MEng Design Project Announcement – 2017-18 AY

**Project title:** Software Defined Radios for RF Indoor Locating

**Brief Description of Design Project Goals:**

**Overview:**

The project will implement an indoor software defined radiolocation systems based on backscattering from passive tags. The reader will be based on the open-source ETTUS software defined radio (SDR) platform, and the passive tag on the open-source WISP (wireless identification sensing platform). The goal is to achieve mm-level ranging accuracy and 20Hz sampling frequency for multiple-access passive tags.

**Specific MEng Contribution:**

The participating student will be working on the open-source platforms together with a Ph.D. student. The ETTUS platform will have a USB interface with the host computer for further processing to complete the 3D localization and other signal extraction.

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**Project Web Site:** [http://kan.ece.cornell.edu/research/](http://kan.ece.cornell.edu/research/)

**Number of MEng Students Needed:** 1 - 2

**Required Skills:**

RF systems; prior experience with software-defined radio platforms; signal processing.

**Estimated Project Time Frame:**

2017-18 Academic Year, Two (2) Semesters