

INDAM MEETING:
**HYPERBOLIC DYNAMICAL SYSTEMS
IN THE SCIENCES**

CORINALDO (ITALY)
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Dynamics of periodically-kicked oscillators

Under suitable conditions, the impact of a kick can be substantially magnified by the underlying shear in a limit cycle, leading to the formation of horseshoes and strange attractors. I will discuss this mechanism in some detail using a simple linear shear model. An important point I would like to convey is that the phenomenon described manifests itself (in slightly different form) in many different contexts. I will mention briefly two examples: white-noise forcing and reaction-diffusion equations undergoing Hopf bifurcations.