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Jichun Li* (jichun@unlv.nevada.edu), Dept of Mathematical Sciences, University of Nevada
Las Vegas, Las Vegas, NV 89154-4020. *Time-domain finite element modeling of wave propagation
in metamaterials.*

Since 2000, there is a growing interest in the study of metamaterials due to their applications in areas such as design of invisible cloak and sub-wavelength imaging. In this talk, I'll first give a brief overview on metamaterials with some interesting applications of metamaterials conducted by engineers and physicists. Then I'll talk about some recently developed time-domain finite element (TDFEM) methods for metamaterial simulation. Finally, some interesting numerical results and open issues will be presented. (Received August 26, 2011)