Algebra/Topology Seminar

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Homology Relations Between Local Unstable Manifolds Characterizing Saddle-Connection Bifurcations — Part 2

Thursday, January 29, 2015
1:15 p.m. in ES-143

ABSTRACT. Homological necessary and sufficient conditions for an arc of vector fields to exhibit (something akin to) a saddle connection bifurcation are described using the theory of isolated invariant sets and Conley indices and are generalized to the G-equivariant situation, G a compact transformation group on the underlying manifold. The homological conditions are motivated by the necessity of two relations between unoriented bordism classes of certain local unstable manifolds of critical elements when an arc of vector fields presents a saddle connection bifurcation. The first talk will (mostly) concentrate on the non-equivariant situation; the second on the equivariant.