Seminar/Talk

Stability theory for concrete categories

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Host: Tim Browning

Abstract: Ramsey's theorem says that for each natural number n, there exists a natural number N so that each graph with N vertices contains either a clique or an independent set of size n. A theorem of Erd?s and Rado generalizes it to infinite cardinals. Ramsey himself showed that one can take n = N if n is the first infinite cardinal but in most other uncountable cases N must be much bigger than n. Stability theory is a branch of model theory studying certain definability conditions allowing us to take n = N for a large number of infinite cardinals. Historically, stability theory was first developed by Shelah for classes axiomatized by first-order formulas. In this talk, I will describe a generalization to a large class of concrete categories: abstract elementary classes. I will also talk about recent progresses on the field's main test question, the eventual categoricity conjecture, resolved by Morley and Shelah for first-order but still open for abstract elementary classes.

Monday, January 20, 2020 09:00am - 10:00am
Mondi Seminar Room 2, Central Building

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