

Lipschitz stability for an inverse hyperbolic problem of  
determining two coefficients by a finite number of  
observations

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**Abstract**

In this talk, we consider an inverse problem of reconstructing two spatially varying coefficients in an acoustic equation of hyperbolic type using interior data of solutions with suitable choices of initial condition. Using a Carleman estimate, we prove Lipschitz stability estimates which ensures unique reconstruction of both coefficients.

I will present some numerical studies on the reconstruction of two unknown coefficients using noisy backscattered data.