



# FMSP Lectures

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## Some Geometric Aspects in Inverse Problems

October 31 (Tue) 16:00 ~ 17:00 Room 118

**Abstract:**

We consider inverse problems related to recovering coefficients in partial differential equations of the second order. It is supposed that some measurements of solutions to direct problems are produced on convenient sets. A study of some inverse problems for hyperbolic equations leads to geometric problems: recovering a function from its integrals along geodesic lines of the Riemannian metric or recovering the Riemannian metric inside a domain from given distances between arbitrary points of the domain boundary. Our main goal here is to demonstrate how such geometric problems arise for equations of parabolic and elliptic types.