

Algebra, Combinatorics and Number Theory Seminar

Date. Wednesday, April 03, 2024 - 4pm Porto, 8am Los Angeles ¹

Speaker. Daniele Garzoni - University of Southern California

Title. Derangements in groups of Lie type

Abstract. Given a group G acting on a set X, an element g of G is called a derangement if it acts without fixed points on X. The Boston–Shalev conjecture, proved by Fulman and Guralnick, asserts that in a finite simple group G acting transitively on X, the proportion of derangements is at least some absolute constant c > 0. After giving an introduction to the subject, I will present a version of the conjecture for the proportion of *conjugacy classes* containing derangements in finite groups of Lie type. Much of the proof concerns the "anatomy" of polynomials over finite fields. Joint work with Sean Eberhard.

¹https://videoconf-colibri.zoom.us/j/7820604023







