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Ph.D., Astrophysicist, Cosmologist

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Education

2018–2023 **Ph. D. degree**, Jilin University, Changchun, P. R. China,

department	College of Physics
specialization	Theoretical physics
field of study	The large-scale structure of the Universe
supervisor	Prof. Ping He
thesis	Applications of the continuous wavelet analysis to the large-scale structure of the Universe

2013–2017 **Bachelor degree**, Northeast Normal University, Changchun, P. R. China

department	School of Physics
thesis	Primordial Gravitational Waves: theory and progress of detection

Work Experience

since 07/2023 **Jilin University**, Changchun, P. R. China

Postdoctoral fellow supported by the “Dingxin Scholar” Program of Jilin University

Publications

[1] Yun Wang and Ping He. “The continuous wavelet derived by smoothing function and its application in cosmology”. In: *Commun. Theor. Phys.* 73.9 (Aug. 2021), p. 095402.

[2] Hua-Yu Yang et al. “The spatial distribution deviation and the power suppression of baryons from dark matter”. In: *MNRAS* 509.1 (Oct. 2021), pp. 1036–1047.

[3] Yun Wang, Hua-Yu Yang, and Ping He. “Continuous Wavelet Analysis of Matter Clustering Using the Gaussian-derived Wavelet”. In: *ApJ* 934.1 (July 2022), p. 77.

[4] Yun Wang and Ping He. “Simultaneous Dependence of Matter Clustering on Scale and Environment”. In: *ApJ* 934.2 (July 2022), p. 112.

[5] Yun Wang and Ping He. “Comparisons between fast algorithms for the continuous wavelet transform and applications in cosmology: the 1D case”. In: *RAS Techniques and Instruments* 2.1 (June 2023), pp. 307–323.

[6] Yun Wang and Ping He. “How do baryonic effects on the cosmic matter distribution vary with scale and local density environment?” In: *MNRAS* 528.2 (Feb. 2024), pp. 3797–3808.

Code & Software

FortranCWT — The Fortran 95 codes for fast implementation of the Continuous Wavelet Transform (CWT) of the one-dimensional signals.

https://github.com/WangYun1995/FortranCWT

pyFortranCWT — Python wrappers of the FortranCWT codes created with f2py.

https://github.com/WangYun1995/pyFortranCWT

WPSmesh — The Python module that used to measure the environment-dependent Wavelet Power Spectrum (env-WPS) of the cosmic density field.

https://github.com/WangYun1995/WPSmesh

References

✍ **Prof. Ping He** **hep@jlu.edu.cn**

A Professor at the college of Physics, Jilin University (Changchun, P. R. China).