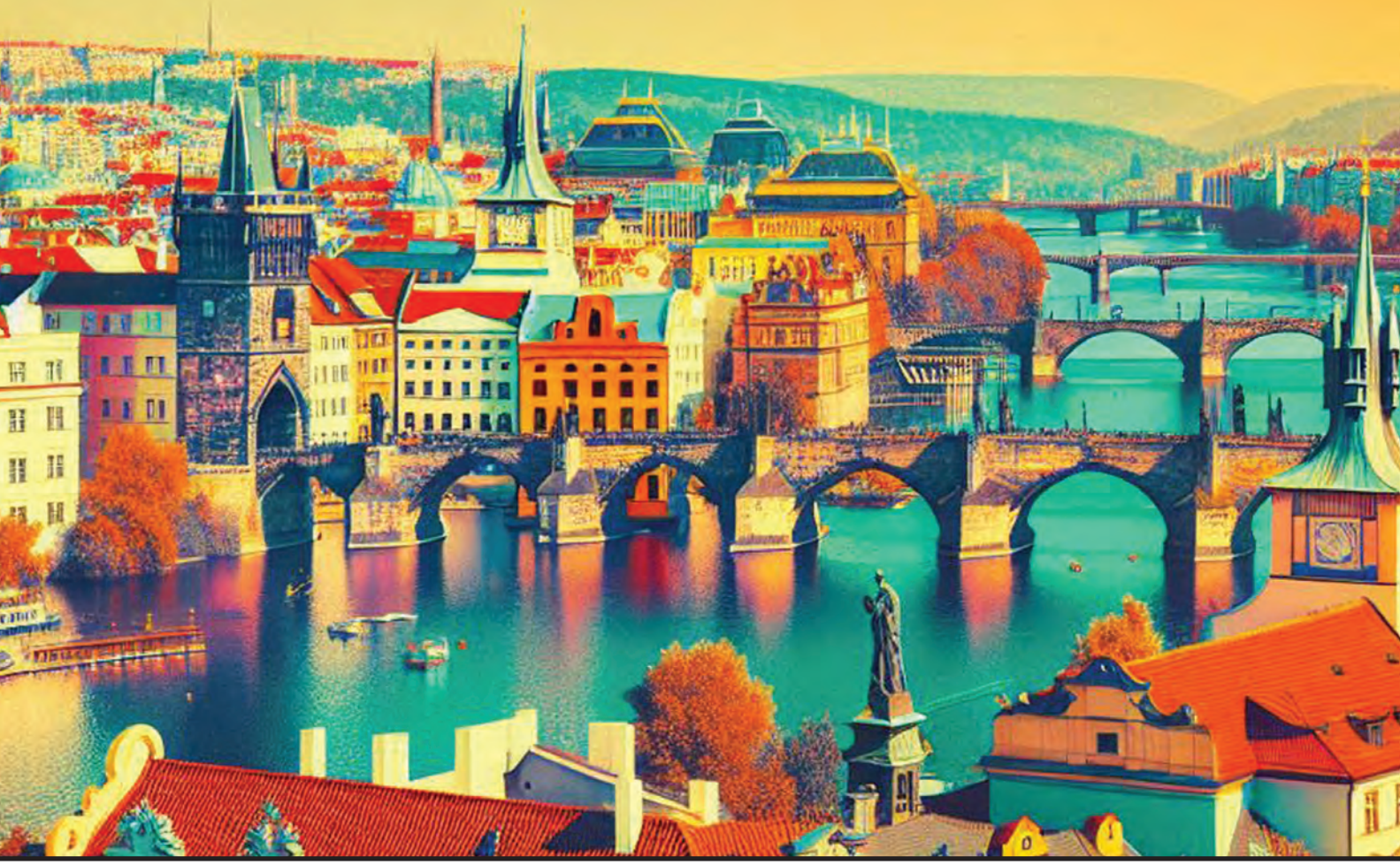
EVENT PROGRAM | EXHIBITION GUIDE

Workshop on SPECIALTY OPTICAL FIBERS AND THEIR APPLICATIONS

7–10 APRIL 2025 | CLARION CONGRESS HOTEL PRAGUE
PRAGUE, CZECH REPUBLIC



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ÚFE Institute of Photonics and Electronics
The Czech Academy of Sciences

TECHNICAL SPONSORS

Czech Academy of Sciences

SPIE.

CZECH OPTICAL CLUSTER

PRAHA PRAGUE PRAGA

Workshop on
SPECIALTY OPTICAL FIBERS AND THEIR APPLICATIONS

Conferences: 7–10 April 2025
Exhibition: 8–10 April 2025
Clarion Congress Hotel
Prague, Czech Republic

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Optoelectronics Research Ctr. (United Kingdom)

Welcome

It gives us great pleasure in welcoming you to the 8th Workshop on Specialty Optical Fibers and Their Applications (WSOF). The series started in Sao Pedro, Brazil in 2008 and, those days, WSOF was one of the rare-events globally that was singly oriented on this topic. Now, specialty optical fibers are amongst the hottest and most critical research areas. WSOF comes to the historic city of Prague, once the capital of the Roman Empire. Because Prague is not only about gothics it is close to optics too. Johannes Kepler, Christian Doppler, Emil Wolf, Erich Spitz lived or made their discoveries here; Albert Einstein spent time here when conceptualizing his general theory of relativity; Prague's first laser devices date as early as 1962 ... and at the Czech Academy of Sciences operate infrastructure for optical fiber technology you are invited to visit.

WSOF 2025 is combined with the Specialty Optical Fiber (SOF) conference of SPIE Optics + Optoelectronics symposium. This special, one-time edition, will not only bring the opportunity for a larger audience and broader technical program of more that 110 papers, 4 plenaries and 14 invited papers covering the latest innovations and advances in specialty optical fibers,but also offers the added benefit of having a dedicated vendor exhibit and industry panel, all combined in a single venue.

Wishing you a good time at WSOF!

Experience this technical workshop and exhibition for the advances and innovations of specialty optical fibers and their applications.

Special Events—PAGES 4–6

Enjoy presentations from expert speakers, technical discussions, and networking sessions.

WSOF Conference PAGES 8–9

Poster events, workshops, and panel discussions - connect with colleagues on topics critical to your work and interest areas.

Exhibition—PAGES 10–13

TUESDAY 8 APRIL . . . . . 10.00 - 17.00
WEDNESDAY 9 APRIL . . . . . 10.00 - 17.00
THURSDAY 10 APRIL. . . . . 10.00 - 13.00

A commercial exhibit will be available offering both stands and tabletops. Meet industry representatives to discuss the latest research and advances in specialty optical fiber technologies.

GENERAL INFORMATION

Badge pick up and registration hours

Location: Clarion Hotel, Conference Floor Foyer

Sunday 6 April	15:00 - 17:00
Monday 7 April	07:45 - 17:00
Tuesday 8 April	07:45 - 17:00
Wednesday 9 April	08:00 - 17:00
Thursday 10 April	08:00 - 16:00

Exhibition-only visitor registration is complimentary, but your registration has to be approved by organizers.

Exhibition hours

Tuesday 8 April	10:00 - 17:00
Wednesday 9 April	10:00 - 17:00
Thursday 10 April	10:00 - 13:00

Event Partners Cashier

Location: Registration Area. Open during registration hours.

Receipt and Certificate of Participation
Preregistered attendees who need a stamped receipt or attendees who need a Certificate of Participation may obtain those at the Cashier.

Badge Corrections
Badge corrections can be made at the Cashier. Please mark your badge with your changes before approaching the counter.

Speaker Check-in and Preview Station

Location: Registration Area

Monday - Thursday . . . . . .08:00 - 17:00

Speakers are not able to present using their own devices. All conference rooms are equipped with a computer workstation, projector, screen, lapel microphone, and laser pointer. All presenters are requested to come to their conference room during the breaks with their memory devices or laptops to confirm their presentation display settings.

Internet access

Complimentary wireless internet access will be available; connection speed depends on the number of users. Please read the SPIE Wireless Service Policy.

Login details and password are available at the Registration Desk.

Luggage and coat check

Location: next to the Registration Desk. Open during Registration Hours.

Complimentary luggage, package, and coat storage are available. Please note opening hours.

Child Care Services

This listing by SPIE does not imply an endorsement or recommendation of these services. They are provided on an "information only" basis for your further analysis and decision. Other services may be available.
To book childcare services, please contact the Event Partners Registration Office at **support@conference.cz**

Fénix Shopping Centre amenities and services

The adjacent shopping Fénix Shopping centre has a multitude of shops as well as services such as restaurants, parking, Children's corner, self-delivery services, banks, ATMs, a post office and a copy centre. For further information (open in Chrome and use English Translation extension).

Mother's Room

Location: Please request a key from the Registration Desk

The Mothers' Room is a lockable room intended for nursing mothers. There is no storage, running water, or refrigeration available in this space.

Quiet Room

Location: Please request key from Registration Desk

The Quiet Room is intended for silent meditation, reflection, and prayer. No mobile devices or computer use is allowed, and no food nor beverages are allowed.

Lost and Found

Location: Cashier

Found items will be kept at the Cashier in the Registration area during the meeting and available only during registration hours. At the Clarion Hotel security services.

Urgent message line

+420 211 131 139
Messages for attendees can be left by calling the Clarion Hotel and Congress Centre and asking for the Events Partners Conference and Registration Desk. Message will be taken during registration hours Monday — Thursday. It is the attendees' responsibility to check the message board on a regular basis.

Food and beverage services

Coffee Breaks
Location: Conference Foyer and Meridian

Monday - Thursday. . . . . 07:00 - 16:00

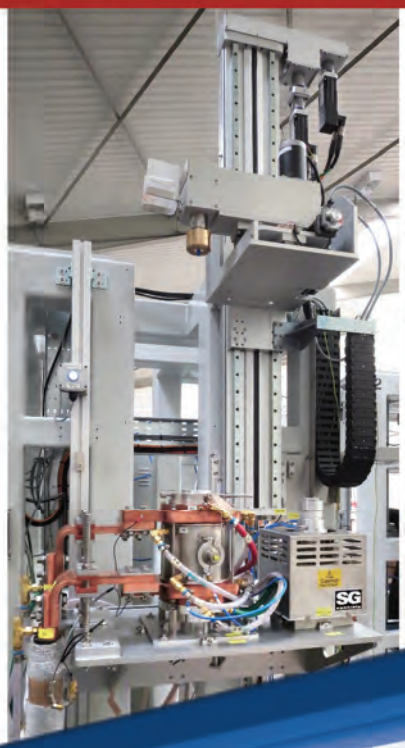
Lunches for purchase
Location: Clarion Hotel, Veduta Restaurant

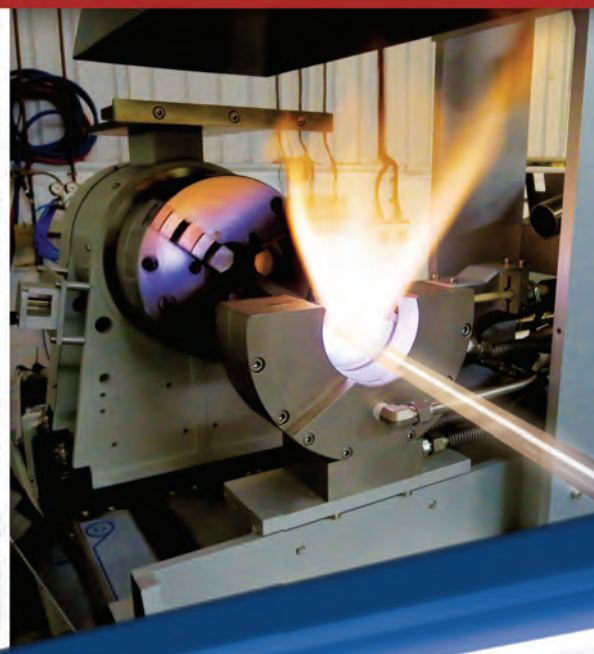
Monday - Thursday. . . . . 12:00 - 14:00

Your event registration includes one lunch each day, but if you need to purchase an additional lunch for a guest you can do so for €28/person, per day. Tickets available via registration.

Visit us at Stand #9 to pick up your FREE t-shirt

Expert Consulting, Superior Equipment





fiber optic center

Specialty Fiber and Optical Fiber Consulting Services

From process consultation to post-installation assistance, services include:

- General troubleshooting
- Recipe development to avoid "chasing the recipe"
- Equipment repair
- Operator training
- Efficiency recommendations
- System maintenance assistance, such as hazardous chemical handling knowledge

SG controls

Preform Production and Optical Fiber Manufacturing Equipment

Including Towers for R&D and Specialty Fiber, High Speed Mass Production and Soft Glasses

Special capabilities for rare earth depositions exceeding 8 weight percent

Benefits:

- Corrosion-proof gas delivery Preform Production and Optical Fiber Manufacturing Equipment
- State of the art vapor delivery control (seal-less pressure control system requires minimal maintenance)
- State of the art preform diameter control
- MCVD machine controlled by integrated process knowledge
- Repeatable process controls

Contact our Optical Fiber Process Development and Manufacturing experts at FiberManufacturing@focenter.com

focenter.com

SPECIAL EVENTS

Plenary sessions feature presentations from a wide range of leaders in the field, with focus on developing research and visions of the future of laser technologies.

Monday Plenary Session

7 April 2025 • 16:15 - 18:00 | Nadir

16:15–16:30

Welcome Address

Peter de Groot, Zygo Corp. (United States)
2025 SPIE President

SPIE Presentation of the 2025 SPIE Maria Goeppert Mayer Award in Photonics to

Pavel Cheben
National Research Council Canada

SPIE congratulates Pavel Cheben, Principal Research Officer at the National Research Council Canada, in recognition of his pioneering contributions to silicon photonic waveguide devices, including the invention of metamaterial waveguides and advancing sub-wavelength integrated photonics technology.

Presentation of SPIE Fellowship to

Niels Quack, Univ. of Sydney (Australia)
and
Peter D. Dragic, Univ. of Illinois (United States)

Welcome and Introduction

Saša Bajt, Deutsches Elektronen-Synchrotron (Germany)
Symposium Chair
Pavel Bakule, ELI Beamlines (Czech Republic)
Symposium Chair

16:30 to 17:15

New perspectives on photonic quantum computing and quantum machine learning

Philip Walther
Univ. of Vienna (Austria)

17:15 to 18:00

Large-scale optical machine learning exploiting disorder

Sylvain Gigan
Sorbonne Univ. (France) and Lab. Kastler-Brossel, ENS (France)

Tuesday Plenary Session

8 April 2025 • 09:00 - 10:40 | Nadir

9:00 to 9:05

Welcome and Introduction

Saša Bajt, Deutsches Elektronen-Synchrotron (Germany)
Pavel Bakule, ELI Beamlines (Czech Republic)
Optics + Optoelectronics Symposium Chairs

9:05 to 9:50

Laser-plasma interaction studies for advanced direct-drive ignition

Emma Hume
ILIL, National Institute of Optics-CNR (Italy)

9:55 to 10:40

Advancements in attosecond technology and applications

Francesca Calegari
Deutsches Elektronen-Synchrotron DESY (Germany)

WSOF Plenary Session I & II-Tuesday

8 April 2025 | Zenit

WSOF PLENARY SESSION I

11:00 to 11:45

Welcome and Introduction

Pavel Honzátko
Institute of Photonics and Electronics,
Czech Academy of Sciences (Czech Republic)

11:00 to 11:45

Fibers for high pulse energy fiber lasers

Clémence Jollivet
Coherent Inc. (United States)

WSOF PLENARY SESSION II

13:35 to 14:20

Welcome and Introduction

John Ballato
Clemson University (United States)

Fiber regenerative amplifiers for femtosecond pulse generation

Frank Wise
Cornell Univ. (United States)

WSOF Plenary Session III-Wednesday

9 April 2025 • 08:45 - 09:30 CEST | Zenit

11:00 to 11:45

Welcome and Introduction

Ivan Kašík
Institute of Photonics and Electronics,
Czech Academy of Sciences (Czech Republic)

Soft glass fibres: versatility through glass composition, nano/micro-crystal incorporation and fibre structure

Heike Ebendorff-Heidepriem
Univ. of Adelaide (Australia)

Wednesday Plenary Session

Joint Plenary Session between SPIE Optics + Optoelectronics

9 April 2025 • 13:30 - 15:10 | Nadir

13:30 to 13:35

Welcome and Introduction

Saša Bajt, Deutsches Elektronen-Synchrotron (Germany)
Optics + Optoelectronics Symposium Chairs

13:35 to 14:20

High repetition rate femtosecond X-ray studies of dynamically compressed matter

Justin S. Wark
Clarendon Lab., Univ. of Oxford and
Oxford Centre for High Energy Density Science
(United Kingdom)

14:20 to 14:25

Welcome and Introduction

Pavel Peterka, Institute of Photonics and Electronics, Czech Academy of Sciences (Czech Republic)
2025 WSOF Chair

14:25 to 15:10

One (hollow) fibre to rule them all

Francesco Poletti
Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom)

See full details and updates at **spie.org/eoo** or on the **SPIE App**

SPECIAL EVENTS

Welcome Reception

7 April 2025 • 19:00 - 22:00 CEST | Off site location

Join your colleagues for food and beverages as we welcome each other to The 8th International Workshop on Specialty Optical Fibers and Their Applications.

All registered WSOF attendees are invited to join your colleagues at the Welcome Reception. The event buff et style banquet and music will take place at The Lord Mayor's Residence.

Please remember to wear your conference registration badg-es. Dress is smart casual or formal.

The Lord Mayor's Residence

Mariánské náměstí 1/98

110 00, Staré Město, Praha 1

City Tour

9 April 2025 • 17:30 - 18:30 | Off site location

Registration for the City tour will be possible onsite at the WSOF Registration Desk

Registered conference attendees are invited to a short guided tour of the historical center of Prague

The city tour will be followed by the Vltava River Cruise.

The tour will depart from the conference venue.

The projected time of meeting with tour guides is 17:15 hrs on Wednesday at the conference venue. Meeting point is in the lobby near the restaurant Veduta.

Information including departure time updates will be available at the WSOF registration desk.

Number of participants is limited.

Vltava River Cruise wih Dinner Banquet

9 April 2025 • 18:45 - 22:00 | Off site location

All registered conference attendees are invited to join us for a stylish buff et dinner aboard a Vltava sightseeing boat.

Please remember to wear your conference registration badg-es. Dress is casual.

Boat departs at 7:00 pm sharp.

We sail on boat named Czechie from Dock No. 14, Na Františku, Prague 1.

Further information about the cruise will also be available on-site at the WSOF Registration Desk.

Posters-Tuesday Joint Poster Session between Optics + Optoelectronics and WSOF

8 April 2025 • 17:30 - 19:00 | Meridian Hall

Symposium attendees are invited to attend the poster ses-sion on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your fi eld. Authors of poster papers will be present to answer questions concerning their papers. Remember to wear your registration badge.

Poster Setup: Tuesday 10:00 - 17:00 hrs

Poster authors, view poster presentation guidelines and set-up instructions at **http://spie.org/EOOPosterGuidelines**.

SPIE assumes no responsibility for posters left up after the end of the poster session.

Lab Tour: Optical Fibre Technology at the Institute of Photonics and Electronics

10 April 2025 • 17:30 - 20:00 | Offsite location

UFE Institute of Photonics and Electronics
The Czech Academy of Sciences

Registered attendees are invited to visit the laboratory for fab-rication of specialty optical fibres for fibre lasers and optical fibre sensors. Transportation will be provided.

Registration for the tour can be made at the WSOF Registration Desk.

The projected time of the shuttle departure is 17:30 on Thurs-day from the conference venue. Information about the depar-ture location and any updates will be available at the WSOF registration desk.

Lab Tour: Synthetic Crystal Manufacturing and Processing at Crytur

11 April 2025 • 09:00 - 15:00 | Offsite location

crytur

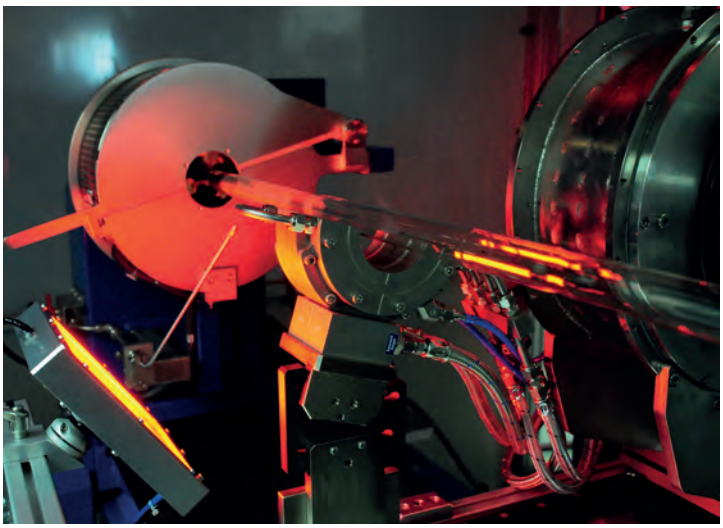
Join us for a Company visit at Crytur, the integrated provider of opto-electonic solutions for science and hi-tech industrial applications. A world leader in synthetic crystal manufacturing and processing.

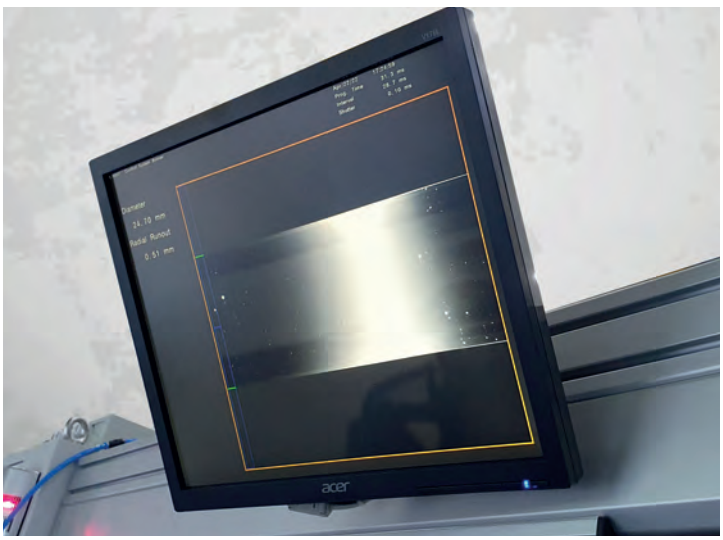
Register for the tour at the WSOF Registration Desk.

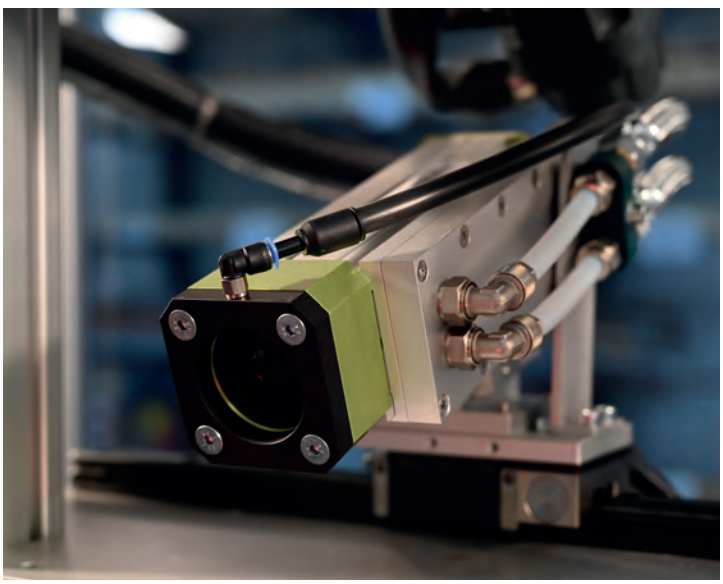
Shuttle departure is 9:00 hrs on Friday from the conference venue. Further information and any updates will be available at the WSOF registration desk. Number of participants is limited.

Tour duration: 6 hours (including travel).

Return to Prague is expected between 15:00 (no traffic delays) and 17:00 hrs (with traffic delays).







ARNOLD GRUPPE

The Arnold Group is an innovative company specializing in the development and implementation of customized solutions in the fields of quartz glass processing (mostly for fiber optics & semiconductor production), glass processing, Silicon processing, as well as automation solution for the previously mentioned.

Since 1950, we have been offering our customers not only high-quality products but also comprehensive services tailored to their individual needs – from individual torches and tools to fully automated, robot feed machines.

Our portfolio for **specialty fiber customers** includes preform preparation machines, MCVD and FCVD systems, horizontal and vertical overcladding systems, and specialty fiber draw towers equipped with our own induction furnaces. We are also working on future developments such as customized OVD and rear earth chelate systems.

For our **telecommunication fiber customers** we offer cutting, grinding and welding machines for the core rod production as well as for the preform manufacturing process. Besides the well-known burner application, we offer future-oriented and energy-saving induction furnace as well as plasma burner solutions. In recent years, vertical and horizontal core rod drawing systems have been developed together with our customers.

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D-35781 Weilburg, Germany

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Mail: info@arnold-gruppe.de

www.arnold-gruppe.de

Eighth Workshop on Specialty Optical Fibers and their Applications

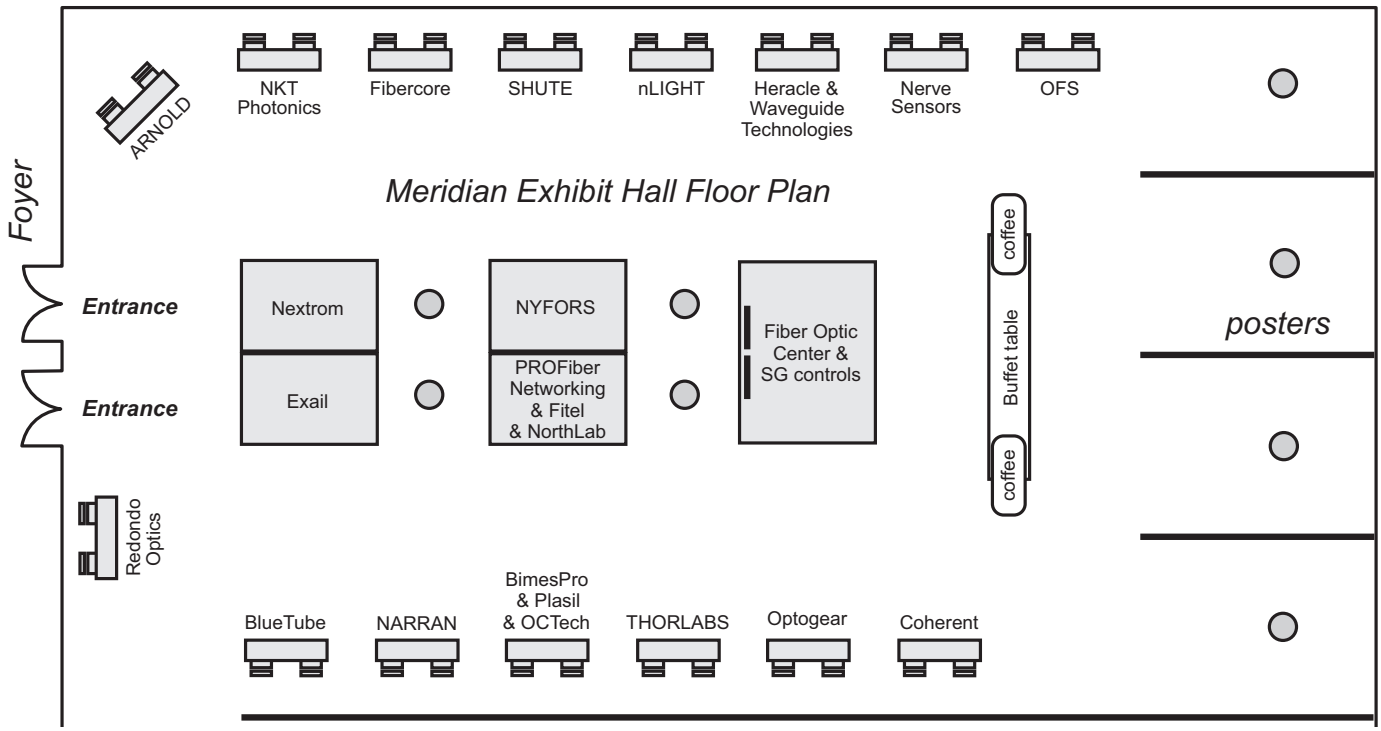
7 - 10 April 2025 | Zenit

MONDAY 7 APRIL 2025	
08:45 - 09:00 Room: ZENIT	**Opening Ceremony** 2025 WSOF Chairs: Pavel Peterka, Institute of Photonics and Electronics, Czech Academy of Sciences (Czech Republic); Kyriacos Kalli, Cyprus University of Technology (Cyprus); ohn Ballato, Clemson University (United States); Alexis Mendez, MCH Engineering LLC (United States)
09:00 - 10:30	**SESSION 1: FIBER FABRICATION** Session Chair: Michal Kamrádek, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)
10:30 - 11:00	Coffee Break
11:00 - 12:30	**SESSION 2: BIOMEDICAL APPLICATIONS** Session Chair: Kyriacos Kalli, Cyprus Univ. of Technology (Cyprus)
12:30 - 14:00	Lunch Break
14:00 - 14:40	**INDUSTRY PANEL** Moderator: Alexis Mendez, MCH Engineering LLC (United States)
14:45 - 15:35	**EXHIBITOR COMPANY BRIEFS** Session Chair: Alexis Mendez, MCH Engineering LLC (United States)
15:35 - 16:15	Coffee Break
16:15 - 18:00 Room: NADIR	**CO-LOCATED EVENT WITH WSOF:** **SPIE OPTICS + OPTOELECTRONICS MONDAY PLENARY SESSION I** **SPIE Presentation of the 2025 SPIE Maria Goeppert Mayer Award in Photonics** **Presentation of SPIE Fellowship** **Large-scale optical machine learning exploiting disorder** *(Plenary Presentation)*, Sylvain Gigan, Lab. Kastler Brossel (France)
TUESDAY 8 APRIL 2025	
08:50 - 10:30 Room: NADIR	**CO-LOCATED EVENT WITH WSOF:** **SPIE OPTICS + OPTOELECTRONICS TUESDAY PLENARY SESSION II** **Laser-plasma interaction studies for advanced direct-drive ignition** *(Plenary Presentation)*, Emma Hume, Istituto Nazionale di Ottica-CNR (Italy) **Advancements in attosecond technology and applications** *(Plenary Presentation)*, Francesca Calegari, Deutsches Elektronen-Synchrotron (Germany)
10:40 - 11:00	Coffee Break
11:00 - 11:45 Room: ZENIT	**SESSION PL1: WSOF PLENARY SESSION I** Session Chair: Pavel Honzátko, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic) **Fibers for high pulse energy fiber lasers** *(Plenary Presentation)*, Clémence Jollivet, Coherent Corp. (United States)
11:45 - 12:35 Room: ZENIT	**SESSION 3: FIBER LASERS I** Session Chair: Pavel Honzátko, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)
12:35 - 13:35	Coffee Break
13:35 - 14:20 Room: ZENIT	**SESSION PL2: WSOF PLENARY SESSION II** Session Chair: John M. Ballato, Clemson Univ. (United States) **Fiber regenerative amplifiers for femtosecond pulse generation***(Plenary Presentation)*, Frank W. Wise, Cornell Univ. (United States)
14:20 - 15:20 Room: ZENIT	**SESSION 4: NONLINEAR EFFECTS** Session Chair: John M. Ballato, Clemson Univ. (United States)
15:20 - 15:50	Coffee Break
15:50 - 17:20	**SESSION 5: ADVANCED TECHNIQUES** Session Chair: Frank W. Wise, Cornell Univ. (United States)
17:30 - 19:00 MERIDIAN HALL	**TUESDAY POSTERS**

WEDNESDAY 9 APRIL 2025	
13:35 - 14:20 Room: ZENIT	**CO-LOCATED EVENT WITH WSOF:** **SPIE OPTICS + OPTOELECTRONICS SESSION PL3: WSOF PLENARY SESSION III** Session Chair: Ivan Kašík, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic) **Soft glass fibres: versatility through glass composition, nano/micro-crystal incorporation and fibre structure** *(Plenary Presentation),* Heike Ebendorff-Heidepriem, The Univ. of Adelaide (Australia)
09:30 - 10:15 Room: ZENIT	**SESSION 6: ADVANCES IN NON-SILICA FIBERS**
10:15 - 10:45	Coffee Break
10:45 - 12:30	**SESSION 7: HOLLOW-CORE FIBERS** Session Chair: Radan Slavík, Optoelectronics Research Ctr. (United Kingdom)
12:30 - 13:30	Lunch Break
13:30 - 15:10 Room: NADIR	**WEDNESDAY PLENARY SESSION** **Joint Plenary Session Between SPIE Optics + Optoelectronics and WSOF** **High repetition rate femtosecond X-ray studies of dynamically compressed matter** *(Plenary Presentation),* Justin S. Wark, Univ. of Oxford (United Kingdom) **One (hollow) fibre to rule them all** *(Plenary Presentation),* Francesco Poletti, Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom)
15:10 - 15:40	Coffee Break
15:40 - 17:15 Room: ZENIT	**SESSION 8: FIBER LASERS II** Session Chair: Clémence Jollivet, Coherent Corp. (United States)
THURSDAY 10 APRIL 2025	
08:30 - 10:30 Room: ZENIT	**SESSION 9: SPECIALTY FIBERS FOR QUANTUM APPLICATIONS** Session Chair: Josef Vojtech, CESNET z.s.p.o. (Czech Republic)
10:30 - 11:00	Coffee Break
11:00 - 12:30	**SESSION 10: FIBER SENSING I** Session Chair: Michal Nikodem, Wroclaw Univ. of Science and Technology (Poland)
12:30 - 13:40	Lunch/Exhibition Break
13:40 - 15:10	**SESSION 11: FIBER SENSING II** Session Chair: Alexis Mendez, MCH Engineering LLC (United States)
15:10 - 15:30	Coffee Break
15:30 - 17:05	**SESSION 12: COMPONENTS AND DEVICES** Session Chair: Pavel Peterka, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)
17:05 - 17:20	**CLOSING CEREMONY AND STUDENT AWARDS**

Specialty Optical Fibers Exhibition Directory

TUESDAY 8 APRIL	10.00 - 17.00
WEDNESDAY 9 APRIL	10.00 - 17.00
THURSDAY 10 APRIL	10.00 - 13.00



PLATINUM SPONSORS

Fiber Optic Center

https://focenter.com/fiber-process-development-and-manufacturing

Fiber Optic Center provides consulting for fiber process development and manufacturing to specialty optical preform and fiber manufacturers. Our experts, Richard Tumminelli and Larry Donalds, offer support throughout, including post-installation and troubleshooting. We partner with SG Controls to supply top-quality optical fiber process development and manufacturing equipment.

SG Controls

www.sgcontrols.co.uk

SG Controls manufactures tools for optical fiber production, including fiber optic draw towers for high-volume production and R&D, MCVD systems for preform production, proof test equipment, and rewind systems. Their equipment features corrosion-proof gas delivery, vapor delivery control, preform diameter control, and integrated process knowledge for repeatable MCVD process control.

GOLD SPONSORS

Exail

www.exail.com

Exail masters the complete supply, from design to manufacturing, of specialty fibers, Bragg gratings, high speed modulation solutions and micro-optic assemblies. We provide turn-key laser systems delivering continuous and sub-ns pulsed signal wave, as well as instruments. Our solutions support a very wide variety of applications in high-speed communications, fiber-based sensing, space, science, medical, and quantum technologies.

NYFORS

www.NYFORS.com

NYFORS is your innovative supplier of advanced glass processing and preparation equipment for specialty optical fiber splicing operations. We supply reliable and precise solutions tailored to the individual challenges of our customers. Our highly automated systems lead to consistent, high yield production for both high and low volume. Our portfolio currently includes: CO2 laser splicing and glass shaping equipment, recoaters, automatic systems for preparation, fiber-end and window stripping.

Rosendhal-Nextrom

rosendahlnextrom.com

Nextrom is the leading global supplier of production technologies for optical fiber and fiber optic cables. Our core competencies include solutions for optical glass making, fiber drawing, fiber coating, ribbon making, proof testing and fiber optic cable production. Our technology is used for producing telecom- and specialty preforms and fibers.

SILVER SPONSORS

ARNOLD GRUPPE

www.arnold-gruppe.de

ARNOLD is one of the worldwide leading manufacturers of burners, tools and machines as well as ready-to-use systems for customers in the area of silicon for semiconductor and photovoltaic, glass and quartz glass processing, fibre-optic and the automotive production.

Fibercore

fibercore.humaneticsgroup.com

Founded 1982, Fibercore is a leading innovator, designer and manufacturer of specialty fiber serving customers across the world. Products include specialty fiber for the Aerospace, Defence, Telecommunications, Oil and Gas, Energy, Medical and Fiber Laser industries – the business is a global market leader. The company's operatiaons are headquartered in Fibercore House, a custom built Southampton based facility, in the UK.

nLIGHT

www.nlight.net

nLIGHT offers cutting-edge specialty laser fibers and semiconductor lasers to realize your fiber laser system at 1µm, 1.5µm and 2µm. nLIGHT's LIEKKI® laser fibers are fabricated using our proprietary direct nanoparticle deposition process. We manufacture Ytterbium, Erbium, Thulium or passive fibers in standard or customized designs.

Optogear Oy

www.optogear.fi

Optogear offers equipment and technologies for optical fiber manufacturing. Our products enable superior quality fiber optic products made by the world leading companies of the industry. Modern industrial design, close co-operation with our worldwide partner network and attention to customer feedback ensure excellent usability and exceptional performance of our products.

PROFiber Networking

www.profiber.eu

PROFiber Networking CZ s.r.o. has been operating since 2007 as a distributor of advanced technologies, diagnostic and measurement equipment for photonics and optical networks. We operate an ISO 17025 accredited calibration laboratory in Trnava and service centers in Prague (CZ) and Trnava (SK).

BimesPro, Plasil and OCTech

bimespro.com plasil.si octech.si

Bimes, Plasil and OCTech, a group of companies with extensive experience in optical fiber field, provide solutions for research, development and production of special optical fibers, based on process knowledge and understanding. Our equipment portfolio covers preform and optical fiber fabrication from raw materials to effluent treatment and specialized measurements.

BlueTube

www.linkedin.com/in/bluetube-technology

The BlueTube® UV LED System designed for curing fiber coatings made of polymers and acrylates demonstrates unprecedented performance thanks to its unique technology. The proprietary technology enables pioneering curing results leading to a new paradigm in UV LED optical fiber curing.

Coherent

www.coherent.com

Coherent empowers market innovators to define the future through breakthrough technologies, from materials to systems. We deliver innovations that resonate with our customers in diversified applications for the industrial, communications, electronics, and instrumentation markets. Headquartered in Saxonburg, Pennsylvania, Coherent has research and development, manufacturing, sales and service facilities worldwide.

Fitel

www.furukawa.co.jp/splicer/en/

For nearly four decades, FITEL has been a pioneer in the realm of splicing technology, a critical component utilized by top-tier photonics, aerospace, defence, research, and academic institutions worldwide. Our innovative splicing systems are paving the way for advancements in quantum communications, fibre lasers, mass data transfer, and a host of other cutting-edge applications.

Heracle

www.heracle.de

Heracle develops and manufactures custom-designed specialty optical fiber for advanced industrial, medical and sensor applications. We offer simulation, prototype development, mass manufacturing and supply chain management for customers worldwide. Along with our comprehensive measurement and characterization services for fused silica optical fibers we help to develop optical device innovation by translating their specific demands and specifications into innovative fiber products.

Narran

narran.cz

Narran develops and supplies industrial laser systems for material processing, including cleaning, welding, and surface treatment. We also distribute optical components and measurement systems from manufacturers such as OptoSigma, Dantec Dynamics, and Thorlabs. Our technologies support applications in research, development, and precision manufacturing across various scientific and industrial fields.

Nerve-Sensors

nerve-sensors.com

Nerve-Sensors produces the world's first composite DFOS Distributed Fibre Optic Sensors, which have been designed especially for geotechnics and civil engineering applications. Our Nerve-Sensors are dedicated to geometrically continuous measurements of strains, temperature, and displacement, and have already been applied in many proven applications.

NKT Photonics

www.nktphotonics.com

NKT Photonics, part of Hamamatsu Photonics, is the leading manufacturer of high-performance fiber lasers & photonic crystal fibers. Choose from a wide range of ultrafast lasers, supercontinuum white light lasers, low-noise fiber lasers, and an extensive variety of specialty fibers. We have lasers in space and deep under the oceans. Our products run in clean rooms and on oil rigs. We seed the world's largest laser fusion experiment and power hundreds of advanced microscopes on the globe. With over fifteen years of expertise, we strive to continually be the market leader in everything we do.

NorthLab

www.northlabphotonics.com

NorthLab's products and know-how include fiber optic cleavers, interferometers, recoaters, fusion splicers, equipment for manufacturing FBG's/combiners/bundles and more. The customers are found in all areas where optical fibers are used and include industry, universities and research institutes. We enable their production and R&D.

OFS

www.ofsoptics.com

OFS is a world-leading innovator, manufacturer and provider of infrastructure solutions for communication networks and specialty fiber optic products. Our company brand is creating future-ready and sustainable solutions for customers in such areas as telecommunications, medicine, industrial networking, sensing, aerospace, defense, and energy. OFS is guiding light for a better life through the limitless possibilities of fiber optics.

Opterro

opterro.com

Opterro is a Silicon Valley-based technology company that offers a family of distributed high speed fiber-optic sensing products with onboard data storage and processing and cloud-based intelligent analytics for a range of applications spanning data center, electric utilities, smart infrastructure, manufacturing, renewable energy, research & development, medical devices & wearables, aerospace & defense, and agtech & climate.

Redondo Optics

Redondo Optics Inc.
An Opterro Company

redondooptics.com

Redondo Optics Inc. (ROI) is a fiber optic sensor company that provides multi-parameter distributed fiber optic sensors for structural health and condition-based monitoring applications. Specific product lines include miniature fiber Bragg-grating (FBG) sensor interrogation systems, dynamic FBG acoustic-emission, wireless and battery power FBG sensor interrogators, as well as distributed fiber optic chemical sensors.

SHUTE

SHUTE Sensing solutions

shute.dk

SHUTE Sensing Solutions has developed a novel microstructured polymer optical fiber sensor system, which enables real-time monitoring of strain/stress, humidity, temperature and vibrations in points along a hair-thin optical fiber. New in productportfolio is a singlemode mPOF humidity sensor and a Chirped FBG mPOF strain sensor. Both are C-band compatible.

Thorlabs

THORLABS

www.thorlabs.com

THORLABS is a vertical integrated photonics products manufacturer serving the Photonics Industry from research to industrial, life science, medical, and defense segments. Its manufacturing assets include fabrication facilities for semiconductors, optical fibers, epitaxial wafer growth, glass and metal shops, thin film deposition, and optomechanical as well as optoelectronic shops.

Waveguide Technologies

WAVEGUIDE TECHNOLOGIES

waveguidetechnologies.com

Waveguide Technologies is a privately-owned photonics company founded in August 20, 1998. Our experts have been pioneers in the research and manufacturing of specialty optical fibers since 1985, emphasizing high-temperature metalized coatings. We are also the original developers of the revolutionary gold-, aluminum-, and gold alloy-coated optical fibers. These products are used in extreme temperatures and challenging environments.

your specialty fiber process partner

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CONFERENCE 13522

Eighth Workshop on Specialty Optical Fibers and their Applications

7 - 10 April 2025 | Zenit

Conference Chair(s): **Pavel Peterka,** Institute of Photonics and Electronics of the ASCR (Czech Republic); **Kyriacos Kalli,** Cyprus Univ. of Technology (Cyprus); **Alexis Mendez,** MCH Engineering LLC (United States); **John Ballato,** Clemson Univ. (United States)

Program Committee: **Ole Bang,** DTU Fotonik (Denmark); **Gilberto Brambilla,** Univ. of Southampton (United Kingdom); **Neil G. R. Broderick,** The Univ. of Auckland (New Zealand); **Ryszard Buczynski,** Univ. of Warsaw (Poland); **John Canning,** Univ. of Technology Sydney (Australia); **Anirban Dhar,** Council of Scientific & Industrial Research (India); **Peter D. Dragic,** Univ. of Illinois (United States); **Sebastien Fevrier,** XLIM Institut de Recherche (France); **Thomas W. Hawkins,** Clemson Univ. (United States); **Stuart D. Jackson,** Macquarie Univ. (Australia); **Deepak Jain,** Indian Institute of Technology Delhi (India); **Greg Jasion,** Univ. of Southampton (United Kingdom); **Nicolas Y. Joly,** Max-Planck-Institut für die Physik des Lichts (Germany); **Alex A. Kazemi,** The Boeing Co. (United States); **Xuegang Li,** Northeastern Univ. (China); **Joris Lousteau,** Politecnico di Milano (Italy); **Christos Markos,** Technical Univ. of Denmark (Denmark); **Linh V. Nguyen,** Univ. of South Australia (Australia); **Yasutake Ohishi,** Toyota Technological Institute (Japan); **Bishnu P. Pal,** Mahindra Univ. (India); **Siddharth Ramachandran,** Boston Univ. (United States); **Yunjiang Rao,** Univ. of Electronic Science and Technology of China (China); **Thierry Robin,** Exail SAS (France); **Mohammed Saad,** Thorlabs, Inc. (United States); **Jayanta K. Sahu,** Univ. of Southampton (United Kingdom); **Kunimasa Saitoh,** Hokkaido Univ. (Japan); **Erik P. Schartner,** The Univ. of Adelaide (Australia); **Natalie V. Wheeler,** Univ. of Southampton (United Kingdom); **Minghong Yang,** Wuhan Univ. of Technology (China); **Michalis N. Zervas,** Optoelectronics Research Ctr. (United Kingdom)

Monday 7 April 2025

OPENING CEREMONY

7 April 2025 • 8:45 - 9:00 | Zenit
Pavel Peterka, Institute of Photonics and Electronics, Czech Academy of Sciences (Czech Republic)
Kyriacos Kalli, Cyprus University of Technology (Cyprus)
John Ballato, Clemson University (United States)
Alexis Mendez, MCH Engineering LLC (United States)
2025 WSOF Chairs

SESSION 1: FIBER FABRICATION

7 April 2025 • 9:00 - 10:30 | Zenit
Session Chair(s): **Michal Kamrádek**, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-1 • 9:00 - 9:30
Graded index active fiber for high-power laser application *(Invited Paper)*
Author(s): **Anirban Dhar,** CSIR-Central Glass & Ceramic Research Institute (India)

13522-2 • 9:30 - 9:45
Index-matching of individual glass preforms: high-volume synthesis and high-precision refractive index measurements
Author(s): **Katrin Wondraczek,** Leibniz-Institut für Photonische Technologien e.V. (Germany); **Baptiste Leconte,** Bloom Lasers (France); **Florian Lindner**, **Roman Sajzew,** Leibniz-Institut für Photonische Technologien e.V. (Germany); **Amelie Chervet,** Bloom Lasers (France); **Romain Dauliat**, **Philippe Roy,** XLIM (France); **Lothar Wondraczek,** Friedrich-Schiller-Univ. Jena (Germany); **Raphael Jamier,** XLIM (France); **Julien Didierjean,** Bloom Lasers (France)

13522-3 • 9:45 - 10:00
Phase-separated nanoparticles in optical fiber, a non-stationary compositional growth
Author(s): **Christelle Guillermier,** Harvard Medical School (United States); **Isabelle Martin,** CAMECA Instruments, Inc. (United States); **Hugues François Saint Cyr**, **Rick Passey,** Thermo Fisher Scientific Inc. (United States); **Philippe Le Coustumer,** Univ. de Bordeaux (France);

Franck Pigeonneau, MINES ParisTech (France); **John M. Ballato,** Clemson Univ. (United States); **Wilfried Blanc,** CNRS (France)

13522-4 • 10:00 - 10:15
Filament extrusion-based 3D glass printing of optical fibre preforms
Author(s): **Anna Radionova**, **Mingze Yang**, **Yunle Wei,** The Univ. of Adelaide (Australia); **Lijesh Thomas,** Australian National Fabrication Facility (Australia); **Heike Ebendorff-Heidepriem,** The Univ. of Adelaide (Australia)

13522-5 • 10:15 - 10:30
Thinly coated hollow-core fibers: how thin can we go?
Author(s): **Ian A. Davidson**, **Gregory Jackson**, **Naveen Krishna Baddela**, **Mahmudur Rahman**, **Xuhao Wei**, **Meng Ding**, **Gregory T. Jasion**, **Francesco Poletti, Radan Slavík,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom)

Coffee Break 10:30 - 11:00

SESSION 2: BIOMEDICAL APPLICATIONS

7 April 2025 • 11:00 - 12:30 | Zenit
Session Chair(s): **Kyriacos Kalli**, Cyprus Univ. of Technology (Cyprus)

13522-6 • 11:00 - 11:30
Meta-fibers: merging nanophotonics and fiber optics via 3D nanoprinting for taylored beam manipulation *(Invited Paper)*
Author(s): **Markus A. Schmidt**, **Bennet Fischer**, **Mohammad Khosravi**, **Shahrzad Hosseinabadi**, **Matthias Zeisberger, Oleh Yermakov,** Leibniz-Institut für Photonische Technologien e.V. (Germany)

13522-7 • 11:30 - 11:45
Deep brain temperature sensing using polymer fiber Bragg grating implants
Author(s): **Kunyang Sui**, **Marcello Meneghetti,** Technical Univ. of Denmark (Denmark); **Guanghui Li,** Univ. of Copenhagen (Denmark); **Andreas Ioannou,** Cyprus Univ. of Technology (Cyprus); **Parinaz Abdollahian,** Technical Univ. of Denmark (Denmark); **Kyriacos Kalli,** Cyprus Univ. of Technology (Cyprus); **Kristian Nielsen,** SHUTE Sensing Solutions A/S (Denmark); **Rune W. Berg,** Univ. of Copenhagen (Denmark); **Christos Markos,** DTU Electro, Technical Univ. of Denmark (Denmark)

13522-8 • 11:45 - 12:00
Brain and spinal cord interrogation with multimaterial bidirectional interfaces based on polymer optical fibers
Author(s): **Marcello Meneghetti**, **Kunyang Sui,** Technical Univ. of Denmark (Denmark), Univ. of Copenhagen (Denmark); **Pietro Metuh,** Technical Univ. of Denmark (Denmark); **Rune W. Berg,** Univ. of Copenhagen (Denmark); **Christos Markos,** Technical Univ. of Denmark (Denmark), NORBLIS ApS (Denmark)

13522-9 • 12:00 - 12:15
Advanced neural network models for enhanced wavefront shaping and Raman signals deconvolution in multimode optical fibers
Author(s): **Mohammadrahim Kazemzadeh**, **Liam Collard**, **Filippo Pisano**, **Massimo De Vittorio, Ferruccio Pisanello,** Istituto Italiano di Tecnologia (Italy)

13522-10 • 12:15 - 12:30
Fiber-optic biosensor utilizing magneto-optic effect in hollow-core anti-resonant optic fiber
Author(s): **Yiwen Zhu,** Univ. of Warsaw (Poland), Huazhong Univ. of Science and Technology (China); **Grzegorz Stępniewski**, **Adam Filipkowski**, **Ryszard Buczyński,** Univ. of Warsaw (Poland); **Wenzhong Liu,** Huazhong Univ. of Science and Technology (China)

Lunch Break 12:30 - 14:00

INDUSTRY PANEL

7 April 2025 • 14:00 - 14:40 | Zenit
Round table discussion
Moderator:
Alexis Mendez, MCH Engineering LLC (United States)

EXHIBITOR COMPANY BRIEFS

7 April 2025 • 14:45 - 15:35 | Zenit
Session Chair(s): **Alexis Mendez**, MCH Engineering LLC (United States)
Brief overviews by WSOF exhibiting companies. Get industry updates such as product releases, award winners, and more.

Coffee Break 15:35 - 16:15

CO-LOCATED: SPIE OPTICS + OPTOELECTRONICS MONDAY PLENARY SESSION I

7 April 2025 • 16:15 - 18:00 | Nadir
Co-located event with WSOF

16:15 to 16:25
Welcome and Opening Remarks
Saša Bajt, Deutsches Elektronen-Synchrotron (Germany)
Pavel Bakule, ELI Beamlines (Czech Republic)
Optics + Optoelectronics Symposium Chairs

SPIE Presentation of the 2025 SPIE Maria Goeppert Mayer Award in Photonics
to
Pavel Cheben, National Research Council Canada

Presentation of SPIE Fellowship
to
Niels Quack, Univ. of Sydney (Australia)
and
Peter D. Dragic, Univ. of Illinois (United States)

Plenary Speaker Introduction

16:25 to 17:10
New perspectives on photonic quantum computing and quantum machine learning
Philip Walther, Univ. Wien (Austria)

17:15 to 18:00
Large-scale optical machine learning exploiting disorder
Sylvain Gigan, Sorbonne Univ. (France) and Lab. Kastler-Brossel, ENS (France)

Tuesday 8 April 2025

CO-LOCATED: SPIE OPTICS + OPTOELECTRONICS TUESDAY PLENARY SESSION II

8 April 2025 • 9:00 - 10:40 | Nadir
Co-located event with WSOF

9:00 to 9:05
Welcome and Introduction
Pavel Bakule, ELI Beamlines (Czech Republic)
Saša Bajt, Deutsches Elektronen-Synchrotron (Germany)
Optics + Optoelectronics Symposium Chairs

9:05 to 9:50
Laser-plasma interaction studies for advanced direct-drive ignition
Emma Hume, Istituto Nazionale di Ottica-CNR (Germany)

9:55 to 10:40
Advancements in attosecond technology and applications
Francesca Calegari, Deutsches Elektronen-Synchrotron DESY (Germany)

Coffee Break 10:40 - 11:00

SESSION PL1: WSOF PLENARY SESSION I

8 April 2025 • 11:00 - 11:45 | Zenit
Session Chair(s): **Pavel Honzátko**, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-700 • 11:00 - 11:45
Fibers for high pulse energy fiber lasers (Plenary Presentation)
Author(s): **Clémence Jollivet,** Coherent Corp. (United States)

SESSION 3: FIBER LASERS I

8 April 2025 • 11:45 - 12:35 | Zenit
Session Chair(s): **Pavel Honzátko**, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-17 • 11:45 - 12:05
Influence of core codopants and components on laser properties of high power holmium-doped silica all-fiber lasers *(Invited Paper)*
Author(s): **Julien Le Gouët,** ONERA (France); **Nicolas Dalloz**, **Christophe Louot**, **Anne Hildenbrand-Dhollande,** Institut Franco-Allemand de Recherches de Saint-Louis (France); **Alexandre Barnini, Thierry Robin,** Exail SAS (France)

13522-18 • 12:05 - 12:20
Highly-doped optical fibers for high-efficiency holmium lasers
Author(s): **Michal Kamrádek**, **Ivan Kašík**, **Jan Aubrecht**, **Petr Vařák**, **Ondřej Podrazký**, **Ivo Bartoň**, **Pavel Peterka, Pavel Honzátko,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-19 • 12:20 - 12:35
BaF2 nanoparticle-based erbium doped fibers
Author(s): **Peter D. Dragic**, **Jennifer J. Campbell,** Univ. of Illinois (United States); **Mary Ann Cahoon,** Clemson Univ. (United States); **Michael Gachich,** Univ. of Illinois (United States); **Bailey Meehan,** Coherent Corp. (United States); **Michael Norlander**, **Alexander R. Pietros,** Univ. of Illinois (United States); **Stephanie Morris,** Coherent Corp. (United States); **Thomas W. Hawkins, John M. Ballato,** Clemson Univ. (United States)

Lunch/Exhibition Break 12:35 - 13:35

SESSION PL2: WSOF PLENARY SESSION II

8 April 2025 • 13:35 - 14:20 | Zenit
Session Chair(s): **John M. Ballato**, Clemson Univ. (United States)

13522-701 • 13:35 - 14:20
Fiber regenerative amplifiers for femtosecond pulse generation (Plenary Presentation)
Author(s): **Frank W. Wise,** Cornell Univ. (United States)

SESSION 4: NONLINEAR EFFECTS

8 April 2025 • 14:20 - 15:20 | Zenit
Session Chair(s): **John M. Ballato**, Clemson Univ. (United States)

13522-20 • 14:20 - 14:50
Towards diffraction limited output via wavefront shaping in a record peak power, single-frequency, pulsed 1.5 µm multimode fibre amplifier *(Invited Paper)*
Author(s): **Ori Henderson-Sapir**, **Darcy L. Smith,** Institute for Photonics and Advanced Sensing, The Univ. of Adelaide (Australia), ARC Ctr. of Excellence for Gravitational Wave Discovery (Australia); **Linh V. Nguyen,** Institute for Photonics and Advanced Sensing, The Univ. of Adelaide (Australia), Future Industries Institute, Univ. of South Australia (Australia); **Shuen Wei**, **Caleb Holme**, **Heike Ebendorff-Heidepriem,** Institute for Photonics and Advanced Sensing, The Univ. of Adelaide (Australia); **Stephen C. Warren-Smith,** Institute for Photonics and Advanced Sensing, The Univ. of Adelaide (Australia), Future Industries Institute, Univ. of South Australia (Australia); **David J. Ottaway,** Institute for Photonics and Advanced Sensing, The Univ. of Adelaide (Australia), ARC Ctr. of Excellence for Gravitational Wave Discovery (Australia)

13522-21 • 14:50 - 15:05
Optimisation of extrusion die designs for the fabrication of soft-glass hollow-core optical fibres
Author(s): **Erik P. Schartner**, **Jobaida Akhtar**, **Heike Ebendorff-Heidepriem**, **Evan Johnson**, **Anoop Sunny,** The Univ. of Adelaide (Australia); **Francois Chenard, Oseas Alvarez,** IRflex Corporation (United States)

13522-22 • 15:05 - 15:20
10 dB Brillouin gain in a silica nanofibers
Author(s): **Maxime Zerbib**, **Simon Colombel**, **Kien Phan Huy, Jean-Charles Beugnot,** FEMTO-ST (France)

Coffee Break 15:20 - 15:50

SESSION 5: ADVANCED TECHNIQUES

8 April 2025 • 15:50 - 17:20 | Zenit
Session Chair(s): **Frank W. Wise**, Cornell Univ. (United States)

13522-23 • 15:50 - 16:20
Topological confinement: light guidance beyond cutoff *(Invited Paper)*
Author(s): **Siddharth Ramachandran,** Boston Univ. (United States)

13522-24 • 16:20 - 16:35
A review of intrinsically low nonlinearity optical fibers
Author(s): **John M. Ballato**, **Bailey Meehan**, **Thomas W. Hawkins,** Clemson Univ. (United States); **Siyuan Wang, Peter D. Dragic,** Univ. of Illinois (United States)

13522-25 • 16:35 - 16:50
Multi-core fibers enhanced with integrated capillary
Author(s): **Ronja Stephan**, **Katharina Hausmann**, **Matthias Ließmann**, **Veronika Adolfs**, **Simon Spelthann, Michael Steinke,** Leibniz Univ. Hannover (Germany)

13522-26 • 16:50 - 17:05
Advanced plasma deposition and post-treatment techniques for creating all-silica optical fibers with tailored properties
Author(s): **Andrey Grishchenko**, **Dmitrijs Saharovs,** CeramOptec SIA (Latvia); **Linards Skuja,** Univ. of Latvia (Latvia)

13522-27 • 17:05 - 17:20
Specialty capillaries and multi-core optical fibres for applications in imaging and multi-modal spectroscopy
Author(s): **Tobias Habisreuther**, **Adrian Lorenz**, **Jörg Bierlich**, **Anne Matthes**, **Claudia Aichele**, **Anett Reichert**, **Anka Schwuchow**, **Martin Lorenz, Tina Eschrich,** Leibniz-Institut für Photonische Technologien e.V. (Germany)

POSTERS-TUESDAY

8 April 2025 • 17:30 - 19:00 | Meridian Hall
Conference attendees are invited to attend the WSOF Poster Session on Tuesday afternoon. Enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster session.

Poster authors, visit wsof2025.ufe.cz/en/special-events for set-up instructions.

13522-57 • 17:30 - 19:00
Design of thulium-doped fiber with microstructured core and air cladding
Author(s): **Martin Grábner**, **Jiří Čtyroký**, **Ivo Bartoň**, **Ondřej Podrazký, Pavel Peterka,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-58 • 17:30 - 19:00
Nonlinear dual-wavelength switching of ultrashort pulses in slightly asymmetric dual-core fibers
Author(s): **Mattia Longobucco,** Lukasiewicz Research Network - Institute of Microelectronics and Photonics (Poland); **Ignas Astrauskas,** Light Conversion, UAB (Lithuania); **Audrius Pugzlys**, **Andrius Baltuska,** Institut für Photonik, Technische Univ. Wien (Austria); **Ryszard Buczyński,** Lukasiewicz Research Network - Institute of Microelectronics and Photonics (Poland); **Ignac Bugar,** Institut für Photonik, Technische Univ. Wien (Austria)

13522-59 • 17:30 - 19:00
Experimental setup for comparative analysis of holmium-doped lasing materials at 2.1 µm wavelength
Author(s): **Guy Shafriri**, **Amiel Ishaaya,** Ben-Gurion Univ. of the Negev (Israel); **Joris Lousteau,** Politecnico di Milano (Italy); **Nadia Giovanna Boetti,** Fondazione Links (Italy)

13522-60 • 17:30 - 19:00
Liquid-core fiber filled with 2D CdSe/CdS semiconductor nanoplatelets for stimulated emission
Author(s): **Veronika Adolfs**, **Dominik Rudolph**, **Artsiom Antanovich**, **Dan Huy Chau,** Leibniz Univ. Hannover (Germany); **Mario Chemnitz**, **Markus A. Schmidt,** Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany); **Simon Spelthann,** Leibniz Univ. Hannover (Germany); **Jannika Lauth,** Eberhard Karls Univ. Tübingen (Germany), Leibniz Univ. Hannover (Germany); **Michael Steinke,** Leibniz Univ. Hannover (Germany)

13522-61 • 17:30 - 19:00
Femtosecond inscription of Fabry-Perot interferometers in a single mode fiber using the phase-mask technique
Author(s): **Aviran Halstuch, Amiel Ishaaya,** Ben-Gurion Univ. of the Negev (Israel)

13522-62 • 17:30 - 19:00
Utilizing 3.6 µm mid-IR fibre lasers beams for thermal lensing compensation in LIGO detectors
Author(s): **Ori Henderson-Sapir,** Institute for Photonics and Advanced Sensing, The Univ. of Adelaide (Australia), ARC Ctr. of Excellence for Gravitational Wave Discovery (Australia), Mirage Photonics (Australia); **Michael Maclean,** The Univ. of Adelaide (Australia), ARC Ctr. of Excellence for Gravitational Wave Discovery (Australia); **Samuel M. Sentschuk,** The Univ. of Adelaide (Australia); **Daniel D. Brown, David J. Ottaway,** The Univ. of Adelaide (Australia), ARC Ctr. of Excellence for Gravitational Wave Discovery (Australia)

13522-63 • 17:30 - 19:00
A novel partial discharge sensor based on Ce/Tb co-doped fluorescent silica fiber
Author(s): **Chengyong Hu**, **Yi Huang**, **Xiaobei Zhang**, **Sujuan Huang, Tingyun Wang,** Shanghai Univ. (China)

13522-64 • 17:30 - 19:00
Technological approaches towards a monolithic visible Pr3+-doped fluoride glass fiber laser
Author(s): **Martin Leich**, **Tina Eschrich**, **Anka Schwuchow**, **Kay Schaarschmidt, Matthias Jäger,** Leibniz-Institut für Photonische Technologien e.V. (Germany)

13522-66 • 17:30 - 19:00
Study on doping of specialty silica optical fibers for Tm-fiber lasers and amplifiers with antimony oxide
Author(s): **Ivan Kašík**, **Michal Kamrádek**, **Ondřej Podrazký**, **Ivo Bartoň**, **Jan Aubrecht**, **Martin Grábner**, **Pavel Honzátko**, **Filip Todorov, Pavel Peterka,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-67 • 17:30 - 19:00
Thermal effects on the Brillouin frequency shift in strained optical silica nanofibers
Author(s): **Simon Colombel**, **Maxime Zerbib**, **Raphael Amerette**, **Jérôme Salvi, Jean-Charles Beugnot,** FEMTO-ST (France)

13522-68 • 17:30 - 19:00
Tapering 6LP few-mode fiber for multi-parameter sensing
Author(s): **Liudmila Silanteva,** Technische Univ. Eindhoven (Netherlands); **Amado M. Velázquez-Benítez**, **Eloy Montesinos Garrido,** Instituto de Ciencias Aplicadas y Tecnología, Univ. Nacional Autónoma de México (Mexico); **Vincent van Vliet**, **Menno van den Hout,** Technische Univ. Eindhoven (Netherlands); **Marianne Bigot-Astruc**, **Adrian Amezcua Correa**, **Pierre Sillard,** Prysmian Group (France); **Frank Achten,** Prysmian Group (Netherlands); **Chigo Okonkwo, Thomas D. Bradley,** Technische Univ. Eindhoven (Netherlands)

13522-69 • 17:30 - 19:00
Fiber-based plasmonic microreactor for flow chemistry
Author(s): **Simon Spelthann,** Leibniz Univ. Hannover (Germany); **Adam Filipkowski,** Univ. of Warsaw (Poland); **Veronika Adolfs**, **Matthias Ließmann,** Leibniz Univ. Hannover (Germany); **Devin O'Neill,** AMOLF (Netherlands); **Elia Savino,** Univ. of Amsterdam (Netherlands); **Dariusz Pyszc,** Univ. of Warsaw (Poland); **Susann Spindler,** EurA AG (Germany); **Timothy Noel,** Univ. of Amsterdam (Netherlands); **Wiebke Albrecht,** AMOLF (Netherlands); **Airán Ródenas,** Univ. de La Laguna (Spain); **Ryszard Buczyński,** Univ. of Warsaw (Poland); **Michael Steinke,** Leibniz Univ. Hannover (Germany)

13522-70 • 17:30 - 19:00
Optimizing differential mode delay and crosstalk in nested anti-resonant hollow core fibers for mode-division multiplexing applications
Author(s): **Riya Kothari, Deepak Jain,** Indian Institute of Technology Delhi (India)

13522-71 • 17:30 - 19:00
Gas filled nested nodeless anti-resonant (NANF) optical fiber for up-conversion in mid- IR wavelength region
Author(s): **Deepak Jain, Suraj Awasthi,** Indian Institute of Technology Delhi (India)

13522-72 • 17:30 - 19:00
Prototype polymer optical fibre sensors for reinforced concrete monitoring
Author(s): **Andreas Pospori**, **Andreas Ioannou,** Cyprus Univ. of Technology (Cyprus); **José Melo**, **Humberto Varum,** CONSTRUCT, Univ. do Porto (Portugal); **Carlos A. F. Marques,** CICECO – Instituto de Materiais de Aveiro, Univ. de Aveiro (Portugal); **Kyriacos Kalli,** Cyprus Univ. of Technology (Cyprus)

13522-74 • 17:30 - 19:00
On demand tapered optical fiber
Author(s): **Maxime Zerbib,** FEMTO-ST (France); **Kien Phan Huy,** FEMTO-ST (France), Ecole Nationale Supérieure de Mécanique et des Microtechniques (France); **Jean-Charles Beugnot,** FEMTO-ST (France)

13522-75 • 17:30 - 19:00
Hybrid anti-resonant negative-curvature optical fibers
Author(s): **Dipanjan Karmakar**, **Anirban Dhar,** Central Glass & Ceramic Research Institute, Council of Scientific & Industrial Research (India); **Deepak Jain,** Indian Institute of Technology Delhi (India)

13522-76 • 17:30 - 19:00
Analysis of transmitted gamma spectrum upon scintillator shading
Author(s): **Tadeáš Zbožínek**, **Michal Jelínek, Břetislav Mikel,** Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic)

13522-77 • 17:30 - 19:00
Towards the engineering of nanoparticles in optical fibers at the micrometer scale
Author(s): **Floriane Pellerin**, **Geoffroy Aubry,** Institut de Physique de Nice, Univ. Côte d'Azur, CNRS (France); **Martiane Cabié**, **Thomas Neisius,** Ecole Centrale de Marseille, Fédération Sciences Chimiques Marseille, Aix-Marseille Univ. (France), Catalyse, Polymérisation, Procédés et Matériaux, CNRS (France); **Franck Pigeonneau,** Ctr. de mise en forme des matériaux, MINES ParisTech, Univ. PSL (France); **Matthieu Bellec, Wilfried Blanc,** Institut de Physique de Nice, Univ. Côte d'Azur, CNRS (France)

13522-78 • 17:30 - 19:00
Environmental effects on metrology optical signal in conventional single-mode and hollow-core optical fibers
Author(s): **Michal Spacek,** Czech Technical Univ. in Prague (Czech Republic); **Josef Vojtech,** CESNET z.s.p.o. (Czech Republic); **Jaroslav Roztocil,** Czech Technical Univ. in Prague (Czech Republic)

13522-79 • 17:30 - 19:00
Effect of drawing process on optical properties of dual-wavelength fiber lasers
Author(s): **Ivo Bartoň**, **Jan Aubrecht**, **Petr Vařák**, **Michal Kamrádek**, **Ondřej Podrazký,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Ryszard Buczyński,** Lukasiewicz Research Network - Institute of Microelectronics and Photonics (Poland); **Ivan Kašík, Pavel Peterka,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-80 • 17:30 - 19:00
The effect of one-dimensional core structure on thulium fiber laser properties
Author(s): **Jan Aubrecht**, **Bára Švejkarová**, **Michal Kamrádek**, **Petr Vařák, Pavel Peterka,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-81 • 17:30 - 19:00
Shaped pulse-based high dynamic range optical time domain reflectometry for hollow-core fiber characterization
Author(s): **Xuhao Wei,** Univ. of Southampton (United Kingdom); **Shahab B. Gorajoobi,** Microsoft Ltd. (United Kingdom); **Igor Khrushchev,** Ikeos Research Ltd. (United Kingdom); **Francesco Poletti,** Univ. of Southampton (United Kingdom), Microsoft Ltd. (United Kingdom); **Radan Slavík,** Univ. of Southampton (United Kingdom)

13522-82 • 17:30 - 19:00
Pressure and refractive index sensing using a perfluorinated gradient index multomode speckle sensor
Author(s): **Antreas Theodosiou, Katerina-Valentina Paun,** Lumoscribe Ltd. (Cyprus)

13522-83 • 17:30 - 19:00
ZBLAN fiber laser configuration for acetone pollutant sensing
Author(s): **Antreas Theodosiou,** Lumoscribe Ltd. (Cyprus); **Kyriacos Kalli,** Cyprus Univ. of Technology (Cyprus); **Ori Henderson-Sapir,** The Univ. of Adelaide (Australia)

13522-85 • 17:30 - 19:00
High power Yb-free Er-doped cladding pumped fiber amplifier for L-band operation
Author(s): **Kevin Audo**, **Laurent Damiens**, **Arnaud Laurent**, **Alexandre Barnini**, **Adrien Steib**, **Thierry Robin**, **Omar Sahni, Nicéphore Nicolas,** Exail SAS (France)

13522-86 • 17:30 - 19:00
Optical fibers doped with nitrogen-vacancy submicron diamonds as a magnetic sensors
Author(s): **Mariusz Mrózek,** Jagiellonian Univ. in Krakow (Poland); **Adam Filipkowski**, **Grzegorz Stępniewski,** Univ. of Warsaw (Poland); **Wojciech Gawlik,** Jagiellonian Univ. in Krakow (Poland); **Ryszard Buczyński**, **Mariusz Klimczak,** Univ. of Warsaw (Poland); **Adam Wojciechowski,** Jagiellonian Univ. in Krakow (Poland)

13522-87 • 17:30 - 19:00
Defining effective bending radius and stress-optic coefficient values using bend loss measurements
Author(s): **Pauli Kiiveri**, **Ossi Kimmelma**, **Ville Aallos**, **Hannu Husu**, **Juha Harra**, **Arto Nieminen**, **Jouko Paavilainen, Steffen Novotny,** nLIGHT, Inc., Lohja (Finland)

13522-88 • 17:30 - 19:00
Nondestructive and spatial resolved refractive index distribution analyses along specialty optical fibers
Author(s): **Tobias Habisreuther**, **Tina Eschrich**, **Anka Schwuchow, Adrian Lorenz,** Leibniz-Institut für Photonische Technologien e.V. (Germany)

13522-89 • 17:30 - 19:00
ZnO-doped preform preparation approaches towards radioluminescent optical fibers
Author(s): **Dennis Köhler,** Leibniz-Institut für Photonische Technologien e.V. (Germany); **Michal Kamrádek,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Florian Lindner**, **Roman Sajzew,** Leibniz-Institut für Photonische Technologien e.V. (Germany); **Ondřej Podrazký,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Robert Müller,** Leibniz-Institut für Photonische Technologien e.V. (Germany); **Pavel Peterka,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Lothar Wondraczek,** Friedrich-Schiller-Univ. Jena (Germany); **Jan Mrazek,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Katrin Wondraczek,** Leibniz-Institut für Photonische Technologien e.V. (Germany)

13522-90 • 17:30 - 19:00
Quantum efficiency and background loss in low thulium concentration silica fibres
Author(s): **Richard Švejkar**, **Martin P. Buckthorpe**, **Nilotpal Choudhury**, **Jayanta K. Sahu, W. Andrew Clarkson,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom)

13522-91 • 17:30 - 19:00
Thulium-doped fiber laser with longitudinally segmented active fiber
Author(s): **Bára Švejkarová,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic), Czech Technical Univ. in Prague (Czech Republic); **Martin Grábner**, **Jan Aubrecht,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Richard Švejkar,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom); **Jan Pokorný,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic), Czech Technical Univ. in Prague (Czech Republic); **Michal Kamrádek**, **Ondřej Podrazký**, **Ivan Kašík**, **Pavel Honzátko,** Institute of Photonics and Electronics of the CAS (Czech Republic); **W. Andrew Clarkson,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom); **Pavel Peterka,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-92 • 17:30 - 19:00
The effect of ion pair dynamics on unsaturable absorption in holmium doped fibers
Author(s): **Jan Pokorný,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic), Czech Technical Univ. in Prague (Czech Republic); **Pavel Peterka,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-93 • 17:30 - 19:00
Improved surface treatment for integration of fiber Bragg sensors in difficult environment
Author(s): **Alberto Rovera,** Politecnico di Torino (Italy); **Giovanni Mingoia,** Fondazione Links (Italy); **Alexandru Tancau**, **Devanarayanan Meena Narayana Menon**, **Malhar Anupamratanshanker Nagar,** Politecnico di Torino (Italy); **Nadia Giovanna Boetti,** Fondazione Links (Italy); **Davide Janner,** Politecnico di Torino (Italy)

13522-94 • 17:30 - 19:00
All-fiber, ultra-high Q hollow-core fiber Fabry-Perot cavities
Author(s): **Matej Komanec**, **Ailing Zhong,** Czech Technical Univ. in Prague (Czech Republic); **Meng Ding, Radan Slavík,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom)

13522-95 • 17:30 - 19:00
SpaceFiber: out-of-this-world ZBLAN fiber fabrication
Author(s): **Ka Wu**, **Alson Ng**, **Yunle Wei,** The Univ. of Adelaide (Australia); **Hubert Moser**, **Jaroslaw Cimek**, **Andrija Djordjevic**, **Mustafa Ali Arat,** Flawless Photonics S.à r.l. (Luxembourg); **Anka Schwuchow,** Leibniz-Institut für Photonische Technologien e.V. (Germany); **Ryszard Buczyński**, **Grzegorz Stępniewski,** Lukasiewicz Research Network - Institute of Microelectronics and Photonics (Poland); **Shreesha Rao D. S.**, **Christian R. Petersen,** DTU Electro, Technical Univ. of Denmark (Denmark); **Ole Bang,** DTU Electro, Technical Univ. of Denmark (Denmark), NORBLIS ApS (Denmark); **Heike Ebendorff-Heidepriem,** The Univ. of Adelaide (Australia)

13522-96 • 17:30 - 19:00
Spectroscopy of thulium-doped fibers with depressed cladding for sources emitting around 1700 nm
Author(s): **Veronika Čírtková,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic), Czech Technical Univ. in Prague (Czech Republic); **Jan Aubrecht,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Bára Švejkarová**, **Jan Pokorný,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic), Czech Technical Univ. in Prague (Czech Republic); **Petr Vařák, Pavel Peterka,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-97 • 17:30 - 19:00
Femtosecond laser inscription of FBG in novel multifunctinal fibre
Author(s): **Andreas Ioannou**, **Andreas Pospori**, **Stephanos Yerolatsitis,** Cyprus Univ. of Technology (Cyprus); **Marcello Meneghetti**, **Kunyang Sui**, **Christos Markos,** Technical Univ. of Denmark (Denmark); **Kyriacos Kalli,** Cyprus Univ. of Technology (Cyprus)

13522-98 • 17:30 - 19:00
Comparative analysis of radiation-induced attenuation in PMMA and pure silica optical fibres for high-dose of ionising radiation
Author(s): **Michal Jelínek**, **Tadeáš Zbožínek, Břetislav Mikel,** Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic)

13522-99 • 17:30 - 19:00
Controlling the optical performance of a simply end-capped 4-tube hollow core fiber using selective gas pressure-controlled phase matching
Author(s): **Somarpita Pradhan**, **Thomas W. Kelly**, **Ian A. Davidson**, **Francesco Poletti**, **Peter Horak, Natalie V. Wheeler,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom)

13522-100 • 17:30 - 19:00
Minimising interconnection losses in hollow-core fibres using femtosecond laser-modified single-mode fibres
Author(s): **Stephanos Yerolatsitis**, **Andreas Ioannou,** Cyprus Univ. of Technology (Cyprus); **Jose Enrique Antonio-Lopez**, **Rodrigo Amezcua-Correa,** Univ. of Central Florida (United States); **Kyriacos Kalli,** Cyprus Univ. of Technology (Cyprus)

13522-101 • 17:30 - 19:00
Birefringent-filter-assisted actively Q-switched tuneable erbium-doped fibre ring laser
Author(s): **Rosemary C. Clark,** Univ. of Southampton (United Kingdom); **Atasi Pal,** CSIR-Central Glass & Ceramic Research Institute (India); **Jayanta K. Sahu, Johan Nilsson,** Univ. of Southampton (United Kingdom)

13522-102 • 17:30 - 19:00
Implementation of yttrium aluminium garnet nanoparticles in active optical fibers by nanoparticle deposition approach
Author(s): **Jan Mrazek**, **Ondřej Podrazký**, **Petr Vařák**, **Ivo Bartoň**, **Jan Aubrecht, Jana Proboštová,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-103 • 17:30 - 19:00
Magnetic field endoscopy using optical fibers and nitrogen-vacancy diamonds
Author(s): **Adam Wojciechowski**, **Mariusz Mrózek,** Jagiellonian Univ. in Krakow (Poland); **Adam Filipkowski,** Univ. of Warsaw (Poland), Lukasiewicz Research Network - Institute of Microelectronics and Photonics (Poland); **Dariusz Pysz,** Lukasiewicz Research Network - Institute of Microelectronics and Photonics (Poland); **Ryszard Buczyński,** Univ. of Warsaw (Poland)

13522-104 • 17:30 - 19:00
Application of a quasi-continuous wave thulium fiber laser in human urinary stone fragmentation
Author(s): **Vincent A. Gomes,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Shubhranil Maity**, **Abdul M. Mallick, Atasi Pal,** Council of Scientific & Industrial Research (India)

13522-105 • 17:30 - 19:00
Compact chirped fiber Bragg gratings for single photon generation from quantum dots
Author(s): **Vikas Remesh,** Univ. Innsbruck (Austria)

13522-106 • 17:30 - 19:00
Rubber-integrated NP-doped optical fiber for distributed displacement sensing
Author(s): **Leandro Macedo**, **Anselmo Frizera-Neto,** UFES (Brazil); **Wilfried Blanc,** Univ. Côte d'Azur (France); **Arnaldo G. Leal,** UFES (Brazil)

13522-107 • 17:30 - 19:00
Optimization of gain-flattened filter for ultra-broadband Tm-doped fiber amplifier
Author(s): **Amala Jose, Nithyanandan Kanagaraj,** Indian Institute of Technology Hyderabad (India)

Wednesday 9 April 2025

SESSION PL3: WSOF PLENARY SESSION III

9 April 2025 • 8:45 - 9:30 | Zenit
Session Chair(s): **Ivan Kašík**, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-702 • 8:45 - 9:30
Soft glass fibres: versatility through glass composition, nano/micro-crystal incorporation and fibre structure (Plenary Presentation)
Author(s): **Heike Ebendorff-Heidepriem,** The Univ. of Adelaide (Australia)

SESSION 6: ADVANCES IN NON-SILICA FIBERS

9 April 2025 • 9:30 - 10:15 | Zenit

13522-28 • 9:30 - 9:45
Development of all-glass optical fibers based on 3D preform printing
Author(s): **Ryszard Buczyński,** Lukasiewicz Research Network - Institute of Microelectronics and Photonics (Poland); **Pawel Wienclaw,** Sygnis S.A. (Poland); **Grzegorz Stępniewski**, **Przemyslaw Gołebiewski**, **Pawel Socha**, **Dariusz Pysz**, **Adam Filipkowski, Rafal Kasztelanic,** Lukasiewicz Research Network - Institute of Microelectronics and Photonics (Poland)

13522-29 • 9:45 - 10:00
Flexible fiber-based implantable neurophotonic interfaces with enhanced illumination volume
Author(s): **Marcello Meneghetti**, **Kunyang Sui,** Technical Univ. of Denmark (Denmark), Univ. of Copenhagen (Denmark); **Jiachen Wang,** Technical Univ. of Denmark (Denmark); **Rune W. Berg,** Univ. of Copenhagen (Denmark); **Christos Markos,** Technical Univ. of Denmark (Denmark), NORBLIS ApS (Denmark)

13522-30 • 10:00 - 10:15
Dy3+-doped phosphate glass fibers for yellow lasers
Author(s): **Jonathan Demaimay**, **Pavel A. Loiko,** Ctr. de Recherche sur les Ions, les Matériaux et la Photonique, Univ. de Caen Normandie, CNRS (France); **Esrom Kifle,** Oxxius SA (France); **Sami Slimi**, **Xavier Mateos,** Univ. Rovira i Virgili (Spain); **Patrice Camy**, **Alain Braud,** Ctr. de Recherche sur les Ions, les Matériaux et la Photonique, Univ. de Caen Normandie, CNRS (France); **Thierry Georges,** Oxxius SA (France); **Nadia Giovanna Boetti,** Fondazione Links (Italy); **Joris Lousteau,** Politecnico di Milano (Italy)

Coffee Break 10:15 - 10:45

SESSION 7: HOLLOW-CORE FIBERS

9 April 2025 • 10:45 - 12:30 | Zenit
Session Chair(s): **Radan Slavík**, Optoelectronics Research Ctr. (United Kingdom)

13522-31 • 10:45 - 11:15
KW-class narrow-linewidth laser delivery through a HCF *(Invited Paper)*
Author(s): **Axel Schülzgen**, **Matthew A. Cooper**, **Joseph Wahlen**, **Stephanos Yerolatsitis**, **Daniel Cruz-Delgado**, **Daniel Parra**, **Ben Tanner**, **Peyman Ahmadi**, **Owen Jones,** CREOL, The College of Optics and Photonics, Univ. of Central Florida (United States); **Md. S. Habib,** CREOL, The College of Optics and Photonics, Univ. of Central Florida (United States); **Ivan Divliansky**, **Jose Enrique Antonio-Lopez, Rodrigo Amezcua-Correa,** CREOL, The College of Optics and Photonics, Univ. of Central Florida (United States)

13522-32 • 11:15 - 11:30
Fabrication approach for aligned, n-core, multi-core fibers
Author(s): **Ian A. Davidson**, **Kunhao Ji**, **Jayanta K. Sahu,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom); **David Richardson,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom), Microsoft Ltd. (United Kingdom); **Massimiliano Guasoni,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom)

13522-33 • 11:30 - 11:45
Simulation of gas flow and its effect on optical properties of nested anti-resonant nodeless hollow-core fibre
Author(s): **Elizaveta Elistratova**, **Ian A. Davidson**, **Hesham Sakr**, **Thomas D. Bradley**, **Gregory T. Jasion**, **Francesco Poletti**, **Peter Horak, Natalie V. Wheeler,** Univ. of Southampton (United Kingdom)

13522-34 • 11:45 - 12:00
Gas dynamics during fabrication of hollow-core optical fibers
Author(s): **Ali Shakiba,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom); **Luke Dickson,** Microsoft Ltd. (United Kingdom); **John S. Shrimpton**, **Jaroslaw Rzegocki**, **Ghafour Amouzad Mahdiraji**, **Naveen Krishna Baddela**, **Ian A. Davidson**, **Natalie V. Wheeler**, **Francesco Poletti, Gregory T. Jasion,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom)

13522-35 • 12:00 - 12:15
Laser beam mode shaper with heptagonal core anti-resonant hollow-core fiber
Author(s): **Yang Wang**, **Yong Yang**, **Qi Zhang**, **Yi Huang**, **Xiaobei Zhang**, **Wei Chen**, **Sujuan Huang, Tingyun Wang,** Shanghai Univ. (China)

13522-36 • 12:15 - 12:30
Freeform preforms and fibers
Author(s): **Michael H. Frosz**, **Azim-Onur Yazici,** Max-Planck-Institut für die Physik des Lichts (Germany); **Dominik Esser,** Fraunhofer-Institut für Lasertechnik ILT (Germany); **Frederik Kotz-Helmer,** Glassomer GmbH (Germany), FMF - Freiburger Materialforschungszentrum, Univ. of Freiburg (Germany)

Lunch/Exhibition Break 12:30 - 13:30

WEDNESDAY PLENARY SESSION

9 April 2025 • 13:30 - 15:10 | Nadir
Joint Plenary Session Between SPIE Optics + Optoelectronics and WSOF

13:30 to 13:35
Welcome and Introduction
Saša Bajt, Deutsches Elektronen-Synchrotron (Germany)
Optics + Optoelectronics Symposium Chair

14:20 to 14:25
Welcome and Introduction
Pavel Peterka, Institute of Photonics and Electronics, Czech Academy of Sciences (Czech Republic)
WSOF Chair

13536-700 • 13:30 - 14:15
High repetition rate femtosecond X-ray studies of dynamically compressed matter (Plenary Presentation)
Author(s): **Justin S. Wark,** Univ. of Oxford (United Kingdom)

13522-703 • 14:25 - 15:10
One (hollow) fibre to rule them all (Plenary Presentation)
Author(s): **Francesco Poletti,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom)

Coffee Break 15:10 - 15:40

SESSION 8: FIBER LASERS II

9 April 2025 • 15:40 - 17:15 | Zenit
Session Chair(s): **Clémence Jollivet**, Coherent Corp. (United States)

13522-11 • 15:40 - 16:00
Simplifying multicore fiber laser systems *(Invited Paper)*
Author(s): **César Jáuregui-Misas**, **Felix Wanitschke,** Friedrich-Schiller-Univ. Jena (Germany); **Arno Klenke,** Friedrich-Schiller-Univ. Jena (Germany), Helmholtz Institute Jena (Germany), Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Yahia Khalil**, **Mehran Bahri,** Friedrich-Schiller-Univ. Jena (Germany); **Jens Limpert,** Friedrich-Schiller-Univ. Jena (Germany), Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany), Helmholtz Institute Jena (Germany)

13522-12 • 16:00 - 16:15
Fabrication of an anti-resonant hollow-core fibre for mid-infrared nonlinear Raman conversion in nitrogen pumped at 2 µm
Author(s): **Achille Bogas-Droy,** Institut Franco-Allemand de Recherches de Saint-Louis (France), Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Nicolas Dalloz**, **Stefano Bigotta**, **Marcin Piotrowski**, **Anne Hildenbrand-Dhollande,** Institut Franco-Allemand de Recherches de Saint-Louis (France); **Michael H. Frosz,** Max-Planck-Institut für die Physik des Lichts (Germany); **Nicolas Joly,** Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

13522-13 • 16:15 - 16:30
Further power scaling of diffraction-limited ytterbium fiber laser ~980nm
Author(s): **Monica T. Kalichevsky-Dong**, **Samuel P. Bingham**, **Thomas W. Hawkins**, **Jannatul M. Nijhum, Liang Dong,** Clemson Univ. (United States)

13522-14 • 16:30 - 16:45
LOMS: interactive on-line software for Judd-Ofelt analysis: introduction and demonstration
Author(s): **Petr Varák,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Jan Hrabovský,** Charles Univ. (Czech Republic); **Robin Kryštůfek,** Institute of Organic Chemistry & Biochemistry of the CAS, v.v.i. (Czech Republic)

13522-15 • 16:45 - 17:00
Beyond 150 W single-mode operation of a pedestal-free 25 µm core double-clad Tm-doped fiber for 2 µm applications
Author(s): **Helena Lopez Aviles**, **Benoit Faugas**, **Joshua Bradford**, **Andrea Agliati, Clémence Jollivet,** Coherent Corp. (United States)

13522-16 • 17:00 - 17:15
Multiring optical fibers doped with Tm3+ and Ho3+ for broadband profiled emission near 2 µm
Author(s): **Piotr Miluski**, **Marcin Kochanowicz,** Bialystok Univ. of Technology (Poland); **Marek Łodziński,** AGH Univ. of Krakow (Poland); **Wojciech A. Pisarski**, **Joanna Pisarska**, **Marta Kuwik,** Univ. of Silesia (Poland); **Jacek Żmojda,** Bialystok Univ. of Technology (Poland); **Dominik Dorosz,** AGH Univ. of Krakow (Poland); **Jan Dorosz,** Bialystok Univ. of Technology (Poland)

Thursday 10 April 2025

SESSION 9: SPECIALTY FIBERS FOR QUANTUM APPLICATIONS

10 April 2025 • 8:30 - 10:30 | Zenit
Session Chair(s): **Josef Vojtech**, CESNET z.s.p.o. (Czech Republic)

13522-37 • 8:30 - 9:00
Next-generation specialty optical fibers for classical and quantum light sources *(Invited Paper)*
Author(s): **Deepak Jain**, **Soorej T., Shruti Jain,** Indian Institute of Technology Delhi (India)

13522-38 • 9:00 - 9:30
Opportunities for hollow core fibres in quantum technologies *(Invited Paper)*
Author(s): **Radan Slavík,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom); **Christopher Hilweg,** Univ. Wien (Austria); **Francesco Poletti,** Optoelectronics Research Ctr., Univ. of Southampton (United Kingdom)

13522-39 • 9:30 - 9:45
Single-photon polarization sensing using a few-mode-fiber probe for microendoscopic applications and quantum technology *(Invited Paper)*
Author(s): **Miroslav Ježek**, **Martin Bielak, Dominik Vašinka,** Palacký Univ. Olomouc (Czech Republic)

13522-109 • 9:45 - 10:00
Multi-node quantum key distribution network using existing underground optical fibre infrastructure *(Invited Paper)*
Author(s): **Kyriacos Kalli,** Cyprus Univ. of Technology (Cyprus)

13522-40 • 10:00 - 10:30
Quantum key distribution over mixed fiber optical links with 16km aerial segments *(Invited Paper)*
Author(s): **George T. Kanellos,** National and Kapodistrian Univ. of Athens (Greece)

Coffee Break 10:30 - 11:00

SESSION 10: FIBER SENSING I

10 April 2025 • 11:00 - 12:30 | Zenit
Session Chair(s): **Michal Nikodem**, Wroclaw Univ. of Science and Technology (Poland)

13522-41 • 11:00 - 11:30
Towards all-waveguide ultra-short pulsed lasers and amplifiers for sensing applications *(Invited Paper)*
Author(s): **Irina Sorokina,** Norwegian Univ. of Science and Technology (Norway)

13522-42 • 11:30 - 11:45
Response of femtosecond laser-written fiber Bragg gratings during γ-radiation
Author(s): **Andrei Stancalie**, **Razvan Michalcea**, **Daniel Negut,** Institutul National pentru Fizica Laserilor, Plasmei si Radiatiei (Romania); **Antreas Theodosiou,** Lumoscribe Ltd. (Cyprus); **Kyriacos Kalli,** Cyprus University of Technology (Cyprus)

13522-43 • 11:45 - 12:00
Advancements in fused silica step-index fibers: A comparative study of STU-D and STU preforms in attenuation and radiation resistance
Author(s): **Andreas Langner**, **Maximilian Fischer**, **Peter Bauer**, **Gerhard Schötz,** Heraeus Quarzglas GmbH & Co. KG (Germany); **Jochen Kuhnhenn**, **Udo Weinand, Raphael Wolf,** Fraunhofer-Institut für Naturwissenschaftlich-Technische Trendanalysen INT (Germany)

13522-44 • 12:00 - 12:15
Advanced fiber optic sensing systems for aviation, aerospace and space applications
Author(s): **Alex Kazemi,** The Boeing Co. (United States)

13522-45 • 12:15 - 12:30
Fusion splice-embedding of diamonds in optical fibres for magnetic field sensing
Author(s): **Jacob Dalgleish,** The Univ. of Adelaide (Australia); **David Simpson,** The Univ. of Melbourne (Australia); **Andrew Greentree**, **Marco Capelli**, **Brant Gibson**, **Brett Johnson**, **Alexander Healey,** RMIT Univ. (Australia); **Shahraam Afshar**, **Wen Qi Zhang,** Univ. of South Australia (Australia); **Heike Ebendorff-Heidepriem, Shuen Wei,** The Univ. of Adelaide (Australia)

Lunch/Exhibition Break 12:30 - 13:40

SESSION 11: FIBER SENSING II

10 April 2025 • 13:40 - 15:10 | Zenit
Session Chair(s): **Alexis Mendez**, MCH Engineering LLC (United States)

13522-46 • 13:40 - 13:55
Laser spectroscopy from near-IR to mid-IR using multi-pass cell coupled with an anti-resonant hollow-core fiber
Author(s): **Michal Nikodem**, **Karol Rzeczkowski,** Wroclaw Univ. of Science and Technology (Poland); **Ryszard Buczyński,** Univ. of Wroclaw (Poland)

13522-47 • 13:55 - 14:10
Influence of the photopolymerization matrix on the fluorophore response of optical fibre pH sensors
Author(s): **Kwang Jun Lee**, **Patrick Capon**, **Heike Ebendorff-Heidepriem,** The Univ. of Adelaide (Australia); **Emerson Keenan**, **Fiona Brownfoot,** The Univ. of Melbourne (Australia); **Erik P. Schartner,** The Univ. of Adelaide (Australia)

13522-48 • 14:10 - 14:25
Co-drawing of phosphate glass and metal for photoelectrochemical applications
Author(s): **Louis Rougier,** Univ. de Rennes (France); **Supattra Somsri**, **Rayan Zaiter**, **Gabriel Loget**, **Thierry Cardinal**, **Angeline Poulon**, **Sylvain Danto,** Univ. de Bordeaux (France); **Jean-François Bergamini**, **Yann Leroux**, **Sebastien Chenu**, **Catherine Boussard, Johann Troles,** Univ. de Rennes (France)

13522-49 • 14:25 - 14:40
Enhancing distributed fiber sensing using novel nanocomposite-coated optical fibers
Author(s): **Åsa Claesson**, **Sandy Alomari**, **Tedros Weldehawariat**, **Joao Pereira, Kenny Hey Tow,** RISE Research Institutes of Sweden AB (Sweden)

13522-50 • 14:40 - 14:55
Evolution of monolithic distributed fibre optic sensors
Author(s): **Tomasz Howiacki,** SHM System Sp. z o.o. Sp. kom. (Poland), Cracow Univ. of Technology (Poland); **Rafał Sieńko,** Cracow Univ. of Technology (Poland); **Łukasz Bednarski,** AGH Univ. of Krakow (Poland); **Kamil Badura, Katarzyna Zuziak,** SHM System Sp. z o.o. Sp. kom. (Poland)

13522-51 • 14:55 - 15:10
Enhanced performance of Vernier multicore fiber sensors
Author(s): **Juan Hernández-Cordero,** Univ. Nacional Autónoma de México (Mexico); **Andrés Camarillo-Avilés**, **Daniel A. May-Arrioja,** Centro de Investigaciones en Óptica, A.C. (Mexico); **Natanael Cuando-Espitia,** Consejo Nacional de Ciencia y Tecnología, DICS, Univ. de Guanajuato (Mexico); **Amado M. Velázquez-Benítez,** Univ. Nacional Autónoma de México (Mexico); **Jose Enrique Antonio-Lopez, Rodrigo Amezcua-Correa,** CREOL, The College of Optics and Photonics, Univ. of Central Florida (United States)

Coffee Break 15:10 - 15:30

SESSION 12: COMPONENTS AND DEVICES

10 April 2025 • 15:30 - 17:05 | Zenit
Session Chair(s): **Pavel Peterka**, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

13522-108 • 15:30 - 15:50
Specialty fiber enabled broadband amplifiers *(Invited Paper)*
Author(s): **Tingyun Wang,** Shanghai Univ. (China)

13522-52 • 15:50 - 16:05
Specialty optical fiber processing
Author(s): **Michael Harju,** Vytran LLC (United States)

13522-53 • 16:05 - 16:20
CO2 laser-based tapering and splicing of specialty fibers
Author(s): **Erik Beckert**, **Erik Böttcher, Lucas Schweickert,** NYFORS (Sweden)

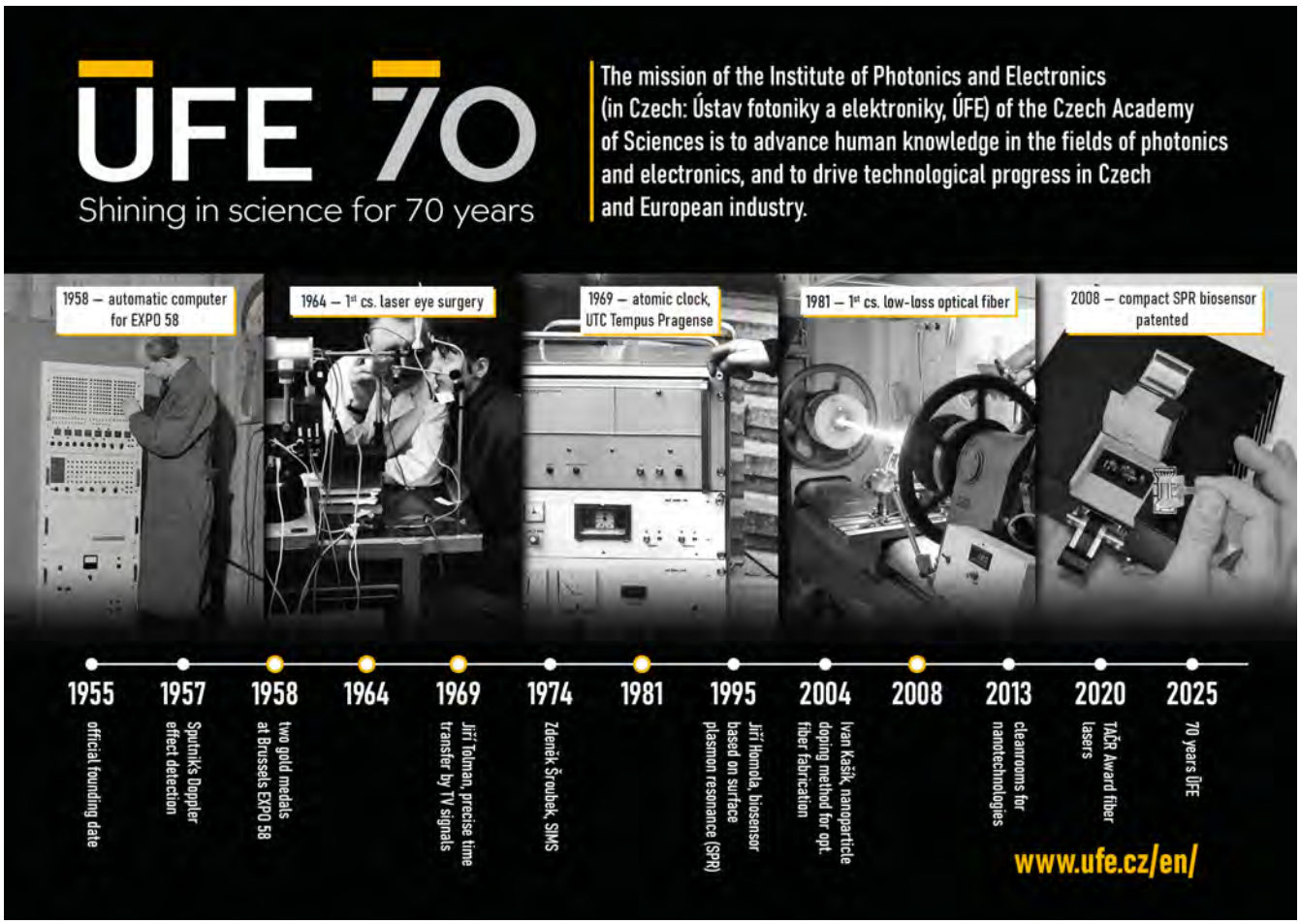
13522-54 • 16:20 - 16:35
Improving the power handling capabilities of laser-machined, microstructured cladding light strippers through homogeneous stripping
Author(s): **Nils Haverland,** Laser Zentrum Hannover e.V. (Germany); **Fabian Kranert**, **Jörg Neumann**, **Dietmar Kracht,** Laser Zentrum Hannover e.V. (Germany), QuantumFrontiers (Germany); **Finn Salhoff,** Laser Zentrum Hannover e.V. (Germany)

13522-55 • 16:35 - 16:50
Multiple higher-order mode generation using all-fibre structures
Author(s): **Yongmin Jung**, **Natasha Vukovic,** Univ. of Southampton (United Kingdom); **Christophe A. Codemard,** TRUMPF Laser UK Ltd. (United Kingdom); **Michalis N. Zervas,** Univ. of Southampton (United Kingdom)

13522-56 • 16:50 - 17:05
Splicing of mid-IR fluoride fibers using filament heating
Author(s): **Antreas Theodosiou,** Lumoscribe Ltd. (Cyprus); **Yauhen Baravets,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Ori Henderson-Sapir**, **Oliver Cobcroft**, **Samuel M. Sentschuk**, **Jack Stone**, **David J. Ottaway,** The Univ. of Adelaide (Australia); **Pavel Peterka,** Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

CLOSING CEREMONY AND STUDENT AWARDS

10 April 2025 • 17:05 - 17:20 | Zenit
Pavel Peterka, Institute of Photonics and Electronics, Czech Academy of Sciences (Czech Republic)
Kyriacos Kalli, Cyprus University of Technology (Cyprus)
John Ballato, Clemson University (United States)
Alexis Mendez, MCH Engineering LLC (United States)
2025 WSOF Chairs



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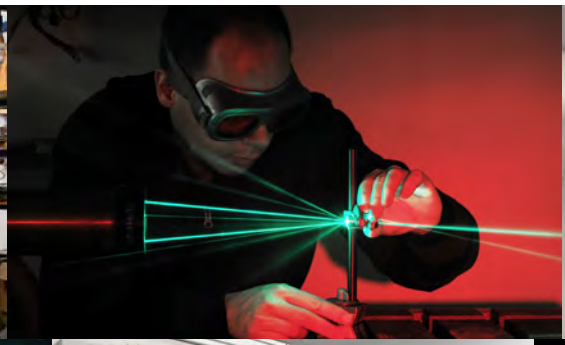

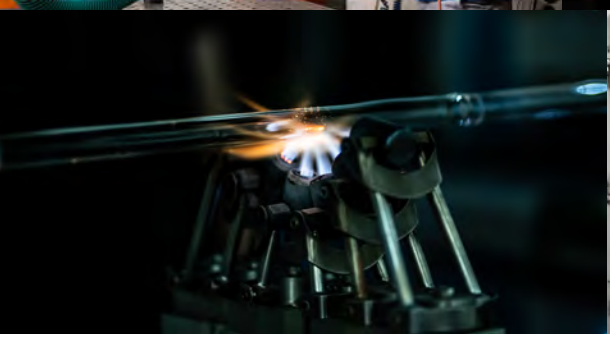

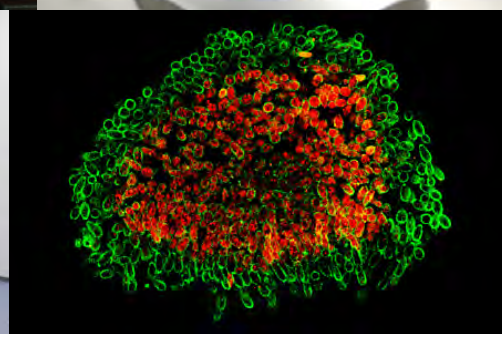

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