

Optics and Photonics of Taiwan International Conference: Introduction by the feature editors

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This Applied Optics feature issue is dedicated to the Optics and Photonics of Taiwan International Conference (OPTIC 2013), held 5–7 December 2013 in Zhongli (Chung-Li), Taiwan. The conference takes place every year at different universities in Taiwan. This feature issue is particularly focused on a broad range of topics covered under subconference VII (Display Technology), and also includes topics pertaining to display technology under other subconferences. In addition, the feature issue is open to all other researchers in the related area. © 2014 Optical Society of America

OCIS codes: (000.1200) Announcements, awards, news, and organizational activities; (050.0050) Diffraction and gratings; (120.2040) Displays; (160.3710) Liquid crystals; (190.0190) Nonlinear optics; (230.3670) Light-emitting diodes.

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The Optics and Photonics of Taiwan International Conference 2013 (OPTIC 2013) was held on 5–7 December 2013 in Zhongli (Chung-Li), Taiwan. Generous financial contributions were provided by National Science Council (NSC), Ministry of Foreign Affairs, Photonics Industry and Technology Development Association (PIDA), Instrument Technology Research Center of Taiwan, and Academia Sinica.

Financial sponsorship was also provided by OSA, SPIE. The conference was formerly known as the Optics and Photonics of Taiwan (OPT), and organized by the Photonics Society of Taiwan. OPTIC 2013 consisted of 10 subconferences, Conference I: Nanophotonic Materials and Devices; Conference II: Optical Waveguides and Communications; Conference III: Quantum Electronics; Conference IV: Optical Information Processing and Holography; Conference V: Optical Design and Testing; Conference VI: Biophotonics; Conference VII: Display Technology; Conference VIII: Solid State Lighting; Conference

IX: Photovoltaic Technology; Conference X: Thin Film Technology and Optical Engineering.

The General Chair of the conference was Cheng-Chung Lee. The conference was coordinated by the Program, Organization and Advisory Committees. The Program Chair was Ching-Cherng Sun, and the Organization Committee Sheng-Hui Chen. Each subconference was organized by the subconference Program Committees as follows:

Conference I: Nanophotonic Materials and Devices

- Akhlesh Lakhtakia, Pennsylvania State University, USA, Subconference Chair
- Din Ping Tsai, Academia Sinica, Taiwan, Subconference Chair
- Chii-Chang Chen, National Central University, Taiwan, Subconference Chair
- Maria-Pilar Bernal, Université de Franche Comté, France
- Yin-Jung Chang, National Central University, Taiwan
- Alexis Fischer, Université Paris 13, France
- Chia-Chen Hsu, National Chung Cheng University, Taiwan
- Jian-Jang Huang, National Taiwan University, Taiwan
- Yang-Tung Huang, National Chiao Tung University, Taiwan
- Yung-Chiang Lan, National Cheng Kung University, Taiwan
- Chengkuo Vincent Lee, National University of Singapore, Singapore
- Chun-Hung Lin, National Cheng Kung University, Taiwan
- Pi-Gang Luan, National Central University, Taiwan
- Thomas Pertsch, Friedrich-Schiller- Universität Jena, Germany
- Pei-Kuen Wei, Academia Sinica, Taiwan
- Ta-Jen Yen, National Tsing Hua University, Taiwan
- Chin-Ping Yu, National Sun Yat-sen University, Taiwan

Conference II: Optical Waveguides and Communications

- Gerd Keiser, PhotonicsComm Solutions, Inc., USA, Subconference Chair
- Wood-Hi Cheng, National Sun Yat-sen University, Taiwan, Subconference Chair
- Chao-Yi Tai, National Central University, Taiwan, Subconference Chair
- John Bowers, University of California Santa Barbara, USA
- Hung-Chun Chang, National Taiwan University, Taiwan
- Jye-Hong Chen, National Chiao Tung University, Taiwan
- Yung-Jui Chen, National Sun Yat-sen University, Taiwan
- Yi-Jen Chiu, National Sun Yat-sen University, Taiwan

- Kai-Ming Feng, National Tsing Hua University, Taiwan
- Tetsuya Kawanishi, National Institute of Information and Communications Technology, Japan
- Yin-Chieh Lai, National Chiao Tung University, Taiwan
- San-Liang Lee, National Taiwan University of Science and Technology, Taiwan
- Gong-Ru Lin, National Taiwan University, Taiwan
- Hai-Han Lu, National Taipei University of Technology, Taiwan
- Mao-Jen Wu, National Central University, Taiwan

Conference III: Quantum Electronics-Lasers, Non-linear Optics, Ultrafast Optics, Quantum Optics, and Allied Fields

- Ci-Ling Pan, National Tsing Hua University, Taiwan, Subconference Chair
- Yen-Hung Chen, National Central University, Taiwan, Subconference Chair
- Hai-Pang Chiang, National Taiwan Ocean University, Taiwan
- Silvano Donati, University of Pavia, Italy
- Wei-Wei Hsiang, Fu Jen Catholic University, Taiwan
- Sheng-Kwang Hwang, National Cheng Kung University, Taiwan
- Galiya Kitaeva, M. V. Lomonosov, Moscow State University, Russia
- Chih-Ming Lai, Ming Chuan University, Taiwan
- Chao-Kuei Lee, National Sun Yat-sen University, Taiwan
- Shoutai Lin, Feng Chia University, Taiwan
- Yu-Ju Lin, Academia Sinica, Taiwan
- Dragomir Neshev, Australian National University, Australia
- Lung-Han Peng, National Taiwan University, Taiwan
- Wan-Shao Tsai, National Chi Nan University, Taiwan
- Hsiang-Chen Wang, National Chung Cheng University, Taiwan
- Tzyy-Jiann Wang, National Taipei University of Technology, Taiwan
- Shang-Da Yang, National Tsing Hua University, Taiwan

Conference IV: Optical Information Processing and Holography

- Ting-Chung Poon, Virginia Tech., USA, Subconference Chair
- Chau-Jern Cheng, National Taiwan Normal University, Taiwan, Subconference Chair
- Yih-Shyang Cheng, National Central University, Taiwan, Subconference Chair
- Chi-Ching Chang, Mingdao University, Taiwan
- Chu-Lung Chen, Yuan Ze University, Taiwan
- Hui-Chi Chen, Fu Jen Catholic University, Taiwan

- Mei-Li Hsieh, National Chiao Tung University, Taiwan
- Ken-Yu Hsu, National Chiao Tung University, Taiwan
- Wei-Feng Hsu, National Taipei University of Technology, Taiwan
- Myung K. Kim, University of South Florida, USA
- Byoung-ho Lee, Seoul National University, Korea
- Ju-Yi Lee, National Central University, Taiwan
- Shiuan-Huei Lin, National Chiao Tung University, Taiwan
- Jung-Ping Liu, Feng Chia University, Taiwan
- Yuan Luo, National Taiwan University, Taiwan
- Wolfgang Osten, University of Stuttgart, Germany
- Wei-Chia Su, National Changhua University of Education, Taiwan
- Wei-Hung Su, National Sun Yat-sen University, Taiwan
- Toyohiko Yatagai, Utsunomiya University, Japan

Conference V: Optical Design and Testing

- Jose Sasian, University of Arizona, USA, Subconference Chair
- Yi-Chin Fang, National Kaohsiung First University of Science and Technology, Taiwan, Subconference Chair
- Chao-Wen Liang, National Central University, Taiwan, Subconference Chair
- Pin Han, National Chung Hsing University, Taiwan
- Wei-Yao Hsu, Instrument Technology Research Center, Taiwan
- John Koshel, University of Arizona, USA
- Tsung-Xian Lee, National Taiwan University of Science and Technology, Taiwan
- Shi-Mu Lin, National Taipei University of Technology, Taiwan
- Shih-Hsin Ma, Feng Chia University, Taiwan
- Vini Mahajan, The Aerospace Corporation, USA
- Osamu Matoba, Kobe University, Japan
- Juan C. Minano, Universidad Politecnica Madrid & Light Prescriptions Innovators, LLC, Spain
- Ivan Moreno, Unidad Academica de Fisica, Universidad Autonoma de Zacatecas, Mexico
- Mang Ou-Yang, National Chiao Tung University, Taiwan
- Guo-Dung Su, National Taiwan University, Taiwan
- Wen-Shing Sun, National Central University, Taiwan
- Rung-Ywan Tsai, Industrial Technology Research Institute, Taiwan
- Yongtian Wang, Beijing Institute of Technology, China
- Hiroshi Yoshikawa, Nihon University, Japan

Conference VI: Biophotonics

- Katarina Svanberg, Lund University, Sweden, Subconference Chair
- Arthur Chiou, National Yang-Ming University, Taiwan, Subconference Chair
- Szu-Yu Chen, National Central University, Taiwan, Subconference Chair
- Shean-Jen Chen, National Cheng Kung University, Taiwan
- Yi-Chun Chen, National Central University, Taiwan
- Fan-Ching Chien, National Central University, Taiwan
- Chien Chou, Chang Gung University, Taiwan
- Kishan Dholakia, University of St Andrews, Scotland, UK
- Min Gu, Swinburne University of Technology, Australia
- Hiro-o Hamaguchi, National Chiao Tung University, Taiwan
- Aaron Ho, The Chinese University of Hong Kong, Hong Kong
- Chau-Hwang Lee, National Yang-Ming University, Taiwan
- Ian Liao, National Chiao Tung University, Taiwan
- Laura Marcu, University of California Davis, USA
- Chi-Kuang Sun, National Taiwan University, Taiwan
- Kung-Bin Sung, National Taiwan University, Taiwan
- Fan-Gang Tseng, National Tsing Hua University, Taiwan

Conference VII: Display Technology

- John Pellegrino, US Army Research Laboratory, USA, Subconference Chair
- Andy Y.-G. Fuh, National Cheng Kung University, Taiwan, Subconference Chair
- Tsung-Hsun Yang, National Central University, Taiwan, Subconference Chair
- Jui-Feng Chang, National Central University, Taiwan
- Cheng-Huan Chen, National Tsing Hua University, Taiwan
- Chien-Yue Chen, National Yunlin University of Science and Technology, Taiwan
- Ko-Ting Cheng, National Central University, Taiwan
- Liang-Chy Chien, Kent State University, USA
- Tzung-Fang Guo, National Cheng Kung University, Taiwan
- Chi-Yen Huang, National Changhua University of Education, Taiwan
- Yi-Pai Huang, National Chiao Tung University, Taiwan
- Chia-Rong Lee, National Cheng Kung University, Taiwan
- Hoang-Yan Lin, National Taiwan University, Taiwan

- Tsung-Hsien Lin, National Sun Yat-sen University, Taiwan
- Chung-Hao Tien, National Chiao Tung University, Taiwan
- Yanlei Yu, Fudan University, China
- Hsiao-Wen Zan, National Chiao Tung University, Taiwan

Conference VIII: Solid State Lighting

- E. Fred Schubert, Rensselaer Polytechnic Institute, USA, Subconference Chair
- Ray-Hua Horng, National Chung Hsing University, Taiwan, Subconference Chair
- Te-Yuan Chung, National Central University, Taiwan, Subconference Chair
- Can Bayram, IBM Thomas J. Watson Research Center, USA
- Jen-Inn Chyi, National Central University, Taiwan
- Asif Khan, University of South Carolina, USA
- Kun-Yu Lai, National Central University, Taiwan
- Wen-How Lan, National University of Kaohsiung, Taiwan
- Kei May Lau, The Hong Kong University of Science and Technology, Hong Kong
- Chia-Feng Lin, National Chung Hsing University, Taiwan
- Ray-Ming Lin, Chang Gung University, Taiwan
- Cheng-Yi Liu, National Central University, Taiwan
- Tien-Chang Lu, National Chiao Tung University, Taiwan
- Tae-Yeon Seong, Korea University, Korea
- Jinn-Kong Sheu, National Cheng Kung University, Taiwan
- Frank Shi, University of California Irvine, USA
- Christian Wetzel, Rensselaer Polytechnic Institute, USA
- Jong-Woei Whang, National Taiwan University of Science and Technology, Taiwan

Conference IX: Photovoltaic Technology

- Alex Jen, University of Washington, USA, Subconference Chair
- Chin-Fuh Lin, National Taiwan University, Taiwan, Subconference Chair
- Jenq-Yang Chang, National Central University, Taiwan, Subconference Chair
- Alex Chang, Oregon State University, USA
- Chin-Ti Chen, Academia Sinica, Taiwan
- Lu-Sheng Hong, National Taiwan University of Science and Technology, Taiwan
- Cherng-Tsong Kuo, Atomic Energy Council, Taiwan
- Chih-Huang Lai, National Tsing Hua University, Taiwan
- Chee-Wee Liu, National Taiwan University, Taiwan
- Wei-Fang Su, National Taiwan University, Taiwan

- Chuang-Chuang Tsai, National Chiao Tung University, Taiwan

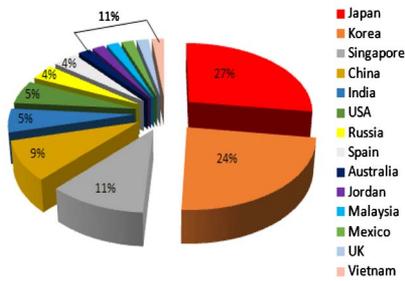
- Bae-Heng Tseng, National Sun Yat-sen University, Taiwan
- Kung-Hwa Wei, National Chiao Tung University, Taiwan
- Chun-Guey Wu, National Central University, Taiwan
- Dong-Sing Wu, National Chung Hsing University, Taiwan
- Yang Yang, University of California Los Angeles, USA
- Chen-Yu Yeh, National Chung Hsing University, Taiwan

Conference X: Thin Film Technology and Optical Engineering

- Norbert Kaiser, Fraunhofer IOF, Germany, Subconference Chair
- Shiuh Chao, National Tsing Hua University, Taiwan, Subconference Chair
- Sheng-Hui Chen, National Central University, Taiwan, Subconference Chair
- Ann-Kuo Chu, National Sun Yat-sen University, Taiwan
- Francois Flory, Centrale Marseille Recherche et Technologies, France
- Jin-Cherng Hsu, Fu Jen Catholic University, Taiwan
- Chang Kwon Hwangbo, Inha University, Korea
- Yi-Jun Jen, National Taipei University of Technology, Taiwan
- Yu-Hua Lee, National Cheng Kung University, Taiwan
- Fan-Yi Lin, National Tsing Hua University, Taiwan
- Yu-Lung Lo, National Cheng Kung University, Taiwan
- Angus Macleod, Thin Film Center Inc., USA
- Ludvik Martinu, Ecole Polytechnique de Montréal, Canada
- Hsi-Fu Shih, National Chung Hsing University, Taiwan
- Chuen-Lin Tien, Feng Chia University, Taiwan
- Likarn Wang, National Tsing Hua University, Taiwan
- Juan Antonio Zapien, City University of Hong Kong, Hong Kong

This feature issue is focused particularly on topics covered under subconference VII (Display Technology), which include: electronic papers and flexible displays; reflective, transflective, transmissive, emissive, and bistable displays; 3D displays, optical films, and display components; alignment films and methods; new mesomorphic materials and effects; organic light-emitting diode and other emissive displays; liquid crystal (LC) applications in photonics and telecom; spatial light modulators; gratings and holography; terahertz imaging and sensing applications;

55 papers from 14 Countries



OPTIC 2013, 5th-7th, Dec. 2013

NCU, Chung-Li, Taiwan

Fig. 1. Contributed paper submission by country.

784 Papers from 63 Affiliations in Taiwan

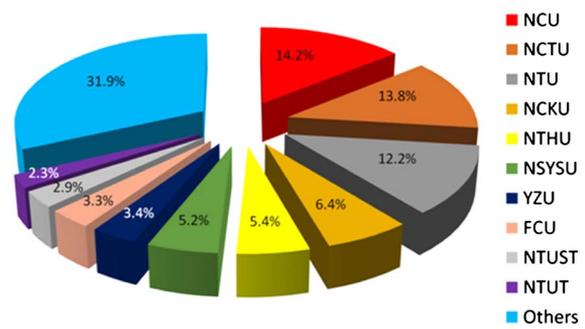


Fig. 2. Contributed paper submissions by local universities.

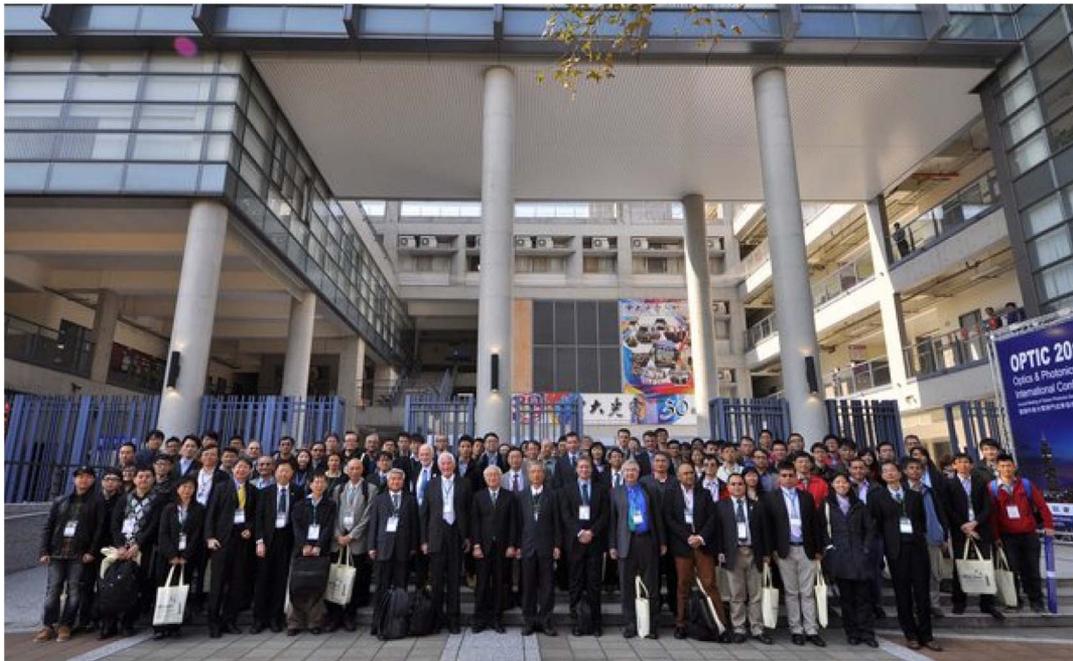


Fig. 3. OPTIC 2013 attendee picture.

nonlinear optics; lasers and surface plasmons; lens, mirrors, photonic crystals, and waveguides; imaging, tweezing, and manipulating nanoparticles; optics and electro-optics of nanoparticles doped LC; photovoltaics and energy storages; sensors and actuators; polymer and LC composites; LC ordering and bioactive functional materials; biological materials, imaging, and technology; self-assembled colloids, nanoparticles, and nanorods; nanostructured systems and metamaterials; materials and manufacturing for displays; thin film transistor backplanes for displays; backlight modules; emissive displays; projection displays; microdisplays; touch and interactive display applications; environmentally friendly (green) displays; color vision, perception, and human

factors. Notably, papers were solicited but not limited to the above areas.

Papers appearing in this issue underwent normal review procedures/standards for Applied Optics.

The OPTIC 2013 conference included technical exhibitions, six plenary talks, 32 international invited talks, 23 local invited talks, 861 contributed papers, and had more than 1500 participants from 17 countries around the world. All the plenary and parallel sessions, special events, student best paper award ceremony, and closing remarks were carried out smoothly. Figures 1 and 2 give the contributed paper submissions by country from overseas, and by local universities, respectively. Figure 3 is the attendee picture.