

2nd Workshop on Fiber Optics Sensing

10–12 September 2026 • Shenzhen, China



WORKSHOP DESCRIPTION

Distributed fiber optic sensing is a rapidly developing technology with significant disruptive potential across the energy sector. By transforming a single fiber into thousands of sensors, it provides unprecedented insights into complex subsurface and infrastructure processes, enabling novel optimizations and significant energy and cost savings. This technology is poised to play a major role in monitoring energy production, distribution, and critical transition activities such as oil and gas storage, Carbon Capture, Utilization, and Storage (CCUS), hydrogen storage, geohazard monitoring, civil engineering, and smart city applications.

This workshop will focus on the latest optical sensing technology and explore high-value use cases that are driving innovation adoption. We aim to create a unique forum that bridges the gap between technology creators – including researchers in sensor hardware, fibers, cables, and interrogators – and technology end-users – such as application experts in seismic imaging, downhole and surface monitoring, and reservoir production management. Accordingly, the workshop will prioritize the cross-fertilization of accessible ideas over deep specialist discourse, aiming to engage our interdisciplinary audience.

The scope is designed to cater to professionals across the entire Energy Transition landscape. This includes traditional sectors like oil and gas and geothermal, as well as emerging fields such as CCUS, hydrogen storage, mining and radioactive waste disposal, and civil engineering and smart city infrastructure monitoring. We invite geoscientists, geophysicists, reservoir and completion engineers, data scientists, optical sensing professionals and civil engineers from operating companies, service providers, academia, manufacturers and research institutions to contribute and participate.

As the industry seeks more cost-effective and scalable long-term monitoring solutions, the advent of affordable technologies like Distributed Acoustic Sensing (DAS) and advanced optical point sensors has been transformative. Significant synergies are now emerging between surface and downhole monitoring applications, making fiber optic sensing increasingly attractive for comprehensive reservoir imaging and long-term surveillance projects.

The Society of Exploration Geophysicists (SEG) is committed to fostering the distribution of cutting-edge knowledge and technology. We are confident this workshop will be an invaluable opportunity for all participants to stay informed about these rapid evolutions, present their latest findings, and network with key individuals and organizations shaping the future of fiber optic sensing for energy applications.

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ABSTRACT SUBJECTS

1. Advances in Fiber Optic Sensing (Interrogator, Fiber, Cable, Sensors & Conveyance)
2. Upstream, Coal, Mining Intelligent
3. Well Completions, Subsea Installations and long-term monitoring
4. Fiber Optics in Energy Transition
 - a. CCUS, Hydrogen, Critical Minerals
 - b. Gas Hydrates
 - c. Renewable Energy (Wind, Geothermal, Solar) & Critical Zone Monitoring
5. Imaging and Monitoring
6. Downstream, Construction, Civil Engineering, Smart Cities
7. Environmental and Infrastructure Monitoring
 - a. Groundwater Dynamics
 - b. Geohazard Monitoring and Mitigation
 - c. Near-surface Characterization and Monitoring
 - d. Infrastructure Monitoring
8. DAS Data Management, Simulation, Processing and AI
9. Field Applications and Application Studies
10. Instrument

GENERAL CO-CHAIRS

Arthur Cheng, The Chinese University of Hong Kong

Hong Cao, BGP Inc., CNPC

GENERAL TECHNICAL CO-CHAIRS *(Listed in alphabetical order by last name)*

Danping Cao, China University of Petroleum (East China)

Zuyuan He, Shanghai Jiao Tong University

Hongjun Lu, Research Institute of Changqing Oilfield, CNPC

Mark Willis, Consultant

Yibo Wang, Institute of Geology and Geophysics, CAS

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Feng Cheng, Zhejiang University

Ge Jin, Colorado School of Mines

Roman Pevzner, Curtin University

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Gang Yu, BGP Inc., CNPC

TECHNICAL COMMITTEE MEMBERS *(Listed in alphabetical order by last name)*

Yuanzhong Chen, BGP Inc., CNPC **Gangding Peng**, The University of New South Wales **Zhenhua Rui**, China University of Petroleum (Beijing)

Liyang Shao, Southern University of Science and Technology **Heping Shen**, Beijing Appso Technology Co., Ltd. **Qizhen Sun**, Huazhong University of Science and Technology

Zinan Wang, University of Electronic Science and Technology of China **Wentao Zhang**, Institute of Semiconductors, CAS **Xuping Zhang**, Nanjing University

Tao Zhu, Chongqing University

(Rolling Invitations...)

IMPORTANT DATES

Call for Abstracts opens: 15 February 2026

Call for Abstracts closes: 15 April 2026

Early Bird Registration opens: 20 May 2026

Full Rate Registration starts: 10 July 2026

ABSTRACT FORMAT

2- 4 pages abstract (max 4), two-column format

- ◆ Abstracts should include sufficient details for the committee to judge the quality of the submitted work.
- ◆ Abstracts should be a minimum of 2 pages, text plus 1 figure (optional), with a maximum of 4 pages.
- ◆ Abstracts should be on 8.5x11 inch paper size, have text in Roman font, and include both text and figures.
- ◆ Title should be one or two-line, at the top of the page, in bold font, and size 12 point.
- ◆ Authors should be listed in Roman italic font, size 10 point, and located just below the title.
- ◆ All text must stay 1 inch clear of the margins of the page.
- ◆ Submissions should be in Adobe Acrobat PDF format.

If authors plan to publish abstracts in SEG Library after the workshop, the submissions must follow the SEG Abstract Template and the copyright transfer letter should be confirmed after the workshop.

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Subject _____ Presentation Type: Oral Poster Both

NOTE: The mechanical recording of any portion of the SEG workshop in any form (photographic, electronic, etc.) is strictly prohibited. Printed reference to the workshop presentations or discussions is not permitted without the consent of the parties involved. All participants are requested to omit public reference to the workshop proceedings in any published work or oral presentation. Only registrants are permitted to attend workshop sessions. Each participant agrees to these regulations when application is accepted, as indicated by his or her signature on this form.

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Please email abstract and call for abstracts form by **15 April 2026** to china@seg.org

Or, submit abstract online via SEG China website <https://seg-china.org.cn/events/calendar-101.html>

ORGANIZER



2026 SEG 第二届光纤传感技术研讨会

2026年9月10-12日 | 中国 · 深圳



主办单位



会议背景

分布式光纤传感是一项在能源领域快速发展且具有重大颠覆性潜力的技术。通过将一根光纤转变为数千个传感器，该技术能够以前所未有的方式洞察复杂的地下过程与基础设施运行状态，从而推动系统优化，显著节约能源与成本。在能源生产、输送及关键转型活动的监测中，这项技术正发挥着日益重要的作用，其应用范围涵盖油气储存、碳捕获、利用与封存（CCUS）、氢气储存、地质灾害监测、土木工程以及智慧城市等多个领域。

本次研讨会将聚焦于最新的光学传感技术，并深入探讨推动创新应用的高价值案例。我们旨在打造一个独特的交流平台，以弥合技术开发者（包括传感器硬件、光纤、光缆及解调设备的研究人员）与技术最终用户（例如地震成像、井下与地表监测、油藏生产管理等领域的应用专家）之间的认知差距。因此，研讨会将优先促进易于理解的跨领域观点交流，而非进行过于深奥的专业探讨，以吸引更多跨学科背景的参与者。

研讨会的内容设计覆盖整个能源转型领域的专业人士需求，既包含石油、天然气和地热等传统行业，也涉及CCUS、氢气储存、采矿与放射性废物处置，以及土木工程和智慧城市基础设施监测等新兴方向。我们诚邀来自作业公司、服务供应商、学术界、制造商及研究机构的地球科学家、地球物理学家、油藏与完井工程师、数据科学家、光学传感专家和土木工程师踊跃投稿并参会。

随着行业对更具成本效益和可扩展性的长期监测解决方案的需求日益增长，分布式声学传感（DAS）与先进光学点传感器等经济型技术的兴起已带来变革性影响。地表与井下监测应用之间正呈现出显著的协同效应，使光纤传感技术在综合性油藏成像与长期监测项目中愈发受到青睐。

SEG国际勘探地球物理学家学会始终致力于推动前沿知识与技术的传播。我们相信，本次研讨会将为所有参会者提供一个宝贵的机会，使其了解该领域的快速进展、展示最新研究成果，并与共同塑造光纤传感技术在能源领域未来发展的关键个人及机构建立联系。

2026 SEG 第二届光纤传感技术研讨会

2026年9月10-12日 | 中国 · 深圳

征稿主题

1. 光纤传感技术进展（解调设备、光纤、光缆、传感器及布设技术）
2. 上游产业、煤炭与智能采矿
3. 完井、海底设施及长期监测
4. 光纤传感在能源转型中的应用
 - a. CCUS、氢气、关键矿物
 - b. 天然气水合物
 - c. 可再生能源（风能、地热、太阳能）及关键带监测
5. 成像与监测技术
6. 下游产业、建筑、土木工程与智慧城市
7. 环境与基础设施监测
 - a. 地下水动态
 - b. 地质灾害监测与减灾
 - c. 近地表表征与监测
 - d. 基础设施监测
8. DAS数据管理、模拟、处理与人工智能
9. 现场应用与案例研究
10. 仪器与设备

大会主席

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张旭萃，南京大学

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(陆续邀请中...)

重要日期：

征稿开始日期：2026年2月15日

征稿截止日期：2026年4月15日

早鸟注册开始：2026年5月20日

常规注册开始：2026年7月10日

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- 作者姓名应使用罗马斜体字, 字号为 10 磅, 列于标题正下方。

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(二) 2026年4月15日前, 登录SEG中国网站在线投稿, 会议网址: <https://seg-china.org.cn/events/calendar-101.html>

