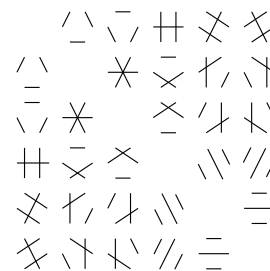# Mathematics Seminar

Rocky Mountain Algebraic Combinatorics Seminar

Lemniscate Trees of Random Polynomials

Michael Epstein
Colorado State University

Full title: Lemniscate Trees of Random Polynomials and Asymptotic Enumeration of Morse Functions on the 2-Sphere. We'll consider two problems: first we'll investigate the nesting structure of lemniscate configurations associated to complex polynomials, and in the second part of the talk we'll determine the asymptotic for the number of geometric equivalence classes of Morse functions on the 2-sphere. Both the lemniscate configurations and the equivalence classes of Morse functions are enumerated by classes of labeled trees, and both problems are amenable to the methods of analytic combinatorics. Along the way we'll introduce some of the basic techniques in this fascinating area.

Online via Zoom
https://zoom.us/j/95321487441?pwd=Tlp4VG9pejZCekJmeDFFb1BzeWpsdz09, Meeting ID: 953 2148 7441, Passcode: 722523
4 pm, Friday, February 12, 2020
Talk part 1, 4.10-4.40,
Break 4.40-5.10 at https://gather.town/HQmdvgyabpEL4qpB/RMAC,
Talk part 2 5:10-5:40

This is a joint Denver U / UC Boulder / UC Denver / U of Wyoming / CSU seminar that meets biweekly.
Anyone interested is welcome to join us at a local restaurant for dinner after the talks.