
LUCAS TEYSSIER, UBC

Mixing time of fixed-point-free conjugacy classes of symmetric groups

In this talk we will discuss mixing times of simple random walks on Cayley graphs of symmetric groups, whose generating set is a conjugacy class. Our focus will be on representation-theoretic techniques. We will present asymptotic approximations of combinatorial formulas related to the hook length formula and character bounds established by Larsen and Shalev, and their application to the mixing times associated with fixed-point-free conjugacy classes. This is joint work with Paul Thévenin (<https://arxiv.org/abs/2411.04347>).