Logic Seminar

UNIVERSITY OF NOTRE DAME
Department of Mathematics

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Tuesday, October 11, 2016
2:00 PM
125 Hayes-Healy Hall

Title: Projective Fraise limits and homogeneity for tuples of points of the pseudoarc

Abstract:

The pseudoarc is the generic compact, connected, metric space. It can be represented as a canonical quotient of the pre-pseudoarc, a certain projective Fraısse limit. (Fraısse theory is a method from classical Model Theory of producing canonical limits of certain families of finite structures.) I will present results on adding and characterizing generic tuples of points in the pre-pseudoarc. These results imply an appropriate partial homogeneity for tuples of points in the pre-pseudoarc. The proof uses tools coming from combinatorics and logic. From the partial homogeneity of the pre-pseudoarc, I will deduce the appropriate topological homogeneity for tuples of points in the pseudoarc, a result attributed to Bing. I will finish with speculations on what the ultimate homogeneity for the pseudoarc may be. This is joint work with Todor Tsankov.