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Vagner G. Ferreira
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Introduction

Both LiDAR and radar mapping technologies are the two fastest-growing active remote sensing technologies with many scientific and practical applications. LiDAR and laser scanning has become a million-dollar industry with applications ranging from topographic mapping, heritage documentation, architectural modeling, and civil engineering, to forestry inventory and vegetation analysis. The development and use of laser scanners on various platforms (airborne, land-based, etc.), together with adapted data processing techniques, made these applications possible. In the past decade, LiDAR has become the most prestigious topic at international meetings on this subject in Europe and the United States, which gives a unique opportunity for scientists, engineers, surveyors, and project managers from around the world to recognize the trends and achievements in this area, exchange ideas, and present and discuss the most recent developments and applications.

In recent years, several new generations of radar imaging satellites have been launched successfully (e.g., TerraSAR-X, COSMO-SkyMed, ALOS, RADARSAT-2, SAC-D), and many new developments have been made in the field of SAR image analysis and the application in the domain of risk management and damage assessment. In fact, the incoming growing capabilities of the new SAR sensors, in terms of the improved spatial resolution and temporal revisit time, offer a potential tool for prevention, monitoring and damage assessment in relation to natural disasters such earthquake, flood, landslide, and fires. It is clear that there are particular properties of SAR images that demand fundamentally different interpretation techniques from conventional image analysis methods.

The Lidar and Radar 2011 symposium in Nanjing, China is the first time this type of event on active remote sensing has been held in Asia. The conference is designed to promote the development and applications of LiDAR and radar mapping technologies in Asia, to meet the scientific, technical, and business needs of the photogrammetry and remote sensing, surveying and mapping, as well as geosciences, forestry, renewable energy, environment, transportation, and disaster management communities.

The Lidar and Radar 2011 Symposium is jointly organized by Hohai University and the Hong Kong Polytechnic University; co-sponsored by the International Cartographic Association (ICA), International Society for Photogrammetry and Remote Sensing (ISPRS), International Federation of Surveyors (FIG), and International Association of Geodesy (IAG) and published by SPIE.

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