You are welcome to nominate speakers to colloquium@nao.cas.cn. The video and slides of previous colloquia and more information can be found at http://colloquium.bao.ac.cn/.

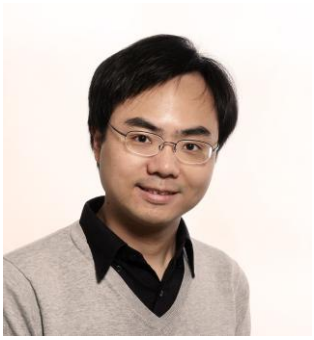
国台学术报告 NAOC COLLOQUIUM

2016 年 第 6 次 / No. 6 2016

Time: Wednesday 2:30 PM, March 16 Location: A601 NAOC

Reverse Engineering Galaxies in the Big Data Era

Dr. Yingjie Peng (KIAA at Peking University)



Yingjie Peng is an astronomer at the Kavli Institute for Astronomy and Astrophysics (KIAA) at Peking University. He received his PhD from ETH Zurich in 2012, and then became a research associate at Cavendish Laboratory and a postdoctoral fellow at Kavli Institute for Cosmology, University of Cambridge. He is a fellow of Homerton College, University of Cambridge since 2013. He joined KIAA in 2015. In 2015, he was awarded the RAS Research Fellowship by the Royal Astronomical Society, UK. In 2016 he was awarded the MERAC Prize in Observational Astrophysics by the European Astronomical Society (EAS). His research interests are observational cosmology, galaxy formation and evolution.

Abstract

The galaxy population appears to be composed of infinitely complex different types and properties at first sight. However, when large samples of galaxies are studied, it appears that the majority of galaxies just follow simple scaling relations while the outliers represent some minority. They demonstrate the astonishing underlying simplicities of the galaxy population emerged from large galaxy surveys and “reverse engineering” of the observed galaxy population at different epochs; derive the analytical forms for the dominant evolutionary processes that control the galaxy evolution. On the other hand, gas regulation is one of the keys to understanding galaxy formation and evolution, as gas regulation depicts the dynamical interplay of the key physical processes in galaxies: gas inflow, star formation, outflow and metal production. He will introduce how the gas regulation acts in galaxies and its dynamical behaviours, and discuss how to apply the gas regulation method to study the evolution of the galaxy population, including the scientific topics that demand forthcoming observing facilities such as MOONS for VLT and future TMT, ELT.

All are welcome! Tea, coffee, biscuits will be served at 2:15 PM.