

# Asymptotic behavior of an SIR reaction-diffusion model with a linear source

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In this talk, we consider an SIR reaction-diffusion model with a linear external source in spatially heterogeneous environment. We first study the global stability of the disease-free equilibrium in spatially heterogeneous environment and the global stability of the endemic equilibrium in spatially homogeneous environment. We then investigate the asymptotic profiles of the endemic equilibrium in spatially heterogeneous environment for small and large diffusion rates.

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