

YUCHENG YIN (阴煜程)

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(last updated 2026-06-02)

EDUCATION

School of Physics, Peking University
Bachelor's Degree of Science

Beijing, China
09/2021 – 07/2025

- Major in Physics (Astrophysics)
- Research interests: gravitational wave astrophysics, black hole perturbation theory.
- Thesis: Gravitational radiation of binary extreme-mass-ratio inspiral systems (Click [here](#))

RESEARCH EXPERIENCE

Kavli Institute for Astronomy and Astrophysics, Peking University
Undergraduate researcher

Beijing, China
02/2023 – 06/2025

Project: Study the three-body dynamics and GW radiation of binary extreme-mass-ratio inspiral (b-EMRI)
Supervisor: Prof. [Xian Chen](#)

Department of Physics, National University of Singapore
Summer intern

Singapore
06/2024 – 08/2024

Project: Waveform modeling of b-EMRI systems using black hole perturbation theory
Supervisor: Prof. [Alvin J. K. Chua](#)

Niels Bohr Institute, University of Copenhagen
Visiting student

Copenhagen, Denmark
10/2025 – 03/2026

Project: Inhomogeneous Sasaki-Nakamura formalism
Supervisor: Dr. [Rico K. L. Lo](#)

SKILLS

- Programming Languages: Mathematica ~ Julia ~ Python > C
- BHPT: RWZ formalism, Teukolsky formalism, Sasaki-Nakamura formalism, QNMs theory, Self-force, ...
- Others: Numerical methods to solve ODE and PDE

PROFESSIONAL MEMBERSHIP

[LISA](#) (Laser Interferometer Space Antenna) consortium, **Core** member

2025 – Present

Waveform working group - working on EMRI OPA flux dataset generation and validation

TOOLS AND CODES

- `KerrGeodesics.jl`: A Julia package for solving timelike bound Kerr geodesics.
- `AdaptiveLevin.jl`: A Julia package to do 1D and 2D highly oscillatory integrals.
- `GeneralizedSasakiNakamura.jl`: A Julia package to solve linear metric (curvature) perturbation in Kerr spacetime.

TALKS

Contributed talks

BIMSA Workshop on Gravitational Wave Astronomy, Beijing

04/2025

Invited talks

School of Physics and Astronomy, Sun Yat-sen University

11/2025

HONORS

Linbridge Scholarship, funded by Prof. Douglas N. C. Lin

2024

Outstanding Undergraduate Thesis from Peking University

2025

REFERENCES

Vitor Cardoso

Professor, University of Copenhagen & Universidade de Lisboa

Alvin J. K. Chua

Assistant Professor, National University of Singapore

Xian Chen

Associate Professor, Peking University