On Mixing and Entropy on Topological Graphs

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Abstract: Call 'pure mixing' a map which is topologically mixing but not topologically exact. The aim of this talk is an analysis of the differences between topologically mixing and topologically exact maps on topological graphs. In particular, we will try to describe the special structure of orbits that must be present in the dynamics of pure mixing map on graphs.

Next, as possible applications of this analysis, we get an estimate of infimum of topological entropies of maps from the class of pure mixing maps (and show some examples where it is exactly the infimum).

We will also explain how our analysis (with a little extra work) can be used to get new proofs of some classical results, including Blokh's theorem (topological mixing implies specification property for maps on graphs).

This is a joint work with G. Harańczyk and D. Kwietniak.