Karlstad Applied Analysis Seminar (2022)

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June 22, Wednesday, 10:30-11.30

A system of PDEs modelling noisy grid cells

Abstract

Grid cells are neurons which play an important role in the internal navigational system of mammals. Even though grid cell networks, and the patterns they create, have been extensively studied within several disciplines in the last years, understanding the effects of noise on the network remains a challenge. In this talk, I will discuss an upscaled noisy grid cell model in the form of a system of partial differential equations. Current results on the robustness of network activity patterns with respect to noise will be presented. Based on joint work with José A. Carrillo (Oxford), Andrea Clini (Oxford) and Helge Holden (NTNU).