



**THE CHINESE UNIVERSITY OF HONG KONG**

*Seminar jointly present by*

**Department of Information Engineering and  
Division of Biomedical Engineering**

**Wireless Powering For Injectable Electronics**

by

**Mr. John S. Ho  
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**Date : 19 December, 2013 (Thur.)  
Time : 2:00 - 3:00pm  
Venue : Room 833 Ho Sin Hang Engineering Building  
The Chinese University of Hong Kong**

Abstract

The miniaturization of electronics has paved way for devices that can be injected rather than surgically implanted in the body. Existing options for powering them, however, require large components that do not scale to injectable dimensions. Recent work establishes a wireless powering modality that overcomes this challenge and enables new classes of injectable microelectronic systems. Using structures designed to control the electromagnetic midfield, propagating modes in tissue are forced to optimally converge on the device with performance approaching theoretical bounds. This talk summarizes the basis of midfield wireless powering as well as key applications that could be enabled by this approach.

Biography

John S. Ho was born in California. He received his B.Eng from the Hong Kong University of Science and Technology (HKUST) and M.S. at Stanford University, both in Electrical Engineering. He is currently pursuing a PhD at Stanford University where he is a National Defense Science and Engineering Graduate (NDSEG) Fellow.

**\*\* ALL ARE WELCOME \*\***