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Hong Sun
Henri Maître
Bruce Hirsch
Editors

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Contents

v	<i>Authors</i>
vii	<i>Symposium Committee</i>
xi	<i>Introduction</i>

PARALLEL PROCESSING OF IMAGES AND OPTIMIZATION

10610 02	A fast method for single image haze removal based on multiscale dark channel prior [10610-102]
10610 03	A GPU-based mipmapping method for water surface visualization [10610-104]
10610 04	Hardware-efficient implementation of digital FIR filter using fast first-order moment algorithm [10610-106]
10610 05	Simulation and analysis of traffic flow based on cellular automaton [10610-107]
10610 06	A novel configurable VLSI architecture design of window-based image processing method [10610-111]
10610 07	Novel structures for Discrete Hartley Transform based on first-order moments [10610-112]
10610 08	Route constraints model based on polychromatic sets [10610-113]
10610 09	Analysis of parameter estimation and optimization application of ant colony algorithm in vehicle routing problem [10610-115]

MEDICAL IMAGING

10610 0A	A threshold-based fixed predictor for JPEG-LS image compression [10610-2]
10610 0B	A block-based JPEG-LS compression technique with lossless region of interest [10610-3]
10610 0C	Sparse representations via learned dictionaries for x-ray angiogram image denoising [10610-4]
10610 0D	Research on segmentation based on multi-atlas in brain MR image [10610-5]
10610 0E	Application of deep learning in the identification of TAO [10610-6]

Authors

Numbers in the index correspond to the last two digits of the seven-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first five digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Cai, Chao, 08
Cao, Li, 04
Cao, Yu-Wei, 09
Deng, Lihua, 0A, 0B
Hong, Hanyu, 02
Hua, Xia, 02
Huang, Zhenghua, 0A, 0B
Huang, Zhenghua, 0C
Jin, Jicheng, 0E
Li, Dongwu, 08
Li, Hua, 03
Li, Qian, 0C
Liu, Jianguo, 04, 07
Liu, Xia, 05
Liu, Zhao, 02
Qian, Yuejing, 0D
Quan, Wei, 03
Ren, Xianping, 05
Sang, Hongshi, 06
Shang, Jingfan, 0C
Shen, Xubang, 06
Shi, Yu, 02
Wang, Hao, 07
Wang, Houjun, 08
Wu, Cong, 0E
Wu, Yan, 03
Xiong, Jun, 04
Xiong, Jun, 07
Xu, Chao, 03
Xu, Quan-Li, 09
Yang, Kun, 09
Yao, Shoukui, 0A, 0B
Yin, Xianjun, 08
Zhang, Jing, 04
Zhang, Tianxu, 0C
Zhao, Hui, 06
Zheng, Wenjuan, 07

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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