# TINGLONG FENG

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## ACADEMIC INTERESTS

Compact object, cosmology, galaxy evolution

#### EDUCATION

# Utrecht University

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

# Xi'an Jiaotong University

• B.S., Clinic Medicine (2019 - 2024).

• GPA for all mathematics, physics and programming courses (up to now): 3.60/4.30 or 87.87/100, 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

#### 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

## **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
- <sup>1</sup>Updated December 9, 2024

# 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.

- December 2020: Created 'inter-university forum of science' with undergraduates from USTC and NJU, co-organized the first research experience sharing activities. website
- February 2021: Co-organized 2021 winter seminars. Invited undergrauadtes form SJTU and UCAS to join the forum. website
  - General Relativity Seminar. Host: Qinxun Li (undergraduate from USTC, current PhD student in Utah university)
  - Statistical Mechanics Seminar. Host: Tingjun Zhang (undergraduate from NJU, current PhD student in Rice university), etc.
  - Electrodynamics Seminar. Host: Me.
- May 2021: Formalized 'inter-university forum of science' and changed its name to United Academic Forum of Basic Science for Undergraduates.
- August 2021: Co-organized the second research experience sharing activities. website
- September 2021 February 2022: Held the position of the Executive Secretary-General of the Council of United Academic Forum of Basic Science for Undergraduates. website
  - Organized 2022 winter seminars
    - \* Electrodynamics Seminar. Host: Xiaotian Feng, Jingyuan Wang (undergraduates from XJTU)

#### 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)