Xianquan Yan

Curriculum Vitae

Department of {Physics, Computer Science}

National University of Singapore

Homepage Github in Linkedin



Education

2023-present PhD Candidate, {Physics, Computer Science}, National University of Singapore, Singapore.

Supervisors: Lee Ching Hua and Kenji Kawaguchi

Research Interests: Topological Matter, Complex Systems, AI for Physics, Graph Representation Learning.

GPA: 5.00/5.00

2019–2023 BS, Physics, Sichuan University, Chengdu, China.

GPA: 3.96/4.00 (Ranking 1/285)

2022 Visiting Student (BPIE), Physics, University of California, Berkeley, Berkeley, CA, USA.

GPA: 4.00/4.00

2022 Summer Institute, Physics, University of Oxford, Oxford, UK.

GPA: 90/100

Publications

- 2025 Xianquan Yan and Jian-Song Pan. Precise Identification of Topological Phase Transitions with Eigensystem-Based Clustering. 2025.
- 2025 Xianquan Yan, Hakan Akgün, Kenji Kawaguchi, N. Duane Loh, and Ching Hua Lee. Hsg-12m: A large-scale spatial multigraph dataset, 2025.
- 2025 Xianquan Yan. Automated Metric Discovery: Navigating Quantum Geometry with Symbolic Regression. 2025.
- 2025 Hakan Akgun, Xianquan Yan, Tamer Taskiran, Muhamet Ibrahimi, Ching Hua Lee, and Seymur Jahangirov. Scale-invariant dynamics in a purely deterministic game of life model, 2025.

Experience

- 2024–2025 **Teaching Assistant**, *National University of Singapore*, Singapore.
 - 2022 **Student Research Assistant**, *Lawrence Berkeley National Laboratory*, Berkeley, CA, USA. Supervisor: Benjamin Nachman

Honors and Awards

- 2020 & 2021 China National Scholarship (Top 0.2%), The Ministry of Education of the P.R. China
 - 2022 **1st Prize, Scholarship of** *Bajian* **program for fundamental disciplines 2.0**, The Ministry of Education of the P.R. China
 - 2022 1st Prize, CASC Scholarship, China Aerospace Science and Technology Corp
 - 2012 Gold, Asia International Mathematical Olympiad Open Contest, A.I.M.O. Union
 - 2019 Provincial Excellent Student Leader, The Education Department of Sichuan Province
 - 2020 **1st Prize** and **Best Demeanor Award**, South-West Undergraduate Physics Tournament, Sichuan Physical Society
 - 2020 **2nd Prize, National English Competition for College Students**, Advisory Board for College Foreign Language Teaching

Extracurricular Activities

- 2013–2023 **Football (Soccer)**, Captain, Left-Winger, School Team.
- 2019–2021 **Debater**, English Debate Team of Sichuan University & Chinese Debate Team of Department of Physics.
- 2021–2023 **Director**, Sichuan University Mathematica Society.
- 2019–2021 **Director**, Sichuan University English Association.

Calligraphy.

Marathon Runner.