

1050-26-120

Hoai-Minh Nguyen* (hoaiminh@ias.edu), Institute for Advanced Study, School of Mathematics, Einstein Drive, Princeton, NJ 08540. *Characterizations of Sobolev spaces and related inequalities.*

In this talk I will present some recent characterizations of Sobolev spaces and new inequalities appearing naturally in this context. I will also discuss some improvements of classical properties of Sobolev spaces such as Sobolev inequality, Poincare inequality, and Rellich-Kondrachov theorem which follow from these inequalities. (Received March 02, 2009)