

Colloqui della Classe di Scienze

Anno Accademico 2021/2022

Scuola Normale Superiore
Piazza dei Cavalieri, 7 - PISA

2 FEBBRAIO 2022
ore 15.00

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Slow Chaos

ABSTRACT:

How can we understand chaotic behavior mathematically? A well popularized feature of chaotic systems is the butterfly effect: a small variation of initial conditions may lead to a drastically different future evolution, a mechanism at the base of the so-called 'deterministic chaos'. We will introduce and focus on 'slowly chaotic' dynamical systems', for which the butterfly effect happens "slowly" (e.g. at polynomial speed). These include many fundamental examples coming from physics, such as the Ehrenfest billiard and the Novikov model of electrons in a metal. In the talk we will survey some of the recent advances in our understanding of their typical chaotic features as well as common mechanisms for chaos..