

1063-60-83

Nicolas Lanchier* (lanchier@math.asu.edu) and **Jared Neuffer**. *Geometric properties of the majority rule model.*

Similarly to the voter model, the version of the majority rule model we introduce in this talk is an example of spin system, i.e., each vertex of the regular lattice is occupied by an individual either black or white. The population is further divided into overlapping groups, with all the individuals within the same group updating their color according to the majority within the group. In particular, the process can be seen as a natural extension of traditional interacting particle systems where dynamics depend upon a hypergraph structure rather than a connected graph. Whereas the voter model exhibits a diffusive clustering in two dimensions, numerical simulations suggest that stronger spatial correlations emerge for the majority rule model. We present analytical results in support of this picture. (Received August 06, 2010)