Longterm Properties of the Symbiotic Branching Model

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In this talk we consider properties of the so-called 'symbiotic branching model' describing the spatial evolution of two populations which can only reproduce if they are both present at the same location at the same time.

We put particular emphasis on the long-term dynamics of this population model. To this end, we identify a 'critical curve' separating the asymptotic behaviour of the moments of the symbiotic branching process into two qualitatively different regimes. From this structural result, various properties can be derived. For example, we improve a result of Etheridge and Fleischmann on the speed of the propagation of the interface between both species.