
JOSE M. SANJURJO, Universidad Complutense de Madrid
Perturbation of global attractors and Shape Theory

We study continuous parametrized families of dissipative flows, which are those flows having a global attractor. The main motivation for this study comes from the observation that, in general, global attractors are not robust, in the sense that small perturbations of the flow can destroy their globality. We give a necessary and sufficient condition for a global attractor to be continued to a global attractor. We also study, using shape theoretical methods and the Conley index, the bifurcation global to non-global. We analyze, in particular, the case of coercive families, for which the bifurcation is originated by the creation of a non-saddle continuum with spherical shape. These results have been obtained in collaboration with Hector Barge.