Periodic solutions of mass-conserving reaction-diffusion systems and their perturbed systems

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We show two examples of periodic solutions of mass-conserving reaction-diffusion systems and their perturbed systems. First, we consider the diffusion-driven destabilization (Turing instability) of a spatially homogeneous limit cycle, which leads to a spatially nonhomogeneous limit cycle. Next, we consider two types of oscillatory patterns, which can be useful for understanding cell polarity oscillations with the reversal and non-reversal of polarity, respectively. This talk is based on joint works with H. Izuhara (University of Miyazaki).