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*The extremal process of branching Brownian motion*

Branching Brownian motion (BBM) is a Markov process where particles perform Brownian motion and independently split into two independent Brownian particles after an exponential holding time. The extreme value statistics of BBM in the limit of large time is of interest since BBM constitutes a borderline case, among Gaussian processes, where correlations start to affect the statistics. The law of the maximum of BBM has been understood since the works of Bramson, McKean, and Lalley and Sellke. But little is known about the distribution of the particles close to the maximum. In this talk, I will present how these previous results and the use of an appropriate auxiliary process (akin to the cavity method in spin glasses) can be used to prove that the extremal process of BBM is a Poisson cluster process. This is joint work with A. Bovier and N. Kistler.