TASEP and Gaussian Ensembles: Analogies and Differences

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The GUE minor process (on eigenvalues) can be obtained as a limit of interlacing particles arising in the totally asymmetric simple exclusion process (TASEP) or from dimers models (e.g. in the Aztec diamond). The link extends further to eigenvalues of Dyson's Brownian Motion for a fixed particle/matrix dimension, but in the general case the connection breaks down. The reason is that matrices have, beyond the eigenvalues, also the information of the eigenvectors: this is not present in the particle systems. http://arxiv.org/abs/1006.3946