SUPER GENERALIZED PSEUDO-ANOSOV (SPAG) MAPS

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The purpose of this talk is not to set a new record for the number of noun modifiers in mathematical definitions, but to present a construction which applies to graph maps in general and yields:

(1) a pseudo-Anosov map if the graph map is a train track map;
(2) a generalized pseudo-Anosov map if the graph map is post-critically finite and has an irreducible aperiodic transition matrix;
(3) an interesting type of surface homeomorphisms which generalizes both the previous classes otherwise.

In particular, this produces a unified construction of surface homeomorphisms whose dynamics mimics that of the tent family of interval endomorphisms, completing an earlier construction of unimodal generalized pseudo-Anosov maps in the post-critically finite case.

This is joint work with Phil Boyland and Toby Hall.