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Editors

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Introduction

The biennial China Symposium on Remote Sensing was held in the beautiful southern city of Hangzhou, China in August 2010. It was another significant event for academic exchange in China's remote sensing community after the 30th ACRS that was successfully held in Beijing in 2009.

Due to the diversity and complexity of the natural resources and environmental conditions in China, as well as the large size of the national territory including the land and sea, the studies of geosciences in China has required increasing use of remote sensing technology. Through recent technological progresses, the resolution of optical RS has much increased, new hyperspectral and microwave remote sensing have become more developed, and their influence on and contribution to the geosciences research have been more obviously apparent. The synoptic and integral features of the RS technologies and observations have led to a more systematic and comprehensive development of geosciences, which enables us to study and review more thoroughly our Earth, her resources and environment, as well as the changes she is undergoing.

On the other hand, China's economic and social development has entered into the high speed way. The resource-saving and environment-friendly approach of development has also raised more urgent, direct, and precise requirements for RS technologies, including satellites and airborne observation, especially when faced with the most severe challenges of resource, environment, and natural disasters. It is these requirements that provide the enormous impulse for RS development. The tasks in front of the Chinese RS community are hard and with great challenges.

It is also important to mention that in 2010 the curtain has been drawn across the 11th Five-year Plan of China's national economic development and the more significant 12th Five-year Plan for 2011–2015 has already started. Therefore the important themes of this symposium were to look back and summarize the development and progress of RS technologies in China in the recent years, to communicate the experiences in studies, to exhibit the achievements in RS applications, as well as to discuss and anticipate the prospects of the new period.

Many people engaged in RS science and technology from different areas of the country gathered together to exchange and discuss with one another across the many themes and fields, demonstrating their enormous motivation and enthusiasm. The more than 50 papers collected and selected in the proceedings well represent the achievements of this symposium. They cover quantitative approach on satellite RS and radiometric calibration, RS applications technological achievements represented by information processing and extraction, the development and applications of hyperspectral and microwave RS, the development of high accuracy and stereo mapping technologies that are mainly of stereo imagery multi-level matching methods based on the Moon and the Mars's explorations in China and abroad, disasters information extraction methods oriented at the emergency response to disaster relief areas, UAV monitoring, responding and warning technologies of road slides that are devastating in the mountainous areas, and the achievements in RS applications in the resources and environment fields, including the areas of land, urban, agriculture and vegetations. There are also papers contacting the RS technologies in exploration of geology and minerals, as well as the problems of geo-biochemical effects.

It is because of the abundant fruits of research by the authors of the papers that the contents of the proceedings have expanded and enriched as well as promoted both RS technology and its increasing applications. From one side the published proceedings are reflecting some features of the recent development of China's RS and its applications and it's just like a water drop in the sea of China's RS fields and a paving stone in its road of development. I should express my deep respect to all authors, reviewing experts, and editors of the papers in the proceedings, and to all the staff of China National Committee on Remote Sensing who has contributed to the edition and publication of the proceedings, as well as my gratefulness to SPIE experts who supported this symposium and the proceedings publication. Finally, I would like give my sincere congratulations upon the release of the proceedings!

Qingxi Tong
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