Gaussian processes, permanental processes and local times

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Dynkin type isomorphism theorems relate the local times of transient Markov processes to the squares of Gaussian processes with covariance equal to the 0-potential density of the Markov process. This allows one to use very well understood properties of Gaussian processes to obtain properties of the local times.

Necessarily we can only consider symmetric Markov processes. The permanental process is a generalization of the process of Gaussian squares and gives rise to isomorphism theorems that allow us to study local times of non-symmetric Markov processes