



Advancing Optics and Photonics Worldwide

Fiber Modeling
and Fabrication

FFTG Bi-Monthly Newsletter: September 2026

Click [here](#) to submit content for next month's newsletter.

[Technical Group Information \(upcoming events/webinars\)](#)

Panel discussion at Frontiers in Optics (FiO) 2026:



Advancing Optics and Photonics Worldwide

Fiber Modeling
and Fabrication



Frontiers in Optics + Laser Science

JOIN US AT FiO 2026 **SPECIAL EVENT ON**

THE MICROGRAVITY ADVANTAGE: IN-ORBIT MANUFACTURING OF OPTICAL FIBERS AND ADVANCED MATERIALS

MEET THE PANELISTS



Matthew Ondler
Aegis Aerospace



Amrit De Apsidal



Kevin Engelbert
NASA



Heike Ebendorff-Heidepriem
University of Adelaide



Rose Hernández
United Semiconductors



DATE
Monday,
28 September 2026



TIME
12:45 – 13:45 EDT
(U.S. Eastern Time)



ROOM
Highland BJ
Rochester Riverside
Convention Center,
Rochester, NY

LEARN MORE
optica.org/FFTG

Fiber Modeling & Fabrication Technical Group – Advancing the science and technology of optical fibers

The Microgravity Advantage: In-Orbit Manufacturing of Optical Fibers and Advanced Materials

Date: Monday, 28 September 2026

Time: 12:30–14:00 EDT (U.S. Eastern Time)

Room: Highland BJ, Rochester Riverside Convention Center, Rochester, NY

RSVP: [FFTG Panel @ FiO2026](#)

More info: [Special Events at FiO2026](#)

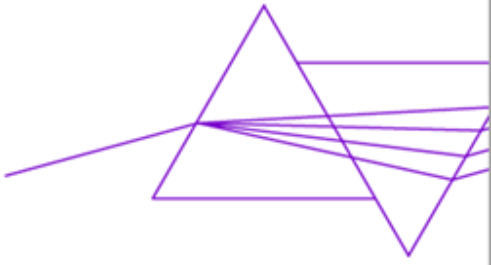
Upcoming Webinar: Space-Division Multiplexing (SDM) and Multi-Core Fiber (MCF) Technologies

OPTICA
Advancing Optics and Photonics Worldwide

Fiber Modeling
and Fabrication

WEBINAR
**Toward a New Ecosystem for
Multi-core Fiber Links**

20 October 2026 | 09:00 - 10:00 EDT (UTC-04:00)



Join us through Zoom on **Tuesday, October 20th at 09:00 EDT (UTC-4:00)** for a presentation by [Kazuhide Nakajima from NTT Inc.](#) Dr. Nakajima will discuss **Space-Division Multiplexing (SDM) and Multi-Core Fiber (MCF) technologies**, including their evolution, applications, standardization efforts, and future directions. More information for the event can be found on our Website.

Date: October 20, 2026,

Time: 09:00 Eastern Time (US and Canada)

Webinar registration link: [FFTG Upcoming Events](#)

FFTG Executive Committee Spotlight

Executive Officer: Ali Karatutlu



Ali Karatutlu is an Associate Professor in the Department of Engineering Basic Sciences within the Faculty of Engineering and Natural Sciences at Sivas University of Science and Technology, specializing in specialty optical fiber fabrication, mid-infrared lasers, and integrated photonic devices. He leads cutting-edge research initiatives focused on advanced manufacturing of mid-IR laser sources for environmental and industrial sensing, multifunctional integrated optical chips, and lab-on-fiber sensing platforms tailored for biomedical and healthcare diagnostics.

In addition to his role at Sivas, he maintains a part-time appointment at Bilkent University UNAM, extending a nearly decade-long tenure in advanced fiber research at the institution. His core contributions at UNAM include spearheading the design, preform processing, and drawing of complex specialty optical fibers, featuring

kilowatt-class active laser fibers and high-birefringence polarization-maintaining (PM) fibers for high-power laser and sensing systems.

He earned his Ph.D. from the School of Physics and Astronomy at Queen Mary University of London (QMUL), UK, in 2014, where his research concentrated on materials physics and optical characterization of nanostructured materials. Active in international professional leadership, Assoc. Prof. Karatutlu serves as an Executive Committee Member of OPTICA's Fiber Modelling and Fabrication Technical Group (FFTG), contributing to global technical exchange, community outreach, and academic-industrial collaborations in fiber optics and waveguide technologies.

Events Officer: Francesco Anelli



Francesco Anelli received the B.Sc. degree in Electronics and Telecommunications Engineering, the M.Sc. degree in Electronic Engineering, and the Ph.D. degree in Information and Electrical Engineering from the Polytechnic University of Bari, Italy, in 2019, 2021, and 2024, respectively. His doctoral research focused on the design and fabrication of mid-infrared photonic devices for sensing and Internet of Things applications. His doctoral dissertation received the 2025 CNIT Award for the Best Ph.D. Thesis in Electromagnetics. He is currently an Assistant Professor at the Polytechnic University of Bari.

His research activities encompass the numerical modeling, fabrication, and experimental characterization of optical fiber sensors and components, with particular emphasis on specialty fluoride fibers and devices operating in the mid-infrared spectral range. His work includes tapered fiber sensors, fiber gratings, couplers, combiners, and interferometers. He has co-authored 24 papers published in international peer-reviewed journals and is a co-inventor on a patent.

His research has benefited from collaborations with academic institutions and industrial partners across Europe. He has participated in several Optica professional-development initiatives, including the Career Accelerator, Student Leadership, and Level Up programs. He currently serves as Events Officer of the Optica Fiber Modeling and Fabrication Technical Group.

[Events and News](#)

SPECIAL EVENT @ APC 2026 (past event)

Rapid-Fire Presentations & Speed Networking

The **Optica Fiber Modeling and Fabrication Technical Group (FFTG)** hosted a special **Rapid-Fire Presentations & Speed Networking** event during **Optica Advanced Photonics Congress (APC) 2026** in Long Beach, California.

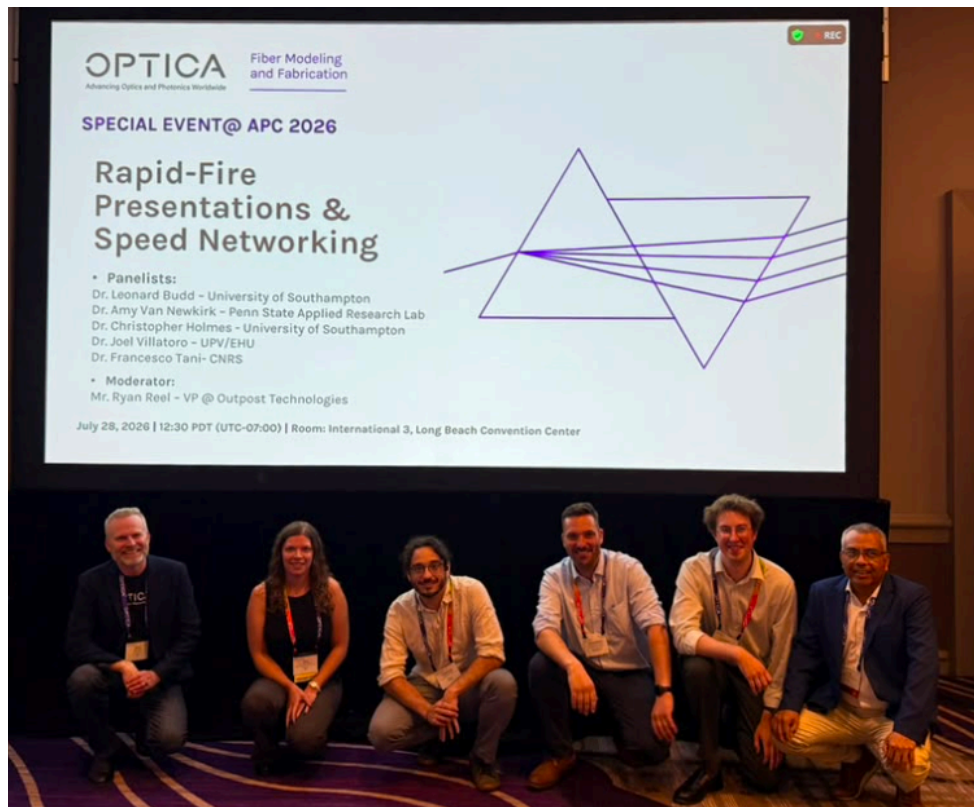
Held on **July 28, 2026**, the event brought together researchers and industry professionals for a dynamic series of short presentations covering the latest developments in **hollow-core fibers, multicore fibers, fiber sensing, structural health monitoring, and ultrafast nonlinear optics**.

Featured speakers:

- **Leonard Budd** – University of Southampton
- **Amy Van Newkirk** – Penn State Applied Research Lab
- **Joel Villatoro** – UPV/EHU
- **Christopher Holmes** – University of Southampton
- **Francesco Tani** – CNRS

Moderator: Ryan Reel, VP, Outpost Space

The event provided an engaging platform for exchanging ideas, exploring emerging fiber technologies, and connecting with colleagues across the specialty optical fiber community. We encourage you to catch a replay of the event through the following link [APC FFTG Rapid-Fire Presentations](#)



A group photo of the panelists and moderator following the Fiber Modeling and Fabrication Technical Group's Rapid-Fire Presentations & Speed Networking special event at Optica Advanced Photonics Congress 2026 in Long Beach, California.

Career and Education Opportunities

Company/University	Career or Education Opportunity	Location	Link
Coherent Corp.	Senior Principal Optical Engineer	Santa Clara, CA, USA	Coherent
Coherent Corp.	Optical Design Engineer	Horsham, PA, USA	Coherent
Coherent Corp.	Engineering Manager	Wilsonville, OR, USA	Coherent
CNRS – Laboratoire Temps Espace	Postdoctoral Researcher – Advanced Photonics & Fiber-Optic Sensing	Paris, France	CNRS
CNRS – Institut des sciences chimiques de Rennes	Postdoctoral Researcher – Infrared Glasses & Optical Fibers	Rennes, France	CNRS
Université de Limoges / XLIM	Postdoctoral Researcher – Physics/Optics, MULTIMOC & GRAFIC	Limoges, France	Uni Limoges
Coractive	Application Scientist	Québec City, QC, Canada	Coractive
Corning Inc.	Fiber Products Associate	Wilmington, NC, USA	Corning
Corning Inc.	Capital Project Manager-Fiber Manufacturing	Wilmington, NC, USA	Corning
Corning Inc.	Optical Fiber and Cable Engineering Intern - Summer 2027	Charlotte, NC, USA	Corning
Corning Inc.	Fibermaking Operations Section Supervisor	Concord, NC, USA	Corning
Lightera	Technical Manager, Fiber Lasers	Somerset, NJ, USA	Lightera
Prysmian	Fiber R&D Director	Claremont, NC, USA	Prysmian

Featured Publications

Check out the recently published

1. Towards complete characterization of hollow core fiber

Find a comprehensive approach to characterizing hollow-core fiber geometry, providing important insights into the structural parameters that influence fiber performance. The work offers valuable tools for understanding and optimizing the design and fabrication of next-generation hollow-core fibers.

Read the article: [Optics Letters](#)

2. Fiber coupler fabrication by 4.6 μm quantum cascade laser irradiation

This article presents a contaminant-free method for fabricating fused fiber couplers using a 4.6 μm quantum cascade laser. The researchers demonstrated a 2×2 fused fiber coupler with 0.65–0.75 dB excess loss across the C-band, offering a promising approach for high-power optical and space-communication applications.

Read the article: [Optics Letters](#)

3. Inverse Design of a 125- μm -Cladding 7-Core OAM Fiber Amplifier

A recent study explores the inverse design of a 125- μm -cladding, seven-core orbital-angular-momentum fiber amplifier, demonstrating how advanced modeling can optimize multicore fiber designs for improved pump efficiency and next-generation optical applications.

Read the article: [Optics Express](#)