Yue Cai* (ycai@math.tamu.edu) and Catherine H. Yan. Rational parking functions. Preliminary report.

The classical parking functions, enumerated by \((n + 1)^{n-1}\), is the set of all sequences \((a_1, \ldots, a_n) \in [n]^n\) whose increasing rearrangement \(b_1 \leq b_2 \leq \cdots \leq b_n\) satisfies \(b_i \leq i\). In this talk, we will introduce the notion of rational parking functions indexed by a pair of coprime integers \((a, b)\). We will present some enumerative results on the rational parking functions and discuss the more general case where \(\gcd(a, b) \neq 1\). (Received September 20, 2018)