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Loc Hoang Nguyen*, Department of Mathematics and Statistics, University of North Carolina Charlotte, 9201 University City Blvd, Charlotte, NC 28262. *A globally convergent numerical method for a 1-d inverse medium problem with experimental data.*

In the talk, we will introduce a globally convergent algorithm to reconstruct the spatially distributed dielectric constant of a medium from the back scattered wave field in the frequency domain. It is worth mentioning that no knowledge of an initial guess for the true solution is required. The Quasi-Reversibility Method is used in the algorithm. The convergence of the algorithm is proved using Carleman estimates. The method is tested on both computationally simulated and experimental data. (Received September 10, 2016)