



**The Chinese University of Hong Kong  
Department of Electronic Engineering**

**Time: 16:00 - 17:00, 8 Dec 2017 (Fri)**

**Venue: Room 215, William M. W. Mong Engineering Bldg, CUHK**



**Robotic Sensing for Unknown Field  
Estimation and the Applications in  
Aquatic Monitoring**

**Teng Li  
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of Mechanical Engineering, University of British Columbia**

**Abstract:**

Recent advances in the technologies of robotic sensing have led to significant progress in environmental telemonitoring. Robotic sensors that can operate mobile sensing and autonomous navigation facilitate the monitoring process on both spatial and temporal scales over a geographical area. This talk will present our efforts in environmental field estimation using robotic sensors under new sensor scheduling and path planning schemes. This talk will also introduce the design and development of a cost-effective, rapidly deployable, and easily maintainable sensing system for aquatic environmental monitoring. The developed platform that follows the proposed sampling schemes has been deployed in the field in Canada and in India to provide spatiotemporal measurements and evaluation results of the water sources. The real-world field implementation and the experimental results will also be discussed in this talk.

**Biography:**

Teng Li is the laboratory manager of the Industrial Automation Lab in the Department of Mechanical Engineering at the University of British Columbia. He is currently a Ph.D. candidate in the Department of Mechanical Engineering at the University of British Columbia, Vancouver, Canada. Before joining the Industrial Automation Lab, he completed his master of the Master's/Ph.D. track program in control science and engineering from Shandong University in 2013 and obtained his B.S. degree in computer science from Shandong Normal University in 2011. His research interests include environmental robotics, mobile sensing, random field estimation, and spatio-temporal experimental design, particularly for robotics applications in environmental monitoring. He is the recipient of the Jaya-Jayant Award and the UBC Graduate Support Initiative Award.

**\*\*\* All are welcome to attend \*\*\***

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