SEMINÁRIO DE EQUAÇÕES DIFERENCIAIS

Bifurcation and stability diagrams of steady-states of a parabolic problem under a nonlinear Neumann boundary condition

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Resumo: We consider the bifurcation and stability structures of steady-state (or equilibrium) solutions of a parabolic problem. Such solutions are harmonic functions taking values between zero and one and satisfying a nonlinear Neumann boundary condition having a parameter and an indefinite weight. We shall present the bifurcation and stability diagrams of equilibria, even in a degenerate case when the Crandall-Rabinowitz transversality condition fails.