KAI WANG 王凯

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⌂ www.KosmosWalker.com

github.com/wkcosmology

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EDUCATION

Tsinghua University

Ph.D. in Astronomy · Sep. 2017 - Jul. 2022

University of Massachusetts, Amherst

Visiting scholar · Nov. 2019 - Oct. 2021

University of Science and Technology of China (USTC)

B.S. in Astronomy · Sep. 2013 - Jul. 2017

EXPERIENCE

Kavli Institute of Astronomy and Astrophysics, Peking University

KIAA Fellow · Jul. 2022 - Now

University of Massachusetts, Amherst

Visiting scholar · Nov. 2019 - Oct. 2021

TEACHING

- **Observational cosmology**

  Teaching assistant, Autumn 2017, Tsinghua University

- **Particle cosmology**

  Teaching assistant, Spring 2017, USTC

- **General relativity**

  Teaching assistant, Autumn 2016, USTC

PROFESSIONAL SERVICE

- **Astronomy & Astrophysics - Referee**

REFERENCES

- **Prof. Cheng Li**   **Tsinghua University**
  ✉ cli2015@tsinghua.edu.cn
- **Prof. HouJun Mo**   **University of Massachusetts, Amherst**
  ✉ hjmo@umass.edu
- **Prof. Yingjie Peng**   **Peking University**
  ✉ yjpeng@pku.edu.cn

GRANTS

- **KIAA fellow start-up research funding**
  50,000CNY   Jul. 2022 - Jul. 2024
- **China Scholarship for the visiting scholar**
  China Scholarship Council (CSC), $45,600   Nov. 2019 - Oct. 2021
- **National Astronomy Training Base**
  Measure the conditional luminosity functions of galaxies at z~0.6 using CLAUDS
  and BOSS, 20,000CNY   Jun. 2016 - Jun. 2017
- **National Astronomy Training Base**
  Thermal gravitational-wave background in the general pre-inflationary scenario,
  20,000CNY   May 2015 - May 2016

HONORS AND AWARDS

Comprehensive scholarship (Second class)	**2020**
Comprehensive scholarship (First class)	**2019**
Outstanding Graduate of USTC	**2017**
National Inspirational Award	**2016**
Encouraging Scholar of USTC	**2016**
Excellent Student Scholarship (Silver Award)	**2014**
Excellent Student Scholarship (Bronze Award)	**2013**

SKILLS

- Skilled in **Python** for data analysis
- Familiar with **C/C++** for data analysis

- Familiar with **HTML, CSS, and JavaScript** for web development
- Experience with simulation data analysis, e.g. ELUCID, IllustrisTNG, EAGLE, SIMBA

TALKS

- **25th Chinese Astronomical Society Guoshoujing Symposium on Galaxies and Cosmology**
  Speaker (Best oral presentation)   Huangshan, May 2023
- **Conference of star formation and nuclei activity in galaxies**
  Speaker   Nanjing, Mar. 2023
- **KIAA-DoA Seminar, Peking University**
  Invited speaker   Beijing, Mar. 2023
- **Lunch Talk at the Department of Astronomy, Tsinghua University**
  Invited speaker   Beijing, Nov. 2022
- **Lunch Talk at Kavli-IPMU, University of Tokyo**
  Invited speaker   Remote, Jun. 2021
- **Journal Club at University of Massachusetts, Amherst**
  Speaker   Amherst MA, Mar. 2021
- **The 11-th Prime Focus Spectrograph collaboration meeting**
  Speaker   Pasadina CA, Dec. 2019
- **The 10-th Prime Focus Spectrograph collaboration meeting**
  Speaker   Shanghai, Dec. 2018

PUBLICATION

◆18 publications (15 refereed + 3 under review)
◆8 as the first/corresponding author (8 refereed)

- **Environmental dependence of the mass-metallicity relation in cosmological hydrodynamical simulations**
  Kai Wang, Xin Wang, Yangyao Chen
  Submitted to ApJ

- **Late-formed halos prefer to host quiescent central galaxies. I. Observational results**

  Kai Wang, Yangyao Chen, Qingyang Li, Xiaohu Yang

  Submitted to MNRAS

- **Dissect two-halo galactic conformity effect: The dependence of star formation activities on the large-scale environment for central galaxies**

  Kai Wang, Yingjie Peng, Yangyao Chen

  Submitted to MNRAS

- **Relating galaxies across different redshift to study galaxy evolution**

  Kai Wang, H.J. Mo, Cheng Li, Yangyao Chen

  2023, MNRAS, Volume 520, Issue 2

- **Finding proto-clusters to trace galaxy evolution: I. The finder and its performance**

  Kai Wang, H.J. Mo, Cheng Li, Yangyao Chen

  2021, MNRAS Volume 505, 3892

- **Identifying galaxy groups at high redshift from incomplete spectroscopic data: I. The group finder and application to zCOSMOS**

  Kai Wang, H.J. Mo, Cheng Li, Jiacheng Meng, Yangyao Chen

  2020, MNRAS Volume 499, 89

- **Thermal gravitational-wave background in the general pre-inflationary scenario**

  Kai Wang, Larissa Santo, Jun-Qing Xia, Wen Zhao

  2017, JCAP 01, 053

- **Smoothing methods comparison for CMB E- and B-mode separation**

  Yi-Fan Wang, Kai Wang, Wen Zhao

  2016, Research in Astronomy and Astrophysics 16, 4

- **Measuring galaxy abundance and clustering at high redshift from incomplete spectroscopic data: Tests on mock catalogs**

  Jiacheng Meng, Cheng Li, Houjun Mo, Yangyao Chen, Kai Wang

  Submitted to ApJ

- **A Conditional Abundance Matching Method of Extending Simulated Halo Merger Trees to Resolve Low-Mass Progenitors and Sub-halos**

  Yangyao Chen, H.J. Mo, Cheng Li, Kai Wang, Huiyuan Wang, Xiaohu Yang

- **MAHGIC: A Model Adapter for the Halo-Galaxy Inter-Connection**
  Yangyao Chen, H.J. Mo, Cheng Li, **Kai Wang**, Huiyuan Wang, Xiaohu Yang, Youcai Zhang, Neal Katz
  2021, MNRAS Volume 507, 2510

- **The clustering of galaxies in the DESI imaging legacy surveys DR8:I. the luminosity and color dependent intrinsic clustering**
  Zhaoyu Wang, Haojie Xu, Xiaohu Yang, Y. P. Jing, **Kai Wang**, Hong Guo, Fuyu Dong, Min He
  2021, Sci. China Phys. Mech. Astron. 64, 289811

- **How to empirically model star formation in dark matter halos: I. Inferences about central galaxies from numerical simulations**
  Yangyao Chen, H. J. Mo, Cheng Li, **Kai Wang**
  2021, MNRAS, Volume 504, 4865

- **Relating the structure of dark matter halos to their assembly and environment**
  Yangyao Chen, H.J. Mo, Cheng Li, Huiyuan Wang, Xiaohu Yang, Youcai Zhang, **Kai Wang**
  2021, ApJ, 899 81

- **Superconducting cosmic strings as sources of cosmological fast radio bursts**
  Jia-Ni Ye, **Kai Wang**, Yi-Fu Cai
  2017, Eur. Phys. J. C 77:720

- **Statistical imprints of CMB B-type polarization leakage in an incomplete sky survey analysis**
  Larissa Santo, **Kai Wang**, Yangrui Hu, Wenjuan Fang, Wen Zhao
  2017, JCAP 01, 043

- **Probing the statistical properties of CMB B-mode polarization through Minkowski Functionals**
  Larissa Santo, **Kai Wang**, Wen Zhao
  2016, JCAP 07, 029