

Special Issue: “OFS in UESTC”



Editor-in-Chief's Preface

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This Special Issue named “OFS in UESTC” is organized for celebrating the 70th birthday of the University of Electronic Science & Technology of China (UESTC), the 20th birthday of the Optical Fiber Sensing (OFS) Group at UESTC, and the 16th birthday of the *Photonic Sensors* journal. UESTC established in 1956 has become the leading university in the field of electronic information in China. The OFS group at UESTC founded by me in 2005 has been recognized as one of the top OFS groups globally due to various pathbreaking innovations in OFS, including laser-induced in-fiber microcavity sensors, ultra-sensitive fiber-optic distributed acoustic sensing (DAS) technology and applications, optical frequency comb-based DAS (selected as an annual breakthrough advances in 2024 by Optica, formerly the Optics Society of America), and integrated fiber-optic communication and sensing networks, etc. *Photonic Sensors* founded by me in 2011 was ranked as a First Quartile (Q1) journal in the Journal Citation Reports (JCR) by Science Citation Index (SCI), Clarivate in 2024, and a Q1 top journal by the National Science Library, Chinese Academy of Sciences (NSLC) in 2025, respectively.

This special issue contains 9 papers from the OFS group at UESTC, including 3 review articles and 6 research papers. In particular, there are 6 papers focusing on the DAS technology and applications, indicating that the UESTC's OFS group has achieved significant advances in DAS at the world-class level. In terms of fundamental research on DAS, we report the first

three-component DAS system, which is the current longest DAS with the biggest bandwidth, while the industrial applications of DAS in oil/gas exploration and development have generated direct economic benefits of ~150 million USD by the holding company of the largest oil/gas magnate in China – China National Petroleum Corporation (CNPC), i.e., CNPC Aobo (Chengdu) Technology Co., Ltd., which was co-founded by the Borehole Geophysics Division (BGP) of CNPC and UESTC in 2018. These achievements show that the UESTC's OFS group has played a leading role in fundamental research and commercialization of DAS worldwide.

Hence, I would like to express my sincere acknowledgment to all the members of my group for their hard and innovative work over the last 20 years, to turn the group into a world first-class OFS group. Also, I would like to thank the members of *Photonic Sensors* for their hard work and dedication to make the journal reach world-level in both optics and instrumentation. Finally, I would like to thank the strong support from the Key Lab of Optical Fiber Sensing & Communications (Ministry of Education of the People's Republic of China) at UESTC.

**Prof. Yunjiang RAO,
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