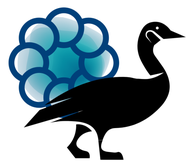
Knotted orbits of flows

Layne Hall

Week 6 - Term 1

WARWICK MATHEMATICS



POSTGRADUATE SEMINAR

Abstract

Knots and their complements play a fundamental role in the study of 3-manifolds. Elsewhere, in dynamical systems, flows are a central object of study. These notions come together with an observation: given a flow on a 3-manifold, the periodic orbits form knots. Such knots have the extra structure of the flow from which they came, and we can use this to deduce information about them.

We will use examples such as the famous Lorenz attractor to discuss how this approach has been taken for a well-studied class of flows. Such flows allow us to draw and encode their knots, which will help us understand their topological and geometric properties.

Time

12 pm, 9^{th} November 2022

Location

Room B3.02

Organisers

Alvaro Gonzalez Hernandez
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