XIAOSHENG ZHAO

xzhao20@gmail.com
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EDUCATION & EXPERIENCE

Institut d'Astrophysique de Paris (IAP), France. Nov 2022 -
Visitor

Tsinghua University, China Sep 2018 -
PhD in Astronomy

Wuhan University, China Sep 2014 - Jun 2018
BS in Physics

RESEARCH INTERESTS

My research interests include implicit likelihood inference, machine learning for 3D cosmological fields, generative modeling as an alternative to cosmological simulations, AI-aid knowledge discovery from multi-modal information of the universe, and large language models for astronomy research.

PUBLICATIONS

Implicit Likelihood Inference of Reionization Parameters from the 21 cm Power Spectrum
Xiaosheng Zhao; Yi Mao; Benjamin D. Wandelt
2022, ApJ, 933, 236

Simulation-Based Inference of Reionization Parameters From 3D Tomographic 21 cm Lightcone Images.
Xiaosheng Zhao; Yi Mao; Cheng Cheng ; Benjamin D. Wandelt
2022, ApJ, 926, 151

SKILLS

Coding languages: Python (Middle), {C, Jax, Shell, html&CSS}(Junior)
General: PyTorch, Tensorflow, Pandas, Scikit-learn, etc.

TALKS & PRESENTATIONS

SAZERAC 21cm 2022 Mar 2022
Recorded talk: *Implicit Likelihood Inference of Reionization Parameters from the 21 cm Power Spectrum* *Virtual*

SAZERAC SIP, learning the high-redshift universe Feb 2022
Contributed talk: *Simulation Based Inference of Reionization Parameters From 3D Tomographic 21 cm Lightcone Images* *Virtual*

SKA CD/EoR Science Telecon July 2021
Contributed talk: *Simulation Based Inference of Reionization Parameters From 3D Tomographic 21 cm Images* *Virtual*

HERA telecon Jun 2021
Contributed talk: *Simulation Based Inference of Reionization Parameters From 3D Tomographic 21 cm Images* *Virtual*

'Barefoot Reionization': Exploring the First Billion Years of the Universe July 2019
Poster sparkler talk: *The 21-cm cosmology with 3D CNN* *U of Melbourne*