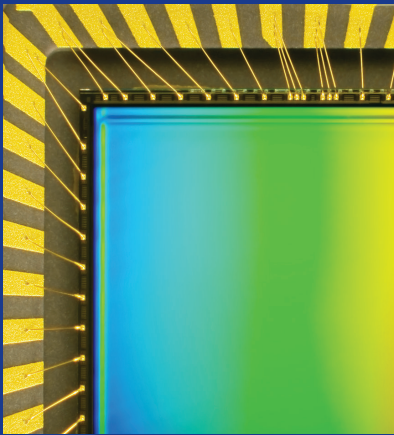


Save the Date



Adaptive Optics: Methods, Analysis, and Applications (AO)

2013 OSA Topical Meeting

Renaissance Arlington Capital View
Arlington, Virginia, USA

23–27
June 2013

AO focuses on adaptive optics technology across all applications.

AO investigates the commonality and possible synergies between the adaptive optics methods developed and used by various communities pursuing different applications. AO has matured considerably over the last decade, in pace with technology development, with applications covering but not limited to commercial optical systems, ophthalmology and microscopy, beam propagation and atmospheric correction. The meeting will include a full spectrum of papers covering results of the most recent research, panel discussions, poster sessions, and time for informal discussion and interaction. Topics include AO systems and their component technologies including wavefront sensing optics and detectors, wavefront correction optics, control algorithms, laboratory and field tests, and signal processing electronics used in AO implementations. Also of special interest is how to address current limitations in existing AO systems and novel applications.

Featured Topics

- Adaptive Optical devices and components
- Control systems
- Wave front sensing and estimation
- Wave front correction algorithms
- Next-generation Adaptive Optics systems
 - Optometry/ophthalmology
 - Microscopy
 - Astronomy
 - Lithography
 - Adaptive optics in manufacturing

GENERAL CHAIRS

Julian Christou, *Gemini Observatory, USA*

Don Miller, *Indiana University, USA*

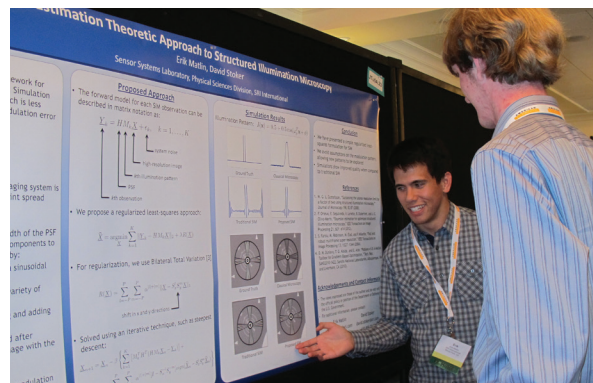
IMPORTANT DEADLINES

Submission: 6 March 2013, 12:00 EST (17:00 GMT)

Hotel Reservation: 23 May 2013

Advanced Registration: 28 May 2013

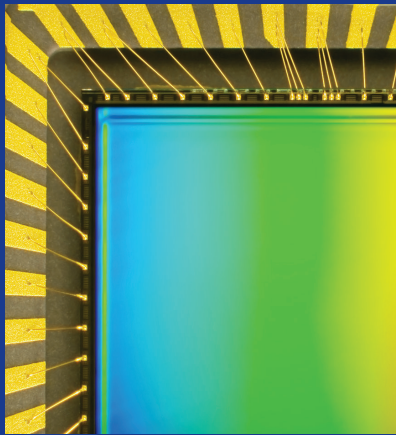
AO is part of the Imaging and Applied Optics Congress, which consists of five additional collocated meetings: Applied Industrial Optics: Spectroscopy, Imaging, and Metrology (AIO); Computational Optical Sensing and Imaging (COSI); Fourier Transform Spectroscopy (FTS); Hyperspectral Imaging and Sounding of the Environment (HISE); Imaging Systems and Applications (IS). Registration for one meeting allows access to sessions in all meetings.



For complete topic listing, visit
www.osa.org/ao

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Computational Optical Sensing and Imaging (COSI)

2013 OSA Topical Meeting

Renaissance Arlington Capital View
Arlington, Virginia, USA

23–27
June 2013

COSI consists of topics that range from theoretical to experimental demonstration and verification of the latest advances in computation imaging research. This meeting covers subject matter in fundamental physics, numerical methods and physical hardware that has led to significant improvements in the fields of imaging and sensing for medical, defense, homeland security, inspection, testing applications. Topics in this meeting include research in wave-front coding, light field sensing, compressive optical sensing, tomographic imaging, structured illumination imaging, digital holography, SAR, lens-less imaging, ghost imaging, blind deconvolution, point spread function engineering, digital/optical super-resolution, unusual form-factor cameras, synthetic aperture optical systems, stable inversion of ill-posed problems, development of Image quality analysis/metrics, complexities and uncertainties in image/signal formation, regularization concepts (for example: Total Variation, Bayesian, sparsity) to mention a few representative areas.

Computational Optical Sensing and Imaging is an important discipline being applied to solve numerous problems in modern optics and the techniques developed in this field have already been incorporated in to numerous commercial products.

COSI places particular emphasis on integrated analysis of physical layer measurement and digital layer processing. In contrast with the conventional model of a “digital image” as simply a discretely sampled version of an analog image, COSI considers advanced opportunities for image data coding and decoding in optical, electronic and software layers.

Submission categories include:

- Wavefront coding
- Light-field sensing
- Compressive sensing
- Tomographic imaging
- Structured illumination
- Digital holography

- Synthetic aperture imaging
- Interferometric imaging measurements and reconstruction
- Phase retrieval
- Lensless imaging
- Computational spectroscopy and spectral imaging
- Ghost imaging
- Blind deconvolution and phase diversity
- Point- spread function engineering
- Digital/optical super-resolution
- Unusual form-factor cameras
- Spectral unmixing
- Signal detection and estimation
- Stable inversion of ill-posed problems
- Development of image quality metrics and analysis techniques

GENERAL CHAIRS

Andrew Harvey, *Univ. of Glasgow, UK*
David Gerwe, *Boeing Company, USA*

PROGRAM CHAIRS

Amit Ashok, *Univ. of Arizona, USA*
Jason Fleischer, *Princeton, USA*
Predrag Milojkovic, *US Army Research Laboratory, USA*

IMPORTANT DEADLINES

Submission: 6 March 2013, 12:00 EST (17:00 GMT)

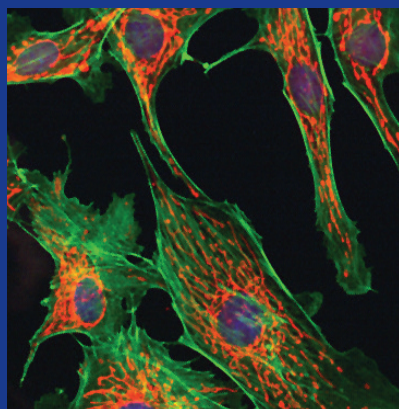
Hotel Reservation: 23 May 2013

Advanced Registration: 28 May 2013

COSI is part of the Imaging and Applied Optics Congress, which consists of five additional collocated meetings: Adaptive Optics: Methods, Analysis, and Applications (AO); Applied Industrial Optics: Spectroscopy, Imaging, and Metrology (AIO); Fourier Transform Spectroscopy (FTS); Hyperspectral Imaging and Sounding of the Environment (HISE); and Imaging Systems and Applications (IS). Registration for one meeting allows access to sessions in all meetings.

For complete topic listing, visit
www.osa.org/cosi

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Optical Trapping Applications (OTA)

2013 OSA Topical Meeting

Waikoloa Marriott Beach Resort and Spa
Waikoloa Beach, Hawaii, USA

Save the Date

14–18
April 2013

Optical Trapping Applications encompasses all areas of particle manipulation and measurement, from optical manipulation to acoustic trapping, emphasizing new and developing application areas.

OTA covers the whole range of topical particle manipulation technologies currently being developed for studies in biophysics, single molecule, single cell and tissue level analysis, lab-on-a-chip development, optomechanical cooling, environmental monitoring and theoretical underpinnings. Technologies to be considered include optical tweezers and associated techniques, but will try and capture synergies between different trapping and manipulation modalities such as acoustic trapping and electrical trapping.

The 2011 meeting featured presentations from 47 speakers, including 14 invited talks.

Submission categories include:

1. Optical manipulation fundamentals and technologies
2. Optical manipulation applications
3. Alternative particle manipulation techniques

GENERAL CHAIRS



Carlos Lopez-Mariscal
US Naval Res. Lab., USA



David McGloin
Univ. of Dundee, UK

INVITED SPEAKERS

- Wei Cheng, *Univ. of Michigan, USA*
Tijmen Godfried Euser, *Max-Planck-Inst Physik, Germany*
Reuven Gordon, *Univ. of Victoria, Canada*
Ulrich Keyser, *Univ. of Cambridge, UK*
Mark Neil, *Imperial College, UK*
Peter Reece, *Univ. of New South Wales, Australia*
Alexander Rohrbach, *Albert-Ludwigs-Universität Freiburg, Germany*
Erik Schaeffer, *Biotechnology Center, TU Dresden, Germany*
Gabriel Spalding, *Illinois Wesleyan Univ., USA*
Jun Tanida, *Osaka Univ., Japan*
Megan Valentine, *Univ. of California at Santa Barbara, USA*

IMPORTANT DEADLINES

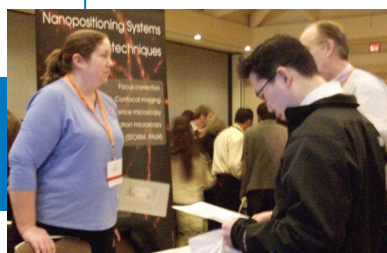
Submission: 10 December 2012, 12:00 EST
(17:00 GMT)

Hotel Reservation: 15 March 2013

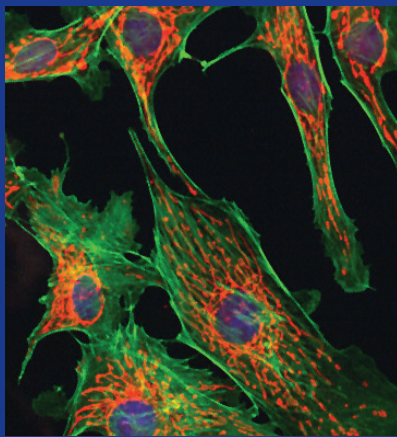
Advanced Registration: 18 March 2013

OTA is part of the **Optics in Life Sciences Congress**, which consists of three additional collocated meetings: Bio-Optics Design and Application (BODA); Novel Techniques in Microscopy (NTM); and Optical Molecular Probes, Imaging, and Drug Delivery (OMP). Registration for one meeting allows access to sessions in all meetings.

For complete list of topics, visit
www.osa.org/ota



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Bio-Optics: Design and Applications (BODA)

2013 OSA Topical Meeting

Waikoloa Marriott Beach Resort and Spa
Waikoloa Beach, Hawaii, USA

Save the Date

14–18
April 2013

BODA addresses all aspects of development and applications of biomedical optical imaging technologies for research and clinical applications.

BODA focuses on design, instrumentation, and applications of optical technologies for life sciences. Topics include but are not limited to optical imaging technologies, system design, fabrication, visual optics, eye imaging and sensing, image guided surgery, bio-inspired optics, biochip, optofluidics, nanobiosensor, nanophotonics for biomedicine, drug discovery imaging, and other novel optical technologies for diagnosis and treatment.

Submission categories include:

- Biomedical optical imaging technologies
- Design and fabrication of biomedical optical devices
- Visual optics, eye imaging and sensing
- Biochip and optofluidics
- Clinical systems and applications
- Nanophotonics for biomedicine
- Novel imaging technologies

GENERAL CHAIRS



Guoqiang Li
Ohio State, USA



Ronguang Liang
Univ. of Arizona, USA

INVITED SPEAKERS

Hatice Altug, *Boston Univ., USA*
Pablo Artal, *Universidad de Murcia, Spain*
Melanie Campbell, *Univ. of Waterloo, Canada*
Joseph Carroll, *Medical College of Wisconsin, USA*
Alf Dubra, *Medical College of Wisconsin, USA*
David Erickson, *Cornell Univ., USA*
Xavier Intes, *Rensselaer Polytechnic Inst., USA*
Allard Mosk, *Univ. of Twente, Netherlands*
Rafael Piestun, *Univ. of Colorado, USA*
Demetri Psaltis, *Ecole Polytechnique Federale de Lausanne, Switzerland*
Eva Sevick, *Brown Foundation Institute of Molecular Medicine, USA*
Yoshiaki Yasuno, *Univ. of Tsukuba, Japan*
Haishan Zeng, *British Columbia Cancer Agency Research Centre, Canada*
Joe Zhou, *Dmetrix Inc, USA*

IMPORTANT DEADLINES

Submission: 10 December 2012, 12:00 EST (17:00 GMT)

Hotel Reservation: 15 March 2013

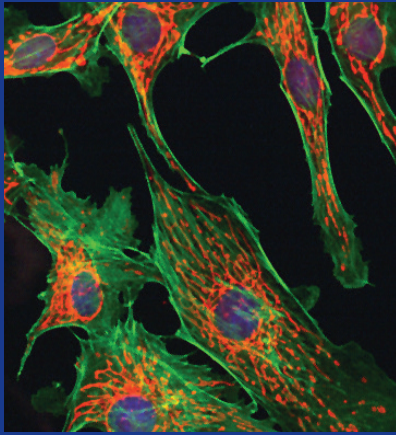
Advanced Registration: 18 March 2013

BODA is part of the Optics in Life Sciences Congress, which consists of three additional collocated meetings: Novel Techniques in Microscopy (NTM); Optical Molecular Probes, Imaging, and Drug Delivery (OMP); and Optical Trapping Applications (OTA). Registration for one meeting allows access to sessions in all meetings.

For complete list of topics, visit
www.osa.org/boda



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Novel Techniques in Microscopy (NTM)

2013 OSA Topical Meeting

Waikoloa Marriott Beach Resort and Spa
Waikoloa Beach, Hawaii, USA

Save the Date

14–18
April 2013

NTM focuses on the development of new and creative techniques in optical microscopy for biological or biomedical applications.

Advances in optical microscopy are continually enhancing imaging performance and versatility. Examples include increasing depth penetration in scattering media, improving resolution beyond the diffraction limit, increasing speed, enhancing sensitivity and/or specificity, developing novel contrast mechanisms, addressing challenges related to intravital imaging, and more.

Submission categories include:

- Imaging in scattering tissue
- Super-resolution
- Nonlinear microscopy and coherent techniques
- OCT, holographic and quantitative phase microscopy
- Fiberscopes and Endoscopy techniques
- New techniques

GENERAL CHAIRS



Jerome Mertz
Boston Univ., USA

Eric Potma
UC Irvine, USA

INVITED SPEAKERS

- George Barbastathis, *MIT, USA*
Claude Boccara, *ESPCI, France*
Meng Cui, *Janelia Farm, USA*
Valentina Emiliani, *Univ. Paris-Descartes, France*
Martin Fischer, *Duke Univ., USA*
Rainer Heintzmann, *Friedrich-Schiller-Univ. Jena, Germany*
Scott Howard, *Notre Dame University, USA*
Keisuke Isobe, *RIKEN, Japan*
Jae Yong Lee, *KRISS, South Korea*
Goro Mizutani, *JAIST, Japan*
Allard Mosk, *Univ. Twente, Netherlands*
Leilei Peng, *Univ. of Arizona, USA*
Gabriel Popescu, *Univ. of Illinois at Urbana, USA*
Colin Sheppard, *National Univ. of Singapore, Singapore*
Peng Xi, *Peking Univ., China*

IMPORTANT DEADLINES

Submission: 10 December 2012, 12:00 EST (17:00 GMT)

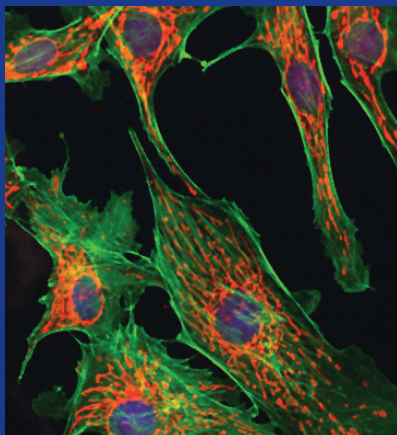
Hotel Reservation: 15 March 2013

Advanced Registration: 18 March 2013

NTM is part of the Optics in Life Sciences Congress, which consists of three additional colocated meetings: Bio-Optics Design and Application (BODA); Optical Molecular Probes, Imaging, and Drug Delivery (OMP); and Optical Trapping Applications (OTA). Registration for one meeting allows access to sessions in all meetings.

For complete list of topics, visit
www.osa.org/ntm





Optical Molecular Probes, Imaging, and Drug Delivery (OMP)

2013 OSA Topical Meeting

Waikoloa Marriott Beach Resort and Spa
Waikoloa Beach, Hawaii, USA

Save the Date

14–18
April 2013

OMP addresses the exciting and timely convergence of optical physics, photonics technology, nanoscience and photochemistry with drug discovery and clinical medicine.

This multidisciplinary topical meeting highlights recent advances in this rapidly evolving area of research such as novel molecular probe design, applications of smart molecular probes in basic and applied research, multimodal imaging agents, advances in instrumentation and algorithms for optical molecular imaging, molecular and functional imaging of normal and diseased tissue, image-guided drug delivery, and monitoring therapeutic response.

Submission categories include:

- Optical visualization/detection of biomolecular processes and pathways
- Reporters and contrast agents for fluorescence and bioluminescence imaging: endogenous and exogenous
- Advanced optical molecular imaging instrumentation for assays and pre-clinical models of disease
- Novel tools for image data analysis and reconstruction

GENERAL CHAIRS



Mary-Ann Mycek
Univ. of Michigan, USA

Konstantin Sokolov
Univ. of Texas at Austin, USA

PROGRAM CHAIRS

Paul French, *Imperial College London, UK*
Peter So, *MIT, USA*

INVITED SPEAKERS

Samuel Achilefu, *Washington Univ. in St. Louis, USA*
Darryl Bornhop, *Vanderbilt Univ., USA*
Kirill Larin, *Univ. of Houston, USA*
Calum MacAulay, *British Columbia Cancer Agency, Canada*
Laura Marcu, *Univ. of California Davis, USA*
Rainer Pepperkok, *EMBL, Germany*
Juergen Popp, *Friedrich-Schiller Univ. Jena, Germany*
Adam Wax, *Duke Univ., USA*
Mehmet Fafih Yanik, *MIT, USA*

IMPORTANT DEADLINES

Submission: 10 December 2012, 12:00 EST (17:00 GMT)
Hotel Reservation: 15 March 2013
Advanced Registration: 18 March 2013

OMP is part of the Optics in Life Sciences Congress, which consists of three additional collocated meetings: Bio-Optics Design and Application (BODA), Novel Techniques in Microscopy (NTM), and Optical Trapping Applications (OTA). Registration for one meeting allows access to sessions in all meetings.

For complete list of topics, visit
www.osa.org/omp



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