



## Invitation to Seminar Talk

# Tracy-Widom limit in q-deformed exclusion processes

**Balint Veto**

Technical University Budapest

**Host: Laszlo Erdős**

We consider two families of interacting particle systems on the one-dimensional integer lattice  $\mathbb{Z}$  which are deformed versions of the totally asymmetric simple exclusion process (TASEP). Particles jump to the right independently according to a certain distribution depending on the distance to the next particle (as in a simple traffic model on one lane). For some specific choices of this distribution, exact formulas are available for the particle position variables in case of step initial condition (particles at  $-1, -2, -3, \dots$  initially). We prove that the particle positions rescaled by the  $1/3$ rd power of time converge to the GUE Tracy-Widom distribution, which confirms the KPZ conjecture for these models.

The talk is partially based on joint work with Patrik Ferrari.

**Thursday, May 7, 2015, 4:00pm**

**Seminar room Mondi 2, Central Building, 1st floor**



This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage (note that the IST Shuttle times are highlighted in dark green):

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