

Qualitative properties of lattice reaction-diffusion equations

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In this talk we discuss basic properties of diffusion and reaction-diffusion equations on one-dimensional lattices. Formulating the problem as an abstract ODE in sequence spaces we are able to show existence, uniqueness and continuous dependence on the initial condition as well as the convergence of the discretized reaction-diffusion equation. We conclude with maximum principles and a priori estimates.

Joint work with Antonín Slavík and Jonáš Volek.