Section Mathématiques

SEMINAIRE D'ANALYSE

➢ *VENDREDI 15 avril 2011 à 15h15 à la salle MA A112*

Madame **Mariana HARAGUS** *(Université de Franche-comté/France joint work with Université Arnd Scheel Minnesota/E.U.)* donnera une conférence sur le thème:

"DISLOCATIONS IN AN ANISOTROPIC SWIFT-HOHENBERG EQUATION"

We study the existence of dislocations in an anisotropic Swift-Hohenberg equation. We find dislocation as traveling or standing waves connecting roll patterns with different wavenumbers in an infinite strip. The proof is based on a bifurcation analysis.
Spatial dynamics and center-manifold reduction yield a reduced, couple-mode system of differential equations. Existence of traveling dislocations is then established by showing that this reduced system possesses robust heteroclinic orbits.
Finally, we discuss possible extensions and limitations of our approach.

Lausanne, le 2 mars 2011
BD/**BB**/JK/nk

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