



## 香港中文大学工程学院

日期：2018年3月24日（星期六）  
 时间：2:00pm - 5:00pm  
 地点：清华大学 精密仪器系9003大楼4303教室  
 联系人：清华大学精密仪器系 曹良才教授  
 学术讲座：陈世祈教授 (机械与自动化工程系)



讲题: Next-generation two-photon microscope and precision microtome for fast 3-D organ imaging

学术讲座：周仁杰教授 (生物医学工程系)



讲题: DMD-based Quantitative Phase Microscopy and Tomography

夏令营简介：周仁杰教授、孟玮教授 (计算机科学与工程系)

### 香港博士生奖学金计划夏令营2018

活动日期：2018年7月9至13日（星期一至五）  
 地点：香港中文大学校园



#### 夏令营重点

- 为有意报名入读本校**2019-20**学年博士课程的申请人而設
- 介绍工学院的研究范畴、实验室及研究设施及与本院师生交流
- 进行入学面试
- 获选取得奖学金的同学将可获得每月港币 \$ 20,000 的津贴

#### 夏令营内容（暂定）

- 工程学部介绍
- 研究讲座
- 由本院博士生介绍之海报展览
- 与本院教授个人面谈
- 实验室及研究设施参观
- 与教授及博士生进行研讨会
- 进行入学面试

#### 夏令营將提供

- 于中大校园内的免费六晚住宿 (7月8-14日)
- 欢迎晚宴
- 完成夏令营后，将可获得交通津贴港币1000元津贴

#### 截止报名日期

2018年4月16日（星期一）



报名

夏令营介绍：<http://hkpfs.erg.cuhk.edu.hk>  
 报名网页：[http://www.erg.cuhk.edu.hk/phdsw\\_apply](http://www.erg.cuhk.edu.hk/phdsw_apply)  
 查询电邮：[phd@erg.cuhk.edu.hk](mailto:phd@erg.cuhk.edu.hk)  
 微信号：foecuhk



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### 讲题: Next-generation two-photon microscope and precision microtome for fast 3-D organ imaging

**Abstract:** I will first present our recent work on femtosecond laser manipulation based on digital micromirror devices (DMD) and binary hologram; and their applications in developing the next-generation two-photon and random-access microscopes, achieving a scanning speed of 22.7 kHz. The fast DMD scanner also simultaneously realizes multi-plane imaging and multi-point optogenetics stimulation. In the second part, I will present the development of a flexure-based vibrating blade microtome for sectioning soft tissues with submicron level flatness and precision. The custom-built microtome is integrated with the two-photon microscope to automatically generate 3-D image of an entire organ, e.g., mouse brain, with subcellular resolution.

**Biography:** Prof. Shih-Chi Chen received his B.S. degree in Mechanical Engineering from the National Tsing Hua University, Taiwan, in 1999. He received his S.M. and Ph.D. degrees in Mechanical Engineering from the Massachusetts Institute of Technology, Cambridge, in 2003 and 2007, respectively. Following his graduate work, he entered a post-doctoral fellowship in the Wellman Center for Photomedicine, Harvard Medical School, where his research focused on biomedical optics and endomicroscopy. From 2009 to 2011, he was a Senior Scientist at Nano Terra, Inc., a start-up company founded by Prof. George Whitesides at Harvard University, to develop precision instruments for nanofabrication processes. In 2011, he joined the Department of Mechanical and Automation Engineering at the Chinese University of Hong Kong (CUHK) as an Assistant Professor. His current research interests include ultrafast laser applications, biomedical optics, precision engineering, and nanomanufacturing. Prof. Chen is a member of the American Society for Precision Engineering (ASPE), ASME, SPIE, OSA, and IEEE. He is the recipient of a 2003 R&D 100 Award for the design of a microscale six-axis nanopositioner. In 2013, he received the Early Career Award from University Grants Committee of Hong Kong.



报名

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