

# Preface

The International Symposium on Software Reliability, Industrial Safety, Cyber Security and Physical Protection of Nuclear Power Plant was successfully held in Yinchuan, China, from May 30 to June 2, 2016. This symposium was jointly organized by China Instrument and Control Society and the Government of Yinchuan City.

The purpose of this symposium is to discuss the status quo, technical progress and development direction of digital instrument control technology, software reliability, information security and physical protection in the process of nuclear power development. It aims to provide a platform of technical exchange and experience sharing for those broad masses of experts and scholars and nuclear power practitioners. At the same time, it also provides a platform for the combination of production, teaching and research in universities and enterprises to promote the safe development of nuclear power plant.

This symposium received a total of 50 papers, covering digital instrument control technology, software reliability, information security and physical protection and other technical directions. After an anonymous peer review and expert selection, 24 excellent papers were finally recommended to Springer for publication. These 24 papers presented corresponding technical solutions and new ideas of the main design of the nuclear power plant control system, software verification and validation, digital instrument control system CPU redundancy configuration, fault diagnosis, remote I/O technology and software reliability, etc. We definitely believe that these papers in this volume have the innovative and practical value, and they can provide a useful reference for the follow-up-related work of nuclear power plant.

201 experts and scholars, students, corporate executives and outstanding scientist and technological workers from 68 institutes and organizations attended this symposium, including Tsinghua University, the Ministry of Environmental Protection, the Chinese Academy of Sciences and the China General Nuclear Power Group. Mr. Wang Zhongqiu, director of Nuclear and Radiation Safety Review Center of Environmental Protection Department, gives the keynote speech of “Nuclear power plant digital instrument control system review”, and Mr. Chen

Weihua, director of Instrumentation and Control Department of China Guangdong Nuclear Power Design Corporation, gives the invited lecture of “Discussion on Information Security of Digital Instrument Control System in Nuclear Power Plant”. Many other wonderful presentations were also presented by experts such as Prof. Huang Xiaojin, researcher of Tsinghua University, Mr. Gao Feng, vice president of China Guangdong Nuclear Power Design Corporation and other industry professionals. A wide ranging discussion were held in the final section of this symposium, which focus on the safety review and information security and other content people generally concerned about.

The symposium was a great success, and we must give our thanks to the organizers, to the scientific society, external reviewers, subject report experts and session chairs, also to the authors of these papers, and so on. Thanks again to the great effort of each of them. Prof. Yang XuTsinghua University, Beijing, China.

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