

# Dr. Jiajun Zhang *October 08, 1990*

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## Summary

*Postdoc, Shanghai Jiao Tong University*

Dr. Zhang got his PhD degree in 2017 in The Chinese University of Hong Kong, under the supervision of Prof. Dr. Ming-Chung Chu. After that, he became a postdoc at Shanghai Jiao Tong University, collaborating with Prof. Dr. Jun Zhang. He mainly contributed to N-body

simulation to study the large scale structure of the Universe. Recently, he has developed N-body simulation code for Fuzzy Dark Matter model and Interacting Dark Energy model. His major interests include Cosmology, Large Scale Structure, Weak Gravitational Lensing, N-body simulation, Dark Matter and Dark Energy, etc. Up to now, he published 6 papers on top journals in astrophysics and receive more than 30 citations.

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## Working Experience

Shanghai Jiao Tong University

**Postdoctoral Researcher**

Collaborate with Prof. Dr. Jun Zhang.

SHANGHAI, CHINA

2017 – now

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## Education

The Chinese University of Hong Kong

**PhD in Physics**

Supervised by Prof. Ming-Chung CHU. Thesis title: Topics in dark matter astrophysics and cosmology.

Fudan University

**Bachelor Degree of Science in Physics**

HONG KONG, CHINA

2013 – 2017

SHANGHAI, CHINA

2009 – 2013

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## First Author Publication

Constraints on interacting dark energy models from SDSS galaxy-galaxy weak lensing measurements

[ARXIV:1807.05522](#)

Fully self-consistent cosmological simulation pipeline for interacting dark energy models

[ARXIV:1811.01519](#) Accepted by PRD

Ultralight Axion Dark Matter and Its Impact on Dark Halo Structure in N-body Simulations

[ARXIV:1611.00892](#) Published on ApJ

Percolation analysis for cosmic web with discrete points

[ARXIV:1708.07602](#) Published on PRD

Is Fuzzy Dark Matter in tension with Lyman-alpha forest?

[ARXIV:1708.04389](#) Published on ApJ

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## Contributed Publication

Galaxy-galaxy weak-lensing measurement from SDSS: II. host halo properties of galaxy groups

[ARXIV:1712.09030](#) Published on ApJ

An accurate centroid algorithm for PSF reconstruction

[ARXIV:1801.01015](#) Published on AJ

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## Highlight Work

Code publicly available: Axion-Gadget

[GITHUB.COM/LIAMBX/AXION-GADGET](https://github.com/liamzhang/axion-gadget) a modified version of Gadget-2 for Fuzzy Dark Matter model

Code available on reasonable request: ME-Gadget

A modified version of Gadget-2 for general non-standard cosmological model