

1067-53-1335

James Vargo* (vargo@math.tamu.edu), Department of Mathematics, Mailstop 3368, Texas A&M University, College Station, TX 77843-3368. *Local rigidity results for Riemannian metrics on a manifold with boundary.*

Consider a manifold with boundary that is endowed with a Riemannian metric. The boundary rigidity problem is to reconstruct the metric from boundary measurements of the geodesic rays. Linearizing leads one to an integral geometry problem of recovering a symmetric tensor from its integrals along geodesic rays. In this talk, we discuss results relating the linear problem to local rigidity for the non-linear problem. (Received September 20, 2010)