

OFC

The future of optical networking
and communications

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

OFCConference.org

**IEEE
ComSoc**
IEEE Communications Society

**IEEE
Photonics
Society**

OPTICA
Formerly OSA



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.

	Before or On 23 February	After 23 February
Half-Day Lecture – Member	USD 292	USD 355
Half-Day Hands-on – Member	USD 355	USD 408
Half-Day Lecture – Non-Member	USD 372	USD 435
Half-Day Hands-on – Non-Member	USD 435	USD 509
Half-Day Hands-on – Member (SC432 only**)	USD 455	USD 508
Half-Day Hands-on – Non-Member (SC432 only**)	USD 535	USD 609

*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

S1, S5

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



SC328 Standards for High-Speed Optical Networking

INSTRUCTOR

Tom Huber, *Nokia, USA*

COURSE LEVEL

Intermediate

TOPIC CATEGORY

N1, N3, S1, S4

SC395 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.
OFCConference.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, *Google, USA*

COURSE LEVEL

Beginner

TOPIC CATEGORY

N1, S1

SC463 Optical Transport SDN:
Architectures, Applications, and
Actual Implementations

INSTRUCTORS

Achim Autenrieth, *ADVA Optical
Networking SE, Germany*
Jörg-Peter Elbers, *ADVA Optical
Networking SE, Germany*

COURSE LEVEL

Intermediate

TOPIC CATEGORY

N1, N3

SC469 **Hands-on:** Laboratory
Automation and Control Using
Python

INSTRUCTORS

Jochen Schröder, *Chalmers University
of Technology, Sweden*
Binbin Guan, *Microsoft, USA*
Roland Ryf, *Nokia Bell Labs, USA*

COURSE LEVEL

Beginner

TOPIC CATEGORY

S4, S5

SC470 Secure Optical
Communications

INSTRUCTORS

Andrew Shields, *Toshiba Research
Labs, UK*
Helmut Griebner, *ADVA Network
Security, Germany*

COURSE LEVEL

Beginner and Advanced Beginner

TOPIC CATEGORY

S5

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

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 **NEW**

INSTRUCTOR

Georg Böcherer, *Huawei Technologies,
Germany*

COURSE LEVEL

Advanced Beginner and Intermediate

TOPIC CATEGORY

S2

13:30 - 17:30

SC267 Silicon Microphotronics:
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

S4

SC433 Introduction to Photodetectors and Optical Receivers

INSTRUCTOR

Andreas Beling, *University of Virginia, USA*

COURSE LEVEL

Beginner

TOPIC CATEGORY

D3

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

SHORT COURSE TOPIC CATEGORIES

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- 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

Monday, 25 March 2024

08:30 - 12:30 (cont'd)

SC452 FPGA Prototyping for Optical Subsystems

INSTRUCTORS

Noriaki Kaneda, *nEye systems Inc, 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*
Jérôme 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 Pepeljugin, *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 **NEW**

INSTRUCTOR

Peter O'Brien, *Tyndall National Institute, Ireland*

COURSE LEVEL

Advanced Beginner

TOPIC CATEGORY

D1

SC527 Optical Satellite Networks **NEW**

INSTRUCTOR

Vincent Chan, *MIT, USA*

COURSE LEVEL

Advanced Beginner

TOPIC CATEGORY

N1, N3, S5

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

SC485 Advanced Fiber Access Networks

INSTRUCTORS

Jun Shan Wey, *Verizon, USA*
Rajesh Yadav, *Verizon, USA*

COURSE LEVEL

Intermediate

TOPIC CATEGORY

N4

SC526 Optical Wireless Technologies, Systems and Applications **NEW**

INSTRUCTOR

Harald Haas, *University of Strathclyde, Scotland*

COURSE LEVEL

Advanced Beginner

TOPIC CATEGORY

N4, S5

Monday, 25 March 2024

SC528 Hands-on: Fiber Optic OFCnet Course: Practical Fiber Optic Network Testing in a Realistic Network Environment **NEW**

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