

1067-00-1870 **Irina Mitrea*** (imitrea@ima.umn.edu), Inst. for Mathematics and its Applications, University of Minnesota, 207 Church St. S.E., 411 Lind Hall, Minneapolis, MN 55455. *An optimal metrization theorem for topological groupoids.*

Metrization theorems (i.e. the question whether a certain topology is induced by a metric) play a basic role in many areas of mathematics including topology, functional analysis, analysis on spaces of homogeneous type, partial differential equations, etc.

In this talk I will discuss a sharp general metrization theorem in the setting of abstract groupoids (groupoids have been introduced by Brand in the 1920's as a generalization of groups which also include arbitrary sets). This theorem contains as particular cases several basic metrization results such as Alexandroff-Urysohn metrization theorem in Topology, the Aoki-Rolewicz metrization theorem in Functional Analysis and the Macias-Segovia metrization theorem in Harmonic Analysis. (Received September 22, 2010)