PROCEEDINGS OF SPIE

SPIDigitalLibrary.org/conference-proceedings-of-spie

Front Matter: Volume 6625

, "Front Matter: Volume 6625," Proc. SPIE 6625, International Symposium on Photoelectronic Detection and Imaging 2007: Related Technologies and Applications, 662501 (29 February 2008); doi: 10.1117/12.796729

SPIE.

Event: International Symposium on Photoelectronic Detection and Imaging: Technology and Applications 2007, 2007, Beijing, China

PROCEEDINGS OF SPIE

*International Symposium on Photoelectronic
Detection and Imaging 2007*

Related Technologies and Applications

Liwei Zhou

Chair/Editor

9–12 September 2007

Beijing, China

Organized by

Topical Committee of Optics, China Ordnance Society (China)

School of Information and Technology, Beijing Institute of Technology (China)

The Editorial Office of *Optical Technique* (China)

Sponsored by

China Ordnance Society (China)

Beijing Institute of Technology (China)

Cooperating Organization

SPIE

Supported by

North Night Vision Technology Company, Ltd. (China) • Kunming Institute of Physics (China) • Beijing Weisidun

Asia Pacific Technology Company, Ltd. (China) • The 8358th Institute of 3rd Research Academy, CASIC (China)

Chinese Society of Astronautics (China) • Hamamatsu Photonics K.K. (Japan) • Topical Committee of Opto-

Electronic Technology, Chinese Optical Society (China) • Beijing Optical Society (China) • The 205th Institute

of China Ordnance Industry Corporation Group (China)

Published by

SPIE

Volume 6625

Proceedings of SPIE, 0277-786X, v. 6625

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

The papers included in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. The papers published in these proceedings reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from this book:

Author(s), "Title of Paper," in *International Symposium on Photoelectronic Detection and Imaging 2007: Related Technologies and Applications*, edited by Liwei Zhou, Proceedings of SPIE Vol. 6625 (SPIE, Bellingham, WA, 2008) Article CID Number.

ISSN 0277-786X

ISBN 9780819467676

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

Copyright © 2008, Society of Photo-Optical Instrumentation Engineers

Copying of material in this book for internal or personal use, or for the internal or personal use of specific clients, beyond the fair use provisions granted by the U.S. Copyright Law is authorized by SPIE subject to payment of copying fees. The Transactional Reporting Service base fee for this volume is \$18.00 per article (or portion thereof), which should be paid directly to the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923. Payment may also be made electronically through CCC Online at copyright.com. Other copying for republication, resale, advertising or promotion, or any form of systematic or multiple reproduction of any material in this book is prohibited except with permission in writing from the publisher. The CCC fee code is 0277-786X/08/\$18.00.

Printed in the United States of America.

Publication of record for individual papers is online in the SPIE Digital Library.

SPIDigitalLibrary.org

Paper Numbering: Proceedings of SPIE follow an e-First publication model, with papers published first online and then in print and on CD-ROM. Papers are published as they are submitted and meet publication criteria. A unique, consistent, permanent citation identifier (CID) number is assigned to each article at the time of the first publication. Utilization of CIDs allows articles to be fully citable as soon they are published online, and connects the same identifier to all online, print, and electronic versions of the publication. SPIE uses a six-digit CID article numbering system in which:

- The first four digits correspond to the SPIE volume number.
- The last two digits indicate publication order within the volume using a Base 36 numbering system employing both numerals and letters. These two-number sets start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B ... 0Z, followed by 10-1Z, 20-2Z, etc.

The CID number appears on each page of the manuscript. The complete citation is used on the first page, and an abbreviated version on subsequent pages. Numbers in the index correspond to the last two digits of the six-digit CID number.

Contents

xi	<i>Symposium Committees</i>
xv	<i>Introduction</i>
6625 02	Study on the automatic extraction of water body from TM image using decision tree algorithm [6625-01] J. Fu, China Institute of Water Resources and Hydropower Research (China); J. Wang, Chinese Academy of Surveying and Mapping (China); J. Li, China Institute of Water Resources and Hydropower Research (China)
6625 03	A tradeoff between motion blur and flicker visibility of electronic display devices [6625-02] Y. Zhang, W. Song, Southeast Univ. (China); K. Teunissen, Innovation Lab., Philips Consumer Electronics (Netherlands)
6625 04	Non-zero order joint transform correlator based on wavelet transform [6625-03] Y. Zhao, X. Sun, Jilin Univ. (China)
6625 05	Application of image processing on analyzing the structure of spatial-temporal pattern [6625-04] X. Yang, North China Electric Power Univ. (China); S. Liu, Agricultural Univ. of Hebei (China)
6625 06	Medical image registration algorithm research based on mutual information similarity measure [6625-05] J. Zhao, H. Yang, Y. Ding, Changchun Univ. of Science and Technology (China)
6625 07	Registration algorithm research for three dimensional medical image [6625-06] J. Zhao, H. Yang, Y. Ding, Changchun Univ. of Science and Technology (China)
6625 08	The embedded desktop augmented reality system based on ADSP-BF561 [6625-07] C. Wang, D. Yan, D. Zhang, W. Zhang, Beijing Institute of Technology (China)
6625 09	Assessment method of digital Chinese dance movements based on virtual reality technology [6625-08] W. Feng, S. Shao, S. Wang, Northwestern Polytechnical Univ. (China)
6625 0A	Laser spot measuring and position method with sub-pixel precision [6625-09] H. Zhuo, Institute of Applied Electronics, CAEP (China)
6625 0B	Algorithm of contrast enhancement for visual document images with underexposure [6625-10] D. Tian, Y. Hao, M. Ha, X. Tian, Y. Ha, Hebei Univ. (China)
6625 0C	No ground control point making the orthophoto for the UAV remote sensing system [6625-11] H. Zhao, Z. Gou, P. Gao, Y. Cheng, Peking Univ. (China)

- 6625 0D **Key technologies and system development method of virtual endoscope** [6625-12]
H. Yang, J. Zhao, Z. Jiang, Y. Li, W. He, Changchun Univ. of Science and Technology (China)
- 6625 0E **Three-dimensional medical image reconstruction based on improved live wire segmentation algorithm** [6625-13]
Y. Li, Z. Jiang, W. He, Y. Zhang, H. Yang, Changchun Univ. of Science and Technology (China)
- 6625 0F **A grid-based architecture for LIDAR data interpolation** [6625-14]
L. Su, J. Tao, S. Li, Institute of Remote Sensing Applications (China)
- 6625 0G **Blind identification and restoration of turbulence degraded images based on the nonnegativity and support constraints recursive inverse filtering algorithm** [6625-15]
D. Li, Beijing Univ. of Aeronautics and Astronautics (China) and Shandong Univ. of Technology (China); Y. Zhao, X. Dong, Beijing Univ. of Aeronautics and Astronautics (China)
- 6625 0H **Comparison and analysis of fusion algorithms of high resolution imagery** [6625-16]
G. Dong, State Key Lab. of Remote Sensing Science (China) and Information Engineering Univ. (China); X. Huang, Information Engineering Univ. (China); C. Dai, State Key Lab. of Remote Sensing Science (China)
- 6625 0I **An improved image segmentation algorithm based on Otsu method** [6625-17]
H. Wang, Y. Dong, Changchun Univ. of Science and Technology (China)
- 6625 0J **High speed gradient Hough transform algorithm for laser spot location** [6625-18]
J. Ying, Y. He, Z. Zhou, Mechanical Engineering College (China)
- 6625 0K **Image segmentation based on maximum relationship principle of conditional distribution under the assumption of Poisson distribution** [6625-19]
Y. Gao, H. Zhang, Beijing Univ. of Civil Engineering and Architecture (China); J. Ji, Xidian Univ. (China)
- 6625 0L **Stereoscopic video object segmentation based on depth and edge information** [6625-20]
C. Lü, D. Yuan, Q. Zhang, Communication Univ. of China (China)
- 6625 0M **L-curve curvature via Arnoldi process with application to super-resolution image reconstruction** [6625-21]
K. Xie, Beijing Institute of Graphic Communication (China)
- 6625 0N **A maximum entropy image restoration method based on Weiner filter** [6625-22]
C. Fu, D. Xu, Y. Zhao, Beijing Univ. of Aeronautics and Astronautics (China)
- 6625 0O **Image analyzing of patterns in dielectric barrier discharge** [6625-23]
H. Yue, L. Dong, Y. He, W. Fan, W. Liu, Hebei Univ. (China)
- 6625 0P **A flame detection technique based on fast mean shift and level set method** [6625-24]
W. Qiu, Nanchang Univ. (China) and South China Normal Univ. (China); J. Wu, W. Gao, Nanchang Univ. (China)

- 6625 0Q **Multi-frame infrared image restoration** [6625-25]
S. Tian, J. Qiao, Y. Gao, Nanjing Univ. of Science and Technology (China) and Nanyang Institute of Technology (China); Y. Qiu, B. Chang, Nanyang Institute of Technology (China)
- 6625 0R **Contour extracting with combination particle filtering and EM algorithm** [6625-26]
B. Meng, Changchun Institute of Optics, Fine Mechanics and Physics (China) and Graduate School of the Chinese Academy of Sciences (China); M. Zhu, Changchun Institute of Optics, Fine Mechanics and Physics (China)
- 6625 0S **Edge effects on the diffraction of the segmented aperture** [6625-27]
B. Wang, J. Yan, X. Zhang, Y. Gu, Beijing Institute of Technology (China)
- 6625 0T **Interpolation method based on resolution distribution for side-looking airborne camera** [6625-28]
J. Fang, Beijing Institute of Technology (China); B. Zhang, Q. Tong, State Key Lab. of Remote Sensing Science (China)
- 6625 0U **Vision based flight procedure stereo display system** [6625-29]
X. Shen, D. Wan, L. Ma, Civil Aviation Univ. of China (China); Y. He, Ctr. of Aviation Safety Technology, CAAC (China)
- 6625 0V **A study on target recognition fusion algorithm based on fuzzy theory** [6625-30]
F. Han, W. Yang, Xidian Univ. (China)
- 6625 0W **Real-time surface defects inspection of steel strip based on difference image** [6625-31]
J. Cong, Y. Yan, Northeastern Univ. (China); H. Zhang, Angang Iron and Steel Co. (China); J. Li, Northeastern Univ. (China)
- 6625 0X **Vegetation NPP distribution based on MODIS data and CASA model: a case study in the Haihe River Basin, China** [6625-32]
L. Wang, H. Gan, China Institute of Water Resources and Hydropower Research (China); C. Zhou, Institute of Geographical Sciences and Natural Resources Research (China); H. Zhang, China Institute of Water Resources and Hydropower Research (China); C. Lin, The Ministry of Water Resources of the People's Republic of China (China); Q. Zhu, China Institute of Water Resources and Hydropower Research (China)
- 6625 0Y **Super-resolution image restoration by maximum likelihood method and edge-oriented diffusion** [6625-33]
H. Zhu, Y. Lu, Institute of Optics and Electronics (China) and Graduate Univ. of the Chinese Academy of Sciences (China); Q. Wu, Institute of Optics and Electronics (China)
- 6625 0Z **A new similarity function for region based image fusion incorporating Gabor filters and fuzzy c-means clustering** [6625-34]
X.-J. Wu, Jiangnan Univ. (China); D.-X. Su, Jiangsu Univ. of Science and Technology (China); X.-Q. Luo, S.-T. Wang, Jiangnan Univ. (China); J.-Y. Yang, Nanjing Univ. of Science and Technology (China)

- 6625 10 **An improved approach to remove cloud and mist from remote sensing images based on the Mallat algorithm** [6625-35]
X. Zhu, Nanjing Univ. of Science and Technology (China) and Changzhou Institute of Technology (China); F. Wu, Changzhou Institute of Technology (China)
- 6625 11 **A speckle reduction and image enhancement anisotropic diffusion method for underwater ultrasonic imaging based on wavelet technology** [6625-36]
Y. Li, P. Li, H. Chen, X. Yan, Beijing Institute of Technology (China)
- 6625 12 **Threshold segmentation using cultural algorithms for image analysis** [6625-37]
Z. Pan, L. Chen, South China Normal Univ. (China); G. Zhang, Sun Yat-sen Univ. (China)
- 6625 13 **Method of real-time automatic recognition for animal posture** [6625-38]
F. Zhuang, K. Wu, F. Zhu, T. Ye, Hangzhou Dianzi Univ. (China)
- 6625 14 **Advanced multi-scale Retinex algorithm for color image enhancement** [6625-39]
X. Jiang, Jiangsu Polytechnic Univ. (China) and Nanjing Univ. of Science and Technology (China); C. Tao, Nanjing Univ. of Science and Technology (China)
- 6625 15 **The research of edge extraction and target recognition based on inherent feature of objects** [6625-40]
Y. Xie, Y. Lin, Y. Huang, Tianjin Univ. (China)
- 6625 16 **Texture discrimination of green tea categories based on least squares support vector machine (LSSVM) classifier** [6625-41]
X. Li, Y. He, Z. Qiu, D. Wu, Zhejiang Univ. (China)
- 6625 17 **Real time image processing system** [6625-42]
Y. Han, Naval Aeronautical Engineering Institute (China); H. Li, Graduate Students' Brigade, Yantai (China)
- 6625 18 **Fractional Fourier transform-based optical encryption with treble random phase-encoding** [6625-43]
Y. Xin, R. Tao, Y. Wang, Beijing Institute of Technology (China)
- 6625 19 **Wavelet fusion based image super-resolution restoration of projection onto convex set** [6625-44]
Y. Cao, T. Liu, W. Wang, Tianjin Univ. (China); Z. Xing, GE Hang Wei Medical System (China)
- 6625 1A **Criterion of phasing in the presence of segment aberrations** [6625-45]
S. Wang, Q. Zhu, G. Cao, X. Wang, Beijing Institute of Technology (China)
- 6625 1B **Research on non-destructive testing method of silkworm cocoons based on image processing technology** [6625-46]
Y. Gan, Guilin Univ. of Electronic Technology (China) and Tongji Univ. (China); Q. Kong, Tongji Univ. (China); L. Wei, Guilin Univ. of Electronic Technology (China)

- 6625 1C **A method of enhancing response speed for fringe under high SNR photodiode detection** [6625-47]
X. Wang, Key Lab. of Modern Manufacture Quality Engineering (China); Y. Zhong, L. Yang, Hubei Univ. of Technology (China)
- 6625 1D **A computed tomographic imaging system for experimentation** [6625-48]
Y. Lu, J. Wang, F. Liu, H. Yu, Chongqing Univ. (China)
- 6625 1E **Landing site locating of UAV by SIFT matching** [6625-49]
X. Zhang, X. Liu, Q. Yu, National Univ. of Defense Technology (China)
- 6625 1F **Investigation of atmospheric aerosol optical properties over Lake Taihu using MODIS and CE318 data** [6625-50]
F. Hu, B. Zhang, Z. Chen, X. Zhang, J. Li, Q. Shen, Q. Tong, Institute of Remote Sensing Applications (China)
- 6625 1G **Design method of ARM based embedded iris recognition system** [6625-51]
Y. Wang, Y. He, Beijing Institute of Technology (China); Y. Hou, Smartiris Biometrics Co. Ltd. (China); T. Liu, Beijing Institute of Technology (China)
- 6625 1H **Video retrieval based on combined color and texture feature in MPEG-7** [6625-52]
Y. Wang, R. Fan, Beijing Institute of Technology (China)
- 6625 1I **Edge detection for millimeter-wave images based on curvelet transform** [6625-53]
H. Du, F. Gu, W. Mei, Beijing Institute of Technology (China)
- 6625 1J **Study and implementation for range-gated underwater laser imaging system** [6625-54]
M. Chen, Z. He, F. Ao, Guilin Univ. of Electronic Technology (China)
- 6625 1K **Expectation maximization reconstruction for circular orbit cone-beam CT** [6625-55]
B. Dong, Dalian Jiaotong Univ. (China)
- 6625 1L **Analysis of terahertz radiation under nonlinear mode of photoconductive switches** [6625-56]
W. Shi, C. Yan, J. Zeng, K. Wang, Xi'an Univ. of Technology (China)
- 6625 1M **Imaging quality analysis of multi-channel scanning radiometer** [6625-57]
H. Fan, W. Xu, Donghua Univ. (China); C. Wang, Shanghai Institute of Technical Physics (China)
- 6625 1N **Experimental study on laser echo characteristics of typical objects** [6625-58]
H. Chen, R. Jia, P. Li, W. Guo, P. Liu, Beijing Institute of Technology (China)
- 6625 1O **Study of fundamental mode output of a coiled multimode Yb³⁺-doped double-cladding fiber amplifier** [6625-59]
C. Yang, S. Yang, X. Sun, C. Zhao, Beijing Institute of Technology (China)
- 6625 1P **Use of Vis/NIRS for the determination of sugar content of cola soft drinks based on chemometric methods** [6625-60]
F. Liu, Y. He, Zhejiang Univ. (China)

- 6625 1Q **Laser detection method of object surface coating uniformity** [6625-61]
N. He, X. Liao, Q. Zhao, Guilin Univ. of Electronic Technology (China)
- 6625 1R **Image quality evaluation of space optical remote sensor with segmented mirror** [6625-62]
Y. Wen, J. Yan, Beijing Institute of Technology (China)
- 6625 1S **NIRS and MIRS technique for the determination of protein and fat content in milk powder** [6625-63]
D. Wu, S. Feng, C. He, Y. He, Zhejiang Univ. (China)
- 6625 1T **Identification of fine wool and cashmere by Vis/NIR spectroscopy technology** [6625-64]
G. Wu, Zhejiang Univ. (China) and Inner Mongolia Agriculture Univ. (China); Y. He, Zhejiang Univ. (China)
- 6625 1U **Optical path design of the external diameter measurement system based on CCD and parallel light projection method with double light paths** [6625-65]
Q. Song, W. Wu, S. Zhu, H. Yan, Beijing Univ. of Posts and Telecommunications (China)
- 6625 1V **All-optical wavelength conversion based on cascaded effect of cross-gain modulation and cross-phase modulation in SOAs** [6625-66]
Z. Wu, Y. Huang, Z. Weng, R. Ye, Xiamen Univ. (China)
- 6625 1W **New method for 2D velocity measurement based on electronic rolling shutter** [6625-67]
Z. He, P. Wei, Beijing Institute of Technology (China)
- 6625 1X **Structure design of Mach-Zehnder interferometer in electro-optic hybrid-integrated 3D acceleration geophone** [6625-68]
D. Tang, Z. Liang, H. Chen, Southwest Petroleum Univ. (China)
- 6625 1Y **Study of optical fiber carbon monoxide gas sensor with DFB LD** [6625-69]
L. Zheng, X. Huang, G. Bi, Yanshan Univ. (China)
- 6625 1Z **Microstructural modification of lithium niobate crystal induced by femtosecond laser ablation** [6625-70]
B. Yu, Huazhong Univ. of Science and Technology (China) and Xinyang Normal Univ. (China); D. Shi, Xinyang Normal Univ. (China); Q. Zheng, P. Lu, Huazhong Univ. of Science and Technology (China)
- 6625 20 **Micro-vibration or displacement measurement based on a novel Bragg grating pair** [6625-71]
B. Peng, Zhejiang Normal Univ. (China); Y. Zhao, Tsinghua Univ. (China); C. Ying, Y. Liu, H. Wang, Zhejiang Normal Univ. (China)
- 6625 21 **Research on the measuring system for crankshaft based on laser principle** [6625-72]
W. Cao, C. Xue, X. Bai, L. Li, Z. An, Changchun Univ. of Science and Technology (China)
- 6625 22 **Effect and control on temperature measurement accuracy of the fiber-optic colorimeter by emissivity of different temperatures** [6625-73]
Y. Liu, X. Han, D. Shi, Henan Normal Univ. (China)

- 6625 23 **Improved harmony search for detection with photon density wave** [6625-74]
H. Dong, Jiangnan Univ. (China); Y. Bo, Nanjing Univ. of Posts and Telecommunications (China); M. Gao, T. Zhu, Jiangnan Univ. (China)
- 6625 24 **The development of a portable quality monitor of TCM with near infrared diffuse reflectance** [6625-75]
H. An, Beijing Univ. of Chinese Medicine and Pharmacy (China); J. Wen, Goushi No. 1 High School (China)

Author Index

Symposium Committees

Honorary Chair

Wang Daheng, Chinese Academy of Sciences (China)

General Chairs

Zhou Liwei, Beijing Institute of Technology (China)

Jin Guofan, Tsinghua University (China)

Wang Dechen, China Ordnance Society (China)

Kuang Jingming, Beijing Institute of Technology (China)

Jiao Wenjun, Beijing Institute of Technology (China)

Advisory Committee

Zhou Bingkun, Tsinghua University (China)

Mu Guoguang, Nankai University (China)

Qin Yuwen, National Natural Science Foundation Committee (China)

Yin Xingliang, General Manager of CASIC (China)

Hou Xun, Xi'an Institute of Optics and Fine Mechanics (China)

Francis T.S.Yu, University of Pennsylvania (USA)

Teruo Hiruma, Hamamatsu Photonics K.K. (Japan)

M. Ya. Schelev, Physics Institute, Russia Academy of Sciences (Russia)

V. Soifer, Samara State Aerospace University (Russia)

Feng Changgen, China Association for Science and Technology (China)

Huang Shanglian, Chongqing University (China)

Horst Weber, Berlin Technical University (Germany)

Igor D. Burlakov, Federal State Unitary Enterprise ORION (Russia)

Organizing Committee

Chairs

Yu Xin, Beijing Institute of Technology (China)

Qi Kangnan, Beijing Optical Society (China)

Xu Yida, China Ordnance Society (China)

Members

Zhang Yimo, Tianjin University (China)

Deng Shushen, Beijing Optical Society (China)

Cui Yuping, The 8358th Institute of CASIC (China)

Yoshui Suzuki, Hamamatsu Photonics K.K. (Japan)

Zhao Yuejin, Topical Committee of Optics, China Ordnance Society (China)
Gu Ying, Beijing 301 Hospital (China)
Wang Xiaopeng, The 205th Institute of China Ordnance Industry Corporation Group (China)
Zeng Guilin, North Night Vision Technology Company, Ltd. (China)
Liu Xiaohua, Beijing Weisidun Asia Pacific Technology Company, Ltd. (China)

Program Committee

Chairs

Zhao Dazun, Beijing Institute of Technology (China)
Ni Guoqiang, Chinese Optical Society (China)
Zhao Yuejin, Topical Committee of Optics, China Ordnance Society (China)

Members

Jin Weiqi, Beijing Institute of Technology (China)
Song Feijun, China Daheng Corporation (China)
Zhang Cunlin, Capital Normal University (China)
Theo Tschudi, Darmstadt University (Germany)
Kimio Tatsuno, Hitachi (Japan)
Wang Yongtian, Beijing Institute of Technology (China)
Bert Van Geest, Lambert Instruments (Netherlands)
Shi Yanyu, Kunming Institute of Physics (China)
Jun Ohta, Nara Institute of Science and Technology (Japan)
Gao Chunqing, Beijing Institute of Technology (China)
Bai Tingzhu, Beijing Institute of Technology (China)
D.E. Greenfield, RD&P Center ORION (Russia)
S.V. Andreev, Prokhorov General Physics Institute (Russia)

Conference Chairs

Conference 6621: Photoelectronic Imaging and Detection

Zhou Liwei, Beijing Institute of Technology (China)
Yoshui Suzuki, Hamamatsu Photonics K. K. (Japan)
D.E. Greenfield, RD&P Center ORION (Russia)
Bai Tingzhu, Beijing Institute of Technology (China)

Conference 6622: Laser, Ultraviolet and Terahertz Technology

Horst Weber, Berlin Technical University (Germany)
Gao Chunqing, Beijing Institute of Technology (China)
Zhang Cunlin, Capital Normal University (China)

Conference 6623: Image Processing

Zhao Dazun, Beijing Institute of Technology (China)

Francis T.S.Yu, University of Pennsylvania (USA)

Jun Ohta, Nara Institute of Science and Technology (Japan)

*Conference 6624: Optoelectronic System Design, Manufacturing,
and Testing*

Wang Yongtian, Beijing Institute of Technology (China)

Theo Tschudi, Darmstadt University (Germany)

Kimio Tatsuno, Hitachi (Japan)

Conference 6625: Related Technology and Applications

Shi Yanyu, Kunming Institute of Physics (China)

Bert Van Geest, Lambert Instruments (Netherlands)

Jin Weiqi, Beijing Institute of Technology (China)

Secretariat

Secretaries General

An Liansheng, Beijing Institute of Technology (China)

Jie Deer, The Editorial Office of *Optical Technique* (China)

Liu Xunliang, Topical Committee of Opto-Electronic Technology,
Chinese Optical Society (China)

Zhao Xueyan, The 8358th Institute of 3rd Research Academy,
CASIC (China)

Liu Baosheng, Beijing Optical Society (China)

Secretaries

Xia Yang, The Editorial Office of *Optical Technique* (China)

Gan Quan, Beijing Institute of Technology (China)

Zhao Baozhang, The Editorial Office of *Optical Technique* (China)

Wu Hong, Beijing Institute of Technology (China)

Board of Editing Management

Chair

Jie Deer, The Editorial Office of *Optical Technique* (China)

Cochairs

Liu Xunliang, Topical Committee of Opto-Electronic Technology,
Chinese Optical Society (China)

Xia Yang, The Editorial Office of *Optical Technique* (China)

An Liansheng, Beijing Institute of Technology (China)

Gan Quan, Beijing Institute of Technology (China)

Members

Zhao Baozhang, The Editorial Office of *Optical Technique* (China)

Xie Haiying, The Editorial Office of *Optical Technique* (China)

Introduction

About 14 years ago, when I organized the first International Symposium on Photoelectronic Detection and Imaging (ISPD) in 1993 at the Friendship Hotel in Beijing, the symposium was going successfully. At the closing ceremony, I expressed my hope and desire to organize the symposium in China again. This year the day came, as we had a great honor to organize the International Symposium on Photoelectronic Detection and Imaging meeting in Beijing once again. It is truly a great pleasure for us to be able to greet our fellow scientists and experts from a number of countries; and I firmly believe this meeting will be a successful international event in the field of photoelectronic detection and imaging.

The purpose of ISPD'07 is to provide a forum for the participants to disseminate and exchange ideas and to present up-to-date comprehensive assessments of progress and developments in the field of photoelectronic imaging and detection. To this end it is very gratifying to me that we have been assembled here for an informative exchange of opinions.

Collected in these five volumes are close to 400 papers accepted for presentation at the symposium, contributed by over 1000 authors from more than 10 countries, including China, Japan, Russia, Germany, Netherland, India, United Kingdom, United States, Italy, and South Korea. These papers cover topics such as photoelectronic imaging, photoelectronic detection, opto-electronic system design, manufacturing and testing, image processing, related technology and applications, as well as many other aspects. These proceedings will no doubt benefit not only the participants of this meeting but also our colleagues engaged in research and development. It is sincerely hoped that as a consequence of this meeting, research and development in photoelectronic detection and imaging will be promoted, and international cooperation between scientists and engineers who share this common interest will be enhanced.

Finally, on behalf of Prof. Wang Daheng, Prof. Jin Guofan and Prof. Yu Xin, China Ordnance Society, and Beijing Institute of Technology, I would like to heartily thank our sponsors and supporters for all they have done for this meeting. Thanks also to all the authors for their contributions to these proceedings; to all of the participants and friends for their interest and efforts in helping us to make this symposium possible, especially those who have traveled great distances and taken their valuable time from their very busy schedules to attend the meeting; to the advisory and organizing committees for their effective work and valuable advice; and to all the organizations and individuals concerned for their active support and assistance, especially the Editorial Office of *Optical Technique* for

their tireless effort and outstanding service in the administration and preparation of the manuscripts for the proceedings. I am also grateful to the SPIE staff for their support and collaboration in publishing these volumes.

Liwei Zhou

Topical Committee of Optics, China Ordnance Society