

# Lab Internship for Overseas Students in Shenzhen Technology University

## Internship in Joint Laboratory of Optical Design and Inspection

(Reference Number: Intern/a/201809/03)

### Lab Introduction

This laboratory is mainly to conduct research and development of using optical technique for sensing and measurement. We would like to propose the research project of “Design the high sensitivity optical fiber distributed temperature sensing array for measurement of temperature in harsh environment”. Temperature measurement application is very high demand in all different kinds of engineering disciplinary. The corresponding measurement range and sensitivity are the crucial parameters in certain applications. However, most of the conventional techniques for temperature measurement, especially electronics type, are not much suitable in some hazardous environments because the electronics components can be easily affected by some extreme working conditions, such as high/low temperature, high acidic and even severe electromagnetic surroundings. Therefore, optical fiber temperature sensors are attractive and even superior to conventional electrical counterparts in some aspects and these offer many specific advantages such as compact size and insensitive to electromagnetic interference.

### Your Tasks

1. Understand the property of fiber Bragg grating.
2. Build up a complete sensing array for quasi-distributed sensing.
3. Use Labview or other language for data acquisition and design the graphical user interface (GUI) for presenting the real time temperature condition.

### Requirements

1. Fluent spoken and written English.
2. Have engineering hands on experience.
3. Willing to learn and hardworking.

### Benefits

1. Excellent experience to do state-of art research.
2. Publish in Top Scientific Publications.

### Supervisor

Prof. Julian Chi Chiu Chan

1996 B(Eng) Electrical Engineering, The Hong Kong Polytechnic University

2000 PhD, The Hong Kong Polytechnic University

2003-2010 Assistant Professor, Nanyang Technological University, Singapore

2010-2017 Tenured Associate Professor, Nanyang Technological University, Singapore

2018- Distinguished Professor, Shenzhen Technology University

#### Research Achievement:

Prof. Chan has published 170 SCI journal papers, the SCI citations and H-index are about 2430 and 29, respectively. The journals include Biosensors and Bioelectronics, Sensors and Actuators B: Chemical, Optics Letters, Optics Express, IEEE Journals of Selected Topics in Quantum Electronics et al. He has received about 2.5 million USD in research funding, applied for 6 international invention technology patents, and 2 have been authorized.

Awards (2018): Pengcheng Scholar Award, Shenzhen Peacock Talent Program Class B award, Fellow of The Hong Kong Institute of Engineers, Fellow of The Society of Operations of Engineers (UK), Albert Nelson Marquis Lifetime Achievement Award.



Please send a full curriculum vitae and passport copy together with copies of qualification documents by email to [international\\_internship@sztu.edu.cn](mailto:international_internship@sztu.edu.cn) with the email subject as “Reference Number – Job title – Full name of applicant”.

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