

Pattern formation in a certain nonlocal evolution equation

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July 30, 2020

Abstract

We study a certain nonlocal evolution equation generalising a model introduced to explain colour patterns on a skin of the guppy fish. We prove an existence of stationary solutions using either the bifurcation theory or the Schauder fixed point theorem. We also present numerical studies of this model and show that it exhibits patterns similar to those modelled by well-known reaction-diffusion equations.

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CertainEvolutionEquation.pdf available at <https://authorea.com/users/347559/articles/473204-pattern-formation-in-a-certain-nonlocal-evolution-equation>

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