

## **Chulmoon Yoo: Abundance of primordial black holes with local non-Gaussianity in peak theory**

*Tuesday, 3 December 2019 16:25 (20 minutes)*

We discuss the effect of local type non-Gaussianity on the abundance of primordial black holes (PBH) based on the peak theory. We provide the PBH formation criterion based on the so-called compaction function and use the peak theory statistics associated with the curvature perturbation with the local type non-Gaussianity. Providing a method to estimate the PBH abundance, we demonstrate the effects of non-Gaussianity. It is explicitly shown that the value of non-linear parameter  $|f_{\text{NL}}| \sim 1$  induces a similar effect to a few factors of difference in the amplitude of the power spectrum.