Central China
Center for Nuclear Theory
华中核理论中心

第十三届华大 QCD 讲习班：非平衡量子色动力学
The 13th HuaDa QCD School: QCD out of equilibirum

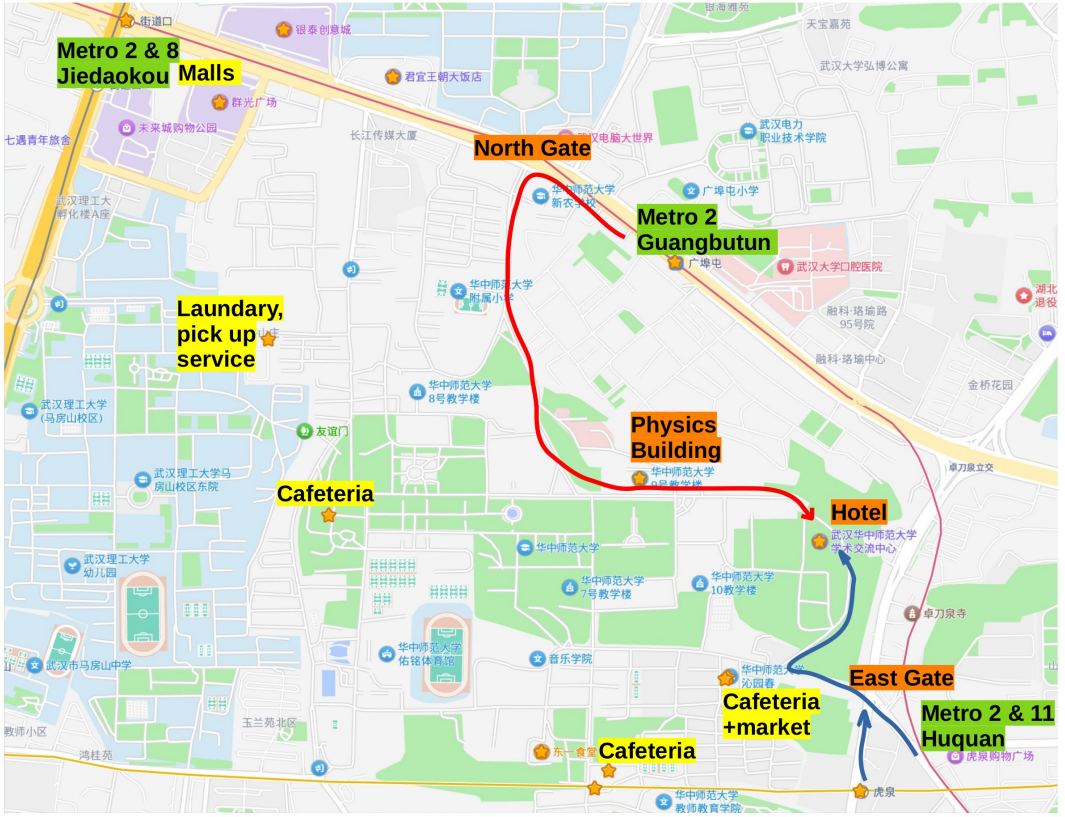
Central China Normal University, Wuhan, China
Aug 25—Aug 29, 2025

1) name tag,
2) proof of participation

Lunch: lunch boxes (please let us know if need special diet)

Dinner: on your own. Cafeteria is not operating this week.

Group dinner:
Thursday 6:30pm, at Guiyuan Hotel (桂苑宾馆) on campus.

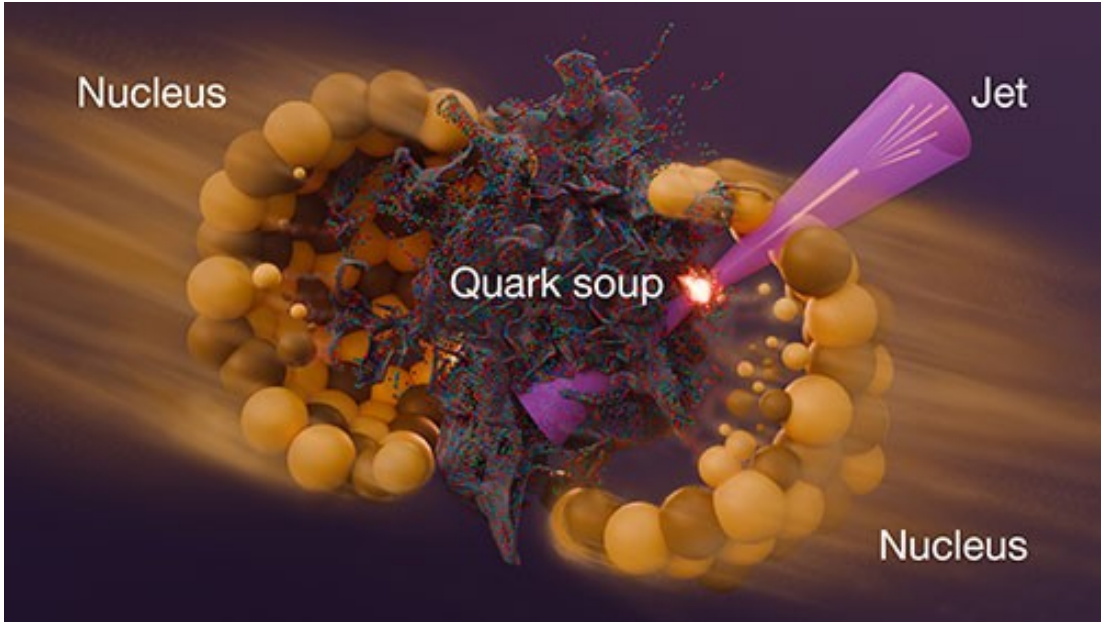


The 13th HuaDa QCD SUMMER School

Wuhan, a week ago (figure from the internet). After that, it has been pure heat. Non-eq physics is more fun.

Of course, the focus of the school is not about the weather (or the high-temperature), but non-equilibrium processes in QCD in an even hotter environment.

For this reason, we invited three speakers.



Valerie A. Lentz/Brookhaven National Laboratory
https://www.bnl.gov/newsroom/news.php?a=122346

2025华大QCD讲习班讲座表
The 13th HuaDa QCD School Lecture Schedule

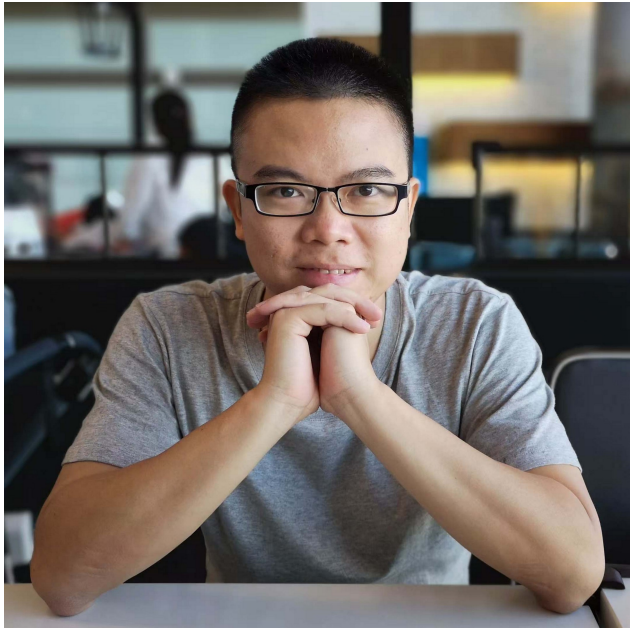
	周一 Mon	周二 Tue	周三 Wed	周四 Thur	周五 Fri
9:00-10:30	Non-equilibrium EFT: hydrodynamics and beyond (Dr. Yi Yin)	First Principle QCD Kinetic Theory and Thermalization (Dr. Xiaojian Du)	Non-equilibrium EFT: hydrodynamics and beyond(Dr. Yi Yin)	First Principle QCD Kinetic Theory and Thermalization (Dr. Xiaojian Du)	Quantum Computing and Thermalization (Dr. Shuzhe Shi)
11:00-12:30	Quantum Computing and Thermalization (Dr. Shuzhe Shi)	Non-equilibrium EFT: hydrodynamics and beyond (Dr. Yi Yin)	First Principle QCD Kinetic Theory and Thermalization (Dr. Xiaojian Du)	Quantum Computing and Thermalization (Dr. Shuzhe Shi)	Non-equilibrium EFT: hydrodynamics and beyond (Dr. Yi Yin)
14:00-15:30	First Principle QCD Kinetic Theory and Thermalization (Dr. Xiaojian Du)	Quantum Computing and Thermalization (Dr. Shuzhe Shi)	Free Afternoon	Q&A Session	Non-equilibrium EFT: hydrodynamics and beyond(Dr. Yi Yin)

Topic I. First-Principle QCD Kinetic Theory

Dr. Xiaojian Du earned his PhD from Texas A&M University in 2019 and is currently a Postdoctoral Scholar at the University of Jyväskylä.

His research focuses on quarkonium production in heavy-ion collisions, QCD kinetic theory, and real-time dynamics of the Quark-Gluon Plasma, as well as quantum computing. A special emphasis of his work is on understanding the thermalization process of the QCD matter created in heavy-ion collisions.

Topic II. Quantum Computing & Thermalization



Dr. Shuzhe Shi earned his PhD from Indiana University Bloomington in 2018 and is currently an Associate Professor at Tsinghua University.

His research focuses on collective dynamics and jet quenching phenomena in heavy-ion collisions, as well as the chiral magnetic effect and spin polarization observables. A significant part of his work also involves applying quantum computing to simulate real-time processes and study thermalization in quantum field theories.

Topic III. Non-equilibrium Effective Field Theory: Hydrodynamics & Beyond

Dr. Yi Yin:
2014, Ph.D, U. Illinois of Chicago;
2014-2016, Postdoc, Nuclear Theory Group, Brookhaven National Lab;
2016-2019, Postdoc, Center for Theoretical Physics, MIT;
2019-2024, Scientist at Quark Matter Research Center, Institute of Modern Physics (Chinese Academy of Science).
2024-present: Associated Professor at CUHK-SZ

Research Interest: the phase diagram of hot and dense nuclear matter, quantum effects in quark-gluon plasma, non-equilibrium statistical field theory

Before we the lectures, let’s welcome Prof. Xinnian Wang for the opening address.