



3rd Colloquium on Optical Fiber Devices and Sensing applications

Co-located with 15th IEEE/IET *International Symposium on COMMUNICATION SYSTEMS, NETWORKS & DIGITAL SIGNAL PROCESSING (CSNDSP'26)*

15-17 July 2026, Edinburgh, UK



Dr Qiang Wu **General Chair**
Northumbria University,
United Kingdom
Qiang.wu@northumbria.ac.uk



Prof Jinhui Yuan **General Co-Chair**
Beijing University of Posts &
Telecommunications, China
yuanjinhui81@bupt.edu.cn

VENUE: John McIntyre Conference
Centre, The University of Edinburgh,
Pollock Halls, 18 Holyrood Park
Road, Edinburgh, EH16 5AY

Technical Program Chairs



Prof Gerald Farrell
Technological University Dublin
gerald.farrell@tudublin.ie



Dr Juan Liu
Nanchang Hangkong University,
China
18042@nchu.edu.cn



Prof. Serhiy Korposh
Nottingham University, UK
S.Korposh@nottingham.ac.uk



Prof Bin Liu
Nanchang Hangkong University,
China
liubin@nchu.edu.cn

International Technical Program Committee

Dr Chao Wang, Kent University, UK
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Prof Guiyao Zhou, South China Normal University, China
Prof Xian Zhou, University of Science & Technology Beijing, China
Prof Qian Li, Peking University, China
Prof Xiaobo Xing, South China Normal University, China

This colloquium focuses on recent advances and developments in novel systems, concepts, structures, theories, materials and applications for optical fiber devices and sensing applications. The main objective of this colloquium is to provide a platform for international experts to discuss the new technologies and potential applications of optical fiber sensors, nonlinear fiber optics, fiber lasers, special fibers, and fiber technologies and applications in urban construction, environmental monitoring and power system. On the other hand, we also pay attention to the latest developments of optical fiber sensors in biochemical detection and the important applications of nonlinear fiber optics in ultrafast photonics, microscopic spectroscopy, etc. Finally, we will discuss and communication the various new optical fiber sensors based on surface plasmon resonance effect.

According to the above, the topics of primary interest include but not limited:

- Physical, mechanical, acoustic and electro-magnetic sensors
- Chemical, gas, biological, environmental and medical sensor
- Microstructure and nanophotonic sensors
- Gyroscopic, interferometric and polarimetric sensors
- Multiplexing and distributed sensing
- Sensors for smart composite materials
- Sensor interrogation techniques and sensor systems
- Multiple-input multiple-output OFDM Systems
- Surface plasmon resonance sensors
- Sensor systems, networks and field tests
- Novel concepts for fiber sensors
- Nonlinear wave mixing and applications
- Soliton dynamics in optical fibers
- Second-harmonics generation in optical fibers
- Nonlinear optical fiber sources
- Mode-locked, high power and ultrafast fiber lasers
- Novel Optical Fibers and Fiber-based Devices
- Novel fiber laser sources
- Infrared fibers and their applications
- Special fibers and their related optoelectronic devices
- Novel fiber structures
- Fiber technologies and applications

Submission Dates

• Full paper due: 31/01/2026 • Notification of acceptance: 15/03/2026 • Final paper submission: 15/05/2026

Paper format and submission are available at <https://eng.ed.ac.uk/csndsp-2026/authors-centre/paper-submission>

For further information about this colloquium, please contact: **Dr Qiang Wu** (Qiang.wu@northumbria.ac.uk)

For general information about the CSNDSP'26, please contact: **Prof. W Popoola**, W.Popoola@ed.ac.uk