THE CHINESE UNIVERSITY OF HONG KONG
Centre for Advanced Research in Photonics &
Department of Electronic Engineering

Seminar

Research on Optical Fiber Sensing in Tianjin University

Professor Junfeng Jiang,
School of Precision Instrument and Optoelectronics Engineering,
Tianjin University

Date: 3 April 2023 (Monday)
Time: 2.15pm-3.pm
Venue: Rm 222, Ho Sin Hang Engineering Building, CUHK

Abstract: High stable and high precision sensing are critical for information acquiring in aviation, space exploring, ocean research, life science and so on. For example, the sensing can provide a solid base for structure health status of spacecraft and ocean environment. However, extreme environment throws a challenge task for traditional sensing technology. Optical fiber sensing is a fast-growing novel sensing method in recent years due to its electro-magnetic immunity, electrical passive, small and embeddable. This presentation will introduce the optical fiber sensing research progress in Tianjin University for extreme environment application, (1) Discrete optical fiber sensing, including optical fiber hybrid sensing microstructure, stable optical fiber sensing wavelength demodulation with hybrid optical wavelength reference under dynamic temperature; (2) Distributed optical fiber sensing, including distributed optical fiber vibration sensing technique, distributed optical frequency domain reflectometry sensing and distributed optical time domain reflectometry sensing.

About the Speaker

Dr Junfeng Jiang is a Professor at the School of Precision Instrument and Opto-electronics Engineering at Tianjin University. He is also Director of Tianjin Optical Fiber Sensing Engineering Center and Executive Deputy Director of Tianjin Fiber Photonics International Joint Research Center. He is a member of Standing Committee on Optoelectronic Technology, COS, member of Opto-Electronic-Mechanic Technology and System Integration Chapter, CIS. He is the PIs of Key Project of National Natural Science Foundation of China, National Basic Research Project (973), National Key Scientific Instrument and Equipment Development Projects of China, Consulting research project of Chinese Academy of Engineering. He has published nearly 160 papers and 5 books, awarded 8 US patents and more than 100 Chinese invention patents. His research has been recognized by many awards, including second prize of National Technical Invention, 5 first prize of provincial science and Technology, Chinese Golden Patent prize, 2 Chinese Excellent Patent prizes. He also received second prize of National Teaching Achievement Award..

*** All are welcome to attend. Please contact. Prof H.K.Tsang hktsang@cuhk.edu.hk for enquiries ***