



COMPARISON PRINCIPLE FOR REACTION-DIFFUSION SYSTEMS WITH DELAYS AND APPLICATION IN SPATIAL SEIR MODELS

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In this paper some qualitative properties of reaction-diffusion parabolic systems with time delays in the principal part of the system are given. Such systems describe, for instance, spatial SEIR models in epidemiology. The novelty in comparison to the traditional spatial SEIR models is that latency and recovery periods are incorporated to the system by time delays in the principal part of the system. The qualitative properties as existence of solution, uniqueness and stability are obtained by comparison principle. For sake of completeness, the comparison principle for reaction-diffusion systems with delays is given as well.

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