

# KUAN WANG

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<https://kuanwang-astro.github.io>

## EDUCATION

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2015 - , PH.D., PHYSICS

*University of Pittsburgh, Kenneth P. Dietrich School of Arts & Sciences*

2011 - 2015, B.S., PHYSICS AND ASTRONOMY

*University of Science and Technology of China, School of the Gifted Young*

## RESEARCH INTERESTS

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- GALAXY–HALO CONNECTION
- N-BODY SIMULATIONS
- COSMOLOGY
- ASSEMBLY BIAS
- HALO STRUCTURE

## AWARDS AND FELLOWSHIPS

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ANDREW MELLON PREDOCTORAL FELLOWSHIP	<i>Fall 2020, Spring 2021</i>
ARTS AND SCIENCES GRADUATE FELLOWSHIP	<i>Fall 2018, Summer 2020</i>
MARY E WARGA FELLOWSHIP	<i>Fall 2015, Summer 2016</i>
NAOC UNDERGRADUATE SCHOLARSHIP	<i>Spring 2015</i>

## PUBLICATIONS

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### First Author

2. CONCENTRATIONS OF DARK HALOES EMERGE FROM THEIR MERGER HISTORIES

**Kuan Wang**, Yao-Yuan Mao, Andrew R. Zentner, Johannes U. Lange, Frank C. van den Bosch, Risa H. Wechsler

*ArXiv preprint, <https://arxiv.org/abs/2004.13732>*

1. HOW TO OPTIMALLY CONSTRAIN GALAXY ASSEMBLY BIAS: SUPPLEMENT PROJECTED CORRELATION FUNCTIONS WITH COUNT-IN-CELLS STATISTICS

**Kuan Wang**, Yao-Yuan Mao, Andrew R. Zentner, Frank C. van den Bosch, Johannes U. Lange, Chad M. Schafer, Antonio S. Villarreal, Andrew P. Hearin, and Duncan Campbell

*Monthly Notices of the Royal Astronomical Society, <https://doi.org/10.1093/mnras/stz1733>*

### Contributing Author

4. COSMOLOGICAL EVIDENCE MODELLING: A NEW SIMULATION-BASED APPROACH TO CON-  
STRAIN COSMOLOGY ON NON-LINEAR SCALES  
Johannes U. Lange, Frank C. van den Bosch, Andrew R. Zentner, **Kuan Wang**, Andrew  
P. Hearin, Hong Guo  
*Monthly Notices of the Royal Astronomical Society*, <https://doi.org/10.1093/mnras/stz2664>
3. UPDATED RESULTS ON THE GALAXY-HALO CONNECTION FROM SATELLITE KINEMATICS  
IN SDSS  
Johannes U. Lange, Frank C. van den Bosch, Andrew R. Zentner, **Kuan Wang**, Antonio  
S. Villarreal  
*Monthly Notices of the Royal Astronomical Society*, <https://doi.org/10.1093/mnras/stz1466>
2. MATURING SATELLITE KINEMATICS INTO A COMPETITIVE PROBE OF THE GALAXY HALO  
CONNECTION  
Johannes U. Lange, Frank C. van den Bosch, Andrew R. Zentner, **Kuan Wang**, Antonio  
S. Villarreal  
*Monthly Notices of the Royal Astronomical Society*, <https://doi.org/10.1093/mnras/sty2950>
1. THE IMMIGABLE NATURE OF ASSEMBLY BIAS: THE IMPACT OF HALO DEFINITION ON  
ASSEMBLY BIAS  
Antonio S. Villarreal, Andrew R. Zentner, Yao-Yuan Mao, Chris W. Purcell, Frank C. van  
den Bosch, Benedikt Diemer, Johannes U. Lange, **Kuan Wang**, Duncan Campbell  
*Monthly Notices of the Royal Astronomical Society*, <https://doi.org/10.1093/mnras/stx2045>

## PRESENTATIONS

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MIDWEST COSMOLOGY NETWORK SEMINAR

*Video Webinar, July 15, 2020*

GALAXY QUENCHING CONFERENCE

*Aspen Center for Physics, February 14, 2020*

ASTROLUNCH SEMINAR

*University of Pittsburgh, October 18, 2019*

HALO AND GALAXY ASSEMBLY BIAS CONFERENCE

*Tsung-Dao Lee Institute, June 13, 2019*

GALAXY LUNCH SEMINAR

*Yale University, May 2, 2019*

LSST DESC MEETING

*Carnegie Mellon University, July 24, 2018*

## OTHER CONTRIBUTIONS

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PARTICIPATED IN THE DEVELOPMENT OF CORE COSMOLOGY LIBRARY

<https://github.com/LSSTDESC/CCL>

<https://doi.org/10.5281/zenodo.3777997>

## PROGRAMMING LANGUAGES

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PYTHON, C/C++, R

## TRAININGS

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LSST DESC DE SCHOOL

*University of California, Berkeley, February 25, 2019*

*Carnegie Mellon University, July 23, 2018*

SUMMER SCHOOL IN ASTROINFORMATICS

*Penn State University, June 4 to June 8, 2018*

SUMMER SCHOOL IN STATISTICS FOR ASTRONOMERS XIV

*Penn State University, May 29 to June 2, 2018*

LSSTC DATA SCIENCE FELLOWSHIP PROGRAM

*University of Pittsburgh, April 30 to May 4, 2018*

## TEACHING

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INTRODUCTION TO PHYSICS II

Teaching Assistant, Fall 2019

INTRODUCTION TO LABORATORY PHYSICS

Teaching Assistant, Spring 2016