Time & Location: March 31, 2020 at 3:00 PM in HEC 356
Title: Modeling Site Specific Urban Propagation Using A Variable Terrain Radiowave Parabolic Equation - Vertical Plane Launch (VTRPE-VPL) Hybrid Technique

The development of efficient algorithms for calculating radio frequency propagation loss in site specific urban environments has been an active area of research for many years, and this dissertation demonstrates that, for particular scenarios, a hybrid approach that combines the Variable Terrain Radiowave Parabolic Equation (VTRPE) and Vertical Plane Launch (VPL) models can be used to produce accurate results over an urban topography. The hybrid approach consists of leveraging the 2-D parabolic equation method in the initial propagation region, where backscatter and out of plane energy can be neglected, and then transitioning to the more computationally intensive RF 3-D ray launching method for the domain closer to the receiver of interest.

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Bachelor's of Electrical Engineering, BS, 2003, University of Florida
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Approved for distribution by W. Linwood Jones, Committee Chair, on March 15, 2020.

The public is welcome to attend.