

Counting by Climbing

Date Tuesday, April 24

Time 3:30 pm

Location 317 Mudd

Abstract: Meet John Q. Combinatorialist. As a student of enumerative combinatorics, John enjoys spending long periods of isolation counting trees, paths and other discrete structures. After one particularly long stretch of isolation, John emerged from his den shouting “Eureka! I’ve successfully programmed an army of explorer robots to climb alien mountains on exotic planets in a five-dimensional universe! The findings they report solve a ton of combinatorial problems.”

No, John has not lost his mind. In this talk we will discuss John’s algorithm for climbing these “alien mountains” – certain one-dimensional complex algebraic varieties. More importantly, we will see a surprising connection between this geometric/topological exploration and a class of problems in combinatorial enumeration.