2023 Conference on Lasers and Electro-Optics (CLEO 2023)

San Jose, California, USA
7-12 May 2023

Pages 1-501

IEEE Catalog Number: CFP23CLE-POD
ISBN: 978-1-6654-5568-8

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP23CLE-POD
ISBN (Print-On-Demand):	978-1-6654-5568-8
ISBN (Online):	978-1-957171-25-8
ISSN:	2160-8989

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

PHOTONIC INTEGRATION

QUANTUM COMMUNICATION AND QUANTUM PHOTONICS I

INTEGRATED PHOTONICS

QUANTUM COMMUNICATION AND QUANTUM PHOTONICS II

ELECTROMAGNETIC SCATTERING AND SPECTROSCOPY FROM MHZ TO X-RAY

HIGH PRECISION LASER MICROMACHINING AND ANALYTICS

MULTI-SCALE APPROACHES FOR ENVIRONMENTAL MONITORING

SPECTROSCOPY I - FREQUENCY COMBS

FIBER-BASED APPROACHES FOR ENVIRONMENTAL SENSING

POSTDEADLINE PAPER PRESENTATIONS I

MACHINE LEARNING FOR MICROSCOPY

LASERS SOURCES

ADVANCES IN SPECTROSCOPY FOR ENVIRONMENTAL SENSING

NEW ALGORITHMS IN OPTICAL DIAGNOSTICS

PHOTONIC BIOSENSORS

A&T TOPICAL REVIEW ON ADVANCES IN OPTICAL NEUROIMAGING I

A&T TOPICAL REVIEW ON FREQUENCY COMB SPECTROSCOPY: FROM THE VUV TO THZ II

A&T TOPICAL REVIEW ON ARTIFICIAL INTELLIGENCE IN MATERIAL PROCESSING II

ADVANCING ENVIRONMENTAL SENSING WITH ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING METHODS

OPTICAL MATERIAL AND DEVICE CHARACTERIZATION

PROGRESS IN BIOIMAGING METHODS

A&T TOPICAL REVIEW ON ADVANCES IN OPTICAL NEUROIMAGING II

QUANTUM CRYPTOGRAPHY I

NONLINEAR PROCESSES IN SUB-WAVELENGTH SYSTEMS, 2D MATERIALS AND METASURFACES

WAVEFRONT SHAPING AND SENSING WITH PLASMONIC AND PHOTONIC STRUCTURES

TOPOLOGICAL METAOPTICS

ULTRAFAST DYNAMICS OF COLLECTIVE EXCITATIONS

NONLINEAR QUANTUM PHOTONICS I

QUANTUM CRYPTOGRAPHY II

STRUCTURED LIGHT AND OPTICAL VORTICES

QUANTUM EFFECTS IN PLASMONICS AND NANOPHOTONICS

METAOPTICS FOR CONTROLLING EMISSION

ULTRAFAST TRANSPORT AND NANO-IMAGING

NONLINEAR QUANTUM PHOTONICS II

QUANTUM NETWORKING

TERAHERTZ, FREE ELECTRONS, AND X-RAYS

FUNDAMENTALS AND ADVANCES IN PLASMONICS AND NANOPHOTONICS

ENGINEERED COUPLING AND RESONANCE

QUANTUM DOT PHOTON SOURCES

QUANTUM NETWORK PROTOCOLS

TOPOLOGICAL PROCESSES I

SOLID STATE QUANTUM OPTICAL SOURCES

QUANTUM LIGHT DETECTORS

NONCLASSICAL STATES OF LIGHT

QUANTUM COMPUTING AND SIMULATION

NON-HERMITICITY, SYMMETRY, AND SYMMETRY BREAKING I

APPLICATIONS OF PLASMONICS AND NANOPHOTONICS I

EMERGING TOPICS IN QUANTUM PHOTONICS

QUANTUM STATES AND ENCODING

NON-HERMITICITY, SYMMETRY, AND SYMMETRY BREAKING II

APPLICATIONS OF PLASMONICS AND NANOPHOTONICS II

INTEGRATED QUANTUM LIGHT SOURCES

CAVITY QED AND ITS APPLICATION

PHOTON-PHONON INTERACTIONS: OPTOMECHANICAL, BRILLOUIN, AND RAMAN PROCESSES I

ELECTRON-MATTER INTERACTION IN PLASMONIC AND PHOTONIC NANOSTRUCTURES

EXCEPTIONAL POINTS AND TOPOLOGICAL PHOTONICS

NANOPHOTONIC SINGLE AND MULTI PHOTON SOURCES

LIGHT MATTER INTERFACES

PHOTON-PHONON INTERACTIONS: OPTOMECHANICAL, BRILLOUIN, AND RAMAN PROCESSES II

NANOPHOTONICS FOR STRUCTURED LIGHT

LIMITS OF PHOTONICS AND METAOPTICS

NONEQUILIBRIUM CORRELATION AND QUANTUM OPTICS

QUANTUM TRANSDUCTION AND INTERFACES

METASURFACES: TOWARDS APPLICATIONS

QUANTUM DOT SOURCES

POSTDEADLINE PAPER PRESENTATIONS II

TOOLS FOR QUANTUM INFORMATION PROCESSING

NONLINEAR PHENOMENA IN CLASSICAL AND QUANTUM SYSTEMS

QUANTUM EMITTERS

TIME INTERFACES, TIME CRYSTALS, AND SYNTHETIC DIMENSIONS

HIGH-ENERGY DENSITY PHYSICS USING ULTRA-INTENSE LIGHT

QUANTUM SENSING AND MEASUREMENT

NONLINEAR PROCESSES IN FIBERS AND WAVEGUIDES

NONLINEAR AND COHERENT INTERACTION AND CONTROL OF PLASMONIC PHENOMENA

TIME CRYSTALS AND TEMPORAL CONTROL

ULTRAFAST SCIENCE OF MOLECULAR AND MANY-BODY SYSTEMS

SOLITONS AND FREQUENCY COMBS I

NUMERICAL DESIGN AND MODELING OF NANOPHOTONIC SYSTEMS I

NEW CONCEPTS IN METASURFACES

QUANTUM TRANSDUCTION

METHODS FOR NOVEL ULTRAFAST DRIVE SOURCES AND PUMP-PROBE SPECTROSCOPIES

CONTROL OF ULTRAFAST DYNAMICS AND PHOTOINDUCED PHASE TRANSITION

SOLITONS AND FREQUENCY COMBS II

NUMERICAL DESIGN AND MODELING OF NANOPHOTONIC SYSTEMS II

SCATTERING AND DIFFRACTIVE MEDIA

ACCELERATED MODELLING AND PHOTONIC COMPUTING

ANALOG QUANTUM PROCESSING & SENSING

NEW HORIZONS IN HIGH-HARMONIC AND SOFT X-RAY SOURCES

EXCITON DYNAMICS IN VDW MATERIALS

SYMPOSIUM ON CELEBRATING OPTICAL-GUIDED-WAVE SOLITONS - THEORY & EXPERIMENTS I: RECOLLECTIONS OF LINN MOLLENAUER

SYMPOSIUM ON RARE-EARTH DOPED INTEGRATED GAIN AND DEVICES I

SYMPOSIUM ON CELEBRATING OPTICAL-GUIDED-WAVE SOLITONS - THEORY & EXPERIMENTS II: EARLY DEVELOPMENTS

SYMPOSIUM ON RARE-EARTH DOPED INTEGRATED GAIN AND DEVICES II

SYMPOSIUM ON CELEBRATING OPTICAL-GUIDED-WAVE SOLITONS - THEORY & EXPERIMENTS IV: MODERN SOLITON PERSPECTIVES

SYMPOSIUM ON EPSILON-NEAR-ZERO OPTICS: RECENT ADVANCEMENT AND DEVELOPMENT I

JOINT POSTER SESSION III

SYMPOSIUM ON BIOINSPIRED PHOTONICS I

SYMPOSIUM ON EPSILON-NEAR-ZERO OPTICS: RECENT ADVANCEMENT AND DEVELOPMENT II

JOINT POSTER SESSION I

SYMPOSIUM ON ENABLING HIGHLY MULTIMODE NONLINEAR AND QUANTUM PHOTONICS I

SYMPOSIUM ON ENABLING HIGHLY MULTIMODE NONLINEAR AND QUANTUM PHOTONICS II

JOINT POSTER SESSION II

SYMPOSIUM ON INTEGRATED PHOTONICS II

INTEGRATED QUANTUM PHOTONICS

MACHINE LEARNING AND DSP IN OPTICAL TRANSMISSION

TECHNOLOGICAL APPLICATIONS OF OPTICAL FIBERS

THZ DETECTION AND SPECTROSCOPY

ON-CHIP COHERENT LIGHT SOURCES

SPACE DIVISION MULTIPLEXING

HIGH POWER AND HIGH ENERGY LASER SYSTEMS

STRUCTURES FOR INTEGRATION

INTEGRATED MODULATORS

HIGH POWER, LONG LIFE LASERS

SPACE TIME WAVEPACKETS AND ULTRAFAST STRUCTURED LIGHT

NOVEL OPTICAL DEVICES

MICROWAVE PHOTONICS WITH FREQUENCY COMBS

FIBER LASER

THZ NEAR-FIELD MICROSCOPY AND SPINTRONICS

NOVEL MODULATION APPROACHES AND APPLICATIONS

ACCESS NETWORKS AND SYSTEMS

NOVEL LASER MATERIALS AND APPROACHES

INP INTEGRATION

NONLINEAR PHOTONICS

COMMUNICATION LASERS AND EMERGING LASERS

DYNAMICS: OSCILLATORS AND APPLICATIONS

NOVEL APPLICATIONS IN INTEGRATED PHOTONICS

OPTICAL FREQUENCY COMB SPECTROSCOPY FROM UV TO NIR

HIGH POWER FIBER AMPLIFIERS

THZ GENERATION

INTEGRATED DETECTORS & SPECTROMETERS

VISIBLE LIGHT PHOTONICS AND SILICON NITRIDE PLATFORMS

NOVEL GAIN, NOVEL RESONATOR

LASER FACILITIES

NONLINEAR DYNAMICS IN FIBER SYSTEMS

NOVEL APPROACHES TO LIGHT MANIPULATION

ADVANCED MATERIALS FOR QUANTUM OPTICS PROCESS

SUPER-RESOLUTION AND QUANTUM METHODS

ELECTRO OPTIC RESONATORS

QUANTUM OPTICS WITH DIAMOND VACANCY CENTERS

FIBER FREQUENCY COMBS

PULSE CHARACTERIZATION

THZ IMAGING

INTEGRATED PHOTONIC PROCESSORS

SPECTRAL CONTROL AND MANIPULATION

ULTRAFAST PULSE MANIPULATION AND NOVEL LASER SYSTEMS

METASURFACES

FIBER OPTICS AND GLASS MATERIAL

NOVEL TRANSMISSION TECHNIQUES AND DEVICES

HETEROGENOUS INTEGRATION

OPTICAL FREQUENCY METROLOGY AND COMPACT CAVITIES

ARTIFICIAL INTELLIGENCE INTEGRATION

STRONG LIGHT-MATTER INTERACTIONS

MID-INFRARED PHOTONICS

LOW DIMENSIONAL MATERIALS

NONLINEAR TRANSMISSION

OPTICAL AND NEUROMORPHIC COMPUTING I

LIGHT PROPAGATION IN MULTI-MODE FIBERS AND APPLICATIONS - I

TECHNOLOGICAL ADVANCEMENTS IN FREQUENCY COMBS

INTEGRATED QUANTUM PHOTONICS

NONLINEAR PHENOMENA IN FIBER-BASED SYSTEMS

LIGHT DETECTION AND MODE MANIPULATION

ADVANCED OPTICAL MATERIAL CHARACTERIZATION

INTEGRATED PHOTONICS FOR HIGH CAPACITY TRANSMISSION

OPTICAL AND NEUROMORPHIC COMPUTING II

LIGHT PROPAGATION IN MULTI-MODE FIBERS AND APPLICATIONS II

SPECTROSCOPIC SENSING

INTEGRATED LIDAR

NOVEL MATERIAL PLATFORMS FOR INTEGRATED NONLINEAR PHOTONICS

HOLLOW-CORE FIBERS

INTEGRATED OPTICS AND PLASMONIC DEVICES

MICROCOMBS I

THZ BEAM FORMING AND COMMUNICATIONS

LASER-ASSISTED MACHINING, FABRICATION AND SYNTHESIS I

MATERIALS FOR INTEGRATION

SOURCES I: FIBER

PHOTONIC CRYSTAL AND NANOLASERS

INTEGRATED ELECTRO-OPTICAL MODULATORS

PHOTONIC-BASED COMPUTING AND NOVEL SIMULATION METHODS

NOVEL FIBER AND FIBER COMPONENTS DESIGNS

HETEROGENEOUS INTEGRATION ON SILICON

MICROCOMBS II

PULSE SHAPING

LITHIUM NIOBATE INTEGRATION I

GHZ AND DUAL-COMB OSCILLATORS AND APPLICATIONS

RING LASERS AND COMB GENERATION

INTEGRATED PLASMONICS

INTEGRATED NONLINEAR PHOTONICS DEVICES

COMPUTATIONAL ALGORITHMS IN PHOTONICS

OPTICAL COMPUTING AND PROCESSING

OPTICAL RANGING & TIMING

APPLICATIONS OF FREQUENCY COMB SPECTROSCOPY

THZ METASURFACES AND NANOSTRUCTURES

LASER-ASSISTED MACHINING, FABRICATION AND SYNTHESIS II

LITHIUM NIOBATE INTEGRATION II

SOURCES II: AMPLIFIERS

VCSELS

INTEGRATED SUBWAVELENGTH METASTRUCTURES AND PHASED ARRAYS

POSTDEADLINE PAPERS PRESENTATION III

QUANTUM OPTOMECHANICS AND QUANTUM MEMORIES

OPTICAL WIRELESS AND MICROWAVE PHOTONICS

TUNABLE PASSIVE DEVICES AND CIRCUITS

NONLINEAR OPTICS IN THIN FILM LITHIUM NIOBATE

OPTICAL DEVICES AND PROCESSING I

OPTICAL METHODS FOR MECHANICAL AND MOTION SENSING

INTEGRATED LASERS I

TISSUE IMAGING METHODS

SHORT REACH TRANSMISSION SYSTEMS

CHIRPED-PULSE AND PARAMETRIC AMPLIFIERS

OPTICAL VORTICES ON CHIP

ADVANCES AND APPLICATION OF INTEGRATED FREQUENCY COMBS

OPTICAL DEVICES AND PROCESSING II

COMPACT BIOLOGICAL AND CHEMICAL SENSORS

INTEGRATED LASERS-II

NONLINEAR PROCESSES IN OPTICAL FIBERS

LITHIUM NIOBATE PHOTONICS

RF DEVICE INTEGRATION

NANOPHOTONIC AND OPTICAL STRUCTURES

PARAMETRIC PROCESSES IN INTEGRATED AND SOLID-STATE MATERIAL PLATFORMS

HIGH-Q RESONATORS AND COMBS

ATOMIC CLOCKS AND QUANTUM SENSORS

LIGHT-MATTER INTERACTIONS: APPLICATIONS