

CLEO/QELS 2003

Technical Conference: June 1-6, 2003

Baltimore Convention Center, Baltimore, MD, USA

CLEO/QELS 2003 was a great success. The conference co-sponsors are thrilled to report an increase in technical attendance this year, up from 2002, bringing the conference nearly 5,500 attendees!

The 2003 technical program was stronger than ever. Paper submissions (including post-deadlines) reached an all-time high of 1,800, a 17% increase over 2002. We had a strong 1,226 papers presented at the conference, along with tutorials, short courses and the standing-room only LEAP program on the exhibit floor.

The exhibit itself was in full-force in 2003, with nearly [300 exhibiting companies](#) ranging from small, innovative new companies to established industry leaders.

As the conference where laser technology was first introduced, CLEO/QELS enjoys a prestigious history which extends to the present day.

2003 Conference Program

Sunday, June 1

9:00 AM - 5:30 PM

SC136	Understanding lasers and critical optical components	Ezekiel
SC142	*CANCELLED* Understanding fiber optics technology and systems	Hecht
SC143	*CANCELLED* Introductory and intermediate topics in polarized light	Fisher

Monday, June 2

8:00 AM - 9:45 AM

CMA	Pulsed OPO/OPA 1	Smith
CMB	THz Generation and Sensing	Zhang
CMC	Mid-infrared Semiconductor Lasers 1	Belenky

CMD	Raman Amplifiers and Applications 1	Radic
CME	Petawatt Laser Systems 1	Pennington
CMF	Quasiphasematching	Menoni
CMG	Novel Technologies for Biomedical Optics	Ediger
QMA	Special Symposium on Laser Control on the Nanoscale: Atoms to Cells 1	Xie
QMB	Coherence in Atomic and Electronic Systems	Mitchell
QMC	Solitons	Reitze

8:30 AM - 12:30 PM

SC108	*CANCELLED* Introduction to optoelectronic devices	Campbell
SC149	Foundations of nonlinear optics	Fisher
SC152	*CANCELLED* Optical amplifiers	Hall
SC154	Quantum well devices for optics and optoelectronics	Miller
SC163	Practical OPOs	Dunn Ebrahimzadeh
SC168	Fundamentals of laser diodes	Ettenberg
SC191	Tissue optics and spectroscopy	Tuchin
SC192	Fiber optic sensors: Principles and applications	Digonnet
SC194	NEW! Photonic crystal fibers and devices	Eggleton
SC196	NEW! Light emitting diodes	Schubert
SC198	NEW! Packaging of optoelectronic components	Rose

10:15 AM - 12:00 PM

CMH	Novel Applications of NLO	Ding
CMI	THz Generation 1	Zhang
CMJ	Mid-infrared Semiconductor Lasers 2	Sirtori

CMK	Rare-Earth Doped Fiber Amplifiers and Lasers	Headley
CML	Petawatt Laser System 2	Chambaret
CMM	Exotic Materials and Fabrication	Norwood
CMN	Optical Techniques for Medical Diagnosis	Pfefer
QMD	Special Symposium on Laser Control on the Nanoscale: Atoms to Cells 2	Lienau
QME	Generation and Detection of Single Photons	Brune
QMF	High Intensity Nonlinear Optics	Siders

1:30 PM - 3:15 PM

CMO	Ultrafast Nonlinear Optics	Wise
CMP	THz Imaging	Tani
CMQ	Visible-spectrum LEDs and Lasers	
CMR	Optical Parametric Amplifiers and Supercontinuum Generation	Agrawal
CMS	Nonlinear High Field Phenomena 1	Sauerbrey
CMT	Organic Materials for Optical Devices	Shirk
CMU	OCT I: Advances in Instrumentation	Drexler
QMG	Special Symposium on Laser Control on the Nanoscale: Atoms to Cells 3	Novotny
QMH	Quantum Measurements & Quantum Imaging	Franson
QMI	Nonlinear Optics in Fibers 1	Gaeta

2:00 PM - 5:00 PM

SC107	*CANCELLED* Basic polarization measurements of optical fibers and components	Hernday
SC147	Optical fiber communication systems	Willner
SC151	Fundamentals of ultrashort pulse amplification	Barty
SC157	Laser beam analysis, propagation, and shaping techniques	Leger
SC164	THz technology	Zhang

SC165	Laser diode-pumped solid-state lasers	Marshall
SC170	Quantum well lasers	Zory
SC174	Acousto-optic and electro-optic devices	Lee
SC180	Properties of optical crystals for solid-state laser and photonic applications	Sumida Wechsler
SC182	Biomedical optical diagnostics and sensing	Cote
SC189	Quantum technologies	Walmsley
SC195	NEW! Tunable lasers	Buus

3:45 PM - 5:30 PM

CMAA	Aerosol Detection and Characterization	Hargis
CMBB	OCT 2: Innovative Approaches to Imaging	Fujimoto
CMV	Ultrafast Optical Interaction	Arissian
CMW	THz Generation 2	Petrov
CMX	III-V Nitride LEDs	Schubert
CMY	Novel Devices	Fortenberry
CMZ	Nonlinear High Field Phenomena 2	Milchberg
QMJ	Special Symposium on Laser Control on the Nanoscale: Atoms to Cells 4	Steel
QMK	Optical Entanglement and Nonlocality	Dolev
QML	Molecular Nonlinear Optics	Rudolph

Tuesday, June 3

8:00 AM - 9:45 AM

CTuA	Nonlinear Optics in Fibers 2	Torruellas
CTuB	High Power Lasers	Abeles
CTuC	Microstructured Fiber Devices and Applications 1	Koch

CTuD	Photodetectors and Pre-amplifiers	Donnelly
CTuE	Emerging Active Optical Sensing Techniques	Allen
CTuF	UV Materials and Methods	O'Brien
JTuA	Joint Attosecond Symposium 1	Ye
QTuA	Nanoassemblies and Nanowires	Fiore
QTuB	Cryptography and Novel Sources of Entangled Photons	van Exter
QTuC	Nonlinear Optical Phenomena and Applications 1	Rand

8:30 AM - 12:30 PM

SC188-A	Hands-on practices with optical fiber	The Light Brigade, Inc.
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9:00 AM - 12:00 PM

SC111	*CANCELLED* Passive components for WDM networks	Nyman
SC120	*CANCELLED* Lightwave component measurements	Derickson
SC133	Reliability methodologies for fiber optic components	Maack
SC161	*CANCELLED* MEMS for optical communications	Wood
SC162	*CANCELLED*NEW! Modelocking of fiber lasers	Duling
SC169	*CANCELLED* Building a successful photonics start-up	Nighan
SC179	*CANCELLED* Free space optical (FSO) laser communication	Killinger
SC184	*CANCELLED* Modeling high-data-rate optical fiber communication systems	Menyuk
SC197	NEW! The merging of the wireless and fiber optic worlds	Novak
SC199	NEW! Micro- and nano-machined optics	Kley

10:00 AM - 12:00 PM

LEAP	Optics in Biology and Medicine	Hattery Ediger Pastel Koehler
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10:15 AM - 12:00 PM

CTuG	Nonlinear Optics in Semiconductors	Sheik-Bahae
CTuH	Longwavelength Lasers on GaAs	Tan
CTuI	Fiber Grating Devices and Applications	Stepanov
CTuJ	Interconnects and Modulators	Gopinath
CTuK	LIDAR	Zayhowski
CTuL	Structured Materials	Menoni
JTuB	Joint Attosecond Symposium 2	Carruthers
QTuD	Field Enhancement from Metallic Nanostructures	Greffet
QTuE	Quantum Information Processing: Implementations	Vuckovic
QTuF	Nonlinear Optical Phenomena and Applications 2	Stegeman

12:45 PM - 5:00 PM

LEAP	DARPA-Funded Optics Overview	Leheny Lembo Durvasula Carrano DeFreez Krug Shah Athale
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1:00 PM - 2:30 PM

CTuM	CLEO Poster Session 1
QTuG	QELS Poster Session 1

1:30 PM - 5:30 PM

SC123	Optical amplifiers in lightwave systems	Zyskind
SC137	*CANCELLED* Measurement of polarization-mode dispersion	Hernday
SC145	*CANCELLED* Photonics for electrical engineers	Boreman
SC153	*CANCELLED* Quasi-phasematching for frequency conversion and all-optical signal processing	Fejer
SC155	Ultrashort laser pulse measurement	Trebino

SC160	Microwave photonics	Williams
SC166	Photonic crystal devices and integrated circuits	Prather
SC167	*CANCELLED* Advances in vertical-cavity surface-emitting lasers	Chow Choquette
SC193	Optical coherence tomography	Izatt
SC200	*CANCELLED*NEW! Laser remote sensing	Carrig Gatt

2:00 PM - 6:00 PM

SC188-B	*CANCELLED* Hands-on practices with optical fiber	The Light Brigade, Inc.
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2:30 PM - 4:15 PM

CTuN	Pulsed OPO/OPA 2	Armstrong
CTuO	Optical Microscopy in Biology and Medicine	Mycek
CTuP	Microstructured Fiber Devices and Applications 2	Eggleton
CTuQ	Optical Signal Processing and Switching	Windover
CTuR	Trace Gas Monitoring	Sigrist
CTuS	Self-assembled Materials	O'Brien
JTuC	Joint Attosecond Symposium 3	Corkum
QTuH	Nanophotonics of Plasmons & Polaritons	Novotny
QTuI	Entanglement and Quantum State Reconstruction	Blinov
QTuJ	Semiconductor Nonlinear Optics 1	Cundiff

4:45 PM - 6:30 PM

CTuT	Second Harmonic and Sum Frequency Generation	Vodopyanov
CTuU	Fluorescence in Biomedicine	Fantini
CTuV	Measurements and Devices	Buryak
CTuW	Mirrors, Rings and Photonic Crystals	Vawter

CTuX	High-Sensitivity Gas Detection	Tittel
CTuY	Novel Light Emitters	Nolte
JTuD	Ultrafast Laser Stabilization	Kaertner
QTuK	Quantum Dots for Nanophotonic Applications	Unlu
QTuL	Waveguides and PBGs	Shalaev
QTuM	Semiconductor Nonlinear Optics 2	Bogges

Wednesday, June 4

8:00 AM - 10:30 AM

JWA Plenary Session

11:30 AM - 12:30 PM

LEAP Keynote Presentation Gabriel

12:30 PM - 2:30 PM

LEAP Business and Management Topics Moulton
Chang
Prabhakar
Kafka

1:00 PM - 2:30 PM

CWA CLEO Poster Session 2

QWA QELS Poster Session 2

2:30 PM - 4:15 PM

CWB Wavelength Conversion in QPM Structures Kang

CWC Surface Emitting Lasers Botez

CWD Pulsed Fiber Lasers Galvanauskas

CWE Pulse Characterization Gu

CWF High Field Science 1 Neely

CWG Nd and Yb Lasers Pennington

CWH Photonic Components Dagenais

CWI Laser-written Index Modification Squier

JWB	Micro-Photonic Bandgap Circuits	Nolte
QWB	THz Nonlinear Optics	Averitt
2:45 PM - 4:15 PM		
LEAP	Intellectual Property Issues in High-Tech Business	Gortych
4:45 PM - 6:30 PM		
CWJ	Stimulated Scattering Processes	Piskarskas
CWK	Ring and Disk Lasers	Abeles
CWL	Raman Amplifiers and Applications 2	McKinstrie
CWM	Ultrafast Solid State Sources 1	Kapteyn
CWN	High Field Science 2	Tanaka
CWO	Guided Wave Solid State Lasers	McKinnie
CWP	Mode Convertors and Other Components	Soole
CWQ	Microscopy and Wavefront Analysis	Marowsky
JWC	Photonic Bandgap Materials	Pendry
QWC	Novel Ultrafast Optics	Leitensdorfer

Thursday, June 5

8:00 AM - 9:45 AM

CThA	Opticals MEMS	Vawter
CThB	Femtosecond Laser Atmospheric Propagation	Richardson
CThC	Dynamics of Semiconductor Lasers	Huffaker
CThD	PMD and Amplification	Lee
CThE	Optical Switching and Solitons	Kippelen
CThF	Short Pulse Solid-State Lasers	Pollock
QThA	Nano-optics in II-VI Materials and Microcavities	Goldberg

QThB	Ultrafast Dynamics in Metallic Systems	Kim
QThC	Photonics in Ordered and Disordered Structures	Segev
QThD	Strongly Interacting Bosons and Fermions	Bloch

10:00 AM - 12:00 PM

LEAP	The Next Big Growth Areas Part I	Jacobs Matthews Anthony Dye Solgaard
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10:15 AM - 12:00 PM

CThG	Nonlinear Wavelength Conversion	Dunn
CThH	Fusion Laser Engineering	Ditmire
CThI	Quantum Dot Lasers	Zory
CThJ	Lightwave Systems Performance	Vodhanel
CThK	Spectral Holographic Processing	Shahriar
CThL	Tunable Solid-State Lasers	Hommerich
QThE	Probing Excitons and Charge Carriers in Quantum Dots	Bryant
QThF	Ultrafast Studies of Many-body Interactions	Binder
QThG	Random Lasers	Wiersma
QThH	Precision Measurements and Spectroscopy with Cold Atoms	Raithel

1:00 PM - 2:30 PM

CThM	CLEO Poster Session 3	
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1:00 PM - 3:00 PM

LEAP	The Next Big Growth Areas Part II	Jacobs Hughes Krupke Craford Forrest
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1:00 PM - 2:30 PM

QThJ	QELS Poster Session 3	
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2:30 PM - 4:15 PM

CThN	X3 and Nonlinear Propagation	Fisher
CThO	Ultrafast Fiber Devices	Horowitz
CThP	Photonic Crystal Lasers	Mawst
CThQ	Modulation Formats and Clock Recovery	Grigoryan
CThR	Optical Instrumentation and Measurement	Shori
CThS	Power Scaling 1	Barnes
CThT	Optical Materials Fabrication and Characterization	Menoni
QThI	Ultrafast Dynamics in Quantum Dots	Woerner
QThK	Soliton Photonics	Cao
QThL	Atom Transport and Cooling	Donley

4:45 PM - 6:30 PM

CThAA	Advances in Organic Materials	Flom
CThU	X2 Nonlinear Optics	Khurgin
CThV	Microstructured Fibers	Corwin
CThW	Characterization and Tuning	Malloy
CThX	Networking	Carter
CThY	Laser Sensing and Detection	Shori
CThZ	Power Scaling 2	Pollnau
QThM	Ultrafast Dynamics in Semiconductors	Citrin
QThN	Left-handed Materials	Shalaev
QThO	Optically Trapped Bose and Fermi Gases	Lukin

Friday, June 6

8:00 AM - 9:45 AM

CFA	Ultrafast Solid State Sources 2	Boivin
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CFB	Optical Metrology and Laser Phase Control	Diels
CFC	Sensors and Components	Lee
CFD	Regeneration	Mamyshev
CFE	Volume Holographic Processing	Burr
CFF	Ultrafast Laser Processing	Liu
CFG	Progress in Laser Materials	Bowman
CFH	Extreme UV and Novel Laser Sources	Baird
QFA	Photonic Crystals	Vlasov
QFB	Ultrafast Molecular Dynamics	Ippen
10:15 AM - 12:00 PM		
CFI	Pulse Shaping and Compression	Gu
CFJ	Transmission	Saylors
CFK	Photorefractive Materials and Applications	Davidson
CFL	Laser Processing	Liu
CFM	Novel Resonators	Clarkson
QFC	Cavity and Chaos	Noginov
QFD	Coherent Transient Phenomena	Norris

2003 Exhibitors

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Coherent, Inc.
Manufacturing Technology, Inc.
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Melles Griot
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Research Electro-Optics, Inc.
Richardson Gratings
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RSoft Design Group, Inc.
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Saint-Gobain Crystals & Detectors

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General Dynamics Advanced Information Systems
Gentec Electro-Optics, Inc.
Georgia Institute of Technology
Gooch and Housego, PLC
Hamamatsu Corporation
Hawkeye Engineering
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Hellma International, Inc.
Heraeus Optics, Inc.
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Hilger Crystals
Hinds Instruments, Inc.
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ILX Lightwave Corporation
IMRA America, Inc.
Information Gatekeepers, Inc.
Infrared Fiber Systems
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Lasertel
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Leptis Technologies
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