

Poissonian Tree Constructed from Independent Poisson Point Processes

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We present the construction of a connected graph without cycles (a *tree*) which has a unique infinite self-avoiding path (an *end*). The vertices of the graph are the points of a sequence of independent Poisson Point Processes in \mathbb{R}^d . When the processes are defined in \mathbb{R} , a sufficient condition for the existence of the Poissonian Tree is $\liminf \lambda_k = 0$. If the processes are defined in \mathbb{R}^d , a more restricted condition on the sequence of rates is required, namely, $\lambda_k = (\alpha)^k$ where $\alpha \in (0, 1)$.

¹Supported by FAPESP grant 0415864-1.