

# Evolution of the inhomogeneous universe: From Inflation to structure formation

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## Non-Gaussianity in Primordial Black Hole Formation

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I will briefly review the recent progress in the non-Gaussian effect on the formation of primordial black holes (PBHs) and the generation of induced gravitational waves (GWs). The most promising mechanism of generating PBHs is by the enhancement of power spectrum of the primordial curvature perturbation, which is usually accompanied by the enhancement of non-Gaussianity that crucially changes the abundance of PBHs. I will discuss how non-Gaussianity is generated in single field inflation as well as in the curvaton scenario, and then discuss how to calculate PBH abundance with such non-Gaussianities. Non-Gaussianity only has mild effects on the induced gravitational waves (GWs), which gives robust predictions in the mHz and nHz GW experiments.

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