

**Gou, J.; Ward, M. J.**

**Oscillatory dynamics for a coupled membrane-bulk diffusion model with Fitzhugh-Nagumo membrane kinetics.** (English) [Zbl 1347.35032](#)

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**MSC:**

- 35B32 Bifurcations in context of PDEs
- 35B20 Perturbations in context of PDEs
- 35B35 Stability in context of PDEs
- 92B25 Biological rhythms and synchronization
- 35K51 Initial-boundary value problems for second-order parabolic systems
- 35K58 Semilinear parabolic equations
- 35B25 Singular perturbations in context of PDEs

Cited in **10** Documents

**Keywords:**

bulk diffusion; active membranes; Hopf bifurcation; winding number; synchronous oscillations; slow-fast membrane dynamics

**Software:**

XPPAUT

**Full Text:** [DOI](#)

**References:**

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