



Speaker: Damir Dzhafarov
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Thursday, October 6, 2011
1:00 PM
125 Hayes-Healy Hall

Title: Reverse mathematics of irregular principles

Abstract:

The investigation of the logical content of mathematical theorems in the framework of reverse mathematics is today an active and well-developed area. Its originators saw the subject as the classification of mathematical principles into one of several natural categories according to the set-existence assumptions required for their proof. While this view was affirmed by the strengths of the vast majority of mathematical statements, the last ten years have seen a growing number of principles fall outside its scope. The most notable example is Ramsey's theorem for pairs, but at last count, it is now joined by over thirty principles from a variety of mathematical areas, including combinatorics, model theory, set theory, and measure theory. I shall present an introduction to principles of this "irregular" type, and include a survey of recent results and open questions.