

INTERNATIONAL CONFERENCE ON DYNAMICAL SYSTEMS
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Curves of fixed points of trace maps

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(joint work with Stephen Humphries)

We study certain diffeomorphisms of \mathbb{R}^3 (where the coordinates are traces of 2×2 matrices). These diffeomorphisms preserve certain level surfaces where the maps are area-preserving with hyperbolic or elliptic behaviour. One such surface is a quotient of a torus and the action is by automorphisms. Hyperbolic fixed points persist at nearby levels and we explain in certain cases where such curves of fixed points return to that level.