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Jinho Baik* (baik@umich.edu). *Totally asymmetric simple exclusion process on a ring.*

We discuss the effect of the system size to the particle fluctuations of interacting particle systems in the KPZ universality class. In particular we consider the TASEP (totally asymmetric simple exclusion process) on a ring in the large ring, large time limit with constant average particle density for two types of initial conditions. This system is equivalently to a periodic TASEP and also a directed last passage site percolation with periodic weights. The hydrodynamic limit of the periodic TASEP is same as the one for the usual TASEP for all large time, but the particle fluctuations agree only up to certain time scale depending on the system size. We discuss especially what happens at the critical time scale. This is a joint work with Zhipeng Liu. (Received August 22, 2016)