



2024 Zurich-Shenzhen Quantitative Financial Risk Summer School

Project Introduction

The Quantitative Finance & Risk Summer School 2024 is organized by the Institute of Risk Analysis, Prediction and Management (Risks-X) at the Southern University of Science and Technology (SUSTech) and supported by the Program of Master of Science UZH ETH in Quantitative Finance (MScQF).

The summer school will take place between July 31st 2024 and August 13th 2024 in Shenzhen China and Zurich Switzerland. Over this two-week course, more than ten top experts from academia and industry will provide courses and hands-on training. Students and practitioners who are interested in quantitative finance & risks are welcome to apply.

Project objectives

The main learning objective of the summer school is to provide in-depth knowledge of Quantitative Finance & Risk for technical background students and practitioners who are interested in the quantitative finance & risk industry. Many of the discussed topics can provide a competitive edge to the participants. The summer school gives a unique opportunity to interact and discuss these topics with the instructors, comprising of experienced professors and top professionals. By the end of the summer school, we want the participants to be comfortable with the introduced insights and methods and to recognize their value in the context of their own working environment.

Project organization

Organizer:

- Institute of Risk Analysis, Prediction and Management (Risks-X), Southern University of Science and Technology

Co-organizer:

- Program of Master of Science UZH ETH in Quantitative Finance (MScQF)

Local organizer:



- Shenzhen: Education and Training Center, Southern University of Science and Technology
- Zurich: Xinrui Business School

Steering Committee:

- **Prof. Dr. Didier Sornette**, Professor Emeritus at ETH Zurich; Chair Professor, Southern University of Science and Technology;
- **Prof. Dr. Walter Farkas**, Program Director, Master of Science UZH ETH in Quantitative Finance (MScQF); Professor of Quantitative Finance, Department of Finance at the University of Zurich (UZH);
- **Prof. Dr. Ke Wu**, Research Associate Professor and Assistant to Dean, Risks-X at Southern University of Science and Technology.

Supporting Industry Partners:

A few top quant funds and securities companies in China and Switzerland will support this program by sending lecturers or providing interactive communication opportunities. Students will have opportunities to network with practitioners from these industry partners, including UBS, AXPO, FINMA, SIX, Guotai Junan Securities, CITIC Securities, CICC Fortune, Shenzhen Financial Stability & Development Institute, Gaia Qingke, Non-convex Tech, etc.

Format

- **Courses:** The topics of the Summer School include foundations and major roles of quantitative finance & financial engineering, machine learning in finance and quantitative trading, risks in financial markets, unusual market circumstances and extreme risks in finance, essentials on dynamical risk management, main trends of global and Chinese quantitative financial industry. The course lecturers will include senior professors in related fields from ETH Zurich, University of Zurich, and Southern University of Science and Technology, as well as industry practitioners from well-known domestic and foreign companies.
- **Quizzes and Projects:** Participants are required to take a quiz and finish a group project during the summer school. Excellent course finishers will have the opportunity to receive internship or job opportunities provided by well-known companies.
- **Visits and Networking:** there will be visits to local financial institutions and companies, as well as networking sessions with local quantitative finance communities, students, and faculties.



Project Highlights

- ✓ Understand the latest trends of the Chinese quantitative industry in Shenzhen
- ✓ Learn cutting-edge technical methods and models in quantitative finance & risks and visit international financial companies in Zurich
- ✓ Top lecturers led by academicians
- ✓ Obtain first-hand information on the Master of Science UZH ETH in Quantitative Finance (ranked No. 1 in Europe and No. 7 worldwide)
- ✓ Experts from UBS, CITIC Securities, quantitative hedge funds and other industry leaders participate in the summer school.

Rewards

- ✓ Learn the application and research of the latest trends and advanced technologies in the field of quantitative finance and risk;
- ✓ Each participant will receive a certificate of participation, which will list the content of the project and learning performance;
- ✓ Rare opportunities to interact with senior renown professors and industry experts in related fields;
- ✓ Opportunity to communicate directly with the Admissions Committee of Master of Science UZH ETH in Quantitative Finance;
- ✓ Internship & Job Opportunities: students who have completed this summer school have the opportunity to be recommended to partners (quantitative hedge funds, securities companies, etc.) for internships or full-time jobs.

Target audience

- **Current students** (advanced Bachelor, Master level, and PhD) who have a good foundation in mathematics and science, and are interested in learning advanced technologies and latest trends in the field of quantitative finance and risk in the industry and academia.
- **Practitioners or researchers in statistics, engineering, computing, data science, etc.**, interested in quickly learning how to apply their domain expertise in the complex world of quantitative finance.

Cost

- 6,000 CHF (Swiss part) and 9000 RMB (Shenzhen part) for non-students
- 4,200 CHF (Swiss part) and 6000 RMB (Shenzhen part) for current students



- Fees include two-week course tuition, teaching materials, hotel accommodation fees in Zurich, some catering expenses, travel and visit expenses.
- Fees do not include round-trip air tickets between Shenzhen and Zurich, visa fees, insurance, and other consumption during Switzerland.

Scholarship

- **Academic scholarship:** ≤ 10 seats (no more than 40,000 RMB per person). The award amount is determined according to the amount of funding received from the program and the performance of students.
- **Excellent group reward:** 1 group (RMB 40,000/group).
- **Outstanding individuals:** The project will select outstanding students of the project based on their academic performance, visit performance, and teamwork during the event. Outstanding students will receive recommendations for internship & full-time positions at top quant companies in China.



Lecturers in 2023

(The final list of lecturers in 2024 are subject to the actual arrangement)

A mix of experienced professors and top practitioners as lecturers is aspired:

- **Prof. Didier Sornette**, Professor Emeritus at ETH Zurich; Chair Professor at the Southern University of Science and Technology. He is a specialist of large and extreme risks. He works on the prediction of complex systems, with applications to finance, economics and insurance as well as to material rupture, earthquakes, landslides and medicine.
- **Prof. Walter Farkas**, Professor of Quantitative Finance at the Department of Finance at the University of Zurich (UZH) and an Associate Faculty member of the Department of Mathematics of ETH Zurich. Prof. Farkas is also the program director of the Master of Science in Quantitative Finance, a specialized degree jointly offered by the UZH and ETH since 2003.
- **Prof. Markus Leippold**, Professor at University of Zurich. His research focus is Climate Finance, Natural Language Processing, Asset Pricing, Portfolio Allocation and Investment Strategies, Risk Management.
- **Prof. Shaun Shuxun Wang**, Chair Professor for the Department of Finance at SUSTech. His previous posts have included the Nanyang Business School at Nanyang Technological University, Deputy Secretary-General and Head of Research at the Geneva Association, Chairman of Risk Lighthouse LLC, Professor and Thomas P. Bowles Endowed Chair of the J. Mack Robinson College of Business at Georgia State University, and Research Director of SCOR Reinsurance Co. He has published more than 37 papers in top academic journals, including Science, Journal of the Institute of Electrical and Electronics Engineers, Pacific Rim Magazine, International Actuarial Journal, Journal of Risk and Insurance, and Insurance: Mathematics and Economics.
- **Prof. Josef Teichmann**, Professor of mathematical finance, head of Department of Mathematics, ETH Zurich.



- **Prof. Sandro Lera**, Assistant Professor at Southern University of Science and Technology. He is visiting scholar at the Massachusetts Institute of Technology (MIT) where he was previously working as a postdoctoral researcher. He received his PhD from ETH Zurich. Prof. Lera also has an industry background in algorithmic trading, developing quantitative trading strategies for several companies and across different asset classes.
- **Prof. Ke Wu**, Research Associate Professor at Southern University of Science and Technology.
- **Prof. Matthias Uhl**, Head Analytics & Quant Modelling at UBS
- **Dr. Carole Ratsimandresy**, Bank supervision at FINMA
- **Dr. Günter Klein**, Chief Risk Officer (CRO) at SIX SIS AG and SIX x-clear AG, Head Financial & Quant. Risk Management at SIX Group AG
- **Dr. Luo Shan**, General Manager of Guangjin Meihao Fund Management Co., Ltd. Postdoctoral fellow at Cornell University in the United States and Ph.D. in astrophysics at the University of Texas at Austin; former executive of internationally renowned investment institutions such as Royal Bank of Scotland, Royal Bank of Canada, Essence International, and E Fund.
- **Dr. Min Sun, Founder and Chief Investment Officer of WUZHI INVESTMENT**, PhD in Quantum Physics from University of Science and Technology of China. Visiting scholar at Dortmund University, she has been engaged in research on quantum computing and quantum games. She studied under Academician Du Jiangfeng of the Chinese Academy of Sciences (currently President of Zhejiang University).
- **Mr. Zuofan Li**, Co-founder and CTO of Feitu Technology. He graduated from the ACM pilot class of Shanghai Jiao Tong University with a bachelor's degree and then received a master's degree from the University of Pennsylvania. He has worked for BlackRock Group, Americas Mutual Fund, Sichuan Securities, Jihai Investment and other investment institutions, and has more than 10 years of experience in the quantitative industry.



- **Mr. Yu Kan**, Chief Financial Engineering Researcher of Guotai Junan Futures. He has 10 years of experience in derivatives quantitative research and strategy development, and is good at trading strategy development, risk management plan design, and asset allocation advice. He has won the Outstanding Analyst Team of "Stock Index Futures and Options" and "Treasury Bond Futures" of CFFEX, the first prize of "Sixth Financial Futures and Options Essay Contest" of CFFEX, and the first prize of "Excellent Research Achievements on Shanghai Financial Industry Reform and Development" First prize, "Best Financial Quantitative Strategy Engineer" by Futures Daily for six consecutive years.

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