CHARACTERIZATION OF SCANNABLE LEAKY WAVE ANTENNAS USING AN EXTENDED METAMATERIAL FRAMEWORK

MS Dissertation Defense

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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 circuit fields. A composite right left handed (CRLH) transmission line approach for characterizing the TE$_{10}$ dominate mode rectangular waveguide scannable leaky wave antenna will be treated. This is explained by transmission line theory using the lumped element inductor/capacitor (LC) model. The treatment will develop the ideal lossless CRLH transmission line and show how it can be successfully applied to treat the scannable leaky wave antenna (LWA).

Monday, December 13, 2010
9:00 a.m.
Bryan, Room 305

Research Advisor:
Professor Barry Spielman

This seminar is in partial fulfillment of the Masters Degree