

Symposium Chair:
Kee S. Moon (US)

Symposium Co-Chairs:
Hyungsuck Cho (KR)
Shun'ichi Kaneko (JP)
Farrokh Janabi-Sharifi (CA)
Takayuki Tanaka (JP)
Samuel K. Kassegne (US)



Symposium Venue: San Diego Marriott Hotel & Marina

The objective of this symposium is to gather researchers and engineers working in the field of Optomechatronics and to provide them with a forum for discussion for exchanging their points of view and experience and sharing their research results through high quality peer reviewed papers. The ISOT meeting is the world's largest and most comprehensive technical symposium focused on Optomechatronics. We invite you to make your plans to attend the technical and the social programs of ISOT 2008 and have a memorable stay in this beautiful San Diego.

The Symposium consists of five conferences:

- 1) Optomechatronic Actuators and Manipulation
- 2) Optomechatronic Sensors and Instrumentation
- 3) Optomechatronic Micro/Nano Devices and Components
- 4) Optomechatronic Computer-Vision Systems
- 5) Optomechatronic Systems Control

Contributed Papers:

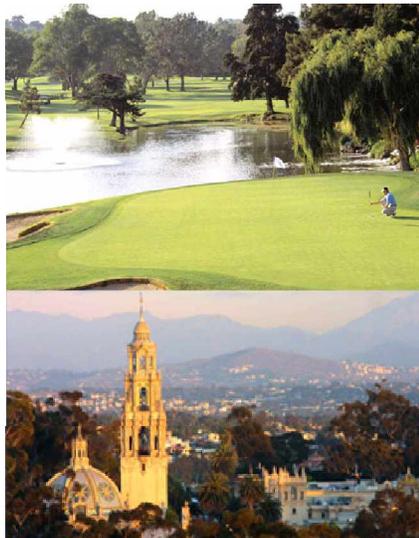
The Symposium includes contributed papers for oral presentations and posters. Do not miss this opportunity to share your latest research results by submitting your full draft paper by 1 September 2008. A high standard will be guaranteed by peer reviewers.

Invited Sessions:

Those interested in organizing an invited session should contact one of the conferences chair by 1 September 2008 and submit a proposal including a list of papers and a session title by 1 September 2008. Each invited session will consist of at least four papers that will also go through the regular peer review process. More details are given in the Call for Papers.

Location of the symposium

San Diego is a coastal Southern California city located in the southwestern corner of the United States. With its great weather, miles of sandy beaches, and major attractions, San Diego is known worldwide as one of the best tourist destinations. International and commercial air service for the region is provided by the San Diego International Airport.



Full paper (6 pages) due: 1 September 2008 Final paper due: 1 October 2008



Conference Chair :
[Yukitoshi Otani](#) (JP)

1) [Submit to Optomechatronic Actuators and Manipulation IV](#)

There has been a rapid growth in actuation and manipulation research in the past few years dedicated to optomechatronic applications. Many novel materials, architectures, and applications have been proposed, built, and studied. The goal of this conference is to keep a record of the state-of-the-art research in this fast moving area. This conference is designed to fulfill the need for closer collaboration between researchers, academics, manufacturers, and end users by bringing them together in a single forum to interact, exchange technical knowledge, and discuss their experiences. We invite submissions of papers on all aspects of optomechatronic actuators and related technology. We especially welcome discussions and demonstrations of implemented systems as well as optical-based manipulation and manipulation of micro-optical components. Oral and poster presentations will be given.

Conference Chair :
[John T. Wen](#) (US)

2) [Submit to Optomechatronic Sensors and Instrumentation IV](#)

Rapidly expanding applications in environmental monitoring, military and security operations, semiconductor manufacturing, biotechnology and laboratory automation, micro and nano systems increasingly demand sensors and instrumentation of enhanced capability and functionalities. To achieve this new level of performance, integrated design of optical, mechanical, signal processing, and control systems – the optomechanronics approach – is required. This conference will bring together researchers and practitioners in the emerging area of optomechatronic sensors and instrumentation to present and discuss latest advances, challenges and applications.

Conference Chair :
[Dalibor Hodko](#) (US)

3) [Submit to Optomechatronic Micro/Nano Devices and Components IV](#)

At this very young stage of the twenty-first century, the emergence of a novel stream is expected to be seen in micro-nanoscale technologies dealing with small objects, including atoms and molecules to establish a sophisticated information-oriented society with some epoch-making innovations, which may include novel computers equivalent to human brains. Although the expectation is supported by many technological sprouts in a wide variety of fields including telecommunications, information processing, and sensing, we are still faced with some critical issues that include how the diffraction limit is overcome or how optical signals are stored against the theory of relativity. For success in a continuing mission to improve science and technologies for the society of the future, it is due time to move on to discussing ways of overcoming such issues. Researchers and engineers will have an opportunity to exchange their opinions in this interdisciplinary conference.

Conference Chair :
[Jonathan Kofman](#) (CA)

4) [Submit to Optomechatronic Computer-Vision Systems III](#)

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.

Conference Chair :
[Okyay Kaynak](#) (TR)

5) [Submit to Optomechatronic Systems Control IV](#)

Optomechatronic control systems deal with the control of integrated optical and mechatronic systems to achieve high performance and functionality, such as high precision, rapid information processing, and intelligent functions. These control systems offer significant potential advantages over the conventional control systems in terms of power, signal attenuation, bandwidth, flow of information, electromagnetic interference immunity, and safety. However, control of optomechatronic systems involves serious challenges due to inherent system non-linearities, uncertainties, time-varying properties, and disturbances. Addressing such control problems is vital for future advancement and the advent of new applications of optomechatronic technology. In order to strengthen the science and engineering of optomechatronic control systems, it is essential that researchers and engineers communicate and coordinate their work. The purpose of this conference is to promote research activities in various areas of design and implementation of optomechatronic control systems by providing a forum for the exchange of ideas, presentation of technological achievements, and discussion of future directions.

Submit your paper today! <http://www.ssc-lab.com/ISOT/>

View Manuscript Specifications <http://spie.org/manuscripts>

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