



香港科技大学 (广州)
THE HONG KONG
UNIVERSITY OF SCIENCE AND
TECHNOLOGY (GUANGZHOU)

金融科技学域
FINANCIAL TECHNOLOGY THRUST
社会枢纽
SOCIETY HUB

HKUST(GZ) SOCIETY HUB FINANCIAL TECHNOLOGY THRUST

PhD in FinTech Program



About the FinTech Thrust

Overview

Financial Technology (FinTech) is an important emerging area that has been developing rapidly in recent years. It refers to the application of cutting-edge technologies and advanced analytics on various financial services and financial challenges, such as digital payments, robo advising, algorithmic trading, blockchain technologies, big data analytics, and central bank digital currencies, aiming to improve service efficiency, promote financial innovations, and increase end-user satisfaction.

Mission of the FinTech Thrust

Financial Technology Thrust nurtures creative minds to explore frontiers in Financial Technology by employing advanced technologies to improve financial services, promote financial innovations, and establish more efficient financial systems.

Head's Message



Prof. Ning CAI

Thrust Head / Professor

Financial Technology

Thrust,

HKUST(GZ)

FinTech, short for financial technology, is a burgeoning interdisciplinary field where novel technologies and financial innovations are employed to improve traditional financial services. Its rapid development has changed and will continue to change the global financial system as well as our lives profoundly, and the whole world has been witnessing growing needs for people with FinTech-related expertise. Located in Nansha, the geometric center of the Greater Bay Area, HKUST(GZ) has a unique advantage to develop the FinTech field because both finance and technology are strategically important in the Greater Bay Area. By drawing on the interdisciplinary expertise of our strong faculty, the FinTech Thrust of HKUST(GZ) aims to conduct original and influential research in various areas of FinTech and nurture outstanding researchers, practitioners, and policy makers in the FinTech field, thereby contributing to the economic development of the Greater Bay Area and playing an important role in shaping the future of the FinTech field.

Program Introduction

Doctor of Philosophy (PhD) Program in Financial Technology provides training and education for students to undertake advanced research and have a sound grasp of developments in FinTech. Students graduating from these programs should be able to conduct and apply high-quality research that makes an impact on FinTech research and practice in academia and/or industry. The programs focus on advanced research with an aim to place graduates in academia, research institutes, and industry jobs that appreciate research capability and quality.

Cross-Disciplinary Focus Areas

- ✦ Blockchain technology, smart contracts, and digital currencies
- ✦ Robo advising, quantitative investing, and risk management
- ✦ Machine learning, artificial intelligence, and big data analytics in finance
- ✦ Technological innovations for financial services
- ✦ Regulatory issues and challenges in FinTech
- ✦ Digital economy and financial inclusion

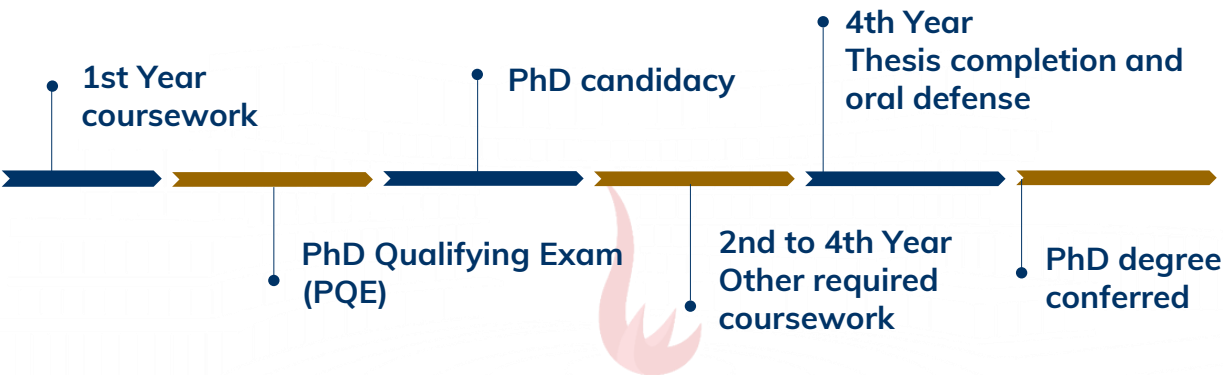
Learning Outcomes

On successful completion of the PhD program, graduates will be able to:



Study Pathway

Normative PhD duration: 4 years



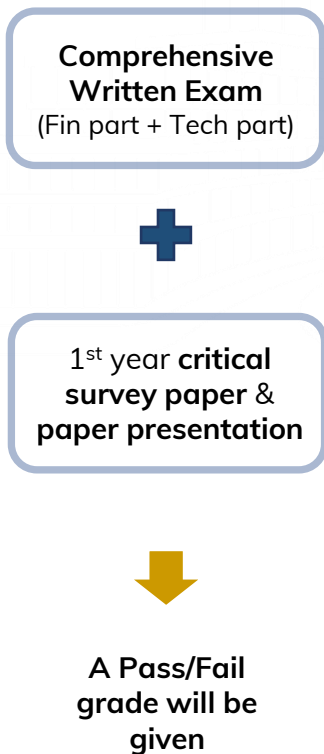
Program Overview

Program Name	Doctor of Philosophy in Financial Technology
Program Short Name	PhD(FinTech)
Mode of Study	• Full-time • Part-time
Normative Program Duration	PhD • Full-time: 3 years (with a relevant research master's degree), 4 years (without a relevant research master's degree) • Part-time: 6 years
Program Advisor	PG Programs Coordinator: Prof. Yue Kuen KWOK
Website	https://soch.hkust-gz.edu.cn/academics/ftec/
Enquiry	ftect@hkust-gz.edu.cn

FinTech PQE Guidelines

PhD Qualifying Examination (PQE)

The objective is to assess whether students are qualified to proceed to pursue PhD degrees.



Written comprehensive examination

- Students are required to take the written comprehensive examination in two sessions.
- a) The first session focuses on the Tech part.
- b) The second session focuses on the Fin part.

Critical survey paper & presentation

- Students should discuss and ask for advice from their supervisor(s) on the critical survey paper topic.
- The paper will be presented to the faculty in a 45-minute presentation followed by a 15-minute Q&A session in October following the first-year summer.
- After the presentation, the PG committee will evaluate both the written critical survey paper and the oral presentation, which are of equal importance. A Pass/Fail grade will be given.

(1) The Tech part mainly focuses on the materials covered in the following three courses:

- FTEC 5030 Statistical Methods for Financial Technology
- FTEC 5031 Advanced Probability Theory
- FTEC 5032 Optimization Theory

(2) The Fin part mainly focuses on the materials covered in the following three courses:

- FTEC 5100 Corporate Finance Theory
- FTEC 5101 Microeconomic Theory
- FTEC 5110 Asset Pricing

Both Tech part and Fin part will be given a grade of P/MP/F.

'P'=Pass,
'MP'=Marginal Pass,
'F'=Fail

To pass, the student should obtain one P plus one MP or above in sub-category grades

PhD in Financial Technology Program Curriculum Design

- Minimum coursework requirement: 21 credits (Core + Required + Electives)
- To meet individual needs, students may take courses in areas including (but not limited to) those listed below.

Course Type	Course Code	Course Title	Credits
Core Courses (6 credits)	UCMP 6010 OR UCMP 6030	Cross-disciplinary Research Methods I OR Cross-disciplinary Design Thinking I	2
	SOCH 5000	Technological Innovation and Social Entrepreneurship	2
	XXXX 5000	Hub Core Course of other 3 Hubs	2
Required Course (3 credits)	FTEC 5040	Financial Technology Research	3
PhD PQE courses (18 credits)	FTEC 5030	Statistical Methods for Financial Technology	3
	FTEC 5031	Advanced Probability Theory	3
	FTEC 5032	Optimization Theory	3
	FTEC 5100	Corporate Finance Theory	3
	FTEC 5101	Microeconomic Theory	3
	FTEC 5110	Asset Pricing	3
GTA training (0 credit)	PDEV 6800	Introduction to Teaching and Learning in Higher Education	0
Professional Development Course (2 credits)	PDEV 6770	Professional Development for Research Postgraduate Students	1
	SOCH 6780	Professional Development in Innovation, Technology, and Social Responsibility	1
English Language Requirement (2 credits)	LANG 5000	Foundation in Listening & Speaking for Postgraduate Students (<u>*could be exempted if pass the English Language Proficiency Assessment (ELPA)</u>)	1
	PLED 5001	Communicating Research in English (<u>*could be exempted if satisfy the exemption condition set by Pillar of Language Education (PLE)</u>)	1
PhD Seminar Course	FTEC 6101	FinTech Program Seminar (**repeat at least 4 terms for PhD)	0
Thesis Research Course (0 credit)	FTEC 7990	Doctoral Thesis Research	0

PhD in Financial Technology Program Curriculum Design

Course Type	Course Code	Course Title	Credits
PhD Electives	FTEC 5050	Machine Learning and Artificial Intelligence	3
	FTEC 5060	Stochastic Processes	3
	FTEC 5061	Stochastic Calculus for Financial Technology	3
	FTEC 5120	Text Mining in Finance and Economics	3
	FTEC 5130	Applied Econometrics in Financial Technology	3
	FTEC 5140	Robo-Advising and Portfolio Management	3
	FTEC 5210	Quantitative Models for Financial Derivatives	3
	FTEC 5220	Monte Carlo Simulation in Finance	3
	FTEC 5230	Financial Risk Management	3
	FTEC 5240	Game Theory in Financial Technology	3
	FTEC 5250	Machine Learning for Finance	3
	FTEC 5260	Data-driven Methods for Risk Management	3
	FTEC 5310	Blockchain Technology	3
	FTEC 5320	Decentralized Finance	3
	FTEC 5330	Graph Machine Learning: Methods and Applications	3
	FTEC 6900	Independent Study	1-3
	FTEC 6910	Special Topics in Fintech	1-3

* Postgraduate students who are Chinese citizens are required to fulfill the Political Education requirement (3 credits for master's students, 2 credits for PhD students).

FinTech Faculty

Regular Faculty at FinTech Thrust

(All names are listed by title, then in alphabetical order of name.)



Ning CAI

Thrust Head / Professor

FTEC

ningcai@hkust-gz.edu.cn

PhD in Operations Research
Columbia University, 2008

Research Interests:

FinTech, Financial Engineering,
Risk Management, Green
Finance, Operations Research,
Stochastic Modeling, Applied
Probability, Statistics and Data
Science



Lionel Ming-Shuan NI

President / Chair Professor

FTEC | DSA

ni@hkust-gz.edu.cn

PhD in Electrical Engineering
Purdue University, 1980

Research Interests:

Big Data, High-performance
Computing, Internet Technologies,
Mobile Computing, Wireless
Networking, Intelligent Computing



Yue Kuen KWOK

Professor

FTEC

maykwok@hkust-gz.edu.cn

PhD in Applied Mathematics
Brown University, 1985

Research Interests:

Financial Mathematics,
Computational Mathematics,
Financial Engineering



Sijia CHEN

Assistant Professor

FTEC

sijiachen@hkust-gz.edu.cn

PhD in Electrical and Computer
Engineering

University of Toronto, 2025

Research Interests:

Distributed computing, mainly federated
learning, Multimodal learning, mainly
focusing on vision-language alignment,
Decision-making algorithm, especially
game theory, Reasoning language
models, Applications of large language
models in finance



Ziteng CHENG

Assistant Professor

FTEC

zitengcheng@hkust-gz.edu.cn

PhD in Applied Mathematics
Illinois Institute of Technology,
2021

Research Interests:

Risk-Averse Decision Making,
Reinforcement Learning, Inverse
Reinforcement Learning, Mean
Field Games, Mathematical
Finance



Bingyan HAN

Assistant Professor

FTEC

bingyanhan@hkust-gz.edu.cn

PhD in Statistics

Chinese University of Hong Kong,
2020

Research Interests:

FinTech, Optimal Transport,
Mathematical Finance



Hang JIANG

Assistant Professor

FTEC

hangjiang@hkust-gz.edu.cn

PhD in Information Systems
National University of Singapore,
2026

Research Interests:

Principal-Agent Problems,
Statistical Contract Theory, Agent
Economics and Mechanism Design,
Blockchain and Decentralized
Finance



Siguang LI

Assistant Professor

FTEC

siguangli@hkust-gz.edu.cn

PhD in Economics
Cornell University, 2022

Research Interests:

FinTech, Digital Economies, Social
Media, Industrial Organization,
Applied Theory



Shi QIU

Assistant Professor

FTEC

shiqiu@hkust-gz.edu.cn

PhD in Operations Management
University of Illinois Urbana-
Champaign, 2025

Research Interests:

Operations Management &
Finance Interface, Financial
Technology and Blockchain, Gen-
AI Application in Business, Supply
Chain Sustainability, Green
Finance



Junxuan WANG

Assistant Professor

FTEC

junxuanwang@hkust-gz.edu.cn

PhD in Finance and Econometrics
University of Warwick, 2023

Research Interests:

International Finance, Decentralized
Finance, Foreign Exchange, Fixed
Income



Xuechao WANG

Assistant Professor

FTEC | IOT

xuechaowang@hkust-gz.edu.cn

PhD in Electrical & Computer
Engineering
University of Illinois Urbana-
Champaign, 2023

Research Interests:

Blockchain, Decentralized Finance



Shuo SUN

Assistant Professor

FTEC

shuosun@hkust-gz.edu.cn

PhD in Computer Science
Nanyang Technological University,
2025

Research Interests:

Reinforcement Learning, Deep
Learning, Quantitative Trading, Large
Language Model, AI + Blockchain



Xiaoyu WANG

Assistant Professor

FTEC

xiaoyuwang@hkust-gz.edu.cn

PhD in Mathematics
Florida State University, 2021

Research Interests:

Theoretical Machine Learning,
Financial Engineering, Stochastic
Systems



Zixuan YUAN

Assistant Professor

FTEC | AI

zixuanyuan@hkust-gz.edu.cn

PhD in Information Technology
Rutgers University, 2023

Research Interests:

Data Science and Artificial
Intelligence, Financial Technology,
Text Analytics, Recommendation
Systems



Chao ZHANG

Assistant Professor

FTEC

chaoz@hkust-gz.edu.cn

PhD in Statistics
University of Oxford, 2022

Research Interests:

Machine Learning in Finance



Zishuo ZHAO

Assistant Professor

FTEC

zishuozhao@hkust-gz.edu.cn

PhD in Industrial Engineering
University of Illinois Urbana-
Champaign, 2026

Research Interests:

Blockchain, Game Theory &
Mechanism Design, Trustworthy &
Decentralized AI, AI Economics,
Verifiable & Sustainable AI
Computation



Guang ZHANG

Assistant Professor

FTEC

guangzhang@hkust-gz.edu.cn

PhD in Economics
Boston University, 2021

Research Interests:

FinTech, Financial Econometrics,
Machine Learning, Empirical
Finance



Leifu ZHANG

Assistant Professor

FTEC

leifuzhang@hkust-gz.edu.cn

PhD in Finance
Washington University in St. Louis,
2021

Research Interests:

FinTech, Information Economics in
Financial Markets,
Adversarial/Strategic ML/AI & Its
Applications, Decentralized Finance
(DeFi)



Liang ZHANG

Assistant Professor

FTEC

liangzhang@hkust-gz.edu.cn

PhD in Computing and Data Science
Nanyang Technological University,
2024

Research Interests:

LLM-driven Marketing and Financial
Technology, Machine Learning in
Digital Economy, Business Intelligence
& Recommender System, Multi-modal
Financial Data Modelling



Yi ZHANG

Assistant Professor

FTEC

ethanyizhang@hkust-gz.edu.cn

PhD in Finance
Imperial College London, 2023

Research Interests:

Theoretical and Empirical Climate
Asset Pricing, Climate Finance, Macro
Finance, ESG, Text Mining, China
Economy, Applied Machine Learning



Ying ZHANG

Assistant Professor

FTEC

yingzhang@hkust-gz.edu.cn

PhD in Mathematics
University of Edinburgh, 2020

Research Interests:

Numerical Algorithms Design,
Machine Learning and Finance,
Stochastic Optimization



Zimu ZHU

Assistant Professor

FTEC

zimuzhu@hkust-gz.edu.cn

PhD in Applied Mathematics
University of Southern California,
2021

Research Interests:

Stochastic Control and Games,
Mathematical Finance, Principal-
Agent Problem, Machine Learning



Ruiting ZUO

Assistant Professor

FTEC

ruitingzuo@hkust-gz.edu.cn

PhD in Analytics & Operations
National University of Singapore,
2022

Research Interests:

Finance-Operations Interface, E-
Commerce and Marketplace
Analytics, Operations-Marketing
Interface, Game Theory, Optimal
Control, Data-driven Decision
Making

Professor of Practice & Industry Advisors

WU Peter 吴金铨 博士

Executive Director and Head of Trading Risk Control, Asia Pacific 执行董事兼亚太区交易风险控制主管

Morgan Stanley 摩根士丹利

PU Stacy Xingyue 蒲星月 博士

AI / ML Researcher 人工智能 / 机器学习研究员

Abu Dhabi Investment Authority (ADIA) 阿布扎比投资局 (ADIA)

CHENG Rocky 郑松岩 博士

General Manager of Information Technology Department and Chief Information Officer 资讯科技部总经理兼首席信息官

Bank of China (HK) 中国银行 (香港)

GUO Jian 郭健 博士

Executive President and Chief Scientist of AI Finance & Deep Learning 执行院长兼 AI 金融与深度学习首席科学家

International Digital Economy Academy at GBA (IDEA) 粤港澳大湾区数字经济研究院

JIA Hongrui 贾红睿 博士

Chief Executive Officer 行政总裁

SPDB International 浦银国际

MA Henry 马智涛 先生

Vice President and Chief Information Officer 副行长兼首席信息官

WeBank 微众银行

MA Jian 马坚 博士

Executive Director of Quantitative Research 量化研究总监

J.P. Morgan 摩根大通

XIAO Jing 肖京 博士

Chief Scientist 首席科学家

Ping An Group 平安集团

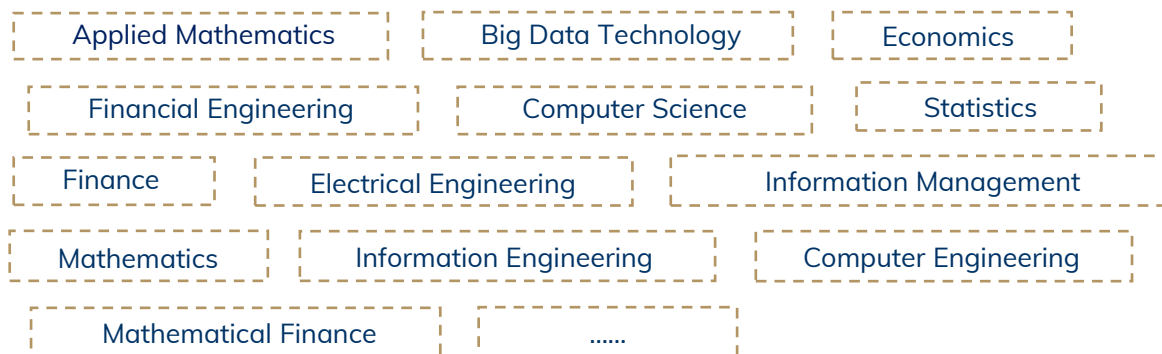
XU Xiaohong 徐晓红 博士

Partner and Chief Executive Officer 创业合伙人及总经理

Zhuhai Defen Financial Technology Co. 珠海得分金融科技有限公司

FinTech PhD Students

Educational/Academic background of FinTech Students



Universities/Colleges Attended

Undergraduate Studies:



Postgraduate Studies:



PhD Graduate Placement

Our graduates have been placed in the following academia/industry positions:

ACADEMIA	
POSITION	INSTITUTION
Assistant Professor	Shanghai University of Finance and Economics
Assistant Professor	BNU-HKBU UIC
Assistant Professor	Fuyao University of Science and Technology
Assistant Professor	Xi'an Jiaotong University
Post-doctoral Fellow	The Chinese University of Hong Kong

INDUSTRY	
POSITION	COMPANY
Analyst	China Everbright Bank
Quantitative Researcher	CITIC Securities (Hong Kong)
Analyst	Bosera Asset Management
Macro Researcher	BlackWings Asset Management
Analyst	Barclays

Admission Requirements

General Admission Requirements

Applicants seeking admission to a doctoral degree program should have:

Obtained a bachelor's degree with a proven record of outstanding performance from a recognized institution; or presented evidence of satisfactory work at the postgraduate level on a full-time basis for at least one year, or on a part-time basis for at least two years.

English Language Admission Requirements

Applicants have to fulfill English Language requirements with one of the following proficiency attainments:

- ◆ TOEFL-iBT: 80 (for tests taken prior to 21 January 2026) *
4.5 (for tests taken from 21 January 2026 onwards) *
- ◆ TOEFL-pBT: 550
- ◆ TOEFL-Revised paper-delivered test: 60 (total scores for Reading, Listening and Writing sections)
- ◆ IELTS (Academic Module): Overall score: 6.5 and All sub-score: 5.5*

* Refers to scores in one single attempt only. Test at home option is not accepted.

Applicants are not required to present TOEFL or IELTS score if

- ◆ Their first language is English, or
- ◆ They obtained the bachelor's degree (or equivalent) from an institution where the medium of instruction was English, or
- ◆ They obtained a master's degree (or above) from an institution where the medium of instruction was English.

Research Postgraduate Programs (PhD)

Application Fees
CNY 150

Tuition

Research Postgraduate Programs (with PGS)
Full-time

CNY 60,000

per academic year

Research Postgraduate Programs (self-financing)
Full-time/Part-time

CNY 150,000

per academic year

Visiting Postgraduate Students

CNY 7,500 per credit

Visiting Research Students

CNY 1,800 per credit

Postgraduate Studentship (PGS)

CNY 15,000

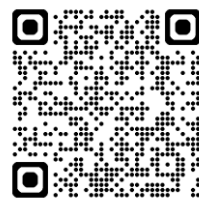
per month, up to 4 years for full-time PhD students

Useful QR code

For Program Details



Contact Proposed Supervisors



Submit Online Application



HKUST(GZ) SOCIETY HUB

FINANCIAL TECHNOLOGY THRUST

PhD in FinTech Program

✉ Email: ftect@hkust-gz.edu.cn

🌐 Website: <https://soch.hkust-gz.edu.cn/academics/ftec/>

📍 Address: The Hong Kong University of Science and Technology (Guangzhou), No.1 Du Xue Rd,
Nansha District, Guangzhou