

## 2012 SATU Joint Research Scheme

NCKU Project Host Center	Medical Device Innovation Center
Project Title	Medical Device Innovation
NCKU PI/ Co-PI	PI: Prof. Fong-Chin Su, Medical Device Innovation Center, NCKU Co-PI: Jimmy Kuan-Jung Li, Medical Device Innovation Center, NCKU
Foreign Co-PI	Yufeng Zhou, Kin Huat Low / Nanyang Technological University Van Toi Vo / International University of Vietnam National University
Date	2012/8/30~2012/9/1; 2012/9/2~2012/9/5
Venue	Medical Device Innovation Center; Department of Biomedical Engineering; International Conference Hall of NCKU

### **Objectives**

To develop innovative medical devices and activate the medical device industry.

### **Collaborative Strategy**

The joint-collaborative teams are formed by the strong groups in the three universities on bio-medical team, robotics, actuation and control, etc. We will collaborate with Prof. Yufeng Zhou and Kin Huat Low of Nanyang Technological University on “Shock Wave/Low Intensity Pulsed Ultrasound (SW/LIPUS) in Treating Calcified Tendinitis” and “Bio-engineering Design and Analysis of Subject-oriented and Task-specific Assistive Devices”. A novel electromagnetic device which can deliver both SW and LIPUS with adjustable parameters (i.e., pressure, burst) will be developed. To work together with the local hospitals and clinics, the joint team will study and propose a series of projects towards the design and development for subject-oriented and task-specific devices. Besides, we will try to collaborate with the department of biomedical engineering at International University of Vietnam National University to develop medical devices on several topics such as biomechanics, biosensors, applications of microelectronics and electromagnetic therapy.

### **Future Perspectives**

The intellectual property agreement between Nanyang Technological University/International University of Vietnam National University and National Cheng Kung University will be signed and an imaging guided ultrasound mobile system for musculoskeletal disorders, assistive devices, and some medical devices will be developed together. Prof. Van Toi Vo would like to promote student exchanges at the graduate and undergraduate levels and for the faculty exchange as well, and would like to receive Taiwanese researchers in his laboratories. Besides, we plan to organize the 1<sup>st</sup> VN-Taiwan Bilateral Symposium in Ho Chi Minh City with Prof. Vo for a platform to promote the collaborations between scientists and industries of both countries.