Elevate your expertise with a Short Course

Technical Conference: 24 - 28 March 2024
Exhibition: 26 - 28 March 2024
Short Courses: 24 - 25 March 2024
San Diego Convention Center
San Diego, California, USA
Explore new possibilities with OFC Short Courses — an ideal training venue for you and your colleagues to delve into the latest products, state-of-the-art technology and crucial insights driving optical communications.

Immerse yourself in one or more of the 51 Short Courses being offered in dynamic half-day lectures or hands-on formats. Renowned industry experts will guide you through diverse subject areas, offering all skill levels from beginner to advanced the chance to learn from some of the brightest minds in our field. Benefit from an intimate learning environment with smaller class sizes, ensuring a more personalized and enriching educational experience.

Discover the perfect course that’s right for you, and register today.

Registration*

Registration gives you access to the selected Short Course and accompanying Short Course notes. To enhance your visit, registering for a Short Course also grants you access to the Plenary Session, Workshops and the Exhibition and its expansive Show Floor Programming.

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Before or On 23 February</th>
<th>After 23 February</th>
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<tr>
<td>Half-Day Lecture – Member</td>
<td>USD 292</td>
<td>USD 355</td>
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<td>Half-Day Hands-on – Member</td>
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<td>Half-Day Hands-on – Member (SC432 only**)</td>
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<td>Half-Day Hands-on – Non-Member (SC432 only**)</td>
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*Short Courses are available onsite and in-person only.
**Attendees will design a PIC that will be fabricated and characterized in SC432.
Schedule

Sunday, 24 March 2024

08:30 - 12:30

SC105 Modulation Formats and Receiver Concepts for Optical Transmission Systems
INSTRUCTORS
Peter Winzer, Nubis Communications, USA
Vivian Chen, Nokia Bell Labs, USA
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
S4

SC203 400, 800Gb/s and Beyond Optical Communications Systems: Design and Design Trade-offs
INSTRUCTORS
Ezra Ip, NEC Labs, USA
Chongjin Xie, Alibaba Group, USA
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
S4

SC208 Optical Fiber Design for Telecommunications and Specialty Applications
INSTRUCTOR
David J. DiGiovanni, OFS Labs, USA
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
D4, D5

SC216 An Introduction to Optical Network Design and Planning
INSTRUCTOR
George Rouskas, North Carolina State University, USA
COURSE LEVEL
Beginner
TOPIC CATEGORY
N1, N3

SC28 Standards for High-Speed Optical Networking
INSTRUCTOR
Tom Huber, Nokia, USA
COURSE LEVEL
Intermediate
TOPIC CATEGORY
N1, N3, S1, S4

SC328 Modeling and Simulation of Optical Transmitter and Receiver Components for Coherent Communications
INSTRUCTORS
Harald Rohde, Nokia, Germany
Howard Wang, Nokia, USA
COURSE LEVEL
Advanced Beginner and Intermediate
TOPIC CATEGORY
S4

SC432 Hands-on: Silicon Photonics Component Design and Fabrication
INSTRUCTOR
Lukas Chrostowski, University of British Columbia, Canada
COURSE LEVEL
Intermediate
TOPIC CATEGORY
D2, D3

Review the course descriptions for a deeper understanding of what each course offers.
OFCCConference.org/ShortCourses

SHORT COURSE TOPIC CATEGORIES

Devices, Components and Fibers
D1 Advanced Prototyping, Packaging and Integration
D2 Passive Components
D3 Active Components
D4 Fibers and Propagation Physics
D5 Fiber Devices, Fiber Lasers and Amplifiers and Nonlinear Waveguides

Subsystems and Systems
S1 Datacom Subsystems and Systems
S2 Subsystems for Transmission
S3 Transmission Systems
S4 Optical Processing, Microwave Photonics and Fiber-Sensing
S5 Free-Space (FSO), Ranging (LIDAR) and Radio-over-Fiber (RoF)

Networks and Services
N1 Advances in Developments of Networks and Services
N2 Optical Networking for Data Center and Computing Applications
N3 Architectures and Software-Defined Control for Metro and Core Networks
N4 Optical Access Networks for Fixed and Mobile Services
N5 Market Watch, Network Operator Summit and Data Center Summit
Schedule

Sunday, 24 March 2024

08:30 - 12:30 (cont’d)

SC443 Optical Amplifiers: From Fundamental Principles to Technology Trends
INSTRUCTORS
Peter Andrekson, Chalmers University of Technology, Sweden
Michael Vasilyev, University of Texas, Arlington, USA
COURSE LEVEL
Beginner and Advanced Beginner
TOPIC CATEGORY
S2

SC461 High-capacity Data Center Interconnects for Cloud-scale Networking
INSTRUCTORS
Dirk van den Borne, Juniper Networks, Germany
Sander L. Jansen, ADVA Optical Networking, Germany
Mark Filer, Stealth Startup, USA
COURSE LEVEL
Beginner
TOPIC CATEGORY
N1, S1

09:00 - 12:00

SC177 High-speed Semiconductor Lasers and Modulators
INSTRUCTOR
John Bowers, University of California, Santa Barbara, USA
COURSE LEVEL
Intermediate
TOPIC CATEGORY
D3

SC359 Networking for Data Centers and Machine Learning
INSTRUCTORS
Hong Liu, Google, USA
Ryohei Urata, Google, USA
COURSE LEVEL
Beginner
TOPIC CATEGORY
D1, N2

SC459 Multimode Photonic Devices, Characterization and Applications
INSTRUCTOR
Nicolas Fontaine, Nokia Bell Labs, USA
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
D5

13:00 - 16:00

SC408 Space Division Multiplexing for Optical Communication Systems and Networks
INSTRUCTOR
Roland Ryf, Nokia Bell Labs, USA
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
S5

SC485 Advanced Fiber Access Networks
INSTRUCTORS
Jun Shan Wey, Verizon, USA
Rajesh Yadav, Verizon, USA
COURSE LEVEL
Intermediate
TOPIC CATEGORY
N4

SC512 Modern Subsea Cable Systems
INSTRUCTOR
Mei Du, Tata Communications, USA
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
S3

13:00 - 17:00

SC514 FEC Techniques for Optical Communications
INSTRUCTOR
Georg Böcherer, Huawei Technologies, Germany
COURSE LEVEL
Advanced Beginner and Intermediate
TOPIC CATEGORY
S2

13:30 - 17:30

SC267 Silicon Microphotonic Materials: Technology Elements and the Roadmap to Implementation
INSTRUCTOR
Lionel Kimerling, MIT, USA
COURSE LEVEL
Beginner
TOPIC CATEGORY
D2, D3
Schedule

Monday, 25 March 2024

09:00 - 12:00
SC465 Transmission Fiber and Cables
INSTRUCTOR John Hedgpeth, Corning Optical Communications, USA
COURSE LEVEL Advanced Beginner
TOPIC CATEGORY D4

08:30 - 12:30
SC160 Microwave Photonics
INSTRUCTOR Jose Capmany, Polytechnic University of Valencia, Spain
COURSE LEVEL Advanced Beginner
TOPIC CATEGORY S2

SC341 Sub-carrier Modulation and Superchannels for Terabit-class DWDM Transceivers
INSTRUCTORS Sander L. Jansen, ADVA Optical Networking, Germany
Dirk van den Borne, Juniper Networks, Germany
COURSE LEVEL Intermediate
TOPIC CATEGORY S4, S5

SC369 Hands-on: Test and Measurement for Coherent Optical Transceivers
INSTRUCTORS Fabio Pittala, Keysight, Germany
Michael Koenigsmann, Keysight, Germany
COURSE LEVEL Advanced Beginner
TOPIC CATEGORY S4

SC393 Digital Signal Processing for Coherent Optical Transceivers
INSTRUCTOR Chris Fludger, Infinera, Germany
COURSE LEVEL Intermediate
TOPIC CATEGORY S2

SC433 Introduction to Photodetectors and Optical Receivers
INSTRUCTOR Andreas Beling, University of Virginia, USA
COURSE LEVEL Beginner
TOPIC CATEGORY S4

SC444 Emerging Optical Communication Technologies for F5G Evolution
INSTRUCTOR Dr. Xiang Liu, Huawei Technologies, China
COURSE LEVEL Intermediate
TOPIC CATEGORY N4

SC448 Evolving Software-Defined Optical Network: Architecture and Design Principles
INSTRUCTOR Ramon Casellas, Ph.D., IEEE SM; OSA M, CTTC, Spain
COURSE LEVEL Beginner
TOPIC CATEGORY N2, N3

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N5 Market Watch, Network Operator Summit and Data Center Summit
Schedule
Monday, 25 March 2024

08:30 - 12:30 (cont’d)

SC452 FPGA Prototyping for Optical Subsystems
INSTRUCTORS
Noriaki Kaneda, Nokia, USA
Robert Elschner, Fraunhofer HHI, Germany
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
S4

SC453A Hands-on: Fiber Optic Handling, Measurements and Component Testing
INSTRUCTORS
Steve Baldo, Seikoh Giken, USA
Chris Heisler, Santec California Corporation, USA
Jérome Allaigre, Data-Pixel, France
Julien Maille, Data-Pixel, France
COURSE LEVEL
Beginner
TOPIC CATEGORY
D4, D5

SC454 Hands-on: Silicon Photonics Design — Circuits
INSTRUCTOR
Wim Bogaerts, University of Ghent, Belgium
COURSE LEVEL
Beginner
TOPIC CATEGORY
D2, D3

SC473 Photonic Switching Systems
INSTRUCTORS
David Neilson, Nokia Bell Labs, USA
Benjamin Lee, NVIDIA, USA
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
D2

SC483 Machine Learning in Optical Networks
INSTRUCTORS
Massimo Tornatore, Politecnico di Milano, Italy
Darko Zibar, DTU FOTONIK, Denmark
COURSE LEVEL
Beginner
TOPIC CATEGORY
N3, N4, S4

SC487 Hands-On: Laboratory Automation and Control Using Python
INSTRUCTORS
Jochen Schröder, Chalmers University of Technology, Sweden
Nicolas Fontaine, Nokia Bell Labs, USA
Binbin Guan, Microsoft, USA
COURSE LEVEL
Advanced
TOPIC CATEGORY
S4, S5

SC513 Data Center Short Links — Link Design, Modeling, Test and Measurements
INSTRUCTORS
Petar Pepeljugoski, IBM Research, USA
Greg D. Le Cheminant, Keysight Technologies, USA
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
S1

SC525 Photonic and Electronic Packaging — Materials, Processes, Equipment and Reliability
INSTRUCTOR
Peter O’Brien, Tyndall National Institute, Ireland
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
D1, D2, N3

13:30 - 16:30

SC114 Technologies and Applications for Passive Optical Networks (PONs)
INSTRUCTOR
Frank Effenberger, Futurewei, USA
COURSE LEVEL
Beginner
TOPIC CATEGORY
N4, S4

SC217 Applications of Radio-over-Fiber Technologies Including Future 5G Networks
INSTRUCTOR
Dalma Novak, Octane Wireless, USA
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
S3

SC261 ROADM Technologies and Network Applications
INSTRUCTOR
Thomas Strasser, Molex, USA
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
D1, D2, N3

SC447 The Life Cycle of an Optical Network: From Planning to Decommissioning
INSTRUCTOR
Andrew Lord, BT Labs, BT, UK
COURSE LEVEL
Advanced Beginner and Intermediate
TOPIC CATEGORY
N1

SC526 Optical Wireless Technologies, Systems and Applications
INSTRUCTOR
Harald Haas, University of Strathclyde, Scotland
COURSE LEVEL
Advanced Beginner
TOPIC CATEGORY
N4, S5
Schedule

Monday, 25 March 2024

13:30 - 16:30 (cont’d)
SC528 **Hands-on**: Fiber Optic OFCnet Course: Practical Fiber Optic Network Testing in a Realistic Network Environment
**INSTRUCTOR**
Gwenn Amice, EXFO, USA
Christine Trembley, École de technologie supérieure, Canada
**COURSE LEVEL**
View Course Description
**TOPIC CATEGORY**
N1, N5

13:30 - 17:30
SC325 Highly Integrated Monolithic Photonic Integrated Circuits
**INSTRUCTOR**
Chris Doerr, Aloe Semiconductor, USA
**COURSE LEVEL**
Advanced Beginner
**TOPIC CATEGORY**
D2, D3

SC327 Fiber Transmission and Design of Long-haul Communication Systems
**INSTRUCTOR**
René-Jean Essiambre, Nokia Bell Labs, USA
**COURSE LEVEL**
Advanced Beginner
**TOPIC CATEGORY**
S5

SC347 Reliability and Qualification of Fiber Optic Components, Modules and Equipment
**INSTRUCTOR**
David R. Maack, David Maack Consulting, USA
**COURSE LEVEL**
Beginner
**TOPIC CATEGORY**
D1, D4

SC357 Circuits and Equalization Methods for Coherent and Direct Detection Optical Links
**INSTRUCTORS**
Alexander Ryl yakov, Nokia, USA
Sudip Shekhar, University of British Columbia, Canada
**COURSE LEVEL**
Advanced Beginner
**TOPIC CATEGORY**
D1, D3, S1, S4

SC384 Background Concepts of Optical Communication Systems
**INSTRUCTOR**
Alan Willner, University of Southern California, USA
**COURSE LEVEL**
Beginner
**TOPIC CATEGORY**
S4, S5

SC431 Photonic Technologies in the Data Center
**INSTRUCTOR**
Clint Schow, University of California, USA
**COURSE LEVEL**
Advanced Beginner
**TOPIC CATEGORY**
D1, D3

SC451 Optical Fiber Sensors
**INSTRUCTORS**
Alexis Mendez, MCH Engineering, USA
William Shroyer, SageRider, Inc., USA
**COURSE LEVEL**
Advanced Beginner and Intermediate
**TOPIC CATEGORY**
D5

SC453B **Hands-on**: Fiber Optic Handling, Measurements and Component Testing
**INSTRUCTORS**
Steve Baldo, Seikoh Giken, USA
Chris Heisler, Santec California Corporation, USA
Jérôme Allaire, Data-Pixel, France
Julien Maille, Data-Pixel, France
**COURSE LEVEL**
Beginner
**TOPIC CATEGORY**
D4, D5

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