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Introduction

Welcome to the proceedings from the 10th International Symposium on Multispectral Image Processing and Pattern Recognition (MIPPR 2017), held 28-29 October 2017 in Xiangyang, China.

MIPPR focuses mainly on latest research in multispectral image processing and pattern recognition. The symposium has a broad charter. Multispectral is interpreted not just multiple-wavelength in a narrow sense but also multi-sensor, multi-modal, and multimedia. It covers many disciplines such as sensing, image processing, computer vision, pattern recognition and involves the development of efficient processing algorithms and their optimization and implementation. The wide range of applications considered in this symposium include automatic target recognition, autonomous navigation, medical image processing, remote sensing, geographic information systems and many others.

The symposium provides a forum for scientists, professors, engineers and graduate students from universities, industries and government laboratories to meet and exchange ideas and discuss theories, techniques, algorithms and applications in multispectral image processing and pattern recognition. As expected, there were ample discussions both inside and outside the lecture halls helping to make MIPPR 2017 an exciting meeting.

In response to the call for papers, we received 231 submissions. Based on the reviews provided by an excellent program committee we accepted 193 papers covering many aspects of multispectral image processing and pattern recognition. To ensure a high-quality conference, all abstracts and proceedings of SPIE papers are reviewed by peers for technical merit and English expression. The conference proceedings from MIPPR 2017 consist of five volumes which will be included on the SPIE Digital Library:

- *MIPPR 2017: Multispectral Image Acquisition, Processing, and Analysis* (SPIE Volume 10607)
- *MIPPR 2017: Automatic Target Recognition and Navigation* (SPIE Volume 10608)
- *MIPPR 2017: Pattern Recognition and Computer Vision* (SPIE Volume 10609)
- *MIPPR 2017: Parallel Processing of Images and Optimization Techniques; and Medical Imaging* (SPIE Volume 10610)
- *MIPPR 2017: Remote Sensing Image Processing, Geographic Information Systems, and Other Applications* (SPIE Volume 10611).

The realization of a conference depends upon the hard work of many dedicated people. We would like to thank all the members of the organizing committee who

put together this symposium for the benefit of all the researchers. They are responsible for making this conference a success. We hope the papers and the research results presented at this conference will inspire new research in all the areas related to multispectral image processing and pattern recognition.

Bir Bhanu