stay up-to-date with
the latest technology

ATTENDEE PROGRAM

OFC
The future of optical networking and communications

TECHNICAL CONFERENCE
11 – 15 March 2018

EXHIBITION
13 – 15 March 2018

San Diego, California, USA

ofcconference.org
DEAR COLLEAGUES,

The largest optical communications conference in the world, OFC, is being held in San Diego this year. It’s a conference you cannot afford to miss! OFC is more than just fiber optics. It has in-depth coverage of photonic integrated circuits, optical networking, digital-signal processing, ASICs, free-space optical communications, quantum optics and more. Whether you are in the academic or the commercial community, at OFC you will have the opportunity to listen, learn, collaborate, take a course, see new products, meet with colleagues and vendors, conduct business, see the state-of-the-art and glimpse into the future of optical communications.

OFC is the only global conference that truly represents the entire ecosystem, from research to the marketplace and paints a complete picture of the industry — where it is today and where it is going tomorrow in terms of research, technologies and product solutions. Get the most up-to-the-minute, in-depth research results in your topic area in technical sessions, or explore other areas of interest in tutorials or Short Courses — all presented by internationally recognized experts. You can see how current research may impact the future of your work and generate new ideas and solutions to your current and future problems. In addition you can get a view of the competitive landscape to see what others are doing, what drives their solutions, and how they may be different from your own.

Perhaps the biggest value of OFC is the face-to-face interactions and the connections you make. Whether you talk to the experts, catch up with former colleagues, establish new relationships or find new vendors or customers, these personal interactions are invaluable; and you can make them all at one place in just 5 days.

Join us in San Diego for OFC 2018 to gain the knowledge and connections you need to stay competitive.

See you there!

San Diego Convention Center
111 West Harbor Drive
San Diego, California 92101 USA

10 January
Conference Program Online

12 February
Advance Registration Deadline (23:59 EST)

15 February
Hotel Reservation Deadline

7 March
Postdeadline Paper Submission Deadline

11 – 15 March
Technical Conference

11 – 12 March
Short Courses

13 – 15 March
Exhibit and Show Floor Programs

Martin Birk
AT&T Labs, USA

Xiang Liu
FutureWei Technologies, Inc., USA

David J. Richardson
University of Southampton, UK

Robert D. Doverspike
Network Evolution Strategies LLC, USA

Daniel Kuchta
IBM TJ Watson Research Center, USA

William Shieh
University of Melbourne, Australia
it’s here

OFC 2018 is the year’s premier event in telecom and data communications.

In fact, it’s the world’s largest conference and exhibition for optical communication and networking professionals.

OFC draws nearly 15,000 business and technology leaders from 65 countries from around the world, who come seeking the future direction of the industry, from the latest research and developments to the newest technologies.

get the latest advancements at OFC

OFC brings together the people, products and information that drive optical networking and communications.

The program is comprehensive — from research to marketplace, from components to systems and networks, from technical sessions to the exhibition.

The peer-reviewed technical conference features more than 120 invited speakers, the thought leaders in the industry who present the highlights of emerging technologies. The technical program includes special symposia, the open platform summit, one-hour in-depth tutorials, interactive workshops, panels and the stimulating rump session.

You can also take a Short Course and learn from the experts about important topics in the industry — there are over 50 to choose from at a variety of educational levels.

The show floor is buzzing with new product announcements and what’s trending in the market. Over 700 exhibitors keep you current on all the latest products and innovative solutions. Three theaters feature Market Watch, The Network Operator Summit and over 20 programs covering the state-of-the-industry and hot topics.

Hear from leading industry groups on standards work, implementation agreements and technical recommendations that are defining new approaches and building solutions that incorporate emerging technologies. Hear from such groups as COBO, Ethernet Alliance, IEEE, OIF, ON2020, TIP and others.
Note the new schedule for 2018 to plan your travel accordingly. All workshops will be held on Sunday, with technical sessions starting Monday morning. The Postdeadline Paper Session will be held from 16:30 to 18:30 on Thursday. All times reflect Pacific Time Zone.

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<td>Poster Session</td>
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<td>Unopposed Exhibit-Only Time</td>
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<td>10:00 – 14:00</td>
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<tr>
<td>Expo Theater I Market Watch</td>
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<td>Network Operator Summit</td>
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<tr>
<td>Expo Theater II &amp; III</td>
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<td>OFC Career Zone Kiosks</td>
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<tr>
<td>OFC Career Zone Live</td>
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<tr>
<td>Awards Ceremony and Luncheon (add’t fee)</td>
<td>12:00 – 14:00</td>
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**CONFERENCE HIGHLIGHTS**

- **520+ Peer-reviewed Technical Presentations**
  Get all your education needs met under one roof
- **120+ Invited Experts in the Field**
  Hear the leaders in the industry
- **700+ Exhibits**
  Attend the world’s largest optical networking and communications show
- **15,000 Attendees**
  Gain unparalleled networking opportunities
- **Postdeadline Sessions**
  Keep current with up-to-the-minute research
- **Show Floor Programs**
  Presentations by industry for industry on market trends and standards

**TRENDING TOPICS**

- Advanced devices and fibers for high-speed data center links
- Enabling 5G and IoT through next-generation optical access
- Manufacturing and packaging of photonic and electronic subsystems
- Multiplexing, transmission and switching techniques for Tb/s networks
- New network architectures and applications enabled by SDN and NFV
- Open hardware and software platforms for cloud scale networks
- Optical wireless and visible light communications
- Silicon and integrated photonics for datacom and telecom

ofcconference.org
# short course schedule

## SUNDAY, 11 MARCH

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<tr>
<th>Time</th>
<th>Course Code</th>
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<tr>
<td>09:00 – 12:00</td>
<td>SC177</td>
<td>High-speed Semiconductor Lasers and Modulators</td>
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<td>SC328</td>
<td>New Developments in High-speed Optical Networking: OTN beyond 100G, 100G/200G/400G Ethernet, Flex Ethernet</td>
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<tr>
<td></td>
<td>SC444</td>
<td>Optical Communication Technologies for 5G Wireless</td>
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<td></td>
<td>SC447</td>
<td>The Life Cycle of an Optical Network: From Planning to Decommissioning</td>
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<tr>
<td></td>
<td>SC463</td>
<td>Optical Transport SDN: Architectures, Applications and Actual Implementations [NEW]</td>
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<tr>
<td>09:00 – 13:00</td>
<td>SC105</td>
<td>Modulation Formats and Receiver Concepts for Optical Transmission Systems</td>
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<td></td>
<td>SC384</td>
<td>Background Concepts of Optical Communication Systems</td>
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<td>SC395</td>
<td>Modeling and System Impact of Optical Transmitter and Receiver Components</td>
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<td></td>
<td>SC454</td>
<td>[Hands-on] Introduction to Silicon Photonics Circuit Design</td>
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<td></td>
<td>SC461</td>
<td>High-capacity Data Center Interconnects [NEW]</td>
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<tr>
<td>13:00 – 16:00</td>
<td>SC216</td>
<td>An Introduction to Optical Network Design and Planning</td>
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<td></td>
<td>SC429</td>
<td>Introduction to Flexible Photonic Networks</td>
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<td></td>
<td>SC433</td>
<td>Introduction to Photodetectors and Optical Receivers</td>
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<td></td>
<td>SC462</td>
<td>Introduction to Pluggable Optics [NEW]</td>
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<tr>
<td>13:00 – 17:00</td>
<td>SC203</td>
<td>100 Gb/s and Beyond Transmission Systems, Design and Design Trade-offs</td>
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<td>SC325</td>
<td>Highly Integrated Monolithic Photonic Integrated Circuits</td>
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<td>SC369</td>
<td>Test and Measurement for Metro and Long-haul Communications</td>
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<tr>
<td>13:30 – 17:30</td>
<td>SC267</td>
<td>Silicon Microphotons: Technology Elements and the Roadmap to Implementation</td>
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<td>SC327</td>
<td>Modeling and Design of Fiber-optic Communication Systems</td>
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<td></td>
<td>SC393</td>
<td>Digital Signal Processing for Coherent Optical Systems</td>
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<tr>
<td></td>
<td>SC450</td>
<td>Design, Manufacturing, and Packaging of Opto-electronic Modules</td>
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<tr>
<td>17:00 – 20:00</td>
<td>SC205</td>
<td>Integrated Electronic Circuits for Fiber Optics</td>
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<td></td>
<td>SC217</td>
<td>Optical Fiber Based Solutions for Next Generation Mobile Networks</td>
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<td></td>
<td>SC408</td>
<td>SDM Based Fiber-optic Transmission Systems</td>
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<td>SC451</td>
<td>Optical Fiber Sensors</td>
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## MONDAY, 12 MARCH

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<tr>
<td>08:30 – 12:30</td>
<td>SC102</td>
<td>WDM in Long-haul Transmission Systems</td>
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<td></td>
<td>SC114</td>
<td>Passive Optical Networks (PONs) Technologies</td>
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<td></td>
<td>SC178</td>
<td>Test and Measurement for Data Center/Short Reach Communications</td>
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<td></td>
<td>SC443</td>
<td>Optical Amplifiers: From Fundamental Principles to Technology Trends</td>
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<td></td>
<td>SC446</td>
<td>[Hands-on] Characterization of Coherent Opto-electronic Subsystems</td>
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<td>SC452</td>
<td>FPGA Programming for Optical Subsystem Prototyping</td>
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<td>SC460</td>
<td>Digital Coherent Optical System Basics: Transceiver Technology and Performance [NEW]</td>
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<tr>
<td>09:00 – 12:00</td>
<td>SC176</td>
<td>Metro Network Evolution</td>
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<td></td>
<td>SC359</td>
<td>Datacenter Networking 101</td>
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<td></td>
<td>SC390</td>
<td>Introduction to Forward Error Correction</td>
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<td></td>
<td>SC411</td>
<td>Multi-layer Interaction in the Age of Agile Optical Networking</td>
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<td>SC428</td>
<td>Link Design for Short Reach Optical Interconnects</td>
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<td>SC442</td>
<td>Free Space Switching Systems: PXC and WSS</td>
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<td>SC448</td>
<td>Software Defined Networking for Optical Networks: a Practical Introduction</td>
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<td></td>
<td>SC459</td>
<td>SDM Components and Devices [NEW]</td>
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<td></td>
<td>SC465</td>
<td>Transmission Fiber and Cables [NEW]</td>
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<td>13:30 – 16:30</td>
<td>SC208</td>
<td>Optical Fiber Design for Telecommunications and Specialty Applications</td>
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<td>SC261</td>
<td>ROADM Technologies and Network Applications</td>
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<td>SC385</td>
<td>Optical Interconnects for Extreme-scale Computing</td>
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<td>SC431</td>
<td>Photonic Technologies in the Data Center</td>
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<td>SC445</td>
<td>Visible Light Communications — the High Bandwidth Alternative to WiFi</td>
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<td>SC464</td>
<td>SDN Inside and In Between Data Centers [NEW]</td>
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<td>SC160</td>
<td>Microwave Photonics</td>
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<td>SC341</td>
<td>Multi-carrier Modulation: DMT, OFDM and Superchannels</td>
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<td>SC347</td>
<td>Reliability and Qualification of Fiber-optic Components</td>
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<td>SC432</td>
<td>[Hands-on] Silicon Photonics Component Design &amp; Fabrication</td>
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<td>SC449</td>
<td>[Hands-on] An Introduction to Writing Transport SDN Applications</td>
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<tr>
<td></td>
<td>SC453B</td>
<td>[Hands-on] Fiber Optic Handling, Measurements and Component Testing</td>
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</table>
Marcus Weldon is considered one of the luminaries in the industry in terms of the clarity, depth and breadth of his vision for the future of networks. He has championed many technological disruptions in telecommunications networks, from the evolution and convergence of networks to “all IP,” the evolution of copper-based access networks to support sophisticated interference cancellation (so-called vectoring), the evolution of wireless networks to highly-distributed networks of small cells and the emergence of virtualization and Software Defined Networking as profound industry changing forces that will drive a new integrated and federated network architecture and economics.

John Doyle’s research is on mathematical foundations for complex networks with applications in biology, technology, medicine, ecology, neuroscience and multiscale physics that integrate theory from control, computation, communication, optimization and statistics (e.g. Machine Learning). The emphasis is on universal laws and architectures, robustness/efficiency and speed/accuracy tradeoffs, adaptability, and evolvability and large scale systems with sparse, saturating, delayed, quantized, uncertain sensing, communications, computing and actuation.

Chengliang Zhang is Vice President of China Telecom Co Ltd Beijing Research Institute and Deputy Director of the China Communications Society Optical Communication Committee and is in charge of optical communication R&D in China Telecom. He has won two National Science and Technology Progress Awards of China as the leader scientist. He has also won more than 10 other major awards in China and contributed in the society both technically and economically. In 2006 the Ministry of Information Industry of China honored Mr. Zhang as “advanced researcher of information industry technology innovation”. In 2013 he became an expert in the National Expert Talents Project, and was awarded the “outstanding young experts” honorary title.

plenary speakers

MARCUS WELDON
President, Nokia Bell Labs, USA

John Doyle’s research is on mathematical foundations for complex networks with applications in biology, technology, medicine, ecology, neuroscience and multiscale physics that integrate theory from control, computation, communication, optimization and statistics (e.g. Machine Learning). The emphasis is on universal laws and architectures, robustness/efficiency and speed/accuracy tradeoffs, adaptability, and evolvability and large scale systems with sparse, saturating, delayed, quantized, uncertain sensing, communications, computing and actuation.

JOHN C. DOYLE
Jean-Lou Chameau
Professor of Control and Dynamical Systems, Electrical Engineering and BioEngineering, California Institute of Technology (Caltech), USA

CHENGLIANG ZHANG
Vice President, China Telecom Beijing Research Institute, China

Chengliang Zhang is Vice President of China Telecom Co Ltd Beijing Research Institute and Deputy Director of the China Communications Society Optical Communication Committee and is in charge of optical communication R&D in China Telecom. He has won two National Science and Technology Progress Awards of China as the leader scientist. He has also won more than 10 other major awards in China and contributed in the society both technically and economically. In 2006 the Ministry of Information Industry of China honored Mr. Zhang as “advanced researcher of information industry technology innovation”. In 2013 he became an expert in the National Expert Talents Project, and was awarded the “outstanding young experts” honorary title.
Cognitive Systems to Streaming Analytics and Network Management Evolution

• What are the key similarities and differences in network analytics, telemetry and cognitive systems between routing and optical transport? The symposium will particularly aim to explore these topics:
  • What are the key enabling technology and system innovations, and remaining limitations towards this new generation of network management and mediation for wireline transport based on streaming telemetry and network analytics? What is the current reality, and true future potential of cognitive systems?
  • What are the key similarities and differences in network analytics and cognitive systems between routing and optical transport?

Future Photonic Devices and Materials for Optical Communications

Organizers
Steven Koester, University of Minnesota, USA
Gunther Roelkens, Ghent University, Belgium
Yoichi Taira, Keio University, Japan

This symposium focuses on emerging photonic devices and materials for the next generation of optical communications. Topics will include 2D-, magneto-optic- and meta-materials, photonic neurons, QKD, topological photonics, entanglement, plasmonics and optomechanical resonators.

Challenges 5G Brings to Optical Fiber Communications Systems

Organizers
Philippe Chanclou, Orange Labs, France
Gee-Kung Chang, Georgia Institute of Technology, USA
Theodore Sizer, Nokia Bell Labs, USA

This symposium presents key 5G drivers and system requirements that will create market opportunities for optical fiber communications and photonic networking systems. The first session focuses on an overview of the requirements of various applications and ecosystems in 5G new radio era and the challenges that they place on the optical network solutions. The second session illustrates key optical technologies that can be developed to meet the 5G vision and goals.

Rump Session

The rump session encourages audience debate presenting opposing points of view. Session organizers open with short introductory presentations, followed by one-slide presentations from opposing points of view, followed by audience participation with organizers facilitating open discussion.

When Will Coherent Replace Direct Detection in the Data Center?

Organizer
Chris Cole, Finisar Corporation, USA

Coherent has now replaced IMDD (Intensity Modulated Direct Detection) in long reach transmission, regional and metro applications. Coherent vs. IMDD for 20km, 40km and 80km links at 100G and 400G is the subject of intense industry debate including in standards bodies and tough competition in the marketplace. Will the trend continue, and when if ever will Coherent replace IMDD for 500m, 1km and 2km data center links? The rump session will cover the pros and cons of each in terms of power consumption, cost, latency and more.

Special Programs

Lab Automation Hackathon

Organizers
Nick Fontaine, Nokia Bell Labs, USA
Binbin Guan, Acacia Communications, USA
Jochen Schroeder, Chalmers University of Technology, Sweden

In this hackathon several researchers with 10+ years of experience of lab automation will show you the power of using Python to quickly get a lab experiment running and display the measurements in a browser. You will learn from companies that work in photonics how they take advantage of Python to create easy interfaces to their software and hardware. Bring a laptop to participate in the exercise.

Connected OFCITY Challenge 2018: Lighting Up the Emerging World

Organizers
Inder Monga, ESNet, USA
Marco Ruffini, Trinity College Dublin, Ireland
Jun Shan Wey, ZTE, USA

Alibaba and Google will collaboratively take on the challenge to develop communications infrastructure and services based on requirements defined by CSquared and Network Startup Resource Center (NSRC), to address the pressing needs for two cities in a fast developing area in East Africa.

The scenarios will provide a realistic insight into the major issues faced by the communications industry in the region, which include network reliability, environmental restrictions, limited funds, regulatory issues and more.
tracks and topic categories

OFC features an exciting roster of invited speakers and tutorial speakers to anchor the technical sessions. These experts have been carefully chosen by subcommittees of over 150 volunteers representing the 16 topic categories. They have also put together a thought-provoking program of 10 interactive workshops designed to stimulate debate and discussion on time-critical topics highly important in the field today. Short Courses provide training from a distinguished faculty to expand your knowledge and advance your career.

The technical program and Short Courses are organized by topic category.

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<td>D2 Passive optical devices for switching and filtering</td>
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<td>D3 Active optical devices and photonic integrated circuits</td>
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<td>D4 Fiber and propagation physics</td>
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<td>D5 Fiber-optic and waveguide devices and sensors</td>
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<td>S3 Radio-over-fiber, free-space optics and sensing systems</td>
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<td>S4 Digital and electronic subsystems</td>
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<td>S5 Digital transmission systems</td>
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<td>N2 Control and management of multilayer networks</td>
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<td>N3 Network architectures and techno-economics</td>
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<td>N4 Optical access networks for fixed and mobile services</td>
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<td>N5 Market Watch and Network Operator Summit (invited program only)</td>
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| DSN6 Optical devices, subsystems and networks for Datacom and Computercom | 26   |

technical program

Presenting more than 120 invited speakers.

OFC features peer-reviewed technical sessions, workshops, tutorials and Short Courses in 16 topic categories.

The comprehensive program covers the technological breakthroughs and all the important topics in the field today.
TRACK D
Devices, Optical Components and Fiber

D1: ADVANCES IN DEPLOYABLE OPTICAL COMPONENTS, FIBERS AND FIELD INSTALLATION EQUIPMENT

INVITED SPEAKERS
SOA for Future PONs
Rene Bonk, Nokia Bell Labs, Germany

Traffic Engineering and Topology Programming
Monia Gholbadi, Microsoft, USA

25G Based PON Technology
Ed Harstead, Nokia, USA

Ultra-high-density MCF Connector Technology
Tetsu Morishima, Sumitomo Electric Industries, Ltd., Japan

Pizzabox Transponders Deployment in the Field and Related Issues
Giuseppe Rizzelli, Facebook, UK

High Performance InP PIC Technology Development Based on a Generic Photonic Integration Foundry
Francisco Soares, Fraunhofer Inst Nachricht Henrich-Hertz, Germany

VCSEL-based Optical Transceivers for Future Data Center Applications
Jim Tatum, Finisar Corporation, USA

Revolutionizing the Data Centers and HPCs — Optical Interconnects
Tolga Tekin, Fraunhofer IZM, Germany

WORKSHOP
Can Undersea System Designs be Truly “Open” and Independent from Initial Terminal Equipment Selections?
ORGANIZERS
Herve Fevrier, Facebook, USA
Dmitri Foursa, TE Subcom, USA
Lara Garrett, TE Subcom, USA

PANELS
Near Term, Large Scale Fiber Deployments for Evolving Networks
ORGANIZERS
Jing Li, Yangtze Optical Fibre and Cable, China
Alan McCurdy, OFS, Fiber Design & Simulation Group, USA
Danny Peterson, Verizon, USA

400G Optics for Hyperscale Data Centers
ORGANIZERS
Kenneth Jackson, Sumitomo Electric, USA
Xiaoxia Wu, Juniper, USA

SHORT COURSES
SC178 — Test and Measurement for Data Center/Short Reach Communications
Greg D. Le Cheminant, Keysight Technologies, USA

SC208 — Optical Fiber Design for Telecommunications and Specialty Applications
David J. DiGiovanni, OFS Labs, USA

SC347 — Reliability and Qualification of Fiber-Optic Components
David Maack, Corning, USA

SC450 — Design, Manufacturing and Packaging of Opto-electronic Modules
Twan Korthorst, Phoenix Software, Netherlands
Arne Leinse, Lionix, Netherlands
Peter O’Brien, Tyndall National Institute, Ireland
Kevin Williams, Eindhoven University of Technology, Netherlands

SC453A and B — [Hands-on] Fiber Optic Handling, Measurements and Component Testing
Steve Baldo, Seikoh Giken, USA
Keith Foord, Greenlee Communications, USA
Chris Heisler, OptoTest Corporation, USA
Steve Lane and Julien Maille, Data-Pixel, France

D2: PASSIVE OPTICAL DEVICES FOR SWITCHING AND FILTERING

INVITED SPEAKERS
3 Micron Silicon Photonics
Timo Aalto, VTT Technical Research Centre of Finland, Finland

Large-scale Silicon Photonic Switches
Eric Bernier, Huawei Technologies R&D, Canada

Fast, High-radix Silicon Photonic Switches
Tao Chu, Zhejiang University, China

In-line Optical Amplification for Silicon Photonics Platform by Flip-Chip Bonded InP-SOAs
Takeshi Matsumoto, Fujitsu Laboratories Ltd., Japan

Photonic Integration for Quantum Communications
Shayan Mookherjea, University of California San Diego, USA

Low-loss Silicon Photonic Switch Module Technology and its Application to Transponder Aggregators in Optical Network Nodes
Shigeru Nakamura, NEC Corporation, Japan

Packaging and Assembly Challenges for 5G6 Silicon Photonics Interposers
Brad Snyder, IMEC, Belgium

WORKSHOP
Will Optical Switching Drive Data Center Design in 2028?
ORGANIZERS
Haoshuo Chen, Nokia Bell Labs, USA
Piero Gambini, STMicroelectronics, Italy
Richard Jensen, Polatis, USA

TUTORIALS
Photonic Switch Fabrics in Computer Communications Systems
Benjamin Lee, IBM TJ Watson Research Center, USA

Optimized Switching of Wavelength and Space Dimensions in SDM
Dan Marom, Hebrew University of Jerusalem, Israel

SHORT COURSES
SC267 — Silicon Microphotonic: Technology Elements and the Roadmap to Implementation
Lionel Kimerling, MIT, USA

SC325 — Highly Integrated Monolithic Photonic Integrated Circuits
Chris Doerr, Acacia Communications, USA

SC384 — Background Concepts of Optical Communication Systems
Alan Willner, University of Southern California, USA

SC432 — [Hands-on] Silicon Photonics Component Design & Fabrication
Loukas Chrostowski, University of British Columbia, Canada

SC442 — Free Space Switching Systems: PXC and WSS
David Neilson, Nokia Bell Labs, USA

D3: ACTIVE OPTICAL DEVICES AND PHOTONIC INTEGRATED CIRCUITS

INVITED SPEAKERS
Optical Transceivers Using Heterogeneous Integration on Silicon
Gregory Fish, Juniper Networks Inc., USA

ORGANIZERS
Gregory Fish, Juniper Networks Inc., USA

WORKSHOP
Optical Packaging and Assembly Challenges for 5G6 Silicon Photonics Interposers
Brad Snyder, IMEC, Belgium

PACKAGING AND ASSEMBLY CHALLENGES FOR 5G6 SILICON PHOTONICS INTERPOSERS
Brad Snyder, IMEC, Belgium

SC442 — Free Space Switching Systems: PXC and WSS
David Neilson, Nokia Bell Labs, USA

D3: ACTIVE OPTICAL DEVICES AND PHOTONIC INTEGRATED CIRCUITS

INVITED SPEAKERS
Optical Transceivers Using Heterogeneous Integration on Silicon
Gregory Fish, Juniper Networks Inc., USA

ORGANIZERS
Gregory Fish, Juniper Networks Inc., USA

WORKSHOP
Optical Packaging and Assembly Challenges for 5G6 Silicon Photonics Interposers
Brad Snyder, IMEC, Belgium

PACKAGING AND ASSEMBLY CHALLENGES FOR 5G6 SILICON PHOTONICS INTERPOSERS
Brad Snyder, IMEC, Belgium
Heterogeneously Integrated III-V Lasers Fabricated Using Epitaxial Growth on an InP/SiO2/Si Substrate
Takuro Fujii, NTT Device Technology Laboratories, Japan

Nanoscale Optical Modulators: Application Drivers and Recent Developments
Gordon Keeler, Sandia National Labs, USA

Integrated Ferroelectric BaTiO3/Si Plasmonic Modulator Operated Beyond 100 Gbit/s
Andreas Messner, ETH Zurich, Switzerland

Highly Efficient Silicon Photonics Phase Modulator using Graphene
Marco Romagnoli, CNIT, Italy

Short Courses
SC177 – High-speed Semiconductor Lasers and Modulators
John Bowers, University of California at Santa Barbara, USA

SC205 – Integrated Electronic Circuits for Fiber Optics
Y. K. Chen, Nokia Bell Labs, USA

SC267 – Silicon Microphotonic Devices: Technology Elements and the Roadmap to Implementation
Lionel Kimmerling, MIT, USA

SC325 – Highly Integrated Monolithic Photonic Integrated Circuits
Chris Doerr, Acacia Communications, USA

SC384 – Background Concepts of Optical Communication Systems
Alan Willner, University of Southern California, USA

SC428 – Link Design for Short Reach Optical Interconnects
Petar Pepeljugoski, IBM Research, USA

SC431 – Photonic Technologies in the Data Center
Clint Schow, University of California, USA

SC433 – Introduction to Photodetectors and Optical Receivers
Joe Campbell, University of Virginia, USA

SC442 – Free Space Switching Systems: PXC and WSS
David Neilson, Nokia Bell Labs, USA

SC443 – Optical Amplifiers: From Fundamental Principles to Technology Trends
Shu Namiki, National Institute of Advanced Industrial Science and Technology (AIST), Japan
Michael Vasilyev, University of Texas at Arlington, USA

SC454 – [Hands on] Introduction to Silicon Photonics Circuit Design
Wim Bogaerts, University of Gent, Belgium

SC459 – SDM Components and Devices [NEW]
Nicolas Fontaine, Nokia Bell Labs, USA

D4: Fiber and Propagation

Invited Speakers
Few-mode and Multicore Amplifiers for SDM Transmissions
Laurent Bigot, Universite de Lille 1, France

Universal Fibers for Both Single-mode and Multimode Transmissions in Data Centers
Xi Chen, Corning Research & Development Corp, USA

Recent Progress and Outlook on Multicore Fiber for Practical Use
Tomohiro Gonda, Furukawa Electric, Japan

Requirements For Simulation-Aided Design Of SDM Systems
Igor Koltchanov, VPIphotonics, Germany

Recent Advances on MMFs for WDM and MDM
Denis Molin, Prysmian Group, USA

Outlook on In-fiber Silicon Photonics
Anna Peacock, University of Southampton, UK

Exploiting Angular Momentum of Light for Optical Communication
Siddharth Ramachandran, Boston University, USA

Ultra-low-loss Silica-core Optical Fiber
Yoshiaki Tamura, Sumitomo Electric Industry, Japan

Tutorials

Coherent Optics in Si Photonics
Chris Doerr, Acacia Communications, USA

Ultra-high-speed Optical-cavity-enhanced DMLs
Johan Richard Schatz, KTH Royal Institute of Technology, Sweden

D5: Fiber-optic and Waveguide Devices and Sensors

Invited Speakers
Applications of Multimode Fibers for Spectroscopy and Polarization Control
Hui Cao, Yale University, USA

From Spider Webs To A Biomimetic Optical Fiber Sensor
Kenny Hey Tow, EPFL, Switzerland

Ultra-large Mode Area Fibers for High Power Lasers
Cesar Jauregui, Friedrich-Schiller-Universität Jena, Germany

Enabling Technologies for Space Division Multiplexed Systems
Yong-min Jung, Optoelectronics Research Centre (ORC), UK

Nonlinearity of Optical Fibers
Govind Agrawal, University of Rochester, USA

Short Courses
SC205 – Integrated Electronic Circuits for Fiber Optics
Y. K. Chen, Nokia Bell Labs, USA

SC208 – Optical Fiber Design for Telecommunications and Specialty Applications
David J. DiGiovanni, OFS Labs, USA

SC347 – Reliability and Qualification of Fiber-Optic Components
David Maack, Corning, USA

SC408 – SDM Based Fiber-optic Transmission Systems
Roland Ryf, Nokia Bell Labs, USA

SC465 – Transmission Fiber and Cables [NEW]
Michael Ellwanger and Chris Towery, Corning Optical Communications, USA
SC451 Optical Fiber Sensors
Wavelength Windows
Optical Amplification in Extended Realistic Approach? Fiber Capacity? What is the Most When Will We Need to Scale the Data-Pixel, France Julien Maille, Data-Pixel, France

SC452 – Continuous Gratings in Single and Multi-core Fibers
Paul Westbrook, OFS Laboratories, USA

TUTORIAL
Optical Amplification in Extended Wavelength Windows
Mikhail Melkumov, Russian Academy of Sciences, Russia

SHORT COURSES
SC451 Optical Fiber Sensors
Zuyuan He, Shanghai Jiao Tong University, China
William Shroyer, SageRider, Inc., USA

SC453A and B [Hands-on] Fiber Optic Handling, Measurements and Component Testing
Steve Baldo, Seikoh Giken, USA
Keith Foord, Greenlee Communications, USA
Chris Heisler, OptoTest Corporation, USA
Steve Lane, Data-Pixel, France
Julien Maille, Data-Pixel, France

TUTORIAL
Enabling Technologies for Fiber Nonlinearity Mitigation in High Capacity Transmission Systems
Olga Vassilieva, Fujitsu Laboratories of America Inc, USA

SC458 – Multi-core Fiber Single and Multi-material and Multi-functional Optical Fibers
Fabien Sorin, Ecole Polytechnique Fédérale de Lausanne, Switzerland

SC459 – Novel Optics [NEW]
Steve Baldo, Seikoh Giken, USA

SC462 – Introduction to Pluggable Optics [NEW]
Robert Blum, Intel, USA
Sharon Hall, Oclaro, USA

S2: OPTICAL, PHOTONIC AND MICROWAVE PHOTONIC SUBSYSTEMS
INVITED SPEAKERS
Intelligent Remote Sensing Systems Based on Microwave Photonic Technologies
Antonella Bogoni, CNIT, Italy

Large-scale Optical Circuit Switch Architecture for Intra-Datacenter Networking
Yojiro Mori, Nagoya University, Japan

Silicon-based Brillouin Photonics and its Optical Signal Processing Applications
Peter Rakich, Yale University, USA

Towards Practical Implementation of Optical Parametric Amplifiers Based on PPLN Waveguides
Takeshi Umeki, NTT, Japan

WORKSHOP
Optical Integration beyond Silicon Photonics: Why, What and How? (S2)
ORGANIZERS
Daniel Blumenthal, University of California, Santa Barbara, USA
Benjamin Eggleton, University of Sydney, Australia
Leif Oxenløwe, DTU, Denmark

WORKSHOP
When Will We Need to Scale the Fiber Capacity? What is the Most Realistic Approach?
ORGANIZERS
Cristian Antonelli, Università dell’Aquila, Italy
Takemi Hasegawa, Sumitomo, Japan
Ming-Jun Lin, Sumitomo, Japan

TUTORIALS
Fundamentals and Applications of Optical Parametric Amplifiers
Peter Andrekson, Chalmers Tekniska Hogskola, Sweden

All-optical Signal Processing Techniques for Flexible Networks
Alan Willner, University of Southern California, USA

SHORT COURSES
SC114 – Passive Optical Networks (PONs) Technologies
Yuanqiu Luo, Futurewei Technologies, Huawei R&D, USA

SC261 – ROADM Technologies and Network Applications
Thomas Strasser, Nistica Inc., USA

SC442 – Free Space Switching Systems: PXC and WSS
David Neilson, Nokia Bell Labs, USA

SC443 – Optical Amplifiers: From Fundamental Principles to Technology Trends
Shu Namiki, National Institute of Advanced Industrial Science and Technology (AIST), Japan
Michael Vasilyev, University of Texas at Arlington, USA

TUTORIALS – [Hands-on]
Characterization of Coherent Opto-electronic Subsystems
Robert Palmer and Harald Rohde, Elenion, Germany

S3: RADIO-OVER-FIBER, FREE SPACE OPTICS AND SENSING SYSTEMS

INVITED SPEAKERS
Power-efficient Noise-insensitive Optical Modulation for High-sensitivity Laser Communications
David Caplan, MIT Lincoln Lab, USA

Research to Field Trial, an RoF Journey
Thavamaran Kanesan, TM Research & Development, Malaysia

RoF-based Optical Fronthaul Technology for 5G and Beyond
Hoon Kim, KAIST, South Korea

Fast Photonics-based 60 GHz Beam-steering
Juerg Leuthold, ETH Zurich, Switzerland

Optical-based Underwater Communications
Hai-Han Lu, National Taipei University of Technology, Taiwan

Use Cases for Optical Wireless Communication
Dominic Schulz, Fraunhofer Heinrich Hertz Institute, Germany

RoF-based mm-wave Links for High-speed Trains
Pham Tien Dat, National Institute of Information and Communication Technology, Japan

TUTORIAL
Microwave Photonic Systems for Sensing Applications
Dalma Novak, Pharad, USA

SHORT COURSES
SC160 – Microwave Photonics
Vince Urick, DARPA, USA

SC217 – Optical Fiber Based Solutions for Next Generation Mobile Networks
Dalma Novak, Pharad, LLC., USA

SC445 – Visible Light Communications — the High Bandwidth Alternative to WiFi
Harald Haas, LiFi Research and Development Centre, The University of Edinburgh, UK

S4: DIGITAL AND ELECTRONIC SUBSYSTEMS

INVITED SPEAKERS
Entropy Loading for Band-limited Meshed-optical-networks: The Multicarrier Advantage
Di Che, University of Melbourne, Australia

Optical Performance Monitoring in Fiber-Optic Networks Enabled by Machine Learning Techniques
Faisal Khan, The Hong Kong Polytechnic University, Hong Kong

DSP-Free Coherent Receivers for Data Center Links
Jose Paulo Krause Perin, Stanford University, USA

Coded Modulation for Next-generation Optical Communications
David Millar, Mitsubishi Electric Research Labs, USA

A Comparative Study Of Technology Options For Next Generation Intra-And Inter-Data Center Interconnects
Mohamed Morsy-Osman, McGill University, Canada

DSP Technologies for 100Gbaud-class Transceivers
Masanori Nakamura, NTT Network Innovation Laboratories, Japan

WORKSHOP
DSP for Short Reach and Client Optics — What Makes Sense?

ORGANIZERS
André Richter, VPIphotonics, Germany
Rene Schmogrow, Google, USA
Benn Thomsen, Microsoft, UK

TUTORIALS
On Joint Design of Probabilistic Shaping and Forward Error Correction for Optical Systems
Georg Böcherer, Technical University of Munich, Germany

Scaling and Enabling Technologies for Large Scale Integration for Next Gen SDM Systems
Peter Winzer, Nokia Bell Labs, USA

SHORT COURSES
SC105 – Modulation Formats and Receiver Concepts for Optical Transmission Systems
Xi Vivian Chen and Peter Winzer, Nokia Bell Labs, USA

SC205 – Integrated Electronic Circuits for Fiber Optics
Y. K. Chen, Nokia Bell Labs, USA

SC261 – ROADM Technologies and Network Applications
Thomas Strasser, Nistica Inc., USA
SC341 – Multi-carrier modulation: DMT, OFDM and Superchannels
Sander L. Jansen, ADVA Optical Networking, Germany
Dirk van den Borne, Juniper Networks, Germany

SC390 – Introduction to Forward Error Correction
Frank Kschischang, University of Toronto, Canada

SC393 – Digital Signal Processing for Coherent Optical Systems
Chris Fludger, Cisco Optical GmbH, Germany

SC446 – [Hands-on] Characterization of Coherent Opto-electronic Subsystems
Robert Palmer and Harald Rohde, Elenion, Germany

SC452 – FGPA Programming for Optical Subsystem Prototyping
Noriaki Kaneda, Nokia Bell Labs, USA
Laurent Schmalen, Nokia Bell Labs, Germany

S5: DIGITAL TRANSMISSION SYSTEMS
INVITED SPEAKERS
Balancing Probabilistic Shaping and FEC for Optimal System Performance
Junho Cho, Nokia Bell Labs, USA

ADC & DAC — Technology Trends and Steps to Overcome Current Limitations
Tomislav Drenski, socionext, UK

The Kramers-Kronig Receiver
Antonio Mecozi, University of L’Aquila, Italy

Secure Transmission Using QAM Quantum Noise Stream Cipher with Continuous-variable QKD
Masataka Nakazawa, Tohoku University, Japan

Digital Pre-compensation Techniques Enabling Cost-efficient High-order Modulation Formats Transmission
Dan Sadot, Ben Gurion University of the Negev, Israel

Probabilistic Constellation Shaping: Challenges and Opportunities for Forward Error Correction
Laurent Schmalen, Nokia Bell Labs, Germany

Learning from the Optical Spectrum: Applications for Soft-failure Localization
Luis Velasco, Universitat Politecnica de Catalunya, Spain

WORKSHOP
Field Trials: Is it Make or Break for Innovative Technologies?

ORGANIZERS
S. Chandrasekhar, Nokia Bell Labs, USA
Robert Killey, University College London, UK

TUTORIALS
Flexible Transponders and the Rate/Reach Trade-off
Gabriella Bosco, Politecnico di Torino, Italy

Equalization for Combating the Effects of Nonlinear Noise in Long-haul Transmission: Limits and Prospects
Mark Shtaif, Tel-Aviv University, Israel

SHORT COURSES
SC102 – WDM in Long-haul Transmission Systems
Neal S. Bergano, TE Subcom, USA

SC203 – 100 Gb/s and Beyond Transmission Systems, Design and Design Trade-offs
Martin Birk, AT&T Labs, Res., USA
Benny Mikkelsen, Acacia Communications, USA

SC261 – ROADM Technologies and Network Applications
Thomas Strasser, Nistica Inc., USA

SC27 – Modeling and Design of Fiber-optic Communication Systems
Rene-Jean Essiambre, Nokia Bell Labs, USA

SC341 – Multi-carrier Modulation: DMT, OFDM and Superchannels
Sander L. Jansen, ADVA Optical Networking, Germany
Dirk van den Borne, Juniper Networks, Germany

SC384 – Background Concepts of Optical Communication Systems
Alan Willner, University of Southern California, USA

SC393 – Digital Signal Processing for Coherent Optical Systems
Chris Fludger, Cisco Optical GmbH, Germany

SC395 – Modeling and System Impact of Optical Transmitter and Receiver Components
Robert Palmer and Harald Rohde, Elenion, Germany

SC429 – Introduction to Flexible Photonic Networks
David Boertjes, Ciena, Canada

SC460 – Digital Coherent Optical System Basics: Transceiver Technology and Performance [NEW]
John Cartledge, Queen’s University, Kingston, Ontario, Canada
Maurice O’Sullivan, Ciena, Canada

TRACK N
Networks, Applications and Access

N1: ADVANCED DEPLOYABLE NETWORKS AND THEIR APPLICATIONS
INVITED SPEAKERS
Scenarios and Economic Analysis of Fronthaul
Andrea Di Giglio, Telecom Italia Lab, Italy

Submarine Cables: Deployment, Evolution and Perspectives
Stephen Grubb, Facebook Inc., USA

Extension of SDN Networks to the Satellite Domain: Integration of an SDN Enabled WAN Network, with Terrestrial and Submarine Elements, with Command and Control of Multiple Satellite Constellations
Robert Kimball, Ciena Corporation, USA

Present and Future Optical Technology Deployments in Facebook’s Terrestrial Networks
Gaya Nagarajan, Facebook, USA

Design Of Submarine “Open” Cables
Pascal Pecci, ASN, France

Benefits of Performance Awareness in Coherent Dynamic Optical Networks
Juraj Slovak, Coriant, Germany

TUTORIALS
Content Distribution Networks and their Impact on Optical Networks
Jeff Bower, Akamai Physics, Inc., USA

Edge Compute and At&T’S Pon Deployment Vision
Edward Walter, AT&T, USA
Machine Learning-assisted Management of Virtualized Network
Michiaki Hayashi, KDDI Research, Japan

Application Aware Multilayer Control and Optimization of Elastic WDM/SDM Switched Optical Networks
Ioannis Tomkos, Athens Information Technology Center, Greece

Converged Access/Metro Infrastructures for 5G services
Anna Tzanakaki, University of Athens, Greece

Optical Networks Virtualization and Slicing in the 5G Era
Ricard Vilalta, CTTC, Spain

Software Defined Optical Network from the Perspective of a Software Developer
Lihua Yuan, Microsoft Corp, USA

SC448 – SDN for Optical Networks: a Practical Introduction
Ramon Casellas, CTTC, Spain

SC449 – [Hands-on] Introduction to Writing Transport of SDN Applications
Karthik Sethuraman, NEC Corporation of America, USA
Ricard Vilalta, CTTC, Spain

SC463 – Optical Transport SDN: Architectures, Applications and Actual Implementations [NEW]
Achim Autenrieth and Jörg-Peter Elbers, ADVA Optical Networking SE, Germany

SC464 – SDN Inside and In Between Data Centers [NEW]
David Maltz, Microsoft, USA

N3: NETWORK ARCHITECTURES AND TECHNO-ECONOMICS

WORKSHOP
Will Cloud-Optical Boxes Change the Way Today’s Networks are Deployed?

ORGANIZERS
Harald Bock, Coriant, USA
Andrew Lord, British Telecom, UK

TUTORIALS
The Software-defined Flexible Optical Network
António Eira, Coriant, Portugal

Data Analytics and Machine Learning Applied to Transport Layer
Massimo Tornatore, Politecnico di Milano, Italy

SHORT COURSES
SC176 – Metro Network Evolution
Loudon Blair and David Krauss, Ciena Corp., USA

SC216 – An Introduction to Optical Network Design and Planning
Jane M. Simmons, Monarch Network Architects, USA

SC328 – New Developments in High-speed Optical Networking
Marc De Leenheer, Open Networking Lab, USA

SC384 – Background Concepts of Optical Communication Systems
Alan Willner, University of Southern California, USA

SC429 – Introduction to Flexible Photonic Networks
David Boertjes, Ciena, Canada

SC447 – The Life Cycle of an Optical Network: From Planning to Decommissioning
Andrew Lord, BT Labs, BT, UK

TUTORIAL
The Role of Open-source Network Optimization Software in the SDN/NFV World
Pablo Pavon-Marino, Universidad Politécnica de Cartagena, Spain

Long-term Capacity Planning in Facebook Network
Yuri Smirnov, Facebook Inc., USA

Data-analytics-based Optical Performance Monitoring Technique for Optical Transport Networks
Takahito Tanimura, Fujitsu Laboratories Ltd., Japan

Agile Optical Networking: Beyond Filtered Solutions
Christine Tremblay, École de Technologie Supérieure, Canada

Progress Toward an Open, SDN Controlled Photonic Network
Kathy Tse, AT&T Corp, USA

WORKSHOP
Will Cloud-Optical Boxes Change the Way Today’s Networks are Deployed?

ORGANIZERS
Harald Bock, Coriant, USA
Andrew Lord, British Telecom, UK

TUTORIALS
The Software-defined Flexible Optical Network
António Eira, Coriant, Portugal

Data Analytics and Machine Learning Applied to Transport Layer
Massimo Tornatore, Politecnico di Milano, Italy

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Loudon Blair and David Krauss, Ciena Corp., USA

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Jane M. Simmons, Monarch Network Architects, USA

SC328 – New Developments in High-speed Optical Networking
Marc De Leenheer, Open Networking Lab, USA

SC384 – Background Concepts of Optical Communication Systems
Alan Willner, University of Southern California, USA

SC429 – Introduction to Flexible Photonic Networks
David Boertjes, Ciena, Canada

SC447 – The Life Cycle of an Optical Network: From Planning to Decommissioning
Andrew Lord, BT Labs, BT, UK
N4: OPTICAL ACCESS NETWORKS
FOR FIXED AND MOBILE SERVICES

INVITED SPEAKERS
Flexible Access System Architecture (FASA)
Kota Asaka, NTT Photonics Laboratories, Japan

Components for High Speed 5G Access
Helene Debregeas, III-V Lab, France

Low Latency Networks: Future Service Level Use Cases and their Requirements
Michael Freiberger, Verizon Communications Inc, USA

Bandwidth Extension Techniques for Optical Access
Christoph Kottke, Technische Universität Berlin, Germany

Recent Progress and Outlook for Coherent PON
Domanic Lavery, University College London, UK

What Applications are Driving Higher Capacity in Access?
Phil Miguelez, Comcast, USA

DSP for High-speed Fiber-wireless Convergence
Huaiyu Zeng, Futurewei Technologies, USA

WORKSHOP
Ultimate Capacity Limits for TDM/TDMA PON
ORGANIZERS
Derek Nesset, Huawei, UK
Naoki Suzuki, Mitsubishi Electric, Japan
Lilin Yi, Shanghai Jiao Tong University, China

TUTORIALS
Photonic Integrated Circuits for NGPON2 Tunable ONU
John O’Carroll, Eblana Photonics, Ltd., Ireland

Edge Compute and At&T’s Pon Deployment Vision
Edward Walter, AT&T, USA

Mobile Xhaul Evolution: Enabling Tools for a Flexible 5G Xhaul Network
Yuki Yoshida, NICT, Japan

PANEL
Is the Lack of Resilience in Access Networks a Potential Showstopper for Future 5G Services?
ORGANIZERS
Volker Jungnickel, Fraunhofer HHI, Germany
Thomas Pfeiffer, Nokia Bell Labs, USA

SHORT COURSES
SC114 – Passive Optical Networks (PONs) Technologies
Yuanqiu Luo, Futurewei Technologies, Huawei R&D, USA

SC444 – Optical Communication Technologies for 5G Wireless [NEW]
Xiang Liu, Futurewei Technologies, Huawei R&D, USA

DSN6: OPTICAL DEVICES, SUBSYSTEMS AND NETWORKS FOR DATACOM AND COMPUTERCOM

INVITED SPEAKERS
Open Compute Project Data Centers
Omar Baldonado, Facebook Inc., USA

Network Traffic Characteristics of Data Centers
Theophilus Benson, Duke University, USA

Bridging the Last Mile for Optical Switching in Data Centers
Paolo Costa, Microsoft Research, UK

Role of Standards in Web-Scale Datacenters
Mark Filer, Microsoft Corp., USA

The ARPA-E ENLITENED Program — Integrated Photonic Technology for Energy-efficient Data Center Networks
Michael Haney, Advanced Research Projects Agency-Energy, USA

Silicon Photonics and plasmonics towards Network-on-Chip functionalities for disaggregated computing
Nikos Pleros, Aristoteleio Panepistimio Thessalonikis, Greece

Analog Optical Signaling for Large Scale Radio Telescopes in Harsh Environments
Jonas Weiss, IBM, Zurich, Switzerland

WORKSHOP
Electro-optical Integration in a Package. What Technologies and Business Models can Make it Happen?
ORGANIZERS
Petar Pepeljugoski, IBM Research, USA

SC428 – Link Design for Short Reach Optical Interconnects
Petar Pepeljugoski, IBM Research, USA

SC431 – Photonic Technologies in the Data Center
Clint Schow, University of California, USA

TUTORIAL
Silicon Photonics For High Performance Interconnection Networks
Keren Bergman, Columbia University, USA

PANEL
Machine Learning and SDN: Towards Intelligent Data Centers (DSN6)
ORGANIZERS
Payman Samadi, Columbia University, USA
Dimitra Simeonidou, University of Bristol, UK

SHORT COURSES
SC178 – Test and Measurement for Data Center/Short Reach Communications
Hong Liu, Google, USA

SC359 – Datacenter Networking 101
John Shalf, Lawrence Berkeley National Laboratory, USA

SC385 – Optical Interconnects for Extreme-scale Computing
Keren Bergman, Columbia University, USA

SC431 – Photonic Technologies in the Data Center
Clint Schow, University of California, USA

SC461 – High-capacity Data Center Interconnects
Sander L. Jansen, ADVA Optical Networking, Germany
Dirk van den Borne, Juniper Networks, Germany

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new short courses for 2018

SC459 – Space Division Multiplexing Components and Devices
Monday, 12 March, 09:00 - 12:00
INSTRUCTOR
Nicolas Fontaine, Nokia Bell Labs, USA
This course is an introduction into components and devices that enable space-division multiplexing (SDM) over optical fibers supporting multiple spatial modes/cores.

SC460 – Digital Coherent Optical System Performance Basics: Transceiver Technology and Performance
Monday, 12 March, 08:30 - 12:30
INSTRUCTORS
John Cartledge, Queen’s University, Canada
Maurice O’Sullivan, Ciena, Canada
This course is designed to equip participants with a basic understanding of implemented electric field modulation and coherent detection on two polarizations, and the ability to estimate and compare link performance in practical coherent transmission applications including nonlinear WDM propagation.

SC461 – High-capacity Data Center Interconnects
Sunday, 11 March, 09:00 - 13:00
INSTRUCTORS
Sander L. Jansen, ADVA Optical Networking, Germany
Dirk van den Borne, Juniper Networks, Germany
This course gives a broad overview of data center interconnect (DCI) architectures and technology, ranging from short-haul interconnects to metro and to long-haul deployments.

SC462 – Introduction to Pluggable Optics
Sunday, 11 March, 13:00 - 16:00
INSTRUCTORS
Robert Blum, Intel, USA
Sharon Hall, Oclaro, USA
This course enables you to better understand the different pluggable optics solutions and form factors ranging from 10Gbps to the latest 400Gbps.

SC463 – Optical Transport SDN: Architectures, Applications and Actual Implementations
Sunday, 11 March, 09:00 - 12:00
INSTRUCTORS
Achim Autenrieth and Jörg-Peter Elbers, ADVA Optical Networking SE, Germany
This course covers practical applications of SDN in optical transport networks. It aims to bridge the gap between pure architectural concepts and real-life implementations.

SC464 – SDN Inside and In Between Data Centers
Monday, 12 March, 13:30 - 16:30
INSTRUCTOR
David Maltz, Microsoft, USA
This course explains each of the layers of the network, from the physical switches and fiber, through the software that runs on the switches, through the Software Defined Networking layers that provide a customizable virtual network. Drawing examples from Microsoft Azure, the course covers how large cloud networks are designed and operate.

SC465 – Transmission Fiber and Cables
Monday, 12 March, 09:00 - 12:00
INSTRUCTORS
Michael Ellwanger and Chris Towery, Corning Optical Communications, USA
This course discusses optical fiber attributes and their importance to network performance, compares the different transmission optical fiber types and their associated ITU-T standards and intended uses and provides an overview on the primary optical cable types and their relevant applications in transmission networks from the LAN to trans-oceanic.

exhibition
The world’s largest exhibit hall in the industry.
Over 700 participating companies will showcase solutions to build your competitive edge. See what’s new and identify technology must-haves for your business.

Only OFC offers the size and scope to compare and contrast vendors, giving you the information you need to make all your technology purchasing decisions in one place.

In addition to the exhibits, OFC offers educational programs on the show floor covering market trends, new technologies and insight into the future. Hear from industry groups such as COBO, Ethernet Alliance, IEEE, OCP, OIF, ON2020, TIP and more.
Market Watch

This three-day series of panel discussions engages the latest application topics and business issues in the field of optical communications. Presentations and panel sessions feature esteemed guest speakers from industry, research, and the investment community.

N5 NETWORK OPERATOR SUMMIT AND MARKET WATCH SUB-COMMITTEE CHAIR
Frank Chang, Inphi Corporation, USA

SPONSORED BY

Network Operator Summit

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 manufacturer to components, will want to hear what’s next in meeting the needs of service providers.

N5 SERVICE PROVIDER SUMMIT AND MARKET WATCH SUB-COMMITTEE CHAIR
Frank Chang, Inphi Corporation, USA

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PANEL I
State of the Industry — Analyst Panel

PANEL II
Optical Bearer Technologies for 5G Networks

PANEL III
Challenges and Solutions for Delivering 400G+ Client and Line Side Optics

PANEL IV
High Capacity, Long Distance Transport: Innovation vs. Reality

PANEL V
Software Innovations in the Next-generation Optical Transport

PANEL VI
IP and Optical Integration: Physical or Control/Management Plane?

KEYNOTE
Najam Ahmad, Vice-President, Network Engineering, Facebook, USA

PANEL I
The role of “Open Transport” in the new Metro and Inter-Data-Center Architectures

PANEL II
On the Road to 100G PON (beyond 10G PON)

View the floor plan, review company descriptions and find products and vendors of interest. ofcconference.org/exhibithall

Exhibitors as of Oct. 2017

3M Electronics Materials
Solutions Division
AC Photonics, Inc.
Accelink Technologies Co., Ltd. & WTD
AC-UNION Technology Co., Ltd.
Adapant Co., Ltd.
Adolite, Inc.
ADVA Optical Networking
Advanced Connectek, Inc.
Advanced Fiber Resources, Ltd.
Advanced Microptic Systems GmbH
Advanced Technology Group, Inc.
AFL
Agilecom Photonics Solutions
Guangdong Limited
Agiliton, Inc.
AIM Photonics
Ateliong Technology Co., Ltd.
Albis Optoelectronics
Alight Technologies APS
Alnair Labs Corporation
AM Compass Group, Inc.
American Technical Ceramics
AMETEK Optical Components & Packaging
AMORTA Microtechnologies GmbH
Anmonics Ltd.
Amphenol
Anaren Ceramics
Anritsu Company
A-One Technology Ltd.
APC Opto Electronics, Inc.
APAT Optolec
APEX Technologies
Apogee Optocom Co., Ltd.
Applied Optoelectronics, Inc.
Applied Thin-Film Products
Aragon Photonics Labs
Arden Photonics, Ltd.
Ardent Concepts, Inc.
Arrayed Fibre Optics Corporation
Arttech Co., Ltd.
ASI/Silica Machinery, LLC
Asia Optical Co., Inc.
ATOP Corporation
AUXA, Inc.
AVIC JIONHON OPTRONIC TECHNOLOGY CO., LTD.
Avo Photonics, Inc.
Axetris AG
AXSUN Technologies
Beijing Grish Hitech Co., Ltd.
Bola Technologies
Brimrose Corporation of America
Bristol Instruments, Inc.
Broadcom Limited
BRDLINK Technologies [Dong Guan] Co. LTD.
Browave Corporation
Cadence Design Systems, Inc.
CAILabs SAS
CALIENT Technologies
Cambridge Industries USA, Inc.
Carefiber Optical Technology Co., Ltd.
Centera Photonics, Inc.
Chang Zhou KangXun
Optoelectronic Technology Co., Ltd.
Changsha Saneway Electronic Materials Co., Ltd.
ChemOptics
Chemtronics
Cheng Yue Enterprises Co., Ltd.
Chengdu Sugerson Communication Technology Co., Ltd.
Chengdu Tsuhan Science & Technology Co., Ltd.
Chengdu Xinrui Xin Optical Technology Co., Ltd.
Chial Photonics
Chroma ATE Inc.
Chuxing Optical Fiber Application Technologies, Lt
Chuzhou First Technology Co., Ltd.
CINENA Corporation
Cisco Systems, Inc.
CN-J Technology Co., LTD.
CoAdna Photonics, Inc.
CODIXX AG
Coherent Solutions
Coherent, Inc.
ColorChip
Compex Corporation
COMWAY Technology, LLC
Connected Fibers
Conor Manufacturing Services, Inc.
CorActive High-Tech, Inc.
Coriant
Corning Incorporated
COSMO Technologies, Inc.
COSNET, Inc.
CreaLights Photonics Co., Ltd.
Crestec Corporation
CrownTech Photonics Co., Ltd.
CryLight Photonics, Inc.
CST Global, Ltd.
CST of America, Inc.
Baitron, Inc.
Baitron, Inc.
DATA-PIXEL
Denselight Semiconductors PTE Ltd.
Deviser Instrument, Inc.
Diamond USA, Inc.
BiCon Fiberoptics, Inc.
Dimension Technology Co., Ltd.
Direct Optical Research Company
Discovery Semiconductors, Inc.
DITF [Diablo Industries Thin Film]
Domeier Engineering, LLC
Dongguan FSG Co., LTD
Dongguan Longyi Electronic Technology Co., Ltd.
Dongguan Mentech Optical & Magnetic Co., Ltd.
Dowlake Microsystems
East Photonics, Inc.
East Point Communication Technology Co., Ltd.
East Tender Oploelectronics Corp.
ECOC 2018
EFFECT Photonics
EGIDE
EKINOPS
Elenion Technologies, LLC
Emcore Corporation
Epotlink Technology Inc., Ltd.
EOSPACE, Inc.
Epyz Technology, Inc.
Ethernet Alliance
EXFO
Experior Laboratories, Inc.
FabriNet
Ferrotec USA
Fiber Instrument Sales, Inc.
Fiber Optic Center, Inc.
Fiber Plus International
Fibercore
Fibercore Technologies, Inc.
Fiberpark Technology Co., Ltd.
FiberPro, Inc.
FiberQA LLC
Fibertom Technology Co., Ltd.
Fibre Systems
FiconTEC (USA) Corporation
FINETECH
Finisar
Fi-ra Photonics Co., Ltd.
Flyin Optronics Co., Ltd.
FOCI Fiber Optic Communications, Inc.
Focus Manufacturing Co., Ltd.
Foremercia Optoelectronics Inc.
Foxconn Interconnect Technology
Fraunhofer Heinrich Hertz Institute
Fraunhofer IPMS
Fuji Xerox Co., Ltd.
Fujian HitechPhotonics Technologies, Inc.
Fujikura, Ltd.
Fujitsu Network Communications
Fujitsu Optical Components
Fujitsu Optical Components
General Photonics Corp.
Gigac Technology Co., Ltd.
Glenair
Glimmerglass
Global Communication Semiconductors, Inc.
GlobalFoundries
GLsun Science and Tech Co., Ltd.

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registration and travel

Make plans now.

OFC delivers what you need — an innovative technical program, unparalleled networking opportunities, a world class exhibition and show floor business programming.

There are, however, a few things you’ll need to consider first — what kind of registration type you want and where to stay. No matter what you decide, be sure to plan early and get the best value.

Consider the new schedule for OFC when you plan your travel. All workshops will be held on Sunday from 12:30 to 18:30, with technical sessions starting Monday morning at 08:00. The Postdeadline Paper Session will be held from 16:30 to 18:30 on Thursday.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Full Conference Registration (US$)</th>
<th>Exhibit Pass Plus** (US$)</th>
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Access

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<tr>
<td>Exhibition and Show Floor Programming</td>
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<td>Market Watch</td>
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<td>Network Operator Summit</td>
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<td>OFC Career Zone</td>
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<td>Workshops</td>
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<td>Poster Sessions</td>
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<td>Conference Reception</td>
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<td>Conference Program Book</td>
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<td>Technical Digest (USB Drive)</td>
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<tr>
<td>Postdeadline Papers Book</td>
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<tr>
<td>OFC Buyers’ Guide</td>
<td>•</td>
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</table>
SHORT COURSE REGISTRATION

Each Short Course requires a separate registration fee. Register early as each course has limited seating. Last year 85% of courses were sold out prior to the conference, and there will not be a wait list for sold out courses. Tickets are required for admission to Short Courses and for Short Course Notes, which are distributed on-site. Short Course Notes are not available for purchase separately.

Short Course registration also includes admission to the plenary session, exhibit hall, Market Watch, Network Operator Summit, the OFC Career Zone, workshops, poster sessions and Exhibits 2018 Buyers’ Guide.

<table>
<thead>
<tr>
<th>Advance Registration thru 12 February**</th>
<th>Half Day Short Course (US$)</th>
<th>Hands-On Course (US$)</th>
<th>SC432 Hands-On Course (US$)</th>
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SHORT COURSE OFFER FOR STUDENT MEMBERS

Student members of IEEE/COMSOC, IEEE/Photonics Society and OSA may register for US$ 30 for select Short Courses not yet at capacity after 14 February 2018. New this year, student members will receive a copy of the full color Short Course notes.

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Convention Center Distance</th>
<th>Rates from (per night)* (US$)</th>
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<tbody>
<tr>
<td>Embassy Suites San Diego Bay</td>
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</table>

* Hotel rates are listed in US dollars and do not include taxes or any hotel fees.
Register now and save.

Advance Registration Ends 12 February 2018

The one conference you can’t afford to miss is more affordable — now for a limited time.

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