

DISSIPATIVE STRUCTURES OF THE GIERER - MEINHARDT MODEL OF MORPHOGENESIS IN THE STOCHASTIC FIELD

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The conditions of soft excitation of Gierer - Meinhardt model dissipative structures in additive homogeneous isotropic Gaussian stochastic field have been analytically received. Numerical simulation of Gierer – Meinhardt system evolution has been carried out. It was shown that region and increment of instability is growing in stochastic field both on linear and nonlinear stages of structures evolution. It was received that real part of eigenvalues depends on intensity of fluctuation and some order of correlation radius, which defined by dimension of researched model.

Gierer - Meinhardt model, dissipative structures, instability, stochastic field, fluctuations, numerical simulation

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