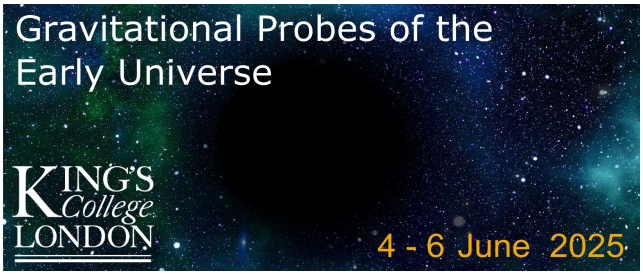

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Harvesting primordial black holes from stochastic trees

When primordial inhomogeneities are produced with sufficiently large amplitude in the early universe, they may subsequently collapse into primordial black holes. I will explain why the effect of quantum diffusion during inflation needs to be taken into account in such a case, and how the statistics of cosmological fluctuations can be predicted within the formalism of stochastic inflation, and using stochastic trees. Quantum diffusion leads to a peculiar type of non-Gaussianity that cannot be captured by perturbative parameterizations. This leaves specific imprints on the statistics of collapsed structures that I will discuss. In particular, I will present recent results on the clustering of primordial black holes, which conditions the rate at which they merge and emit gravitational waves.

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