in...