

## I-Jen Hsu

E-mail: [ijhsu@cycu.edu.tw](mailto:ijhsu@cycu.edu.tw)

Ph.D., Physics, National Tsing Hua University

Associate Professor, Department of Physics

Microscopy, Spectroscopy, Profilometry, Optical Coherence Tomography, Endoscopy



### ◆ Research Interests

- ◆ I-Jen Hsu is an associate professor in the Department of Physics. Courses taught include General Physics, Introduction to Fourier Optics, Biomedical Photonics and Modern Technology in Photonics. I-Jen Hsu's research is in a variety of microscopy and in spectroscopy. Research topics include high-resolution profilometry with composite interferometer, optical coherence tomography, fluorescent spectral imaging of biological cells, and optical techniques for clinical applications.

### ◆ Selected Publications

- ◆ Chia-Yun Kao, Chun-Wei Chang, Kitsakorn Locharoenrat, Chao-Ming Chang, Max Ti-Kuang Hou, and I-Jen Hsu, "Compact optical delay line for long-range scanning," *Optics Communications*, Vol. 284, pp. 4243-4247, 2011.
- ◆ Max T. Hou, Hui-Mei Shen, Guan-Lin Jiang, Chiang-Ni Lu, I-Jen Hsu, and J. Andrew Yeh, "A rolling locomotion method for untethered magnetic microrobots," *Applied Physics Letters*, Vol. 96, pp. 024102-1-3, 2010.
- ◆ Cheng-Chung Lai and I-Jen Hsu, "Surface profilometry with composite interferometer," *Optics Express*, Vol. 15, No. 21, pp. 13949-13956, 2007.

### ◆ Recent Research Projects

- ◆ Preparation and properties of three dimensional porous scaffold materials for adhesion and differentiation of neural stem cells—measurement of morphology and characterization of porous scaffold materials and neural stem cells, sponsored by National Science Council (August 2010 ~ July 2013)
- ◆ Developing novel optical imaging systems for diagnosis and prognosis prediction of esophageal cancer—development of endoscopic optical systems for the diagnosis and treatment of esophageal cancer with spectroscopy and tomography, sponsored by Department of Health (January 2012 ~ December 2012)