

Spatial Lambda-Fleming-Viot process: genealogies in the presence of recombination

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A spatial Lambda-Fleming-Viot process models a population distributed on R^d (R^2 in practice) which experiences local partial extinctions, followed by the recolonization of the affected area by the offspring of an individual present in this region. After introducing the model, we will consider the genealogy of a sample of individuals when the population lives on a two-dimensional torus of size L . In particular, we will see that this ancestral process converges as L grows to infinity towards a coalescent with multiple mergers, whose characteristics depends on the range of the extinction areas. Our last item will be the (de)correlation of the genealogical processes at two loci, depending on the rate at which recombination occurs.