TEMPLE UNIVERSITY

Department of Mathematics

Analysis Seminar

Room 617 Wachman Hall

Monday, March 14, 2016, 2:40 p.m.

Local solvability of a class of degenerate second order operators with smooth and non smooth coefficients

by Serena Federico

University of Bologna

Abstract: In this talk I will show some local solvability results for a class of degenerate second order partial differential operators with multiple characteristics. The model is an elaboration of that introduced by Colombini, Cordaro and Pernazza, which in turn is a generalization of the Kannai operator. In particular the local solvability is studied in the neighborhood of a set where the principal symbol can possibly change sign (which is a property that can produce the non solvability of the operator). I will start giving some results, joint work with Alberto Parmeggiani, in the smooth coefficients case. I will next analyze the local solvability of a class of operators with non smooth coefficients which are a variation of that introduced by Federico and Parmeggiani.