

# Exhibits and Show Floor Programs

Gain Access to Thought Leaders, Hot Products  
and Ground-breaking Technologies

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# OFC

The future of optical networking  
and communications

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## TECHNICAL CONFERENCE

8 - 12 March 2020

## SHORT COURSES

8 - 9 March 2020

## EXHIBITION

10 - 12 March 2020

San Diego, California, USA

[ofcconference.org](http://ofcconference.org)



# Location

## San Diego Convention Center

111 W Harbor Drive  
San Diego, California 92101  
USA

# Dates

## 10 February 2020

Advance Registration Deadline  
(23:59 EST)

## 14 February 2020

Hotel Reservation Deadline

## 8 - 12 March 2020

Technical Conference

## 8 - 9 March 2020

Short Courses

## 10 - 12 March 2020

Exhibits and Show Floor Programs

# Support

## General Information

+1.202.416.1907  
+1.800.766.4672  
custserv@osa.org

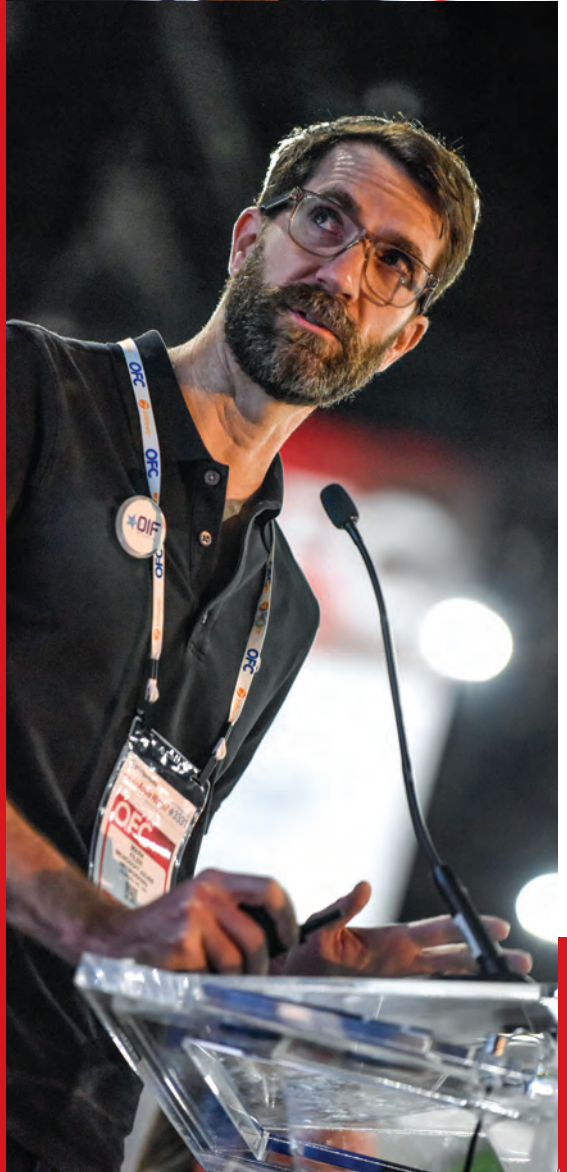
## Registration

+1.855.326.8341  
+1.224.563.3121  
ofc@csreg.zohodesk.com

## Hotel Reservations

+1.800.465.9101  
+1.240.439.2949  
ofc@experient-inc.com

# OFC



## It's Here!

### The Year's Premier Event in Telecom and Data Center Optics

OFC is the world's largest conference and exhibition for optical communications and networking professionals.

Nearly 15,000 manufacturers, developers, end users and other business and technology leaders attend from 70 countries seeking the future direction of the industry.

OFC is the go-to source for information on new products and forward-looking market intelligence and trends.

## It's Free!

### Exhibits Pass Plus Registration Includes:

- Access to the exhibition with over 700 exhibitors
- Market Watch – 7 panel discussions covering the latest application topics and trending business issues.
- Network Operator Summit – keynote and 2 panels provide the inside perspective from network operators and service providers – their issues, drivers and requirements.
- Data Center Summit – keynote and 1 panel address different aspects of optical technologies that impact data centers.
- Over 20 business programs on the show floor
- Plenary Session featuring 3 industry luminaries
- 10 interactive hot topic workshops
- OFC Career Zone Live
- OFC 2020 Buyers' Guide

**Register today for Exhibits Pass Plus!**

[ofcconference.org/registration](https://ofcconference.org/registration)

# Schedule

	Sunday, 8 March	Monday, 9 March	Tuesday, 10 March	Wednesday, 11 March	Thursday, 12 March
<b>General</b>					
Registration*	07:30 – 19:00	07:30 – 18:00	07:00 – 18:00	07:30 – 17:00	07:30 – 16:00
Exhibition and Show Floor			10:00 – 17:00	10:00 – 17:00	10:00 – 16:00
Unopposed Exhibit-only Time			10:00 – 14:00	12:30 – 14:00	12:30 – 14:00
OFC Career Zone Live			10:00 – 17:00	10:00 – 17:00	10:00 – 16:00
Short Courses (fee required)	09:00 – 20:00	08:30 – 17:30			
Workshops	13:00 – 18:00				
Plenary			08:00 – 10:00		
Poster Sessions				10:30 – 12:30	10:30 – 12:30
Special Keynote: Celebrating 50 Years of Light-speed Connections			18:15 – 19:00		
Conference Reception (Ticket required for Exhibits Pass Plus attendees)			19:00 – 20:30		
<b>Show Floor Programs</b>					
<b>MARKET WATCH (SPONSORED BY HUAWEI)</b>					
Panel I: State of the Industry			10:30 – 12:00		
Panel II: 5G and Re-thinking Access Networks			12:30 – 14:00		
Panel III: Optical Interconnect and Computing for Scaling Machine Learning (ML) Systems			14:30 – 16:00		
Panel IV: What Is Next for Data Center Interconnects?				15:30 – 17:00	
Panel V: Inside the Data Center					10:30 – 12:00
Panel VI: Advanced Packaging and Photonic Integration					12:30 – 14:00
Panel VII: IP+WDM Architecture Evolution					14:30 – 16:00
<b>NETWORK OPERATOR SUMMIT</b>					
Keynote: Chih-Lin I, <i>China Mobile Chief Scientist, Wireless Technologies, China Mobile Research Institute, China</i>				10:30 – 11:15	
Panel I: Next Generation Access Network				11:15 – 12:45	
Panel II: Transport on a Plug				13:30 – 15:00	
<b>DATA CENTER SUMMIT (SPONSORED BY INNOLIGHT)</b>					
Keynote: Jeffrey Cox, <i>Partner Director Network Architecture, Microsoft, USA</i>			11:30 – 12:15		
Data Center 2020 – Less Hyperscale and More Co-location and Compute at the Edge?			12:15 – 13:45		

All times reflect Pacific Time Zone

\* Hours subject to change

	Tuesday, 10 March	Wednesday, 11 March	Thursday, 12 March
<b>INFRASTRUCTURE MAKEOVER AND NETWORKING</b>			
5G Architectures and Service Considerations	12:15 – 13:15		
Accelerating ROI on the Road to SDN	16:00 – 17:00		
The Disaggregated Transport Network (TIP)		11:30 – 13:00	
Cloud Network Evolution Bandwidth Drivers (IEEE Future Directions)		13:15 – 14:45	
Open, Multi-vendor Networks – Design, Management and Operations (OpenConfig)		15:30 – 17:00	
<b>INTRA AND INTER DATA CENTER CONNECTIVITY</b>			
Ethernet Interoperability and Deployments – New and Legacy Solutions Work Together (Ethernet Alliance)	10:15 – 11:15		
400ZR Specifications Update (OIF)	13:30 – 14:30		
Embedded Optics and How They Should Be Done to Support the OEM Eco-system	15:00 – 17:00		
New High-bandwidth, Non-DSP Interface for Data Center and Campus Interconnects (Open Eye MSA)		15:00 – 16:00	
Design Consideration of Next Generation Ethernet Switches With Higher Speed Optics			10:15 – 11:15
System Evaluation of On-board Optics (COBO)			11:30 – 12:30
<b>OTHER</b>			
AIM Photonics Member Successes and Updates (AIM Photonics)	11:00 – 12:00		
Standards Update on 5G Transport, Higher Speed PON, Latest OTN Technologies and Interoperable Optical Coherent Interfaces (ITU-T SG15)	14:45 – 15:45		
112 Gbps Electrical Interfaces – An OIF Update on CEI-112G		16:15 – 17:00	
3D Sensing Uses in Consumer and Automotive Markets			12:15 – 13:30
POF Symposium (POFTO)			13:45 – 14:45
Fiber Types and Amplifiers: Choices and Trade-offs			15:00 – 16:00
<b>COMMERCIALY SPONSORED SESSIONS</b>			
Preparing the Transport Network for 5G (Juniper Networks)	13:50 – 14:50		
Revolutionizing the Economics of Pluggable Optics with Silicon Photonics (Juniper Networks)		10:15 – 11:15	
Transforming Network Operations Through Automation (Juniper Networks)			12:45 – 13:45
Unleashing the Full Potential of Silicon Photonics (Acacia Communications Inc.)		13:30 – 14:30	
Beyond 400ZR...What Comes Next? (Acacia Communications Inc.)			11:00 – 12:00
<b>PRODUCT SHOWCASES</b>			
Company Product Presentations	10:15 – 10:45	10:15 – 13:30 14:30 – 15:30	10:15 – 10:45



# Special Sessions

## Plenary

The plenary speakers at OFC include an industrial leader and a research leader, both covering topics related to the technical core of the conference, and a visionary speaker linking topics outside OFC's focus to the conference.



**Qi Bi**  
*President, China  
Telecom Technology  
Innovation Center, Chief  
Technology Office,  
China Telecom Beijing  
Research Institute*

5G Evolution: Challenges  
and Opportunities



**Karsten Danzmann**  
*Vice Managing Director,  
Laser Interferometry  
and Gravitational Wave  
Astronomy, Max Planck  
Institute for Gravitational  
Physics, Germany*

The Challenge and Impact of  
Detecting Ripples in Spacetime



**Sir David Payne**  
*Director,  
Optoelectronics  
Research Centre,  
University of  
Southampton, UK*

Is There a Future for Silica  
as an Optical Material?

## Workshops

Interactive workshops discuss and debate the latest technologies featuring a panel of invited speakers. See complete descriptions and speakers at [ofcconference.org/workshops](https://ofcconference.org/workshops)

800G and Beyond: Will Coherent Prevail at Short-Reach Distances?

Are Radical Photonic Devices and Architectures Needed for Future Data Centers?

Converged 5G and Heterogeneous Services Access Networks: How to Achieve Ultra-low Latency and High Reliability?

Does Disaggregation Support Data Center Evolution?

Network Analytics in the Age of Machine Learning: How to Share Data and Maximize Synergies Among Transport Systems and Network Operators

Optical Components for fJ/bit Exascale Computing: How and When?

Optics for Neuromorphic Computing and Machine Learning: Status, Prospects and Challenges

Trends and Perspectives in Space-division Multiplexed Transmission and Related Devices

What ROADM/OXC Technologies Will Cost-effectively Enable Dynamic and Reconfigurable Optical Networks in 5G Era?

What Will Drive the Transition to Coherent Intra-Data-Center Optics?

# Special Events

## Celebrating 50 Years of Light-speed Connections

In 1970, two significant technical achievements led to the development of practical fiber optical communications: the demonstration of low-loss fibers (16dB/km) and the first CW room-temperature semiconductor laser. Since then, numerous other breakthroughs have led to increasing the bandwidth and reach of fiber links, enabling the World Wide Web, video streaming, trans-oceanic high-capacity links, high-capacity wireless communications and many other data services.

At the 2020 OFC Conference and Exhibition, come celebrate the successes of the OFC community that have facilitated light-speed connections between individuals across geographic and oceanic boundaries.

Highlights include:

### Special Keynote

The evolution of technology is often a history of firsts. The initial demonstration of low-loss fibers and CW diode lasers have led to other important developments including; the first electrically pumped VCSEL, the first transatlantic fiber cable, commercial WDM systems, the deployment of InP photonic integrated circuits and the commercialization

of silicon photonics to mention a few. This special presentation from one of our industry's leaders looks back at 50 years of discovery and concludes with an overview of how these technologies have impacted our world – from instant, worldwide communication to enabling 5G, the Internet and the Internet of Things.

### The Timeline of Innovation

As we look back at the discoveries of years past and speculate about what is yet to come, OFC unveils a unique show-floor exhibit that surveys 50 years of optical fiber innovations – from the first demonstration of low-loss fiber in 1970 to efficient 400GbE transport at any distance today. Browse the timeline of milestones, and see the progression of invention through artifacts and imagery.

### Conference Reception

The special keynote will be followed by an enhanced, themed conference reception featuring an array of food and drink. (Requires a ticket for Exhibits Pass Plus attendees.)

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**CORNING**

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**THORLABS**





## Exhibition

**Fit a Year's Worth of Meetings into Just Three Days!**

Visit more than 700 participating companies showcasing network equipment and software, active and passive components, test and manufacturing equipment, data center/IT products and cable and fiber. Only OFC offers the size and scope to compare and contrast vendors, giving you the information you need to make all your technology decisions in one place.

### **Experience the Most Comprehensive Exhibition in the Industry**

- Check out multi-vendor interoperability demos
- See and compare new products
- Meet with vendors
- Explore customized solutions
- Network with colleagues
- Establish new contacts
- Learn what's hot
- Attend business sessions
- Speak with recruiters from top companies



## Exhibitors and Sponsors as of November 2019

View the floor plan, review company descriptions and find products and vendors of interest. [ofcconference.org/exhibithall](http://ofcconference.org/exhibithall)

(Sponsors are highlighted in red)

3M Electronics Materials Solutions Division  
3SAE Technologies  
**AC Photonics, Inc.**  
**Acacia Communications, Inc.**  
Accelight Technologies, Inc.  
Accelink Technologies Co., Ltd. & WTD  
Accumold  
ACON Optics Communications, Inc.  
Adamant Namiki Precision Jewel Co., Ltd.  
ADSANTEC, Inc.  
ADVA  
Advanced Fiber Resources (Zhuhai) Ltd.  
Advanced Micro Foundry  
Advanced Microoptic Systems GmbH  
Aerotech Inc.  
AFL  
Agilecom Photonics Solutions Guangdong Limited  
Agiltron, Inc.  
AIM Photonics  
Aitelong Technology Co., Ltd.  
Akribis Systems, Inc.  
Albis Optoelectronics  
**Alibaba Group**  
Alight Technologies APS  
Allwave Lasers Devices, Inc.  
Alnair Labs Corporation  
Alpine Optoelectronics, Inc.  
American Technical Ceramics  
AMETEK Electronic Components & Packaging  
Amonics Ltd.  
Amphenol  
Analog Devices  
Analog Photonics  
Anritsu Company  
A-One Technology Ltd.  
APAC Opto Electronics, Inc.  
APAT Optoelectronics  
APEX Technologies  
Apogee Optocom Co., Ltd.  
Applied Optoelectronics, Inc.  
Applied Thin-Film Products  
Aragon Photonics Labs  
Arden Photonics, Ltd.  
Arista Networks  
Arrayed Fiberoptics Corporation  
ASI/Silica Machinery, LLC  
Asia Optical Co., Inc.  
ASM AMICRA Microtechnologies  
ASM Pacific Technology  
ATOP Corporation  
Avient Solutions, Inc.  
Auxora, Inc.  
AVIC JONHON OPTRONIC TECHNOLOGY CO., LTD.  
Avo Photonics, Inc.  
Axcen Photonics Corporation

Axetris AG  
Bandwidth10 Ltd.  
Beijing Grish Hitech Co., Ltd.  
Benchmark Electronics, Inc.  
Berlin Partner für Wirtschaft und Technologie GmbH  
BKTEL Photonics  
Bola Technologies  
Brimrose Corporation of America  
Bristol Instruments, Inc.  
Broadcom  
Browave Corporation  
Cadence Design Systems, Inc.  
Cailabs SAS  
CALIENT Technologies  
Cambridge Industries USA, Inc.  
Canovate Elektronik Endustri Ticaret A.S.  
CASTECH, Inc.  
CCL Optoelectronics Pvt. Ltd.  
Centera Photonics, Inc.  
ChemOptics  
Chengdu Superxon Communication Technology Co., Ltd.  
Chengdu Tsuhan Science & Technology Co., Ltd.  
Chiral Photonics, inc.  
Chroma ATE Inc.  
Chuxing Optical Fiber Application Technologies, Lt  
Cicor Group  
**CIENA Corporation**  
**Cisco Systems, Inc.**  
Cleveland Electric Laboratories  
Cloud Light Technology Limited  
CN-J Technology Co., LTD.  
Coastal Connections  
CODIXX AG  
Coherent Solutions  
CompoundTek Pte. Ltd.  
Connected Fibers  
Consortium for On-Board Optics (COBO)  
Conweal Technologies Co., Ltd.  
CorActive High-Tech, Inc.  
Cornerstone  
**Corning Incorporated**  
COSET, Inc.  
Craftmark Cable Markers  
CreaLights Technology Co., Ltd.  
CREDO  
Crestec Corporation  
Crowntech Photonics Co., Ltd.  
CRXCONEC Company Ltd.  
Daitron, Inc.  
Dandong Futian Exactitude Machinery Co., Ltd.  
Danyang Yuqiao Precision Component Co., Ltd.  
DATA-PIXEL  
Delta Electronics (Americas), Ltd.  
Denselight Semiconductors PTE Ltd.  
DiCon Fiberoptics, Inc.

Dimension Technology Co., Ltd.  
Direct Optical Research Company  
Discovery Semiconductors, Inc.  
Domaille Engineering, LLC  
Dowlake Microsystems  
DustPhotonics, Inc.  
East China Research Institute of Microelectronics (ECRIM)  
East Photonics, Inc.  
East Point Communication Technology Co., Ltd.  
East Tender Optoelectronics Corp.  
ECI Telecom  
ECOC 2020  
EFFECT Photonics B.V.  
EKINOPS  
ElectroniCast Consultants  
Elenion Technologies, LLC  
Emcore Corporation  
Enable USA Components, Inc.  
Eoptolink Technology Inc., Ltd.  
EOSPACE, Inc.  
Epoxy Technology, Inc.  
Ethernet Alliance  
Eugenlight Technologies  
European Patent Office  
EXFO  
Exporior Laboratories, Inc.  
F&K Delvotec Inc.  
Fabrinet  
Ferrotec USA  
Fiber Instrument Sales, Inc.  
Fiber Locator  
Fiber Optic Center, Inc.  
Fiber Plus International  
**Fibercore**  
FiberLabs, Inc.  
Fibernet SRL  
Fiberon Technologies, Inc.  
FiberPro, Inc.  
FiberQA LLC  
FiberStory  
ficonTEC (USA) Corporation  
FINETECH  
Finisar  
Fi-ra Photonics Co., Ltd.  
Fishman Corporation  
FiTek Photonics Corporation  
FitTech Co., Ltd.  
Fluke Networks  
Flyin Optronics Co., Ltd.  
FOCI Fiber Optic Communications, Inc.  
Focuz Manufacturing Co., Ltd.  
Formerica Optoelectronics Inc.  
Foxconn Interconnect Technology  
Frontlynk Technologies, Inc.  
Fujitsu Network Communications  
Fujitsu Optical Components  
G&H  
General Photonics Corp.  
Genair

Global Communication Semiconductors, Inc.  
GLOBALFOUNDRIES  
Gloriole Electropic Technology Corp.  
Go!Foton  
GOC Co., Ltd.  
GOC International Technology Corp.  
Golight Technology  
GouMax Technology, Inc.  
Gowanda Components Group  
GPD Optoelectronics Corp.  
Guandong Huajiyu Technology, Co., Ltd.  
Guangdong Ruigu Optical Network Communication  
Guilin GLsun Science and Tech Group Co., LTD  
Hengtong Optic-Electric Co., Ltd.  
Henkel Corporation  
Hikari, Inc.  
Hikifune Co., Ltd.  
HiLight Semiconductor, Ltd.  
Hisense Broadband, Inc.  
Hitachi High Technologies America  
Hitronics Technologies, Inc.  
HTD Fibercom Co., Limited  
Huangshi Sunshine Optoelectronic, LLC  
**Huawei Technologies USA**  
HUBER+SUHNER  
**HYC Co., Ltd.**  
IBM Canada  
II-VI  
IMEC  
Industrial Technologies LLP  
**Infinaera**  
Infinaera – GSM  
INNO Instrument, Inc.  
**InnoLight**  
Innovative Micro Technology  
Innovium  
INOPTICALS Inc.  
InPhenix  
Inphi Corporation  
Inphotech  
INTEC E&C Co. Ltd.  
Intel Corporation  
International Telecommunication Union (ITU)  
inTEST Thermal Solutions  
IQE  
Ironwood Electronics  
IXBLUE  
Jabil AOC Technologies  
JBTX  
JC Com Co., Ltd.  
Jenoptik  
JGR Optics  
Jiangsu Etern Co., Ltd.  
JiangSu UNIKIT Optical Technologies Co., Ltd.  
Jiangxi Ruiyuan Precision Machining Co., Ltd.  
Johanson Technology, Inc.  
**Juniper Networks**  
KAPID (Korea Association for Photonics Industry)  
Kelvin Nanotechnology Limited  
Keysight Technologies

KGS America  
Kingbolt Technology (HK) Co., Ltd.  
Knowles Precision Devices  
Kohoku Kogyo Co., Ltd.  
Komshine Technologies Limited  
Korea Optron Corp.  
Krell Technologies, Inc.  
KST World Corp.  
Kyocera International, Inc.  
Kyosemi Opto America Corp.  
Laser Components USA Inc.  
LETI  
Liaoning Youopto Technology, Co. Ltd.  
LiComm Co., Ltd.  
**LiGenTec SA**  
Lightcomm Technology Co., Ltd.  
LightCounting, LLC  
Lightel Technologies, Inc.  
Lightip Technologies  
Lightron, Inc.  
Linktel Technologies Co., Ltd.  
Lintes Technology Co., Ltd.  
LioniX International  
Leverage Technology, Inc.  
Lonte Technology Co., Ltd.  
LUCEDA Photonics  
Lumacron Technology Ltd.  
Lumentum  
Lumerical, Inc.  
Lumibird  
Luna Innovations  
Luxshare-ICT  
MACOM  
Malico, Inc.  
Maxim Integrated Products  
MaxLinear  
Mellanox Technologies  
**Menara Networks**  
**An IPG Photonics Company**  
Mentor Graphics Corporation  
Mianyang Optink Technology Co., Ltd.  
Micram Microelectronic GmbH  
Microchip Technology  
MicroCircuit Laboratories LLC  
Microlap Technologies, Inc.  
Mitsubishi Electric US, Inc.  
Mitsubishi Materials USA Corporation  
Mixed-Signal Devices Inc.  
ModuleTek Limited  
Molex  
MoSys, Inc.  
MPB Communications, Inc.  
MPI Corporation  
MPNICS Co., Ltd  
MRSI Systems  
MultiLane SAL  
Murata Electronics  
Nanometer Technologies, Inc.  
nanoPrecision Products  
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NetQuest Corporation  
New Ridge Technologies

Newport Corporation  
Nicslab Pty Ltd  
Ningbo Getek Communications Equipment Co., Ltd.  
Ningbo GEYIDA Cable Technology Co. Ltd.  
Ningbo GMF Telecom Technology Co., Ltd.  
Ningbo Guangyu-Tech Co. Ltd.  
Ningbo Hi-Sun IMP & EXP Co. Ltd.  
Ningbo Jitong Electronics Co., Ltd.  
Ningbo Yuda Communication Technology, Co. Ltd.  
Nippon Electric Glass Co., Ltd.  
Nissin Kasei USA Corp  
Nokia  
Notice Co., Ltd.  
nPoint, Inc.  
NTT Advanced Technology Corporation  
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**NTT Electronics Corporation**  
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OE Solutions, Co., Ltd.  
OECS Communication Co., Ltd.  
OFS  
OgMentum, Inc.  
OIF  
O-Net Communications (Shenzhen) Ltd.  
Opt Gate Co., Ltd.  
Optelligent, LLC  
Optical Connections  
Optical Fiber Packaging  
OptiCLARITY  
Optilab, LLC  
Optiwave Systems, Inc.  
OptiWorks, Inc.  
OPTOKON  
Optoscribe Ltd.  
OptoSigma Corporation  
OptoTest Corporation  
Optoway Technology, Inc.  
Optowide Technologies Co., Ltd.  
Optronics Co., Ltd., The  
**OSA Industry Development Associates (OIDA)**  
OSI Laser Diode Incorporated  
OSI Optoelectronics, Inc.  
Otrans Communication Technologies (Hangzhou) Co., Ltd.  
Ousent Technologies Co, Ltd.  
Oxford Fiber, Ltd.  
**OZ Optics**  
Pacific (Liaocheng)  
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Pacific Microchip Corp.  
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Palomar Technologies, Inc.  
PE Fiberoptics Limited  
PETRA  
PFC Flexible Circuits Ltd.  
Phase Sensitive Innovations  
PHIX Photonics-Assembly  
Phononic  
Photon Design  
Photon Kinetics, Inc.  
Photonics Media  
PI – Physik Instrumente LP  
PICadvanced  
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PIXAPP  
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Precision Fiber Products, Inc.  
Precision Optical Transceivers, Inc.  
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PriTel, Inc.  
Promet Optics  
Prysmian Group  
PSC-SC  
Raith America, Inc.  
RAM Photonics, LLC  
Ranovus USA  
Raysung Photonics, Inc.  
Rayzer Optoelectronics  
Technology Co., Ltd.  
Reflex Photonics  
Renesas Electronics America Inc.  
RMT, Ltd.  
Rockley Photonics  
Rosendahl Nextrom  
**Samtec, Inc.**  
**Santec USA Corporation**  
**Sanwa Electronics USA Corporation**  
SCHOTT Electronic Packaging  
SCINTIL Photonics  
Sedona Systems  
Seikoh Giken Co., Ltd.  
Sekisui Chemical Co., Ltd.  
Semtech Corporation  
**SENKO Advanced Components, Inc.**  
SETNA  
SFO Technologies PVT LTD  
Shanghai B&A Technology Co., Ltd.  
Shaoxing ZKTel Equipment Co., Ltd.  
Shenzhen ADTEK  
Technology Co., Ltd  
Shenzhen CY COM Product Co. Ltd.  
Shenzhen DYS Fiber Optic  
Technology Co., Ltd.  
Shenzhen Eagleton  
Technology Industrial Limited  
Shenzhen Fastrain  
Technology Co., Ltd.  
Shenzhen Fiber Stamp  
Technology Co., Ltd.  
Shenzhen Fibercan Optical Co., Ltd.  
Shenzhen Gongjin  
Electronics Co., Ltd.  
Shenzhen HJF Electro-optics  
Technology Co. Ltd.  
Shenzhen JDD Tech New  
Material Co., Ltd.  
Shenzhen KOC  
Communication Co., Ltd.  
Shenzhen Lasun Network  
Cabling Co., Ltd.  
Shenzhen Lightwit Photonics Co. Ltd.  
Shenzhen Olinkom  
Technology Co., Ltd  
Shenzhen Opticking  
Technology Co., Ltd.  
Shenzhen Optone  
Technology Co., Ltd.  
Shenzhen Opway Communication  
Shenzhen PD-OPTIC  
Technology Co., Ltd.  
Shenzhen Puhuxin T  
echnology Co., Ltd.  
Shenzhen SDG Information Co., Ltd

Shenzhen Sinovo Telecom, Ltd.  
Shenzhen Solar Valley Scitech  
Dev. Co., Ltd.  
Shenzhen Tanlink Optics Co., Ltd.  
Shenzhen TIBTRONIX Technology  
Shenzhen T-ORCH Telecom  
Technology Co. Ltd.  
Shenzhen Wintop Optical  
Technology Co., Ltd  
SHENZHEN XIANGTONG CO.,LTD  
Shenzhen Youngsun Com Optical  
Fiber Cable Co., Ltd.  
SHF Communication  
Technologies AG  
Shijia Photons Technology Co., Ltd.  
Sichuan Jiuzhou  
Opto-Electronics, Ltd.  
**Sicoya GmbH**  
SiFotonics Technologies Co., Ltd.  
Silex Microsystems  
Sindi Technologies Co., Ltd.  
Skylane Optics  
SmarAct, Inc.  
SMART Photonics B.V.  
Smartoptics  
SOC America, Inc.  
Somacis  
Sony Semiconductor  
Solutions Corporation  
Source Photonics  
Speedphoton Technology  
Spirent  
Srico, Inc.  
Stelight Instrument Co., Ltd.  
Sterlite Technologies Limited  
Sticklers Fiber Optic Cleaners  
Sumitomo Electric Device  
Innovations U.S.A., Inc  
Sumitomo Electric Industries, LTD.  
Sumix Corporation  
Suncall America  
Sunstar Communication  
Technology Co., Ltd.  
SURWINS Technologies Co., Ltd.  
SUSS MicroOptics SA  
Suzhou Agix Optical  
Technology Co., Ltd.  
Suzhou GL Foresight Electronic  
Technology Co., Ltd.  
Suzhou Green Telecom  
Technology Co., Ltd.  
Suzhou Lieqi Intelligent  
Equipment Co. Ltd.  
Suzhou TFC Optical  
Communication Co., Ltd.  
**Synopsys, Inc.**  
Syntec Optics  
SZOPT Communication Co., Ltd.  
T Plus, Co., Ltd.  
T&S Communications Co. Ltd.  
TE Connectivity  
Teccia, Inc.  
Technohands Corp.  
Technisco, Ltd.  
Telecom Infra Project  
Telescent, Inc.  
TeraXion  
The Light Connection, Inc. (TLC)  
The Suzanne R. Nagel Lounge  
**Thorlabs**  
Tianjin Eloik Communication  
Equipment Technology

Timbercon, Inc.  
TomoeGawa Co., Ltd.  
Topstone Communication, Inc.  
TowerJazz  
Triformix Optronics Technology  
(Suzhou) Co., Ltd.  
Triple Stone  
TRUMPF Photonic  
Components GmbH  
TTM Technologies  
UC Instruments Corp  
U-Flex Co., Limited  
ULTRA TEC Mfg., Inc.  
**US Conec, Ltd.**  
Vanguard Automation GmbH  
Vectrawave  
VeEX, Inc.  
**VI Systems GmbH**  
Viasat, Inc.  
VIAVI Solutions  
Vishay Intertechnology  
Vital Materials  
VLC Photonics S.L.  
**VPIphotonics**  
W2 Optronics, Inc.  
WAKA Manufacturing  
WanJun Engineering SDN BHD  
WaveSplitter Technologies, Inc.  
Wooriro Co., Ltd.  
Wuhan Amalink Technologies  
Wuhan HuaGong Genuine  
Optics Tech Co., Ltd  
Wuhan RayOptek Co., Ltd.  
Wuhan Yi Valley Optoelectronic  
Technology Co., Ltd.  
Wuhan Yilut Technology Co., Ltd.  
Wuxi Taclink Optoelectronics  
Technology Co., Ltd.  
XDK Communication Equipment  
(Huizhou) Co., Ltd  
Xelic  
Xena Networks  
**XFS Communications, Inc.**  
Xgiga Communication  
Technology Co., Ltd.  
Xiamen Beogold  
Technology Co., Ltd.  
Xiamen San-U Optronics Co., Ltd.  
**Xilinx, Inc.**  
Yangtze Optical Fibre and  
Cable Co., Ltd.  
Yelo Limited  
Yokogawa Corporation of America  
Yuasa Electronics Co., LTD.  
Yuetsu Seiki Co., Ltd.  
YumaWorks, Inc.  
Zeus, Inc.  
ZGT Optical Comm Limited  
Zhejiang Hanxin  
Optoelectric Corp. Ltd.  
Zhejiang Jiawei Communication  
Equipments Co., LTD.  
Zhejiang Lante Optics Co., Ltd.  
Zhejiang Oryarwa  
Zhejiang Wanma Tianyi  
Zhongruisulian (Wuhan)  
Technology Co., Ltd.  
Zhongshan Meisu  
Technology Co., Ltd.  
Zibo Fengyan Electronics  
Component Co., Ltd



## Business Programs

Three theaters on the show floor feature presentations by experts from major global brands and key industry organizations. Get high-level takes on hot topics and market trends. Learn about the state of the industry, emerging technologies and recommended courses of action to tackle today's toughest business challenges.

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THEATER II SPONSORED BY



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THEATER III SPONSORED BY



# Hear Industry Leaders

Show floor programs feature companies and industry groups driving the evolution of optical networks.

## COMPANIES

II-VI	Comcast	Intel
Acacia Communications	Equinix	Juniper
ADVA Optical Networking	euNetworks	MACOM
Alibaba Group	Facebook	Mellanox
Arista Networks	Fujitsu	Microsoft
Ayar Labs	Futurewei	Nokia
British Telecom	Google	Oracle
Broadcom	Hewlett Packard	Semtech
Ciena	Huawei	Verizon
Cisco	Inphi Corp.	

## INDUSTRY GROUPS





# Show Floor Programs

## Market Watch

### GET AN INSIDER'S LOOK AT TODAY'S MOST IMPORTANT INDUSTRY DEVELOPMENTS

This three-day series of panel discussions addresses the latest application topics and business issues in optical communications and networking. Market Watch features esteemed speakers from top carriers, system vendors, market analyst firms and component companies.

#### ORGANIZER

N5 Network Operator Summit,  
Market Watch and Data Center Summit  
Sub-Committee Chair

Karen I. Matthews, *Technology and Market Development Manager, Science and Technology, Corning Incorporated, USA*

#### SPONSORED BY



#### Panel I: State of the Industry

Tuesday, 10 March, 10:30 – 12:00

##### MODERATOR

Vladimir Kozlov, *Founder and CEO, LightCounting Market Research, USA*

Industry and financial analysts present their unique view on the current state of the optical market, discussing areas that encompass components, subsystems and system manufacturers as well as market influences and drivers. The session covers factors that influenced the past year and describes trends that are expected to define the future.

##### SPEAKERS

Heidi Adams, *Executive Director, Network Infrastructure Research, Informa, Canada*

Lisa Huff, *Principal Analyst, Ovum, USA*

Jimmy Yu, *Vice President, Dell'Oro Group, USA*

#### Panel II: 5G and Re-thinking Access Networks

Tuesday, 10 March, 12:30 – 14:00

##### MODERATOR

Ed Harstead, *Lead Technology Strategist, Nokia, USA*

This session discusses the future of TDM PONS and whether they can support the requirements for 5G backhaul, midhaul and fronthaul and whether PONs for 5G transport will be widely adopted. It will also cover Fixed Wireless Access (FWA) and whether it is a viable FTTH substitute.

It will bring varying viewpoints to help sort out the proliferating PON standardization developments – what are the use cases, with particular emphasis on 5G mobile transport and what are the competing technologies.

##### SPEAKERS

Kevin Cheng, *Senior Director of PLM and Business Development – APAC, MACOM Technology Solutions, Inc, USA*

Frank Effenberger, *Vice President Fixed Access Network Lab, Futurewei Technologies, USA*

Per Hansen, *VP Marketing and Sales, OE Solutions America, USA*

Steve Penticost, *Vice President Global Business Development, ADVA Optical Networking, UK*

Stefaan Vanhastel, *CTO, Nokia Fixed Networks, USA*

#### Panel III: Optical Interconnect and Computing for Scaling Machine Learning Systems

Tuesday, 10 March, 14:30 – 16:00

##### MODERATOR

Ryohei Urata, *Technical Lead/Manager, Google, USA*

Until recently, the architectures and systems for executing Machine Learning (ML) workloads were based on traditional optical interconnects used for data center networking or high-performance computing. In this session cloud operators, component/system vendors and startups discuss optical technologies for more efficient and scalable ML systems.

##### SPEAKERS

Paolo Costa, *Principal Researcher, Microsoft, UK*

Nicolas Harris, *CEO, Lightmatter, Inc., USA*

Benny Koren, *VP Architecture, Mellanox Technologies, Israel*

Robert (Ted) Weverka, *Senior Optical Physicist and IP Lead, Fathom Computing, USA*

## **Panel IV: What Is Next for Data Center Interconnects?**

Wednesday, 11 March, 15:30 - 17:00

### **MODERATOR**

Loukas Paraschis, *Senior Director, Infinera, USA*

This panel discusses the extent to which innovations in automation, programmability, management abstraction, control-plane disaggregation and open transport architectures have been adopted in current and future DCI networks. It will also cover the potential value from optimization and traffic engineering.

### **SPEAKERS**

Andy Bechtolsheim, *Founder, Chief Development Officer and Chairman, Arista Networks, USA*

Nancy El-Sakkary, *Staff Network Engineer, Google, USA*

Michael Strunz-Kroll, *Head of Architecture and Engineering, euNetworks, UK*

Chongjin Xie, *Senior Director, Alibaba Group, USA*

## **Panel V: Inside the Data Center**

Thursday, 12 March, 10:30 - 12:00

### **MODERATOR**

Hideki Isono, *Senior Professional Engineer, Fujitsu Optical Components, USA*

This panel discusses technology options to achieve the next phase of the data center technology roadmap beyond 400G. There are several alternatives to explore such as 800G and 1.6T, pluggable options, on-board optics and co-packaging, which will all require technology breakthroughs and time to mature.

### **SPEAKERS**

Andy Bechtolsheim, *Founder, Chief Development Officer and Chairman, Arista Networks, USA*

Robert Blum, *Director of Marketing and New Business, Intel, USA*

Brad Booth, *Next Cloud System Architecture, Microsoft, USA*

Jefery Maki, *Distinguished Engineer II, Juniper Networks, USA*

Mark Nowell, *Fellow, Cisco Systems Inc., Canada*

Sang-Yoon (Sy) Rhee, *Director, Marketing, Fujitsu Optical Components America, Inc., USA (FOCUS)*

## **Panel VI: Advanced Packaging and Photonic Integration**

Thursday, 12 March, 12:30 - 14:00

### **MODERATOR**

Takashi Saida, *Senior Manager, NTT, Japan*

Continuous growth of data center performance and high performance computing requires wider bandwidth optical interconnects. This will require innovative photonic integration technology. The panel debates the current reality and the future promise of packaging technology, photonic integration and the associated eco systems.

### **SPEAKERS**

Peter De Dobbelaere, *Director Technology Development, Cisco, USA*

Raj Krishnaswamy, *Vice President Product, Optical Communications, Rockley Photonics, USA*

Thomas Lillieberg, *GM Photonic Integration, Intel, USA*

Patrick Lo, *Co-Founder and President, Advanced Micro-Foundry Pte Ltd, Singapore*

Rob Stone, *Distinguished Engineer, Broadcom, USA*

Andrew Wheeler, *HPE Fellow, Vice President and Deputy Director, Hewlett Packard Labs, Hewlett Packard Enterprise, USA*

Anthony Yu, *Vice President, Computing and Wired Infrastructure (CWI) Segment Business Unit, Global Foundries, USA*

## **Panel VII: IP+WDM Architecture Evolution**

Thursday, 12 March, 14:30 - 16:00

### **MODERATOR**

Helen Xenos, *Sr. Director, Portfolio Marketing, Ciena, USA*

The miniaturization of electro-optics alongside advancements in CMOS that enable lower power/footprint are enabling the deployment of coherent optics in smaller pluggable form factors across new areas of the network. These advancements bring with them new opportunities for deploying switches/routers with integrated or coherent pluggable optics, also known as IP over DWDM (IPoDWDM). This session discusses different points of view on the evolution of networks toward IP+DWDM architecture.

### **SPEAKERS**

Robert Keys, *Senior Director Optical Transmission, Ciena, USA*

Praveen Kumar, *Vice President, Bharti Airtel, India*

# Network Operator Summit

## GET THE INSIDE PERSPECTIVE FROM NETWORK OPERATORS

This dynamic program presents the inside perspective from service providers and network operators – their issues, drivers and how their requirements may impact the future of the industry. Everyone in the supply chain, from equipment manufacturers to components, will want to hear what’s next in meeting the needs of all network operators.

### ORGANIZER

N5 Network Operator Summit,  
Market Watch and Data Center Summit  
Sub-Committee Chair  
  
Karen I. Matthews, *Technology and Market  
Development Manager, Science and  
Technology, Corning Incorporated, USA*

### Keynote

Wednesday, 11 March, 10:30 - 11:15



Chih-Lin I, *China  
Mobile Chief Scientist,  
Wireless Technologies,  
China Mobile Research  
Institute, China*

### Panel I: Next Generation Access Network

Wednesday, 11 March, 11:15 - 12:45

#### MODERATOR

Julie Kunstler, *Principal Analyst, Network  
Infrastructure and Software, Ovum, USA*

This panel presents and discusses case studies of next-gen access deployments covering telco operators, cable operators and mobile network operators. It covers different approaches such as a “universal” access network, next-gen TDM-based GPON and EPON, HFC-based Full Duplex DOCSIS and 5G.

### SPEAKERS

Cedric Lam, *Engineering Director,  
Google Fiber, USA*  
  
Ariyanto S. Pawiro, *Assistant Vice  
President of Access Network Strategy,  
PT. Telekomunikasi Indonesia, Indonesia*  
  
Albert Rafel, *Optical Networks Research  
Manager, British Telecom, UK*  
  
Glen Wellbrock, *Director of Optical  
Transport Planning, Verizon, USA*

### Panel II: Transport on a Plug

Wednesday, 11 March, 13:30 - 15:00

#### MODERATOR

Joy Jiang, *Technical Program Manager,  
Google Fiber, USA*

This session assembles speakers from leading edge operators around the world that are exploring and deploying IPoDWDM. Other speakers include systems manufacturers and component vendors that are developing IPoDWDM technology. Throughout the session, speakers will articulate IPoDWDM use cases and technology updates.

### SPEAKERS

Jörg-Peter Elbers, *SVP Advanced  
Technology, Standards & IPR, ADVA  
Optical Networking, Germany*  
  
Mark Filer, *Principal Engineer, Optical  
Networking, Microsoft, USA*  
  
Tad Hofmeister, *Optical Network  
Architect, Google, USA*  
  
Radha Nagarajan, *CTO Interconnects,  
Inphi, USA*



## Data Center Summit

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### ORGANIZER

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Market Watch and Data Center Summit  
Sub-Committee Chair

Karen I. Matthews, *Technology and Market  
Development Manager, Science and  
Technology, Corning Incorporated, USA*

### Keynote

Tuesday, 10 March, 11:30 – 12:15



Jeffrey L. Cox, *Partner  
Director Network  
Architecture,  
Microsoft, USA*

### Panel: Data Center 2020 – Less Hyperscale and More Co-location and Compute at the Edge?

Tuesday, 10 March, 12:15 – 13:45

#### MODERATOR

Robert Blum, *Director of Marketing  
and New Business, Intel, USA*

This panel discusses the latest trends in data centers from an infrastructure and networking hardware perspective. What vectors and opportunities exist to reduce power consumption, size and cost; what architectures are being considered inside data centers and how data centers are evolving.

Ed Baichtal, *Solutions Architect,  
Equinix, USA*

Dan Pitt, *Senior Vice President,  
MEF Forum, USA*

Saurabh Sandhir, *Vice President  
of Product Management, Nuage/  
Nokia, USA*

Zuwei Shen, *Senior Staff  
Hardware Engineer, Google, USA*

Chongjin Xie, *Senior Director,  
Alibaba, USA*

## Infrastructure Makeover and Networking

### 5G Architectures and Service Considerations

Tuesday, 10 March, 12:15 – 13:15

This discussion addresses distributed RAN versus centralized RAN versus cloud RAN versus full cloud BTS and the trade-offs versus benefits of each.

### Accelerating ROI on the Road to SDN

Tuesday, 10 March, 16:00 – 17:00

This panel provides different viewpoints on the cost investment in SDN solutions versus return on investment and foster a discussion around how to best address the issue.

### The Disaggregated Transport Network

Wednesday, 11 March, 11:30 – 13:00

#### ORGANIZER

Telecom Infra Project (TIP)

This panel session covers the latest engineering innovations coming from the Open Optical and Packet Transport Group of the Telecom Infra Project. Short engineering talks may highlight specific technological areas such as: optical simulation environments, disaggregated optical systems, open technologies in telecom operator networks and software abstraction interfaces for optical components.

### Cloud Network Evolution Bandwidth Drivers

Wednesday, 11 March, 13:15 – 14:45

#### ORGANIZER

IEEE Future Directions

This panel debates the bandwidth requirements that are expected to drive the evolution and innovations in cloud network architectures and related systems and technologies.

### Open, Multi-vendor Networks – Design, Management and Operations

Wednesday, 11 March, 15:30 – 17:00

#### ORGANIZER

OpenConfig

In this session, panelists review and discuss some of the latest developments in software to help operators design and manage multi-vendor heterogeneous, disaggregated networks at scale.

## Intra and Inter Data Center Connectivity

### Ethernet Interoperability and Deployments – New and Legacy Solutions Work Together

Tuesday, 10 March, 10:15 – 11:15

#### ORGANIZER

Ethernet Alliance

This panel discusses the testing that results in successful end user deployments. It addresses the evolution of new PAM4 based solutions – 50GbE and above – entering the market and the advancements supporting Ethernet interoperability testing for the successful deployment and integration into legacy networking environments.

### 400ZR Specification Update

Tuesday, 10 March, 13:30 – 14:30

#### ORGANIZER

Optical Internetworking Forum (OIF)

A panel of industry experts representing the coherent eco-system discusses and debates the conflicting demands for a near-term, high-volume, interoperable, moderate reach, coherent 400G optical link. The status of the OIF's project to define a 400ZR link specification will also be provided.

### Embedded Optics and How They Should be Implemented to Support the OEM Eco-system

Tuesday, 10 March, 15:00 – 17:00

What will be the implementation of optical interfaces to support the next generation of Ethernet switching chipsets? This panel debates embedded optics versus optical transceivers and will include COBO, Co-packaged Optics (CPO) Collaboration, Ayar Labs and optical transceiver vendors.

### New High-bandwidth, Non-DSP Interface for Data Center and Campus Interconnects

Wednesday, 11 March, 15:00 – 16:00

#### ORGANIZER

Open Eye MSA Group

This panel discusses a new solution for low cost and high speed interconnects for data centers and campus networks that will make new optical modules cost effective and easy to deploy. It utilizes PAM4 modulation and a unique application of CDR and analog PLL to provide non-DSP-based signal receive and demodulation.

### Design Consideration of Next Generation Ethernet Switches with Higher Speed Optics

Thursday, 12 March, 10:15 – 11:15

This panel discusses the current view of the market that is driving innovations in switching, ASIC and optical module design, the progress and future plan for higher capacity switching systems and the advancement and level of integration of optical module design.

### System Evaluation of On-board Optics

Thursday, 12 March, 11:30 – 12:30

#### ORGANIZER

Consortium for On-Board Optics (COBO)

This panel reviews the learnings that have come from designed systems and building networks using onboard optics and why these learnings are critical for moving optics forward in the industry, especially as the industry looks toward developments such as terabit optical modules and co-packaged optics.

## Other

### AIM Photonics Member Successes and Updates

Tuesday, 10 March, 11:00 – 12:00

#### ORGANIZER

AIM Photonics

In this session, a number of key members and partners of AIM will present their research and commercial successes.

### Standards Update on 5G Transport, Higher Speed PON, Latest OTN Technologies and Interoperable Optical Coherent Interfaces

Tuesday, 10 March, 14:45 – 15:45

#### ORGANIZER

ITU-T SG15

This session presents hot topics from the latest development of international standards (ITU-T Recommendations) within ITU-T SG15. It covers standardization work related to transport network support of IMT-2020/5G mobile, higher speed PON (Passive Optical Network), latest OTN (Optical Transport Network) and other transport technologies. This session also discusses interoperable optical interfaces at 200 Gbit/s and 400 Gbit/s per wavelength.



## **112 Gbps Electrical Interfaces – An OIF Update on CEI-112G**

Wednesday, 11 March, 15:00 – 17:00

### **ORGANIZER**

Optical Internetworking Forum (OIF)

A panel of OIF contributors discusses the ongoing CEI-112G electrical interface development projects, and the new architectures they will enable including chiplet packaging, co-packaged optics and internal cable based solutions. The panel provides an update on the multiple interfaces being defined by the OIF including CEI-112G MCM, XSR, VSR, MR and LR for 112 Gbps applications of die-to-die, chip-to-module, chip-to-chip and long reach over backplane and cables.

## **3D Sensing Uses in Consumer and Automotive Markets**

Thursday, 12 March, 12:15 – 13:30

This panel discusses how new 3-D sensing applications are shaping the optics industry and whether there is an opportunity for technical differentiation or is it mostly about execution and investment capital and ultimately whether 3-D sensing provides cost benefits to the core optics business.

## **POF Symposium**

Thursday, 12 March, 13:45 – 14:45

### **ORGANIZER**

Plastic Optical Fiber Trade Organization (POFTO)

The POF Symposium covers recent developments in plastic optical fibers (POF) technology, applications, technical standards, industry progress and new markets. Leading technical experts and key industry players will discuss areas such as automotive, aerospace, consumer electronics and more.

## **Fiber Types and Amplifiers: Choices and Trade-offs**

Thursday, 12 March, 15:00 – 16:00

This panel reviews the various types of optical fibers deployed today in the long haul network segments and how they perform with different amplifier technologies.

## **Commercially Sponsored Sessions**

### **Preparing the Transport Network for 5G**

Tuesday, 10 March, 13:50 – 14:50

#### **ORGANIZER**

Juniper Networks

This panel addresses key technologies for 5G networks including automation, orchestration, transport protocols, edge clouds, wireless-wireline convergence (WWC) and threat-aware infrastructure.

### **Revolutionizing the Economics of Pluggable Optics with Silicon Photonics**

Wednesday, 11 March, 10:15 – 11:15

#### **ORGANIZER**

Juniper Networks

This session covers Juniper's unique approach to optics manufacturing and the associated benefits.

### **Unleashing the Full Potential of Silicon Photonics**

Wednesday, 11 March, 13:30 – 14:30

#### **ORGANIZER**

Acacia Communications

Silicon photonics technology is increasingly finding its way into multiple network applications. This session discusses how the industry is transitioning from a technology validation phase to a focus on packaging and automation advancements, further leveraging electronics packaging techniques for optics.

### **Beyond 400ZR...What Comes Next?**

Thursday, 12 March, 11:00 – 12:00

#### **ORGANIZER**

Acacia Communications

This session discusses the potential areas of expansion beyond 400ZR such as: data rates beyond 400G, channel spacing evolution, technology enablers and how these will collectively affect next generation architectures beyond the DCI edge.

### **Transforming Network Operations Through Automation**

Thursday, 12 March, 12:45 – 13:45

#### **ORGANIZER**

Juniper Networks

This session explores automation and orchestration over the network lifecycle (Design->Implement->Operate) in Metro, Edge and Core Networks.

# Short Courses

While you can attend the exhibition at no cost, you can supplement your experience by getting in-depth training from industry experts. Short Courses require a registration fee.

Find complete course descriptions, objectives and instructor biographies at [ofcconference.org/shortcourse](https://ofcconference.org/shortcourse)

Sunday, 8 March		
09:00 - 12:00	SC177	High-speed Semiconductor Lasers and Modulators
	SC208	Optical Fiber Design for Telecommunications and Specialty Applications
	SC444	Optical Communication Technologies for 5G Wireless
	SC470	Secure Optical Communications
	SC485	Advanced Fiber Access Networks <b>NEW</b>
09:00 - 13:00	SC105	Modulation Formats and Receiver Concepts for Optical Transmission Systems
	SC328	New Developments in High-speed Optical Networking
	SC384	Background Concepts of Optical Communication Systems
	SC395	Modeling and Simulation of Optical Transmitter and Receiver Components
	SC432	<b>Hands-on:</b> Silicon Photonics Component Design & Fabrication
	SC461	High-capacity Data Center Interconnects
	SC469	<b>Hands-on:</b> Laboratory Automation and Control Using Python (Beginner)
13:00 - 16:00	SC216	An Introduction to Optical Network Design and Planning
	SC217	Applications of Radio-over-fiber Technologies including Future 5G Networks
	SC433	Introduction to Photodetectors and Optical Receivers
	SC460	Digital Coherent Optical System Performance Basics
13:00 - 17:00	SC203	400 Gb/s and Beyond Transmission Systems, Design and Design Trade-offs
	SC267	Silicon Microphotronics: Technology Elements and the Roadmap to Implementation
	SC369	Test and Measurement for Signals with Complex Optical Modulation
	SC390	Introduction to Forward Error Correction
	SC463	Optical Transport SDN: Architectures, Applications and Actual Implementations
13:30 - 17:30	SC443	Optical Amplifiers: From Fundamental Principles to Technology Trends
	SC452	FPGA Programming for Optical Subsystem Prototyping
17:00 - 20:00	SC205	Integrated Electronic Circuits for Fiber Optics
	SC428	Link Design and Modeling for Intra Data Center Optical Interconnects
	SC484	Transport Evolution due to Cloud Services and Network Resiliency <b>NEW</b>

Monday, 9 March		
08:30 - 12:30	SC102	WDM in Long-haul Transmission Systems
	SC160	Microwave Photonics
	SC178	Test and Measurement for Data Center/Short Reach Communications
	SC341	Multi-carrier Modulation and Superchannels for Terabit-class Transceivers
	SC446	<b>Hands-on:</b> Characterization of Coherent Opto-electronic Subsystems
	SC448	Software Defined Networking for Optical Networks: a Practical Introduction
	SC453A	<b>Hands-on:</b> Fiber Optic Handling, Measurements and Component Testing
	SC468	Advanced FEC Techniques for Optical Communications
	SC473	Photonic Switching Systems
	SC483	<b>Hands-on:</b> Machine Learning in Optical Networks <b>NEW</b>
09:00 - 12:00	SC487	Laboratory Automation and Control Using Python (Advanced) <b>NEW</b>
	SC114	Passive Optical Networks (PONs) Technologies
	SC261	ROADM Technologies and Network Applications
	SC359	Datacenter Networking 101
	SC408	Space Division Multiplexing in Optical Fibers
	SC450	Design, Manufacturing and Packaging of Opto-electronic Modules
	SC465	Transmission Fiber and Cables
	SC486	Optoelectronic Devices for LIDAR and High-BW or 3D Sensing <b>NEW</b>
13:30 - 16:30	SC429	Advances in Flexible Photonic Networks and Open Architectures
	SC431	Photonic Technologies in the Data Center
	SC447	The Life Cycle of an Optical Network: From Planning to Decommissioning
	SC459	Multimode Photonic Devices, Components and Characterization
	SC462	Introduction to Pluggable Optics
	SC464	SDN Inside and In Between Data Centers
13:30 - 17:30	SC325	Highly Integrated Monolithic Photonic Integrated Circuits
	SC327	Modeling and Design of Long-haul Fiber-optic Communication Systems
	SC347	Reliability and Qualification of Fiber-optic Components
	SC357	Circuits and Equalization Methods for Coherent and Direct Detection Optical Links
	SC393	Digital Signal Processing for Coherent Optical Transceivers
	SC451	Optical Fiber Sensors
	SC453B	<b>Hands-on:</b> Fiber Optic Handling, Measurements and Component Testing
	SC454	<b>Hands-on:</b> Introduction to Silicon Photonics Circuit Design
	SC472	<b>Hands-on:</b> Controlling and Monitoring Optical Network Equipment

# Registration

Categories	On or Before 10 Feb. (US\$)			After 10 Feb. (US\$)		
Exhibits Pass Plus**	\$0			\$0		
<b>Full Conference</b>						
Member*	\$679			\$806		
Student Member*	\$199			\$281		
Non-member	\$851			\$990		
Student Non-member	\$239			\$363		
<b>Short Courses</b>	<i>Half Day</i>	<i>Hands-on</i>	<i>SC432 Hands-on</i>	<i>Half Day</i>	<i>Hands-on</i>	<i>SC432 Hands-on</i>
Member*	\$275	\$335	\$435	\$335	\$385	\$485
Non-member	\$350	\$410	\$510	\$410	\$480	\$580

	Full Conference	Exhibits Pass Plus**	Short Course Only
Plenary Session	•	•	•
Special Keynote: Celebrating 50 Years of Light-speed Connections	•	•	
Technical Sessions and Rump Session	•		
Exhibition & Show Floor Programming	•	•	•
Market Watch	•	•	•
Network Operator Summit	•	•	•
Data Center Summit	•	•	•
OFC Career Zone Live	•	•	•
Sunday Workshops	•	•	•
Poster Sessions	•	•	•
Conference Reception	•	<i>Ticket Required</i>	
Conference Program Book	•		
Technical Digest on USB	•		
Postdeadline Papers Book	•		
Exhibits 2020 <i>Buyers' Guide</i>	•	•	•
Short Course Notes (for Short Course attendees only)			•

\* Member of IEEE Communications Society, IEEE Photonics Society or The Optical Society

\*\* Exhibits Pass Plus is not for use by presiders, poster presenters or speakers. These audiences must register as a Full Conference attendee.

# Hotel

Experient, the official hotel reservation vendor, brings you unbeatable rates at a variety of hotels within walking distance to the San Diego Convention Center. And, when you reserve a room through Experient, you also help OFC keep meeting costs as low as possible. Deadline to save is 14 February 2020. To check hotel availability, learn about new hotels recently added or to reserve your accommodations, visit [ofcconference.org/hotel](http://ofcconference.org/hotel)

## San Diego Convention Center

111 W Harbor Drive  
San Diego, California 92101

	Convention Center Distance	Rates from (per night, US \$)*
Courtyard San Diego Downtown	.7 mile	\$243
Embassy Suites San Diego Bay Downtown	.8 mile	\$259
Hard Rock Hotel San Diego	.2 mile	\$280
Hilton San Diego Bayfront	.2 mile	\$291
Hilton San Diego Gaslamp Quarter	.3 mile	\$281
Horton Grand Hotel	.4 mile	\$199
Hotel Indigo	.8 mile	\$238
Hotel Palomar San Diego	1.0 mile	\$241
Hotel Salomar	.5 mile	\$251
Hotel Z	.6 mile	\$246
Hyatt Andaz Hotel	.7 mile	\$279
Manchester Grand Hyatt San Diego	.3 mile	\$292
Marriott Marquis San Diego Marina	.2 mile	\$292
Omni San Diego Hotel	.5 mile	\$279
Pendry San Diego	.3 mile	\$269
San Diego Marriott Gaslamp Quarter	.5 mile	\$276
Sheraton Harbor Island	3.2 miles	\$246
The Bristol Hotel	1.0 mile	\$218
The Sofia Hotel	.9 mile	\$238
The US Grant – A Luxury Collection Hotel	.9 mile	\$276
The Westgate Hotel	1.0 mile	\$251
The Westin San Diego Gaslamp Quarter	.7 mile	\$265
Wyndham San Diego Bayside	1.2 miles	\$192

\* Hotel rates are listed in U.S. dollars (unless noted otherwise) and do not include taxes or any hotel fees. Rates shown are for single rooms. Double rooms may have an increased rate.



## Register Online Now

Exhibits Pass Plus registration provides free access to the 3-day exhibition and show floor programs.

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### **Bonus! Exhibits Pass Plus Registration also includes:**

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  - OFC 2020 Buyers' Guide
- 

**Advance Registration Ends  
10 February 2020**

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# OFC

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