

1143-35-500

Yernat Assylbekov and **Ting Zhou*** (t.zhou@northeastern.edu). *Direct and Inverse problems for the Nonlinear Time-Harmonic Maxwell Equations in Kerr-Type Media.*

In this work, we consider an inverse boundary value problem of electromagnetism in a nonlinear Kerr medium. We show the unique determination of the electromagnetic material parameters and the nonlinear susceptibility parameters of the medium by making electromagnetic measurements on the boundary. We are interested in the case of the time-harmonic Maxwell equations. This is a joint work with Dr. Yernat M. Assylbekov. (Received August 21, 2018)