XIAOSHENG ZHAO

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EDUCATION & EXPERIENCE

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

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 astronomical fields, generative modeling as an alternative to astronomical simulations, 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* *Online*

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

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

HERA telecon Jun 2021
Contributed talk: *Simulation Based Inference of Reionization Parameters From 3D Tomographic 21 cm Images* *UC, Berkeley (Online)*

'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*