Sturm global attractors as regular CW-complexes

Carlos Rocha*[1] and Bernold Fiedler[2]

[1]Instituto Superior Tecnico [Lisboa] (IST) – Av. Rovisco Pais, 1 1049-001 Lisboa, Portugal
[2]Freie University Berlin – Kaiserswerther Straße 16-18, 14195 Berlin, Allemagne, Germany

Abstract

We consider global attractors for dissipative semiflows generated by scalar reaction-diffusion equations defined on an interval with Neumann boundary conditions. Assuming hyperbolicity of all equilibrium solutions, the global attractor possesses a dynamical decomposition as a finite disjoint union of unstable manifolds of the equilibria. We use this decomposition to describe the global attractor as a finite regular CW-complex. This is based on a joint work with B. Fiedler.

*Speaker