PROCEEDINGS OF SPIE

MIPPR 2017: Pattern Recognition and Computer Vision

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Editors

28–29 October 2017
Xiangyang, China

Organized by
Huazhong University of Science and Technology (China)
Hubei University of Arts and Sciences (China)

Sponsored by
National Key Laboratory of Science and Technology on Multi-spectral Information Processing (China)
Huazhong University of Science and Technology (China)
Hubei University of Arts and Sciences (China)
Hubei Association of Automation (China)

Published by
SPIE

Volume 10609

Proceedings of SPIE 0277-786X, V. 10609

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

MIPPR 2017: Pattern Recognition and Computer Vision, edited by Zhiguo Cao, Yuehuang Wang, Chao Cai, Proc. of SPIE Vol. 10609, 1060901 · © 2018 SPIE
CCC code: 0277-786X/18/$18 · doi: 10.1117/12.2316392

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Please use the following format to cite material from these proceedings:
Author(s), "Title of Paper," in *MIPPR 2017: Pattern Recognition and Computer Vision*, edited by Zhiguo Cao, Yuehuang Wang, Chao Cai, Proceedings of SPIE Vol. 10609 (SPIE, Bellingham, WA, 2017) Seven-digit Article CID Number.

ISSN: 0277-786X
ISSN: 1996-756X (electronic)

ISBN: 9781510617216
ISBN: 9781510617223 (electronic)

Published by
SPIE
P.O. Box 10, Bellingham, Washington 98227-0010 USA
Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445
SPIE.org
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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