

Questions about the holomorphic group action dynamics on a natural family of affine cubic surfaces

Monday, May 27, 2024 4:30 PM (1 hour)

I will describe the dynamics by the group of holomorphic automorphisms of the affine cubic surfaces

$S_{A,B,C,D} = \{(x, y, z) \in \mathbb{C}^3 : x^2 + y^2 + z^2 + xyz = Ax + By + Cz + D\}$, where A, B, C , and D are complex parameters. This group action is studied by Loray, Cantat, Tan – Wong – Zhang, Maloni – Palesi – Tan, and many others.

In this talk I will describe my recent joint work with Julio Rebelo and I will focus on several interesting open questions that arose while preparing our work “Dynamics of groups of automorphisms of character varieties and Fatou/Julia decomposition for Painlevé 6” and during informal discussions with many people.

Presenter: ROLAND ROEDER (Indiana University-Purdue University Indianapolis)