

International Symposium on Optomechatronic Technologies ISOT 2007

8-10 October 2007 • Beaulieu, Lausanne, Switzerland

Symposium Chair: Jean-Marc Breguet, Ecole Polytechnique Fédérale de Lausanne (Switzerland)

Symposium Co-chairs: Hyungsuck Cho, Korea Advanced Institute of Science and Technology (South Korea); Shun'ichi Kaneko, Hokkaido University (Japan); Yoshitada Katagiri, Nippon Telegraph and Telephone Corp. (Japan); Jonathan Kofman, University of Waterloo (Canada); George K. Knopf, University of Western Ontario (Canada); Rainer Tutsch, Technical University Braunschweig (Germany); John T. Wen, Center for Automation Technologies and Systems, Rensselaer Polytechnic Institute (USA)

Call for Papers and Announcement: Conference on

Optomechatronic Sensors and Instrumentation III

Conference Chair: Rainer Tutsch, Technical University Braunschweig (Germany)

Conference Co-chairs: Zhao Hong, Xi'an Jiatong University (China); Katsuo Kurabayashi, University of Michigan (U.S.); Yasuhiro Takaya, Osaka University (Japan); Pavel Tománek, Brno University of Technology (Czech Republic)

Program Committee: Alain Bosseboeuf, Université Paris (France); Young-June Cho, Korea Institute of Industrial Technology (South Korea); Sangsoo Choi, LG Electronics Inc. (South Korea); Terutake Hayashi, Osaka University (Japan); Hideki Ina, Canon Inc. (Japan); George K. Knopf, The University of Western Ontario (Canada); Hiroki Shimizu, Kyushu Institute of Technology (Japan); Satoru Takahashi, The University of Tokyo (Japan)

The novel achievements in optics, semiconductors, micro-machines, and micro-system technologies significantly enhance the requirements for highly precise and efficient sensors and instrumentation. Furthermore, for the tremendous developments in the rapidly increasing field of nanotechnology, a tight link between electro-optical components and mechanical systems becomes essential. This conference will focus on recent developments in sensors, instrumentation, and their applications in the engineering field of optomechatronic technology emerging from the integration and functional fusion of optical and mechatronic engineering. It brings together engineers and researchers seeking solutions for their particular optomechatronic problems. The conference program will consist of oral and poster presentations on topics that include, but are not limited to:

- metrology for microtechnology and nanotechnology
- microstructure measurement
- shape measurement/reverse engineering
- large-area and aspheric surface inspection
- accurate roundness, cylindricity, and diameter measurement
- coordinate measuring machine (CMM) measurement
- sensing and measurement in positioning stage systems
- precision angle measurement
- wavelength or optical frequency measurement
- measurement of environmental influences
- non-destructive evaluation of structures
- calibration standards and uncertainty evaluation

- surface quality control and material research
- characterization of nanostructured functional surfaces and modeling procedures
- nanotopography and roughness measurement
- particle, defect, flow analysis, and sub-surface detection
- film thickness measurement
- light scattering techniques (BSDF; Total Scatter etc.)
- Fourier transform (FT) instruments
- interferometry, photogrammetry, liquid crystals, infrared sensing
- holographic and speckle techniques
- fiber optic sensors
- short- or partial-coherence interferometry
- fiber gratings
- photonic crystal circuits for integrated optics
- novel applications of near-field optics
- near-field enhancements of plasmonic imaging or sensing.

Invited Sessions:

Invited sessions are aimed at providing focused discussion on new and timely research topics, and innovative issues on optomechatronics. Each invited session will consist of at least four papers, which will be reviewed through the regular reviewing process. Those interested in organizing an invited session should contact the conference chair, Prof. Rainer Tutsch, r.tutsch@tu-bs.de, by 1 March 2007, and submit a proposal including the list of contributed papers and a session title.

Abstract Due: 1 March 2007
Full paper Due: 15 July 2007

Submission of Abstracts for ISOT 2007

Abstract Due: **1 March 2007**

Full paper Due: **15 July 2007**

IMPORTANT!

Submissions imply the intent of at least one author to register, attend the symposium, present the paper (either orally or in poster format), and submit a full-length manuscript for publication in the conference Proceedings.

All authors (including invited or solicited speakers), program committee members, and session chairs are responsible for registering and paying the reduced author, session chair, program committee registration fee. (Current SPIE Members receive a discount on the registration fee.)

Instructions for Submitting Abstracts via Web

For abstract submission, please use the URL link <http://www.isot07.org>, then go to "AUTHORS" and select the conference to which you would like to submit the abstract.

Please note! When submitting your abstract you must provide contact information for all authors, summarize your paper, and identify the **contact author** who will receive correspondence about the submission and who must submit the manuscript and all revisions.

Your abstract submission must include all the following:

1. **PAPER TITLE**
2. **AUTHORS (principal author first) For each author:**
 - First (given) Name (initials not acceptable)
 - Last (family) Name
 - Affiliation
 - Mailing Address
 - Telephone Number
 - Fax Number
 - Email Address
3. **PRESENTATION PREFERENCE** "Oral Presentation" or "Poster Presentation."
4. **PRINCIPAL AUTHOR'S BIOGRAPHY** Approximately 50 words.
5. **EXTENDED ABSTRACT TEXT** must be at least 500 words long and must include: Introduction, Method, Results, and Conclusion.
6. **KEYWORDS** Maximum of five keywords.

Accepted Abstracts

The notification of paper acceptance is fixed for 1st April, 2007 and authors of accepted papers will have to submit their full papers before 15 July, 2007. For accepted papers (oral and poster presentations), authors should send a one page summary describing the contribution of their papers, for inclusion in the printed digest. Full papers will be included in the ISOT CD-ROM. The printed digest and the ISOT CD-ROM will be distributed to the symposium attendees. All the papers will be available on the SPIE Digital Library.

Conditions of Acceptance

- Only original material should be submitted.
- Commercial papers, papers with no new research/development content, and papers where supporting data or a technical description cannot be given for proprietary reasons will not be accepted for presentation in this symposium.
- Abstracts should contain enough detail to clearly convey the approach and the results of the research.

Review, Notification, Program Placement

- To ensure a high-quality conference, all abstracts and Proceedings manuscripts will be reviewed by the Conference Chair/Editor for technical merit and suitability of content. Conference Chair/Editors may require manuscript revision before approving publication, and reserve the right to reject for presentation or publication any paper that does not meet content or presentation expectations.
- Applicants will be notified of abstract acceptance by email no later than 1st April 2007.
- Final placement in an oral or poster session is subject to the Chairs' discretion. All oral and poster presentations will be included in the *CD-ROM* and require presentation at the meeting and submission of a manuscript.

Proceedings

- These conferences will result in full-manuscript Chairs/Editor-reviewed volumes published in the SPIE Digital Library.
- Detailed instructions will be provided soon.
- **Late manuscripts may not be published in the conference Proceedings and SPIE Digital Library.** The objective of this policy is to better serve the conference participants as well as the technical community at large, by enabling timely publication of the Proceedings.