
CONFERENCIA

Iacopo Longo

Universidad Tecnológica de Munich

A path towards classifying rate-induced tipping as a non-autonomous bifurcation

Abstract: Critical Transitions are sudden changes in the dynamics of complex systems, often with catastrophic consequences. There are several mechanisms leading to a critical transition and we focus on those caused by the rate of a time-dependent drift of parameters (which are usually fixed or at most varied adiabatically), so-called rate-induced tipping.

Particularly, in the case of a rate-induced tipping, a system evolves in time into another with possibly same topological properties of stability. However, depending on the rate at which such transition takes place, a local attractor of the past system can fail to track the corresponding local attractor of the future system. This encompasses various real scenarios, for example in ecology, climate, biology and quantum mechanics.

E.I. I. Edificio Induva, Aula 02
Miércoles 16 de Marzo de 2022 (12:00)
Organiza: GIR Sistemas Dinámicos

