THE n-SIMPLEX AS A PROJECTIVE FRAÏSSÉ LIMIT

ARISTOTELIS PANAGIOTOPOULOS

Classical Fraïssé theory has played a key role in the study of dynamics of automorphism groups of countable structures. Projective Fraïssé theory, introduced by Irwin and Solecki, captures the dense dynamics of homeomorphism groups of compact metrizable spaces. In this talk, we express the n-simplex as a projective Fraïssé limit. In the process, we develop further the combinatorial counterpart to PL-topology known as stellar theory. We use this development to show that any simplicial map between two triangulations of the n-simplex that is a near-homeomorphism and fixes the $(n+1)$-many spanning vertexes is a factor of some very simple map generated by selections. Recall that a map from the n-simplex to the n-simplex is a near-homeomorphism if it is the uniform limit of a sequence of homeomorphisms.

This is a joint work with Slawomir Solecki.