Characterization of Scannable Leaky Wave Antennas
Using an Extended Metamaterial Framework

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Abstract: In the past decade, metamaterials have shown new and exciting ways to treat electromagnetic problems, which have gained popularity within the antenna and microwave profession. A composite right left handed (CRLH) transmission line approach for characterizing the TE10 dominate mode rectangular waveguide scannable leaky wave antenna will be discussed. This is explained by transmission line theory using the lumped element inductor/capacitor (LC) model. The discussion will develop the ideal lossless CRLH transmission line and show how it is applied to the scannable leaky wave antenna (LWA).

Bio: Mr. Garrett Gilchrist is currently a student at Washington University finishing his Masters in Electrical Engineering. He is also working at The Boeing Company working with computational electromagnetics. Garrett received his Bachelor of Science in Electrical Engineering from the University of North Florida.

Host: Jung-Tsung Shen

Friday, April 2, 2010
3:00 p.m.
Bryan Hall, room 305
Light refreshments will be served.