



Applied Mathematics



McGill & CRM Applied Mathematics Seminar

2:35 pm Monday 8th March 2004

At McGill, Burnside Hall 1205

“Oscillatory localized patterns in a model of the Belousov-Zhabotinsky reaction with global inhibitory feedback”

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Coffee and refreshments will be served after the seminar

Abstract: Localization in a discrete system of oscillators refers to the partition of the population into a subset that oscillates at high amplitudes and another that oscillates at much lower amplitudes. Motivated by experimental results on the Belousov-Zhabotinsky reaction with global inhibitory feedback we study a mechanism of localization in a discrete system of relaxation oscillators globally coupled via inhibition. The mechanism is based on the canard phenomenon for a single relaxation oscillator: a sudden explosion in the amplitude of the limit cycle as a parameter governing the relative position of the nullclines is varied.

