

Jiming Zheng

Place of birth: Xiangyang, Hubei, China \diamond *Date of birth:* 09-11-2001 \diamond *Gender:* Male

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Higher Education

Graduate student in Physical Chemistry

University of North Carolina at Chapel Hill

Supervisor: Zhiyue Lu

August 2023 - Current

Visiting student in Physics (CTBP)

Rice University

Supervisor: Evelyn Tang

August 2022 - December 2022

B.S. in Chemical Physics

University of Science and Technology of China

Supervisor: Zhonghuai Hou

August 2019 - July 2023

Preprints

\dagger denotes co-corresponding author, * denotes co-first author

1. "Universal Fluctuation-Response Relations of Nonequilibrium Dynamics: A Trajectory Information Geometry Framework"
Jiming Zheng \dagger , Zhiyue Lu \dagger
arXiv: 2403.10952 (2024)

Refereed Papers

\dagger denotes co-corresponding author, * denotes co-first author

4. "Stochastic Distinguishability of Markovian Trajectories"
Asawari Pagare*, Zhongmin Zhang*, **Jiming Zheng***, Zhiyue Lu
J. Chem. Phys. 160, 171101 (2024)
3. "Designing autonomous Maxwell's demon via stochastic resetting"
Ruicheng Bao*, Zhiyu Cao*, **Jiming Zheng***, Zhonghuai Hou
Phys. Rev. Research 5, 043066 (2023)
2. "Combining Infrared Spectroscopy Experiment with Quantum Chemical Calculations to Study Hydrogen Bond in Several Aliphatic Alcohol and CCl₄ Solutions"
Yu Liu, **Jiming Zheng**, Nayan Zongchen, Hong Wu, Wanqun Hu
University Chemistry 38(8): 216-224 (2023)
1. "Fast Functionalization with High Performance in the Autonomous Information Engine"
Zhiyu Cao*, Ruicheng Bao*, **Jiming Zheng**, Zhonghuai Hou
J. Phys. Chem. Lett. 14, 66 (2022)

Oral Presentations

4. Invited talk (online), "Universal Fluctuation-Response Relations of Nonequilibrium Dynamics: A Trajectory Information Geometry Framework"
Statistical Physics Youth Seminar
June 01, 2024

3. Invited seminar, "Time-Rate-Clock Duality and Time Calibration in Arbitrary Markov Process"
Nonlinear Chemistry Group (Hou Group)
University of Science and Technology of China, Hefei, China, May 21, 2024
2. Invited seminar (online), "Universal Thermodynamic Bounds on Non-stationary Responses"
Nonlinear Chemistry Group (Hou Group)
University of Science and Technology of China, Hefei, China, March 26, 2024
1. Contributed talk, "Cabirate time with arbitrary Markov process"
125th Statistical Mechanics Conference
Rutgers University, New Brunswick, USA, December 17 - 19, 2023

Honors and Awards

5. Level-A USTC Fellowship for Undergraduate Students
USTC, Hefei, China, May, 2023
4. Weirui Cup Chemistry Innovation Competition - First Prize
Wuhan, China, July, 2022
3. Lu Jiayi Talent Program Scholarship
USTC, Hefei, China, November, 2020-2021
2. Outstanding Student Scholarships
USTC, Hefei, China, October, 2020-2022
1. Outstanding Freshman Scholarship - Gold Award
USTC, Hefei, China, October, 2019

Technical Skills

Programming Language	Python, Mathematica
Tool/Software	L ^A T _E X, Adobe Illustrator, Affinity Designer 2, Blender

Language Proficiencies

Chinese	Native speaker
English	Fluent