

Institute for Applied Mathematics, Bonn University

Oberseminar Stochastik

Thursday, 21 May 2026, 16:30

Lipschitz-Saal (LWK 1.016)

Yuan Tian

Leipzig University

On the convoy of the ASEP speed process

In this talk, we investigate the size of the convoy in the speed process for the multi-species asymmetric simple exclusion process (ASEP). We present an exact formula for the expected convoy size. We show that the asymptotic expected convoy size is universal for all fixed jump rates $q \in [0, 1)$. We further establish a critical scaling $q = 1 - \gamma/\sqrt{n}$ that yields a nontrivial limiting regime.