Internal Webinar

Pattern formation in spatio-temporal population models

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Spatio-temporal pattern formation is commonly observed in various physical, chemical and biological processes. The basic modelling approach is based on nonlinear parabolic partial differential equation(s) with given initial and boundary conditions. These type of systems generate various types of patterns like spots, stripes, spirals, targets, traveling waves, spatio-temporal chaos etc. The study of the stationary nature of the patterns and relevant bifurcations are challenging issues. Significant progress in these directions have been made on models based on self-diffusion terms. In the first part of the talk I will present a brief overviewof the research done in this field. In the next part of the talk, I will discuss on one of the current research problems that I have worked on.

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10:30AM