



The rising STAR of Texas

Discrete Mathematics Seminar

Time: Friday, November 22, 2019, 2:15-3:15 PM
Room: 330 Derrick Hall
Title: Fixed points of Parking Functions
Speaker: Dr. Nathan Williams, Department of Mathematics, UT - Dallas

Abstract:

We define an action of words in $[m]^n$ on \mathbf{R}^m to give a new characterization of rational parking functions---they are exactly those words whose action has a fixed point. We use this viewpoint to give a simple definition of Gorsky, Mazin, and Vazirani's zeta map on rational parking functions when m and n are coprime, and prove that this zeta map is invertible. A specialization recovers Loehr and Warrington's sweep map on rational Dyck paths. This is joint work with Jon McCammond and Hugh Thomas.