



ICECA

International Conference
Enumerative Combinatorics and Applications
University of Haifa – Virtual – September 4-6, 2023

U-PARKING FUNCTIONS AND (p, q) -PARKING FUNCTIONS

CATHERINE YAN

Department of Mathematics, Texas A&M University, USA

The notions of U -parking functions and (p, q) -parking functions are two high-dimensional generalizations of the classical parking functions. U -parking functions are defined via a special family of interpolation polynomials called Gončarov polynomials, while (p, q) -parking functions can be interpreted as recurrent configurations in the sandpile model for a complete bipartite graph with an additional root, as introduced by Cori and Poulalhon. In this talk, we show that (p, q) -parking functions can be obtained as a specialization of U -parking functions and characterized by a pair of weakly disjoint lattice paths in the grid $p \times q$. Then we present various enumerative results for increasing (p, q) -parking functions.

This is joint work with Lauren Snider.