

## DECAY OF CORRELATIONS IN A TOPOLOGICAL GLASS

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We study a 2-dimensional topological glassy system. The state space of the model is given by all triangulations of a sphere with  $N$  nodes, half of which are red and half are blue. Red nodes want to have 5 neighbors while blue ones want 7. Energies of nodes with other numbers of neighbors are supposed to be positive. The dynamics is that of flipping the diagonal between two adjacent triangles, with a temperature dependent probability. We consider the system at very low temperatures. Starting from a detailed description of the stationary state, we conclude that pairs of defects (nodes with the "wrong" degree) move with very high mobility along 1-dimensional paths. As they wander around, they encounter single defects, which they then move "sideways" with a geometrically defined probability. This induces a diffusive motion of the single defects. If they meet, they annihilate, lowering the energy of the system. We both estimate the decay of energy to equilibrium, as well as the correlations. If time allows it, I will say a few words on the 3-dimensional case we are currently working on.