Contribution ID: **38**   Type: **not specified**

Deep learning the cosmic large scale structure

Sunday, 8 September 2019 16:35 (15 minutes)

We use the deep CNN to map the complex, non-linear cosmic large-scale structure to the underlying cosmological parameters Ω_m, σ_8. In the ideal case, we can achieve a constraint 6 times better than the Planck CMB results, just using a $(256\mathrm{Mpc/h})^3$ box of dark matter density field with 2 Mpc/h resolution. Machine learning may play a very important role in the future astronomical data mining.

Primary author: Prof. LI, Xiao-Dong (SYSU)

Presenter: Prof. LI, Xiao-Dong (SYSU)

Session Classification: science-6: