

abstract

COMPUTER SCIENCE AND DISCRETE MATHEMATICS SEMINAR II

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

Infinite continuous graphs emerge naturally in the geometric analysis of closed planar sets which cannot be presented as countable union of convex sets. The classification of such graphs leads in turn to properties of large classes of real functions - e.g. the class of Lipschitz continuous functions - and to meta-mathematical properties of sub-ideals of the meager ideal (the sigma-ideal generated by nowhere dense sets over a Polish space) which reduce to finite Ramsey-type relations between random graphs and perfect graphs.

I will survey the development in this area and provide some of the proofs. The following and other relevant papers are available on the web.

1. S. Geschke. 2-Dimensional convexity numbers and \mathcal{P}_4 -free graphs, 2010 preprint.
2. S. Geschke, M. Goldstern and M. Kojman. Continuous Ramsey theory on Polish spaces and covering the plane by functions. J. math. Logic 4(2) (2004) 109--145.
3. S. Geschke, W. Kubis, M. Kojman and R. Schipperus. Convex decompositions in the plane, meagre ideals and continuous air colorings of the irrationals. Israel J. Math. 131 (2002) 285-317.
4. M. Kojman, M. Perles and S. Shelah. Sets in a Euclidean space which are not a countable union of convex sets. Israel J. Math 70 (1990), 313--342.

