



Qian Hu

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Education

- Sept. 2017 – Present **Undergraduate**
Department of Astronomy, School of Physical Sciences, University of Science and Technology of China (USTC)
Overall GPA: 3.86/4.30 Major GPA (Physics & Math & Coding & Experiment): 3.96/4.30
Ranking: 3/30 in Department of Astronomy, 9% in School of Physical Sciences

Standardized Tests

- TOEFL 99 (R: 29 L: 26 S: 22 W: 22, Test date: Nov. 02 2019)

Research Experiences

- **Parameter estimation in parity-violating gravities** Sept 2019 – Present
 - Advisor: Prof. Wen Zhao, USTC
 - Generate waveform of gravitational waves from coalescence of compact binaries in the general parity-violating gravities. Use python toolkits like BILBY / PyCBC Inference to constrain parameters in those gravity theories.
- **Fast gravitational wave localization based on null SNR** July 2019 – Aug. 2019
 - Advisor: Prof. Linqing Wen, The University of Western Australia (UWA)
 - Use the stability of distribution of null SNR to constrain the influence caused by non-Gaussian noise during GW sources localization. Reconstruct coherent SNR based on singular values. Give confidence area according to these two statistics.
- **Model-Independent test of the parity symmetry of gravity using GWs** Mar. 2019 – Aug. 2019
 - Advisor: Prof. Wen Zhao, USTC
 - Develop a waveform-independent method to decompose right-hand and left-hand polarizations of gravitational waves and calculate their arrival times. Test the parity symmetry of gravity by investigating the time difference.
 - Submitted to **Nature Communications** (reference number: NCOMMS-19-38611)

Research Interests

- **Gravitational-wave astronomy:** Physics around gravitational waves, including black hole astrophysics, gravity theories and so forth.
- **Cosmology:** Problems about dark matter, dark energy, CMB.

Professional Skills

- **Python** (preferred), LaTeX, Mathematica, Matlab, C, Origin Lab, LabView

Awards

- Oct. 2018
 - Outstanding Student Scholarship
- Oct. 2019
 - CGN Scholarship (Gold)
 - Outstanding Student Scholarship