

FELIX KLEIN SEMINAR

Speaker: Joey Palmer
University of Illinois Urbana-Champaign

Date: Thursday, November 3, 2022

Time: 2:00 PM

Location: 258 Hurley Hall

Zoom URL: NA



Lecture Title:

Integrable systems and S^1 -actions: constructions and bifurcations

Abstract

Semitoric systems are a type of four-dimensional integrable system which admit a global S^1 -action; these systems were classified by Pelayo and Vu Ngoc in 2011, generalizing the classification of toric integrable systems and making use of an invariant called a 'semitoric polygon'. I will present some results about bifurcations of such systems, and show how this can be used to construct explicit examples of such systems associated to certain given semitoric polygons. Time permitting, I will also discuss how hypersemitoric systems, a generalization of semitoric systems, appear in this context. Some of the results I will present are joint with Yohann Le Floch and Sonja Hohloch.