1113-35-180   **Shitao Liu*** (`liul@clemson.edu`) and **Lauri Oksanen**. *A Lipschitz stable reconstruction formula for the wave speed from boundary measurements.*

We consider the problem of reconstructing a wave speed in a bounded domain from acoustic boundary measurements modeled by the hyperbolic Dirichlet-to-Neumann map. We introduce a reconstruction formula that is based on the Boundary Control method and also incorporates features from the complex geometric optics solutions approach. Moreover, we show that the reconstruction formula is locally Lipschitz stable for a low frequency component of the wave speed under suitable geometrical and controllability assumptions. (Received August 21, 2015)