

1038-60-204

Omer Angel*, Dept. of Mathematics, Univ. of Toronto, Toronto, ON M5S 1L2, Canada, and
Gideon Amir and **Benedek Valko**. *The TASEP speed process.*

Start a multiple class asymmetric exclusion process on \mathbf{Z} with a class- k particle at position k (extending the notion of second class particles). It follows from well known results, that each particle has an asymptotic average speed U_k that is uniformly distributed in $[-1, 1]$.

We calculate the joint distribution of speeds. In particular we prove that $U_0\{<, =, >\}U_1$ with respective probability $\{1/3, 1/6, 1/2\}$. We also describe the partition of the particles into infinite classes of particles with equal speeds. (Received February 10, 2008)