

Call for Papers and Invited Session Proposals  
for the Conference on  
**Optomechatronic Computer-Vision Systems III**

**SPIE International Symposium on Optomechatronic Technologies  
(ISOT 2008)**

17-19 November 2008 San Diego, U.S.A.

*Symposium Chair* : Kee S. Moon (USA)

*Symposium Co-chairs*: Hyungsuck Cho (Korea), Shun'ichi Kaneko (Japan), Farrrokh Janabi-Sharifi (Canada), Takayuki Tanaka (Japan), Samuel K. Kassegne (USA)

*Conference Chair*: Jonathan Kofman, University of Waterloo (Canada)

*Conference Co-chairs*: Shun'ichi Kaneko, Hokkaido University (Japan); Claudio A. Perez, University De Chile (Chile); Didier Coquin, IUT d'Annecy (France)

Computer-vision systems are being developed and employed in an increasing range of applications from surveillance and security to manufacturing and industry, archaeology, entertainment, and medicine. Recent advances in research and development of vision-based sensors and systems have been the result of advances in both computer-vision and optical-system design, and the innovative fusion of these technologies. Optomechatronic computer-vision systems have evolved in intelligent robot-vision systems, automated inspection, autonomous tracking systems, medical, biological, and agricultural imaging and diagnosis, and novel biometric techniques, to name only a few areas. Improved technology in optical devices, and computer-vision techniques, has led to increased intelligence and capabilities of new systems. This conference will bring together scientists from academia and industry to exchange the latest ideas and newest techniques, principles, and applications related to optomechatronic computer-vision systems.

Particular topics of interest include, but are not limited to:

- sensing technology for computer-vision systems and machine vision including optics, illuminations, image sensors, devices, and measurement methods
- imaging techniques including range imaging, stereo, surface analysis, particle analysis, defect analysis
- integration of sensing technologies including multi-sensor fusion, and multi-view analysis
- robotic-vision systems, including human-robot interfaces and teleoperated robots, semi-autonomous, and autonomous systems, 2-D and 3-D image-guided systems and robots

- applications including automation, vehicle control, manufacturing and visual inspection
- tracking of objects, human body, hand, and face, motion analysis
- hand and facial gesture recognition
- medical imaging, analysis, modeling, and diagnosis
- biometrics
- biological and agricultural imaging
- optical measurement systems, range-sensing, fringe-projection, phase-shifting, phase-measurement and interferometry techniques
- pattern and object recognition
- surveillance and security applications
- computer-vision graphics and display
- augmented reality.

Invited Sessions:

Invited sessions are aimed at providing focused discussion on new and timely research topics, and innovative issues in optomechatronic computer-vision systems. 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. Jonathan Kofman, [jkofman@engmail.uwaterloo.ca](mailto:jkofman@engmail.uwaterloo.ca), by 1 September 2008, and submit a proposal including the list of contributed papers and a session title.

Full paper (6 pages) due: September 1, 2008

Final paper due: October 1, 2008

# Submission of Papers for International Symposium on Optomechatronic Technologies

Manuscript Due Date: 1 September 2008  
Final Manuscript Due Date: 1 October 2008

## **ATTEND THE CONFERENCE**

Present a paper to an international audience  
Receive feedback from your peers  
Hear the latest research  
Network with your colleagues.

## **PUBLISH YOUR WORK**

Publish your work—fast. Your work will appear in the SPIE Digital Library at the start of the meeting  
Contribute to and gain visibility in the most extensive resource available for optics and photonics content—250,000+ journal articles and proceedings manuscripts  
Proceedings of SPIE are referenced in leading scientific databases and indices  
SPIE Digital Library has the highest number of citations for patent applications in optics and photonics.

### **1. By submitting a full paper, I agree to the following conditions:**

- § An author or coauthor (including keynote, invited, and solicited speakers) will register at the reduced author registration rate, attend the meeting, and make the presentation as scheduled. (Current SPIE Members receive an additional discount on the registration fee.)
- § Authors and coauthors attending the meeting must obtain funding for their registration fees, travel, and accommodations, independent of SPIE, through their sponsoring organizations before submitting abstracts.
- § All clearances, including government and company clearance, have been obtained to present and publish. If you are a DoD contractor, allow at least 60 days for clearance.
- § SPIE is authorized to circulate your abstract and full paper to conference committee members for review and selection purposes.
- § Please also submit a 100-word abstract suitable for early release. If accepted, this abstract text may be published prior to the meeting in online or printed programs promoting the conference.
- § A full-length final manuscript (**minimum, 6 pages**) for any accepted oral or poster presentation (including keynote, invited, and solicited presentations) will be submitted for publication in the SPIE Digital Library and conference Proceedings CD-ROM.

### **2. Prepare to submit:**

- § Have all contact information (full names, affiliations, addresses, phone numbers, and emails) for your coauthors ready.
- § Only original material should be submitted.
- § Papers should contain enough detail to clearly convey the approach and the results of the research.
- § Commercial papers, papers with no new research/development content, and papers where supporting data or a technical description cannot be given for proprietary reasons should not be submitted, and will not be accepted for presentation in this conference.
- § Read and follow the manuscript submission guidelines at <http://spie.org/manuscripts>

**NOTE:** The standard SPIE Manuscript Guidelines state that manuscripts should be 8-12 pages, but 6-12 pages will be allowed for ISOT 2008.

### **3. Submit your full paper online:**

View the call for papers at <http://spie.org/isot>  
Click on the conference title to submit your full paper. You will be prompted to sign in to the MySPIE system. If you have a MySPIE account, sign in using your username and password. First-time users of MySPIE can create a new account by clicking on the "create new account link".

### **Review, Notification, and Program Placement**

- § To ensure a high-quality conference, all papers will be reviewed by the Conference Chair/Editors for technical merit and suitability of content. Conference Chair/Editors reserve the right to reject for presentation or publication any paper that does not meet content or presentation expectations.
- § Conference Chair/Editors are expected to assess manuscripts for technical merit, suitability of content, and clarity. The process for assessing manuscripts for publication in SPIE proceedings is managed differently by chairs/editors of different conferences. Conference Chair/Editors may require one or more manuscript revisions before approving publication, and reserve the right to reject for publication any paper that does not meet content or quality expectations or manuscript requirements. SPIE's decision on whether to publish a manuscript is final.
- § Applicants will be notified of acceptance and sent final manuscript and summary instructions by email no later than 22 September 2008.
- § Final placement in an oral or poster session is subject to the Chairs' discretion. Instructions for oral and poster presentations can be found on the Information for Authors and Presenters link on the SPIE ISOT Event Home Page

### **Final Manuscript and Summary**

- § For accepted papers (oral and poster presentations), authors will be required to submit a final manuscript and final summary by 1 October 2008.
- § The same manuscript guidelines apply to both the draft and final manuscript <http://spie.org/manuscripts>
- § The format for the final summary is a one-page PowerPoint file describing the contribution of your paper. Further instructions will be provided.
- § Final summaries will be published with the printed Final Program for distribution at the meeting.

### **Proceedings of SPIE and SPIE Digital Library**

- § Full-manuscripts will be Chair/Editor-approved and published in the *Proceedings of SPIE* and in SPIE Digital Library.
- § Manuscript instructions will be emailed to the person marked as contact author for the paper and are also available from the "Information for Authors" link on the conference website.
- § Authors must be authorized to transfer copyright of the manuscript to SPIE, or provide a suitable publication license. Authors reserve the right to expand and revise the manuscript for future publication.
- § Only papers presented at the conference will be published in the conference Proceedings and SPIE Digital Library.
- § Published papers are indexed in leading scientific databases including INSPEC, Ei Compendex, Chemical Abstracts, International Aerospace Abstracts, ISI Index to Scientific and Technical Proceedings and NASA Astrophysical Data System, and are searchable in the SPIE Digital Library. Full manuscripts are available to all SPIE Digital Library subscribers.