Conference Information and Agenda of Sessions



Laser Science to Photonic Applications

Technical Conference: 15 – 20 May 2022 **The CLEO Hub:** 17 – 19 May 2022

San Jose McEnery Convention Center San Jose, California, USA

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San Carlos Street

Agenda of Sessions — Sunday, 15 May

08:30–12:30	Short Courses
	SC149: Foundations of Nonlinear Optics SC157: Laser Beam Analysis, Propagation, and Spatial Shaping Techniques SC477: LiDAR and Remote Sensing: An Application-Oriented Introduction SC362: Optomechanics: Fundamentals and Applications of Controlling and Measuring Nano- and Micro-mechanical Oscillators with Laser Light Tomorrow
10:00-12:00	Virtual Technical Sessions (Online Only)
	SS1A • Virtual: Imaging and Dual Comb Metrology SS1B • Virtual: Light Sources and Metasurfaces SS1C • Virtual: Nonlinear Processes in Microresonators SS1D • Virtual: Photonic Integration I
13:30–17:30	Short Courses
	SC479: Introduction to Quantum Optics SC474: Super-Resolution Imaging: Basic Nanoscopy Principles and Its Applications to Biology, Chemistry and Materials Science SC502: Topological Photonics
14:00–16:00	Virtual Technical Sessions (Online Only)
	SS2A • Virtual: Ultrafast Spectroscopy & Nonlinear Processes SS2B • Virtual: Photonic Neural Networks and Related Components SS2C • Virtual: THz Generation and Applications II SS2D • Virtual: Power Scaling in Semiconductor Lasers

Explanation of Session Codes



The first letter of the code denotes the day of the week (Sunday=Sunday, Monday=M, Tuesday=Tu, Wednesday=W, Th=Thursday, F=Friday). The second element indicates the session series in that day (for instance, 1 would denote the first parallel sessions in that day). Each day begins with the letter A in the third element and continues alphabetically through a series of parallel sessions. The lettering then restarts with each new series. The number on the end of the code (separated from the session code with a period) signals the position of the talk within the session (first, second, third, etc.). For example, a presentation coded SM1C.4 indicates that this paper from S&I Meeting is being presented on Monday (M) in the first series of sessions (1), and is the third parallel session (C) in that series and the fourth paper (4) presented in that session.

Agenda of Sessions — Monday, 16 May

Pacific Daylight Time Zone (PDT)	Executive Ballroom 210A	Executive Ballroom 210B	Executive Ballroom 210C	Executive Ballroom 210D	Executive Ballroom 210E	Executive Ballroom 210F	Executive Ballroom 210G	Executive Ballroom 210H					
05:00-07:00		1	Virt	ual Technical Se	ssions (Online C	Dnly)							
	FM1A • Virtual: Exciton and Phonon Dynamics in Quantum Materials FM1B • Virtual: Metamaterials, Metasurfaces, and Metalenses FM1C • Virtual: Quantum Networks SM1D • Virtual: Active Optical Sensing												
08:00–10:00	FM2A • Advances in Nano-optics: Reaching the Atomic Scale	FM2B • Nonlinear Phenomena in Quantum Processes and Quantum Light Generation I	AM2C • Topical Review on Micro and Nano mechanics in Photonic Integrated Circuits I	AM2D • Quantum Photonics	JM2E • Symposium on Ultrafast Mid-IR Laser Sources and Applications I	SM2F • Coherent Light Sources for Precision Timing Applications	SM2G • Photonics of Low Dimensional Materials and Nanostructures	FM2H • Meta- Imaging and Holography					
08:30–12:30		Short Courses											
		SC361: Coherent Mid-IR Light: Generation and Applications											
		SC396: Frontiers of Guided Wave Nonlinear Optics SC475: Metasurface Flat Optics											
		SC475: Metasurrace Flat Optics SC376: Plasmonics and Mie-tronics											
10:00-10:30				Coffee Break	, Concourse 1								
10:30–12:30	JM3A • Symposium on Optical Frequency Combs in Dissipative Fiber Systems I	FM3B • Nonlinear Phenomena in Quantum Processes and Quantum Light Generation II	AM3C • Topical Review on Micro and Nano mechanics in Photonic Integrated Circuits II	AM3D • Quantum Communication & Networking	JM3E • Symposium on Ultrafast Mid-IR Laser Sources and Applications II	SM3F • Spectroscopy for Optical Metrology	SM3G • Noise and Stability in Semiconductor Lasers	SM3H • Light-matter Interactions on Chip					
12:30-13:30				Lunch (on	Your Own)								
13:30–15:30	JM4A • Symp: Optical Frequency Combs in Dissipative Fiber Systems II	FM4B • Non- Hermitian Systems and Parity-Time Symmetry I	FM4C • Single-Photon Detectors	FM4D • Quantum Optics with Atoms and Molecules	JM4E • Symp: Ultrafast Mid-IR Laser Sources and Applications III	FM4F • Optical Metasurfaces I	SM4G • Silicon Nitride Photonics	FM4H • Propagation and Sensing					
13:30–17:30				Short (Courses								
			SC410: Finite	Element Modeling	Methods for Photor	nics and Optics							
		:	SC455: Integrated F SC503: The F	Physics Behind the C	um information Scie Quantum Internet/ I	ence and Technolog For Beginners	У						
15:30–16:00				Coffee Break	, Concourse 1								
16:00–18:00	JM5A • Symposium on Optical Frequency Combs in Dissipative Fiber Systems III	FM5B • Non- Hermitian Systems and Parity-time Symmetry II	FM5C • Continuous Variables and Higher Dimensions	FM5D • Quantum Optics with lons and Electrons	SM5E • Lasers in Large Scale Facilities	FM5F • Optical Metasurfaces II	SM5G • Silicon Photonics	FM5H • Computational Design					
18:00–19:00			SpE23 • Bla	ack in Photonics Info	ormal Social Hour, L	ocation TBD							
18:30–19:30		SpE1 • Op	tica Networking Mo SpE10 • Deep	eetup: How Was Yo Sensing and Super I	ur Pandemic Experi Resolution, Executiv	ence? Executive Bal re Ballroom 210E	Iroom 210A						

Monday, 16 May (cont'd.)

Pacific Daylight Time Zone (PDT)	Meeting Room 211A	Meeting Room 211B	Meeting Room 211C	Meeting Room 211D	Meeting Room 212A	Meeting Room 212B	Meeting Room 212C	Meeting Room 212D				
05:00-07:00		1	Virt	ual Technical Se	ssions (Online C	Dnly)	I	I				
	FM1A • Virtual: Exciton and Phonon Dynamics in Quantum Materials FM1B • Virtual: Metamaterials, Metasurfaces, and Metalenses FM1C • Virtual: Quantum Networks SM1D • Virtual: Active Optical Sensing											
08:00–10:00	AM2I • New Paths for Biosensing	SM2J • High Capacity Transmission	AM2K • Advances in LIDAR for Physical and Atmospheric Sensing Applications	SM2L • High Power Fibre Lasers and Amplifiers	AM2M • Advanced Spectroscopy for Material Characterization	SM2N • Generating Exotic States of Light	SM2O • Nonlinear Optical Sources in Bulk Solid State and Fiber Platforms	SM2P • Heterogenous Integration				
08:30–12:30				Short (Courses							
			SC361: Co	herent Mid-IR Light	: Generation and A	pplications						
		SC396: Frontiers of Guided Wave Nonlinear Optics SC475: Metasurface Flat Optics										
		SC475: Metasurface Flat Optics										
10:00-10:30			-	Coffee Break	, Concourse 1			-				
10:30-12:30	AM3I •	SM3J •	SM3K •	SM3L • Fiber-	AM3M • Design	SM3N •	SM3O •	SM3P •				
	Industrial Applications in Laser Microprocessing	Short Reach and Analog Transmission	Photodetection	based Imaging and Compact Biosensors	and Application of Acoustic and Ultrasound Sensors	Electronic- Photonic Integration	Ultrafast Nonlinear Optics and Pulse Manipulation	Reconfigurable Photonics and Emission Control				
12:30–13:30				Lunch (on	Your Own)							
13:30–15:30	AM4I • Laser- Based Device Fabrication	SM4J • High-speed Transmission Techniques	SM4K • Integrated Nonlinear Photonics I	SM4L • Spectroscopy for Biosensing and Imaging	AM4M • Multi- Scale Field Measurements of Greenhouse Gases	FM4N • Novel Spectroscopy for Probing Multibody Dynamics	SM4O • Nonlinear Nanophotonics	SM4P • Beamsteering				
13:30–17:30				Short (Courses	-						
			SC410: Finite	Element Modeling	Methods for Photor	nics and Optics						
		9	C455: Integrated P	Photonics for Quant	um Information Scie	ence and Technolog	уу					
15.30 16.00			SC503: The F	Coffee Break	Concourse 1	-or Beginners		-				
16.00_18.00	AM5I •	SM51•LiFi	SM5K •	SM5L • Short-		EM5N •	SM50 • Novel	SM5P • Two				
10.00 10.00	Advances in Optical Coherence Tomography	and Wireless Convergence	Integrated Nonlinear Photonics II	wave and Mid- IR Fibre Lasers	Applications for Optical Environmental Sensing	Spectroscopy Investigation of Topological and Magnetic Materials	Microscopy Techniques	Dimensional Materials Photonics				
18:00–19:00			SpE23 • Bla	ack in Photonics Info	ormal Social Hour, L	ocation TBD						
18:30–19:30		SpE1 • Op	tica Networking Me SpE10 • Deep S	eetup: How Was Yo Sensing and Super I	ur Pandemic Experi Resolution, Executiv	ence? Executive Ba re Ballroom 210E	llroom 210A					

Agenda of Sessions — Tuesday, 17 May

Pacific Daylight Time Zone (PDT)	Executive Ballroom 210A	Executive Ballroom 210B	Executive Ballroom 210C	Executive Ballroom 210D	Executive Ballroom 210E	Executive Ballroom 210F	Executive Ballroom 210G	Executive Ballroom 210H				
04:00-06:00	Virtual Technical Sessions (Online Only)											
			FTu1A • Virtu	al: Quantum Optic	s of Atoms, Molecu	les and Solids						
			FTu1B •	Virtual: Novel Mod	es and Coupling Ph	enomena						
08.30-10.00		JTu2A • Jo	• STUTC •	Virtual: Ferroelectr	and Fellow Present	crocombs	Jub Theater					
10:00-11:30	SpE2 • Experiences and Advice in Breaking the Glass Ceiling as a Woman in STEM, Executive Ballroom 210A											
10:00-16:00	The CLEO Hub (Exhibition) Hours											
10:00–13:00	Exhibit Only Time											
10:00-11:30				Coffee Break,	The CLEO Hub							
10:00-11:30			SpE3 • Optica Pu	blishing Group's M	eet the Journal Edi	tors, Optica Booth						
10:30–14:30				Short (Courses							
	SC403: NanoCavity Quantum Electrodynamics and Applications SC438: Photonic Metamaterials											
10.20.40.45	TC4 a Taskasal	Charles Miles	SC352: Ultrafast	Laser Pulse Compre	ession, Shaping, and	d Characterization		the Time and				
10:30-10:45	ISI • lechnol	ogy Showcase: Why	y is Beam Profiling	Difficult Compared Techr	to Other Laser Mea niques	isurements and Wh	at Can You Do Abo	ut It? Tips and				
			Present	ed by MKS Instrum	ents, The CLEO HU	B Theatre						
10:45–11:00		TS2 • Technology S	Showcase: What is Devel	Laser Trapping and	Excitation and why	is it Crucial for Qu niques	antum Computing?					
			Present	ed by MKS Instrum	ents, The CLEO HU	B Theatre						
11:00-12:30	SpE4 • Optica Panel Discussion: What's Next in Integrated Photonics - Hot Topics at CLEO 2022, Executive Ballroom 210E											
11.15 11.45		SpE5	• Women Pioneer	ing the World of Qu Mire Altitude Th	uantum Computing,	Executive Ballroom	210F					
11:15-11:45		155 • 16	Presented by	/ Gentec Electro-Op	otics, Inc., The CLEC) Hub Theater	surement					
11:30-12:30			SpE7 • Front	iers of Guided Wav	e Nonlinear Optics,	Optica Booth						
11:30–13:00			JTu3A • J	oint Poster Session	I-A (In-person), The	CLEO Hub						
			SpE6 • Optica Fel	Iows and Honorees	Luncheon (Invitatio	on Only), Room 111						
12:00-12:30		TS4	 Technology Show 	case: Photon Count	ing Technologies fo	r Low Light Applica	ations					
12.00 12.20			Presented I	oy Hamamatsu Corp	oration, The CLEO	Hub Theater						
12:00-12:30	Τυ4Α •	FTu4B ●	JTu4O •	ITu4D • Symp:	STu4F •	STu4F •	STu4G •	STu4H •				
13.00-13.00	Quantum Key	Light-induced	Symposium on	Entangled	Topological and	Integrated	Lithium Niobate	Nanoscale				
	Distribution	Emergent	Crossroads of	Two-Photon	Nanolasers	Quantum	Photonics	Light-Matter				
		Phenomena in Solids	Metaphotonics: Computational	Absorption:		lechnologies: Devices and		Interactions				
			Imaging and	Opportunities		Fabrication						
			Reconfigurable	in Molecular								
			Metasurfaces I	Spectroscopy I								
13:15–13:45		SpE14	4 • 3D Phase and F	uorescence Micros	copy with Scattering	g Examples, Optica	Booth	I				
15:00-16:00		1	1	Coffee Break,	The CLEO Hub	1	1	1				
16:00–18:00	FTu5A •	STu5B • Design	JTu5Q •	JTu5D •	STu5E • Vertical	STu5F •	STu5G • Hybrid	STu5H •				
	Measurement	of Composite	Crossroads of	on Entangled	VCSELs,	Networks and	integration	Light-Matter				
	of Quantum	Quasiparticles	Metaphotonics:	Two-Photon	Topological	Computation		Interactions				
	States	in Solids	Computational	Absorption:	Lasers	with Diamonds						
			Reconfigurable	opportunities		State Systems						
			Metasurfaces II	in Molecular								
				Science and								
18:30–19:30			SpE9 • Optio	a Cracking the Opt	ics Networking Eve	I ent, Room 214		<u> </u>				
18:30–20:00			I . P	Special	Sessions							
			SpE11 • Hybrid (Ωuantum-Classical T	echnologies, Execu	tive Ballroom 210B						
	SpE12 •	Opportunities and	Challenges for Opt	ical Phase-Change	Materials in Foundr	y-Processed Photo	nics, Executive Ballro	oom 210E				
		SpE13 • Opti	imizing Career Path	s in Optics: The Gu	iae for Young Profe	ssionals, Executive	Bailroom 210F					

Tuesday, 17 May (cont'd.)

Pacific Daylight Time Zone (PDT)	Meeting Room 211A	Meeting Room 211B	Meeting Room 211C	Meeting Room 211D	Meeting Room 212A	Meeting Room 212B	Meeting Room 212C	Meeting Room 212D	The CLEO Hub Theater			
04:00-06:00		Virtual Technical Sessions (Online Only)										
	FTu1A • Virtual: Quantum Optics of Atoms, Molecules and Solids											
	FTu1B • Virtual: Novel Modes and Coupling Phenomena											
00.20 10.00	STu1C • Virtual: Ferroelectric Materials and Microcombs											
10.00-11.30		SpE2 • Exi	eriences and Ad	vice in Breaking t	he Glass Ceiling a	ow Presentations	FM Executive Bal	Iroom 210A				
10.00 14.00		9PEE EA		The CIE								
10:00-13:00				The CL	Exhibit Only Time							
10:00-11:30				Coffe	e Break, The CLE	O Hub						
10:00-11:30			SpE3 • Op	tica Publishing G	roup's Meet the J	ournal Editors, C	ptica Booth					
10:30–16:30					Short Courses	5						
			SC403	3: NanoCavity Qu	antum Electrodyı Rhotonic Motom	namics and Applic	cations					
			SC352: Ult	rafast Laser Pulse	Compression, SI	naping, and Chara	acterization					
10:30-10:45	TS1 • Tech	nology Showcase	Why is Beam Pro	ofiling Difficult Co	mpared to Other	Laser Measurem	ents and What Ca	an You Do About	It? Tips and			
			-	-	Techniques				·			
10.45 11.00		TS2 • Technol	For Showcase: W	resented by MKS	ning and Excitation	e CLEO HUB Thea	tre rucial for Quantu	m Computing?				
10.45-11.00		132 100	ogy showcase.	Developments ir	Laser Technolog	y and Techniques		in computing.				
			F	resented by MKS	Instruments, The	e CLEO HUB Thea	tre					
11:00–12:30		SpE4 • Optica Pa	nel Discussion: W	/hat's Next in Inte	grated Photonics	- Hot Topics at C	tivo Ballroom 210	tive Ballroom 210I =	-			
11:15-11:45		TS3	Technology Sho	owcase: Miro Alti	tude - The State-0	Of-The-Art in Lase	r Beam Measurer	nent				
				Presented I	oy Gentec Electro	-Optics, Inc.						
11:30-12:30			SpE7	Frontiers of Gui	ded Wave Nonlin	ear Optics, Optica	a Booth					
11:30–13:00			JTu	3A • Joint Poster JTu3B • Joint	Session I-A (In-pe Poster Session I-F	erson), The CLEO B (Virtual Only)	Hub					
			SpE6 • Opt	ica Fellows and H	Ionorees Lunchec	on (Invitation Only	i), Room 111					
12:00–12:30			TS4 • Technology	Showcase: Photo	on Counting Tech	nologies for Low	Light Application	S				
12.00-12.30			SpE8 • Coh	erent Mid-IR Ligh	t: Generations ar	nd Applications. (Dotica Booth					
13:00-15:00	ATu4I • Laser	FTu4J •	ATu4K •	STu4L • THz	ATu4M • Cav-	STu4N • High	ATu4O •	STu4P •	ATu4C •			
	Absorption	Topological	Photonics	Imaging and	ity-enhanced	Power and	Mid-IR and	Multimode	Laser Induced			
	in Extreme Environments	Processes I	Technologies for Biological	Spectroscopy	Detection and	High Energy	Frequency Comb Laser	Fibers and	Surface Func-			
	and Robust		Applications		mentation	Lasers	Comb Laser	-	tionalization			
	Sensing											
13:15–13:45		9	pE14 • 3D Phase	and Fluorescence	e Microscopy with	n Scattering Exam	ples, Optica Boo	th				
15:00-16:00	AT. 51 e	ET. 5 La	ATUEK a Mid	Coffe	e Break, The CLE		STUEO .	CT.,5D .	ATU5C .			
16:00-18:00	Advanced	Topological	IR Frequency	Photonics and	Cutting-Edge	Advanced	Clocks and	Multimode	Aluse • A&TTR:			
	Microscopic	Processes II	Combs and	Communica-	Technologies	High Intensity,	Sensing	Fibers and	Photonics			
	Applications		Advanced	tions	and Optical	Ultrashort		Applications	Technologies			
			Applications		Devices	Laser Systems		- 11	Advancements			
									in Opthalmic			
									Applications			
18:30–19:30			SpE9	 Optica Cracking 	the Optics Netw	orking Event, Ro	om 214					
18:30–20:00				S	pecial Sessior	15						
	CnE1	2 • Opportunition	SpE11 • H	ybrid Quantum-C	lassical Technolog	gies, Executive Bal	llroom 210B	Executive Pallream	n 210E			
	Spe 1	SpE13 •	Optimizing Care	er Paths in Optics	: The Guide for Y	oung Professiona	ls, Executive Ballro	com 210F	121UL			

Agenda of Sessions — Wednesday, 18 May

Pacific Daylight Time Zone (PDT)	Executive Ballroom 210A	Executive Ballroom 210B	Executive Ballroom 210C	Executive Ballroom 210D	Executive Ballroom 210E	Executive Ballroom 210F	Executive Ballroom 210G	Executive Ballroom 210H						
05:00-07:00		Virtual Technical Sessions (Online Only)												
		FW1A • Virtual: Quantum Photonics FW1B • Virtual: Frequency Combs, Solitons and Spatiotemporal Phenomena FW1C • Virtual: Optical Metasurfaces III AW1D • Virtual: Progress in LED and Lasers												
08:00–10:00		JW2A • J	oint Plenary Sessior	II and Award, Priz	e and Fellow Preser	tations, The CLEO	Hub Theater							
10:00–19:00				The CLEO Hub	(Exhibition) Hours									
10:00–10:30				Coffee Break	, The CLEO Hub									
10:30–11:00		TS	5 • Technology Sho Prese	wcase: Laser and O inted by Thorlabs, I	ptomechanics Devention of the provided method method of the provided	lopments from Tho Theater	rlabs							
10:30-11:15			SpE15 • Optica P	Publishing Group's I	Veet the Journal Ec	litors, Optica Booth								
11:00–12:30		SpE16 • Optica Panel Discussion: Machine Learning, AI, and Metalens Synergies in Advanced Bioimaging, Executive Ballroom 210E												
11:15–11:45			SpE17 • The	Physics Behind the	e Quantum Internet	, Optica Booth								
11:30–12:30		SpE18 • Exp	eriences in Breaking	g Through the Glass	s Ceiling as an Ethn	i c Minority, The CLE	O Hub Theater							
11:30–13:00			WL	/3A • Joint Poster S JW3B • Virtual: Jo	Session II, The CLEC pint Poster Session I	Hub I								
13:00–13:30			SpE19 • Pulse C	ompression, Shapin	g, and Characteriza	tion, Optica Booth								
13:00–15:00	JW4A • Symposium on Novel Phenomena in Time-Variant Photonics I	FW4B • High Harmonic Generation and Attosecond Pulse Techniques	JW4Q • Symposium on Crossroads of Metaphotonics: Computational Imaging and Reconfigurable Metasurfaces III	FW4D • Quantum Optomechanics and Transduction	SW4E • Deep Learning for Optical Communications	SW4F • Quantum Metrology for High Precision Measurement	SW4G • THz Metasurfaces and Cavities	SW4H • Nonlinear Processes in Microresonators I						
13:30-14:00		Sp	E20 • Finite Eleme	ent Modeling Metho	ods for Photonics a	nd Optics, Optica B	ooth							
15:00–15:30			Co	olor Technical Group	Meet-up, Optica B	ooth								
15:00-16:00				Coffee Break	, The CLEO Hub									
16:00–18:00	JW5A • Symposium on Novel Phenomena in Time-Variant Photonics II Hotonics II Sources JW5Q • Symposium on Crossroads of Metaphotonics: Computational Imaging and Reconfigurable Metasurfaces IV													
18:00–19:30				Conference Recep	otion, The CLEO Hul	0								

Continued

Wednesday, 18 May (cont'd.)

Pacific Daylight Time Zone (PDT)	Meeting Room 211A	Meeting Room 211B	Meeting Room 211C	Meeting Room 211D	Meeting Room 212A	Meeting Room 212B	Meeting Room 212C	Meeting Room 212D	The CLEO Hub Theater			
05:00-07:00				Virtual Techr	nical Sessions (Online Only)						
			FW1B • Virt	FW1A • \ ual: Frequency Co FW1C • Vir AW1D • Virte	/irtual: Quantum ombs, Solitons an tual: Optical Met ual: Progress in LE	Photonics d Spatiotemporal asurfaces III ED and Lasers	l Phenomena					
08:00-10:00		JW2A • Joint Plenary Session II and Award, Prize and Fellow Presentations, The CLEO Hub Theater										
10:00–19:00		The CLEO Hub (Exhibition) Hours										
10:00–10:30				Coffe	e Break, The CLE	O Hub						
10:30–11:00		TS5 • Technology Showcase: Laser and Optomechanics Developments from Thorlabs Presented by Thorlabs, Inc., The CLEO Hub Theater										
10:30–11:15			SpE56 • Op	otica Publishing G	iroup's Meet the .	Journal Editors, (Optica Booth					
11:00–12:30		SpE16 • Optica Panel Discussion: Machine Learning, AI, and Metalens Synergies in Advanced Bioimaging, Executive Ballroom 210E										
11:15–11:45			SpE17	• The Physics Be	hind the Quantur	n Internet , Optica	a Booth					
11:30–12:30	SpE18 • Experiences in Breaking Through the Glass Ceiling as an Ethnic Minority, The CLEO Hub Theater											
11:30–13:00			JW:	3A • Joint Poster JW3B • Joint	Session II-A (In-pe Poster Session II-F	erson), The CLEO 3 (Virtual Only)	Hub					
13:00–13:30			SpE19 • Pr	ulse Compression	, Shaping, and Ch	aracterization, O	ptica Booth					
13:00–15:00	AW4I • Topical Review on Space Optics	FW4J • Combs and Solitons I	SW4K • Hollow-core Optical Fibers	AW4L • Advances in Mid-Infrared Atmospheric Sensing	AW4M • Novel Semiconductor Laser Configurations	AW4N • Topi- cal Review on Laser Surface Functional- ization for Antibacterial and Medical Applications I	SW4O • Integrated Photonics for RF Signal Processing	AW4P • Quantm Technology & Quantum Computing	AW4C • A&TTR: Compact Technologies for Wearable Devices I			
13:30–14:00			SpE20 • Finite	Element Modelin	g Methods for Ph	otonics and Opti	cs, Optica Booth		<u>.</u>			
15:00–15:30				Color Technic	al Group Meet-up	, Optica Booth						
15:00–16:00				Coffe	e Break, The CLE	O Hub						
16:00–18:00	FW51 • FW5J • SW5K • SW5K • AW5L • Next- Gen Com- munications AW5M • QD and Novel Laser Diodes AW5N • Topi- cal Review on Laser Surface SW5O • AW5P • AW5C • Solitons II Solitons II Solitons II Superial Fibers AW5L • Next- Gen Com- munications AW5M • QD and Novel Laser Diodes AW5N • Topi- cal Review on Laser Surface SW5O • AW5P • A&TTR: Compact Vertical Fibers Optical Fibers Technologies Technologies Awsin for and Medical Applications II Awsin for Bands Sw5O • Awsin for Quantum Awsin for A&STR: Compact											
18:00–19:30				Conference	e Reception, The	CLEO Hub						

Agenda of Sessions — Thursday, 19 May

Pacific Daylight Time Zone (PDT)	Executive Ballroom 210A	Executive Ballroom 210B	Executive Ballroom 210C	Executive Ballroom 210D	Executive Ballroom 210E	Executive Ballroom 210F	Executive Ballroom 210G	Executive Ballroom 210H					
05:00-07:00			Virt	ual Technical Se	ssions (Online (Only)		1					
		FTh1A • Virtual: Synthetic Dimensions and Optical/Photonic Simulators and Devices											
	STh1B • Virtual: Hot Topics in Quanutm Science with Atoms, Photons and Spins ATh1C • Virtual: Laser Material Processing												
		ATh1D • Virtual: Imaging Techniques Across Multiple Modalities and Dimensions											
08:00-10:00	JTh2P •	FTh2B •	ATh2C • Topical	FTh2D •	STh2E • Pulse	STh2F •	STh2G • Beam	STh2H •					
	Symposium	Advances in	Review on Specialty Fibers	Reconfigurable	shaping and	Microcombs I	Steering	Metasurfaces					
	Optics I	Tidometo	for Ultrafast	Devices	Coupling - STC		Switching						
			Lasers I										
10:00–15:30				The CLEO Hub (Exhibition) Hours								
10:00-13:00				Exhibit (Only Time								
10:30-12:30			FTh5C • Microres	sonator-based Quar	ntum Sources, The (CLEO Hub Theater							
11:30–13:00			JTh3A • Joint JTh	Poster Session III-A 3B • Joint Poster Se	(In-person), The CL ession III-B (Virtual (EO Hub Theater Dnly)							
13:00–15:00	JTh4Q • Symposium on Space-time Optics II	FTh4B • All Dielectric Nanophotonics	ATh4C • Topical Review on Specialty Fibers for Ultrafast Lasers II	FTh4D • Temporal Media	STh4E • Special Light Sources: Non-linear Frequency Conversion, Solitons, Orbital Angular Momentum	STh4F • Microcombs II	STh4G • Tunable Photonics	STh4H • Integrated Quantum Photonics					
15:00–15:45			1	Coffee Break	, Concourse 1								
15:00-17:30			SpE21 • Quantum	Entanglement (Net	working Mixer), Exe	ecutive Ballroom 214	1						
15:30–17:30	JTh5P • Symposium on Space-time Optics III	FTh5B • Thermal and Nonlinear Effects and Electron-light Interactions	FTh5A • Novel Phenomena	FTh5D • Nonlinear and Active Nanophotonics	STh5E • Broadband and Supercontinuum Sources, Frequency Combs	STh5F • Optomechanics	STh5G • Neuromorphic Photonics	STh5H • Long Wavelength Semiconductor Laser Sources from MIR to THz					
18:00–19:00	Spl	E22 • Optica Panel	Discussion: Emergir	ng Trends in Nonline	ear Optics – A Revie	ew of CLEO:2022, E	Executive Ballroom 2	10D					
19:00–21:00	JTh6A • Joint Postdeadline Presentation Session I	JTh6B • Joint Postdeadline Presentation Session II			JTh6C • Joint Postdeadline Presentation Session III								

Continued

Thursday, 19 May (cont'd.)

Pacific Daylight Time Zone (PDT)	Meeting Room 211A	Meeting Room 211B	Meeting Room 211C	Meeting Room 211D	Meeting Room 212A	Meeting Room 212B	Meeting Room 212C	Meeting Room 212D	The CLEO Hub Theater				
05:00-07:00				Virtual Techr	nical Sessions	(Online Only)							
	FTh1A • Virtual: Synthetic Dimensions and Optical/Photonic Simulators and Devices												
			SINIB • Virtu	al: Hot lopics in C ATh1C • Virt	zuanutm Science tual: Laser Materi	al Processing	tons and Spins						
		1	ATh1D • Virtu	al: Imaging Techn	iques Across Mul	tiple Modalities a	nd Dimensions	1	1				
08:00–10:00			ATh2l • Deep	ATh2K •	ATh2L • Novel	STh2M • Free	STh2N • THz	STh2O •	FTh2A •				
			Enhanced	Techniques in	tor Based	Communica-	and Detection	Photonics	Processes in				
			Contrast	Optical Fiber	Devices	tions		and Quantum	Fibers				
10.00_15.30			imaging		 :O Hub (Exhibitio	n) Hours		Waterials					
10.00-13.00					Exhibit Only Time								
10.00-13.00			FTh5C • M	licroresonator-ba	sed Quantum Sou	Irces The CLEO F	Jub Theater						
11.30-13.00			JTh3A •	Joint Poster Ses	sion III-A (In-perso	n) The CLEO Hu	h Theater						
11.00-10.00			0111071	JTh3B • Joint I	Poster Session III-	B (Virtual Only)							
13:00–15:00	ATh4I • Photonics for Biomedical Diagnostics	STh4J • Optical Methods for Mechanical and Geometric Applications	STh4K • Resonator Devices	STh4L • Applications - Imaging & Ultrafast Nonlinear Processes	FTh4M • Quantum Optics with Solid-state Spin Qubits	STh4N • Spatial Division Multiplexing	STh4O • THz Generation and Applications I	STh4P • Nanofabrica- tion of Novel Photonic Devices	FTh4A • Terahertz and Free Electrons (13:15–15:30)				
15:00–15:45			1	Coff	ee Break, Concou	ırse 1	1		1				
15:00–17:30			SpE21 • Qua	antum Entanglem	ent (Networking	Mixer), Executive	Ballroom 214						
15:30–17:30		STh51 • Light Generation, Detection, and Nonlinear Effects	STh5J • Imaging- Based Techniques for Sensing	STh5K • Brillouin Fibre Lasers	FTh5L • Quantum Memory	STh5M • Photonics- enabled Signal Processing	STh5N • Time Transfer Techniques	FTh5O • Enabling Technologies					
18:00–19:00	5	pE22 • Optica Pa	anel Discussion: E	merging Trends i	n Nonlinear Optic	cs – A Review of (CLEO:2022, Execu	utive Ballroom 210	D				
19:00-21:00													

Agenda of Sessions — Friday, 20 May

Pacific Daylight Time Zone (PDT)	Executive Ballroom 210A	Executive Ballroom 210B	Executive Ballroom 210C	Executive Ballroom 210D	Executive Ballroom 210E	Executive Ballroom 210F	Executive Ballroom 210G	Executive Ballroom 210H					
05:00–07:00		Virtual Technical Sessions (Online Only) FF1A • Virtual: Thermodynamic Optics and Tailored Materials SF1B • Virtual: Short Wave and Broadband Infrared Laser Systems SF1C • Virtual: Photonic Integration II SF1D • Virtual: Optical Computing and Quantum Photonics											
08:00–10:00	JF2A • Symposium on Light Control in Complex Medium: Fundamentals and Applications I	JF2B • Symposium on Topological Lasers I	FF2C • Advances in Nano-optics: Topological Effects	FF2D • Meta- optics	SF2E • Few- cycle Pulses and CEP	SF2F • Frequency Comb-Based Spectroscopy and Sensing	SF2G • Integrated Light Sources	SF2H • Ultrashort Pulsed Fiber Laser Systems					
10:00-10:30		1		Coffee Brea	k, Concourse		,						
10:30–12:30	JF3A • Symposium on Light Control in Complex Medium: Fundamentals and Applications II	JF3B • Symposium on Topological Lasers II	FF3C • Nonlinear and Quantum Plasmonics	FF3D • Chiral and Rotational Structures	SF3E • Ultrashort Pulse Characterization and Control	SF3F • Advanced Spectroscopic Sensing Techniques	SF3G • Quantum Photonics	SF3H • Dispersion and Nonlinearity Managed fiber Systems					
12:30-14:00				Lunch (on	Your Own)								
14:00–16:00	FF4A • Quantum Sensing	FS4B • Single Emitters and Light-matter Interactions	FF4C • Advances in Nano- Optics: Two- Dimensional and Novel Materials	FF4D • Quantum Phenomena	SF4E • Ultrafast Oscillators, Amplifiers and Post- Compression	SF4F • Nonlinear Optical Technologies for Neural Networks and Machine Learning Applications	SF4G • Novel Materials Integration	SF4H • Optical Fiber Based Frequency Combs and Supercontinumm Sources					

Continued

Friday, 20 May (cont'd.)

Pacific Daylight Time Zone (PDT)	Meeting Room 211A	Meeting Room 211B	Meeting Room 211C	Meeting Room 211D	Meeting Room 212A	Meeting Room 212B	Meeting Room 212C	Meeting Room 212D				
05:00–07:00	Virtual Technical Sessions (Online Only) FF1A • Virtual: Thermodynamic Optics and Tailored Materials SF1B • Virtual: Short Wave and Broadband Infrared Laser Systems SF1C • Virtual: Photonic Integration II SF1D • Virtual: Optical Computing and Quantum Photonics											
08:00-10:00		FF2I • Quantum Computation 1	FF2J • Quantum Sources and Their Characterization	SF2K • Novel Applications	FF2L • Brillouin Process	SF2M • Biophotonic and High Power Applications	SF2N • Phase Change Materials Photonics	SF2O • Photonic Modulation, Isolation and Switching				
10:00–10:30		1	1	Coffee Brea	k, Concourse	1	1	J				
10:30–12:30	SF31 • Controlling the Properties of Light	FF3J • Quantum Computation II	FF3K • Components for Quantum Networks	SF3L • Laser Induced Surface Effects	SF3M • DSP and Techniques for Coherent Transmission	FF3N • New Methods in Ultrafast Lasers and Strong-field Physics	SF3O • Low- Loss Integrated Photonics	SF3P • Lasers and Parametric Sources				
12:30-14:00				Lunch (on	Your Own)							
14:00–16:00		FF4I • Entanglement	FF4J • Heterogeneous Quantum Platforms	SF4K • Functional Surfaces and 2D Materials	SF4L • RF Photonics and Secure Communications	SF4M • Advanced Photonic Integrated Circuitry	FF4N • Nonlinear Processes in Sub-wavelength Systems, 2D Materials, and Metasurfaces	SF4O • Optical Methods for Chemical Sensing				

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The American Physical Society (APS) publishes the Physical Review collection, the world's most widely read physics research and review journals.

Please stop by booth #310 to learn more about our newest journals *PRX Energy*, a fully open access journal focused on the interests and needs of the broad and diverse energy research community and *PRX Quantum* an open access journal focused on quantum research and technologies with a lasting impact.

IEEE Photonics Society

The CLEO Hub, Booth 512 Email: photonicssociety@ieee.org Website: www.PhotonicsSociety.org

The IEEE Photonics Society is the professional home for a global network of scientists and engineers who represent the laser, optoelectronics, and photonics community. The Society provides its members with professional growth opportunities, publishes journals, sponsors conferences, and supports local chapter and student activities around the world.

Visit the IEEE Photonics Society booth within the CLEO Hub for more information. When you join or renew an IEEE Membership at the booth, eligible members will receive 50% off membership dues and all benefits through 31 December 2022. A professional IEEE Photonics Society Membership is as low as USD 10, and students can receive 50% off IEEE dues with the code, FU-TURE50.

IEEE members are also welcomed to visit the IEEE Member Lounge, sponsored by the IEEE Photonics Society. Come to the IEEE membersonly lounge to relax, grab a snack, and an appreciation gift. There, IEEE TryEngineering resources will be dispersed, and IEEE Thought Leader interviews will take place throughout the week.

IEEE Lounge Schedule:

Tuesday, 17 May: 10:00-17:00 Wednesday, 18 May: 10:00-17:00 Thursday, 19 May: 10:00-15:00

Optica (Formerly OSA)

The CLEO Hub, Booth 113 Email: info@optica.org Website: www.optica.org

Optica (formerly OSA), Advancing Optics and Photonics Worldwide, is the society dedicated to promoting the generation, application, archiving and dissemination of knowledge in the field. Founded in 1916, it is the leading organization for scientists, engineers, business professionals, students and others interested in the science of light. Optica's renowned publications, meetings, online resources and in-person activities fuel discoveries, shape real-life applications and accelerate scientific, technical and educational achievement. Optica has more than 22,500 members with 290 member companies that support 488k+ professionals in over 183 countries and spanning academia, government and industry, call Optica their professional home. Stop by to meet Optica staff, and learn more about our publications, conferences and meetings and membership for individuals and companies.

The CLEO Hub

Exhibit Hall 1 17 - 19 May 2022

Tuesday, 17 May 10:00 - 16:00 Wednesday, 18 May 10:00 - 19:00 Thursday, 19 May 10:00 - 15:30



EXHIBITOR BOOTH NUMBER AND NAME

112 Quantum Design, Inc.

- 113 Optica
- 114 Vescent Photonics, Inc.
- 118 **Prospective Instruments** LK OG
- 119 DataRay Inc.
- 120 Micro Photon Devices **Picoquant Photonics North** America, Inc. Quandela Quantum Opus
- 121 Edmund Optics, Inc.
- **124** Guiding Photonics
- 126 Synopsys, Inc.
- 128 IXBLUE
- 202 Altos Photonics, Inc. **EKSMA Optics** EKSPLA Light Conversion-USA STANDA

- 203 Menlo Systems GmbH
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