

Nonlinear stability of 2D periodic waves of reaction-diffusion system

vendredi 17 mars 2023 09:00 (50 minutes)

In this talk we explain how to prove the nonlinear asymptotic stability of multiD periodic steady solutions that are diffusively spectrally stable, focusing our attention on the 2D case. Our goal is to extend the comprehensive theory now available for plane periodic waves to the multidimensional context. All this work is performed on reaction-diffusion systems but we expect it can be extended to viscous conservation laws. We show that two kind of asymptotic behavior can occur: a scalar-type and a dispersive type. This is a joint work with Miguel Rodrigues (IRMAR).

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