Tuesday, November 27
6 p.m.
Syracuse University
Goldstein Student Center
Room 201

Refreshments will be served.

Pulse Propagation Through Dispersive Material: From the Beginning

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About the presentation
Dispersive materials are those in which the dielectric permittivity is a function of frequency. The requirement of causality enforces a special relation between the real and imaginary parts of this frequency-dependent dielectric permittivity. Thus, when an electromagnetic pulse travels through a dispersive material, each frequency component of the pulse experiences both amplitude and phase changes, and each at its own rate. It is difficult, if not impossible, to provide a mathematical expression for the propagated pulse that accurately describes all of these amplitude and phase changes. Instead, approximations are made. This talk will begin with an introduction to dispersive material, causality, and causal models of dielectric permittivity. Attention will then be given to popular approximation methods and their solutions.

For more information, visit our website at:
http://www.ewh.ieee.org/r1/syracuse/mtt-ap/mttap.htm
or contact Michael Enders at: menders@ieee.org

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