Tinglong Feng

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https://arendelle-ftl.github.io/

Academic Interests

Cosmology, compact object, galaxy evolution

Education

Utrecht University

- M.S., Theoretical Physics (2024 - 2026).

Xi'an Jiaotong University

- B.S., Clinic Medicine (2019 - 2024).
- GPA for **advanced mathematics and physics courses**: 3.89/4.30 or 91.48/100, including

Main Courses	Credits	Grades	Main Courses	Credits	Grades
Mathematical and Physical Equation	2	98	Electrodynamics	4	87
Complex Analysis and Integral Transformation	3	96	Quantum Field Theory	3	A
Thermodynamics and Statistical Physics I	4	94	Introductory General Relativity	2	A
Quantum Mechanics	4	89	Introduction to Group Theory	2	92
Theoretical Mechanics	3	89	Introduction to Elementary Particles	2	84

Publications and Preprints

Publications

1. **Correlators for pseudo Hermitian systems** (joint with Y. Bai, S. Kim, C.Y. Lee, L.H. Liu, W. Zhao, S. Zhou). *Journal of High Energy Physics* . journal, preprint

Preprints

2. **Stability of the Potential Super Jupiter in Alpha Centauri System**. submitted. preprint
1. **Holographic Approach to Neutron Stars**. submitted. preprint

Research Experience

Conformal Extension of the Standard Model

- Supervisor: Prof. Tomislav Prokopec (Utrecht University)
- Time: December 2024 - now
- State: Ongoing Master Project
- Abstract: We try to study early universe electroweak phase transition in a conformal extension of the standard model

Correlators for seudo Hermitian systems

- Supervisor: Prof. Siyi Zhou (Chongqing University)
- Time: January - August 2024
- State: Published in JHEP
- Abstract: We develop the in-in formalism to calculate cosmological correlation functions for pseudo-Hermitian systems.
- Detail: see this website

[1] Updated January 12, 2025

Stability of Planetary System

- Time: May - June 2024
- State: Term paper for Course Theoretical Mechianics, submitted to arXiv
- Abstract: We explore the Stability of the Potential Super Jupiter in Alpha Centauri System using Python simulation

Graphene Production

- Supervisor: Prof. Wei Wei (Xi'an Jiaotong University)
- Time: September 2019 - May 2021
- State: Submitted to attend XJTU 'Tengfei Cup' Technology Innovation Competition
- Abstract: Innovative electrochemical exfoliation for high-quality graphene production.
- Detail: See this website

Health Economics Modelling of Infectious Disease

- Supervisor: Prof. Fan Zhang (Xi'an Jiaotong University)
- Time: May 2020 - May 2021
- State: Submitted to attend XJTU 'Tengfei Cup' Technology Innovation Competition
- Abstract: A new mathematical model to evaluate utilities of different ways to prevent infectious disease such as COVID-19.
- Detail: See this website

Invited Talks

1. *Introduction to 2019-nCoV*. online, February 19, 2020, Talk. recording.

Organization

Theoretical Physics Seminars

- September 2024: Host of Cosmology Seminars (reference: *Mukhanov's Cosmology*, seminar recording)
- March 2024: Host of Astrophysics Seminars (reference: *Weinberg's Lectures on Astrophysics*, seminar website, recording)
- April 2021: Host of Quantum Mechanics Seminars (reference: *Landau Vol. 3* and *Dirac's Principle of QM*, seminar website, recording)
- February 2021: Host of Classical Electrodynamics Seminars (reference: *Landau Vol. 2*, seminar website, recording)
- April 2020: Host of Analytical Mechanics Seminars (reference: *Landau Vol. 1*, seminar website, recording)

United Academic Forum of Basic Science for Undergraduates

Developed and co-organized this communication platform designed for undergraduates from various universities, fostering collaboration and engagement in basic science research. See this website.

Outreach

- September 2020 – August 2021: Staff of Scholastic Guidance Center of Qian Xuesen Honors College, Xi'an Jiaotong University
- Autumn 2021: Deputy editor-in-chief of *Journal of Zhufeng*
- September 2020 – : Peer reviewer of *Journal of Zhufeng*

Computing

Familiar with C++, MATLAB, Mathematica, Python

Language

Fluent in English (CEFR C1), capable of speaking a little Quenya (my Quenya learning notes)