

## PREFACE

Welcome to the Proceedings of the 2nd Asian International Workshop on Advanced Reliability Modeling (AIWARM 2006), held in Busan, Korea, August 24–26, 2006. The AIWARM 2006 provides a unique opportunity for academia and industry researchers who are interested not only in the latest research results in reliability and maintenance modeling but also in development of the next generation solutions in this emerging area. Since the great success of the AIWARM 2004 in Hiroshima, Japan, August 26–27, 2004, this workshop has been already recognized to be one of the most significant international forums in reliability and maintenance modeling, especially, in Asian region. Our objectives are to bring together researchers, scientists and practitioners from all over the world as well as Asian countries to discuss the state of research and practice when dealing with reliability and maintenance issues at the system design (modeling) level, and to jointly formulate an agenda for future research. To meet these objectives, this time, we focus on the special theme “Reliability Testing and Improvement” and feature nine research categories: System and Network Reliability, Optimization in Reliability Engineering, Maintenance, Advanced Warranty Modeling, Software Reliability, Accelerated Testing and Failure Analysis, Statistical Analysis and Reliability Modeling, Stochastic Models, and Statistical Quality Control. The proceedings contain 95 rigorously refereed articles presented at AIWARM 2006. Each paper was reviewed by at least two referees. These articles come from Japan, Taiwan, South Africa, India, China, Italy, New Zealand, Singapore, Kuwait, Korea, cover the key topics in the above nine categories and provide an in-depth representation of theory and practice in these areas. We believe that the articles of the proceedings will introduce readers to significant and up-to-date theory and practice in reliability and maintenance modeling, and also be of interest and importance to the practitioners such as system designers and engineers, as well as to researchers such as applied mathematicians, statisticians, and graduate students interested in reliability, maintenance and safety engineering.

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Center for Failure Analysis and Reliability, Pusan National University, Korea. We, the Guest Editors, are indebted to Honorary General Chairs, Professor D. H. Park, Hallym University and Professor G. S. Kim, Ajou University, who are the past and current presidents of the Korean Reliability Society. Their continual support during the last two years leads to the success of the AIWARM 2006. Also, the workshop is held in cooperation with Reliability Engineering Association of Japan, The Operations Research Society of Japan, IEEE Reliability Society Japan Chapter and IEICE Technical Group on Reliability, Japan. We would like to express our sincere appreciation to the Program Committee members and to the Local Organizing Committee members as well as to all the contributors to the proceedings and the participants of the workshop. Special thanks should go to Program Co-Chairs, Professor J. H. Lim, Hanbat University, Korea and Professor S.-H. Sheu, National Taiwan University of Science and Technology, Taiwan. They have spent their much time and effort to the review process of all the articles submitted and hardly worked to make an excellent program. From AIWARM 2006, we have welcomed some distinguished leading researchers as our International Advisory Committee members. We very much appreciate Professor N. Balakrishnan, McMaster University, Canada, Professor W. Kuo, University of Tennessee, USA, Professor T. N. Goh, National University of Singapore, Singapore, Professor D. N. P. Murthy, University of Queensland, Australia, Professor S. Osaki, Nanzan University, Japan, Professor D. H. Park, Hallym University, Korea, Professor K. S. Trivedi, Duke University, USA, for their useful suggestions and helpful comments. We hope through the proceedings that the readers can enjoy the state-of-art results in advanced reliability modeling and get inspiration for contributions to their on-going research. Finally, we would like to thank Chelsea Chin, World Scientific Publisher, Singapore, for her warm and patient help.

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