ECE Seminar &

WORKSHOP!

2019 ECE SPEAKI

Mike McLernon

Development Manager **Commnications and Software-defined Radio MathWorks**

Fri. Nov 8, 2019 @ 9 AM - 11 AM 8 St. Mary's Street, PHO 906 Faculty Host: David Starobinski Light refreshments will be available inside of 906 at 9 AM



REAL-WORLD WIRELESS SIGNALS IN MATLAB

Abstract: In this talk we show how you can transmit and receive over-the-air signals with MATLAB and a variety of hardware, such as RTL-SDR, ADALM-PLUTO (PlutoSDR), and USRP. We will work with applications like broadcast FM, ADS-B (aircraft tracking), and QPSK. We show how you can build up your own wireless communications link, learning practical receiver design in the process. After the talk, we will conduct a workshop to download the RTL-SDR driver on your personal laptops. We will walk you through the install process, and launch several applications to ensure proper installation. You will get to keep the RTL-SDR radios once the workshop is complete. To participate in this workshop, you must have MATLAB R2017b or later loaded on your laptop, and you must also have Communications Toolbox loaded in your MATLAB install.

Bio: Mike McLernon is a development manager for communications and software-defined radio products at MathWorks. Since joining MathWorks in 2001, he has overseen the development of numerous PHY layer capabilities in Communications Toolbox, and of connectivity to multiple SDR hardware platforms. He has worked in the communications field for over 30 years, in both the satellite and wireless industries. Mike received his BSEE from the University of Virginia and his MEEE from Rensselaer Polytechnic Institute.

REMEMBER TO BRING YOUR LAPTOP, HAVE MATLAB R2017B OR LATER UPLOADED ON YOUR LAPTOP, AND COMMUNICATIONS TOOLBOX LOADED IN YOUR MATLAB INSTALL.



BU Department of Electrical & Computer Engineering