SEMINARIO SISTEMAS DINÁMICOS DE SANTIAGO.

EXPOSITOR(A): Marisa Cantarino (Universidad de Chile)

TÍTULO: *Computer-assisted proof of robust transitivity.*

RESUMEN: A smooth dynamical system is transitive if it has a dense orbit, loosely meaning that it has some chaos in a topological sense. If this property holds for all diffeomorphisms in a C^1-neighborhood, we say that systems in this neighborhood are robustly transitive. By Bonatti, Diaz and Pujals (2003), robustly transitive diffeomorphisms are volume hyperbolic, and thus they have positive topological entropy, being chaotic in a strict sense and in a robust way. Robust properties are key in classifying smooth dynamical systems, and they are also desirable to model applications.

We develop a computer-assisted strategy to prove robust transitivity in dimension 3 that includes the proof of the existence of a blender. We present a family of D.A. (derived-from-Anosov) systems on the 3-torus for which this strategy applies. This work in preparation is a collaboration with Andy Hammerlindl and Warwick Tucker.

DÍA / HORA: Lunes 20 de octubre, 2025 / 16:30 - 17:30 hrs.

LUGAR: Sala de Seminarios (7° piso), Facultad de Ciencias Físicas y Matemáticas (Edificio Beauchef 851), Universidad de Chile

IDIOMA: Inglés