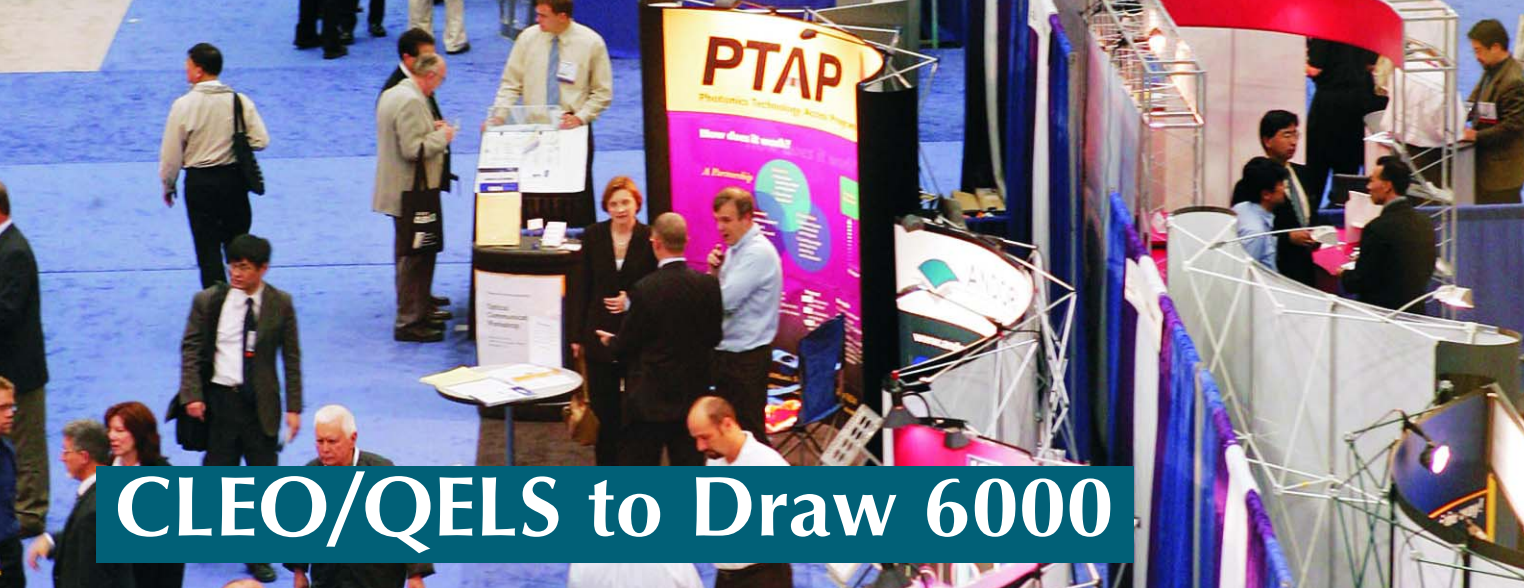




CLEO/QELS to Draw 6000

CLEO

From terahertz technologies, laser processing, and optical instrumentation to nonlinear optics, nano-optics, and ultrafast dynamics, a broad range of topics will be covered at the 2006 Conference on Lasers and Electro-Optics and the Quantum Electronics and Laser Science Conference, slated for Sunday, 21 May through Friday, 26 May at the Long Beach Convention Center in Long Beach, California.

Sure, the name's a mouthful, but that only underscores the healthy number of papers—more than 200 in about 30 categories—that will be presented at the gathering, which again will also include the Photonic Applications, Systems, and Technologies (PhAST) Conference from Monday, 22 May to Thursday, 25 May. According to the Optical Society of America, close to 6000 attendees from 44 countries will be on hand while more than 300 companies are participating in the conference exhibit, which runs from Tuesday, 23 May to Thursday, 25 May.

“Where Technology Is Born” is the annual conference's slogan, and some of the topics that will feature a large number of papers this year include fiber and guided-wave lasers and amplifiers, metamaterials, and plasmonics.

CLEO session topics this year include laser processing and optical instrumentation; solid-state lasers; semiconductor lasers; applications of nonlinear optics; terahertz technologies and applications; optical materials, fabrication, and characterization; high-field physics and high-intensity lasers; ultrafast optics and optoelectronics; optical components, interconnects, and processing; medical and biological applications; fiber and guided-wave lasers and amplifiers; light-wave communications and networks; active optical sensing; optical metrology; and LEDs and solid-state

lighting. A symposium on enabling technologies for quantum communication is being jointly presented with QELS on Tuesday, 23 May at 8:00am.

QELS sessions will cover cold atoms and molecules and atom optics; quantum optics and information; fundamentals of metamaterials and of periodic and random media; ultrafast dynamics; nonlinear optics and novel phenomena; nano-optics and plasmonics; and high-field physics and high-intensity lasers. QELS will also present a symposium on nonlinear nanophotonics on Thursday, 25 May at 8:00am.

This year the PhAST program covers five categories, including lasers in manufacturing, photonics in homeland and national security, nanophotonics and laser optical nanofabrication, biophotonics instrumentation, and high-power semiconductor lasers. Topics of invited talks for PhAST, CLEO, and QELS range from *in vivo* optical imaging of small animals and optical cancer diagnostics (PhAST); to diffuse optical tomography, light transport in tissue, and silicon laser technology for integrated lasers and amplifier applications (CLEO); to light-matter interface in quantum networks and nanoscale photonics of structural transformations (QELS).

The joint CLEO/QELS plenary and awards sessions will be held on Monday, 22 May from 7:00 to 9:30pm and Wednesday, 24 May from 8:00 to 10:30am in the convention center's grand ballroom. In his talk on “Fiber Lasers: The Next Generation,” David Payne, director of the optoelectronics research center at the University of Southampton, UK, will discuss presenting fiber lasers' prospects for beam combination, visible sources, MW pulsed lasers, and other configurations. Don Boroson, senior staff member in the optical communications technology group at MIT's Lin-

coln Lab, will talk about “The Mars Laser Communications Demonstration Project.” Although NASA canceled the project, it's expected to influence many future laser communications systems. Richard E. Slusher, director of the quantum information and optics research department at Lucent Technologies' Bell Labs, will present a talk on “Quantum Phenomena in Optical Communications Systems: Is the Quantum Internet Next?” and will discuss future quantum optical repeaters that will enable quantum teleportation and distributed quantum computing. “Defense Applications for Emerging Opto-Electronic Technologies” is the subject of a talk by Robert F. Leheny, deputy director of the Defense Advanced Research Projects Agency. Leheny will discuss recent research results from DARPA-supported programs, development trends, and the way those developments may impact future defense systems.

Among the other events and offerings during the conference is a business and management insights panel on Tuesday, 23 May, from 1:00 to 3:00pm and chaired by Milton Chang of Incubic LLC in Mountain View, California. Poster sessions are Tuesday, 23 May, from 1:00 to 2:30pm; Wednesday, 24 May, from 12:00 to 1:30pm; and Thursday, 25 May, from 1:00 to 2:30pm, all at the conference center's exhibit hall. Activities aimed at students include a networking breakfast Monday, 22 May from 7:00 to 8:00am at the Hyatt Regency; a networking lunch for OSA student members Tuesday, 23 May from 12:00 to 1:30pm; and two career workshops on Tuesday, 23 May from 2:30 to 3:30pm and Wednesday, 24 May from 11:00am to 12:00pm. The student career center, covering optics and photonics employment opportunities, will run Tuesday, 23 May through Thursday, 25 May.

Career center registration is available through the conference's website, <http://www.cleoconference.org>.

A conference reception will be held Tuesday, 23 May, at 6:30pm, in the grand ballroom at the convention center.

Sessions with Invited Speakers

CLEO

Laser processing and optical instrumentation.

Swenson, Mao, Grunwald.

Solid-state lasers. *Hartl, Moses, Morgner, Killi, Yu.*

Semiconductor lasers. *Paniccia, Kunishi, Bour,*

Gopinath, Jahnke.

Applications of nonlinear optics. *Bisson, Moses,*

Kuo, Khurgin.

Terahertz technologies and applications. *Tanaka,*

Hubers, Liu, Scalari.

Optical materials, fabrication, and characteriza-

tion. Rosenberg, Fancchetti, Lipson.

Ultrafast optics, optoelectronics, and applications.

Bovatesek, Gaeta, Xia, Shuntarou, Jones,

Shah.

Optical components, interconnects, and process-

ing. Urata, Watts, Suda, Nakamura, Fan.

Medical and biological applications. *Hengl,*

Carlson, Joshi, Vasan.

Fiber and guided-wave lasers, amplifiers.

Zheltikov, Sumetsky, Rong.

Lightwave communications and networks.

Kazovsky, Djordjevic, Diab, Bayvel,

Simsarian, Pilipetskii, Mamyshev, Chao,

Robinson.

Active optical sensing. *Henderson, Patel,*

Webster.

Optical metrology. *Nemati, Margolis, Gohle,*

Nakazawa.

LEDs, organic LEDs, and solid-state lighting. *Park,*

Parry.

QELS

Cold atoms and molecules, atom optics. *Buechler,*

Katori, Krueger.

Quantum optics and quantum information.

Kuzmich, Pan, Steinberg.

Fundamentals of metamaterials and periodic and

random media. Cao, Wiersma, Zhang.

Ultrafast dynamics. *Gartner, Fiebig, Kuwata-*

Gonokami.

Nonlinear optics and novel phenomena. *Gabitov,*

Soljacic, Zheludev.

Nano-optics and plasmonics. *Bawendi, Bayer,*

Giessen.

Nonlinear nanophotonics. *Osgood, Petek,*

Smolyaninov.

Joint CLEO/QELS

Awards and plenary session. *Payne, Boroson,*

Slusher.

High-field physics and high-intensity lasers.

Baltuska, Moshamme, Patel, Sauerbrey,

Tanaka, Villeneuve.

Enabling quantum technologies. *De Riedmatten,*

Vuckovic, Rosenberg.

PhAST

Lasers in manufacturing. *Addington, Booth, Jones,*

Hainsey, Kleine, Klene, Mazumder, Oesterlin,

Tornegard.

Photonics in homeland and national security.

Alexa, Gordon, Krohn, Pellegrino, Silcott,

Wilson, Wong, Woodward.

Nanophotonics and laser optical nanofabrication.

Athale, Koecher, Welch.

Biophotonics instrumentation. *Hillman, Mansfield,*

Uttinger.

High-power, super-efficient, semiconductor lasers.

Farmer, Kanskar, Peters, Stickly, Tsao,

Werthen.

Market overviews. *Kanskar, Krohn.*

Funding opportunities. *Pellegrino, Wilson, Wong.* ■



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