



## **Marc Georgi**

# **Homoclinic orbits and Hopf points in forward-backward delay equations**

### **TIME:**

7 May 2007, 16:00 - 18:00

### **LOCATION:**

Freie Universität, Arnimallee 6, 14195 Berlin-Dahlem (Raum 031)

Forward-backward delay equations have recently attracted much attention. They typically arise as traveling wave equations of lattice-differential equations. In contrast to pure delay equations forward-backward delay equations are not well-posed. This talk focuses on a bifurcation of a homoclinic orbit to an asymptotic equilibrium, which undergoes a Hopf bifurcation. Using invariant manifolds we can successfully detect bifurcating solutions near the primary homoclinic orbit. This is the first time that such a global bifurcation is analysed in the setting of forward-backward delay equations.

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