TEXAS ★ STATE
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Texas State Topology Group

Friday, October 28, noon-1:00 p.m., in DERR 338.
Professor Thomas Thickstun

"Degree-one, monotone self-maps of the Pontryagin surface are near-homeomorphisms"

Given any topological space X one can ask "Which self-maps of X are near-homeomorphisms (i.e., approximable by homeomorphisms)?" The homogeneous spaces are especially reasonable choices for X endowed as they are (by definition) with a rich supply of self-homeomorphisms. The answer for X a manifold has been known for over 30 years (it's the cell-like self maps). The Pontryagin surface is a more exotic choice but is the prototype for a broad class of homogeneous spaces which are not locally contractible. The speaker will report on joint work with Robert J. Daverman in which the title of the talk is proven (the converse of the title is straightforward).