

# **MSC ADVANCED TECHNOLOGY FOR FINANCIAL COMPUTING**

**DR VALERIO RESTOCCHI - PROGRAMME DIRECTOR**



THE UNIVERSITY *of* EDINBURGH  
**informatics**

**WORLD-LEADING EDUCATION**

**27TH** UNIVERSITY IN THE WORLD

**20TH** FOR COMPUTER SCIENCE

**1ST** IN THE UK FOR RESEARCH OUTPUT AND REAL-WORLD IMPACT

**QS UNIVERSITY RANKING 2024 AND 2025**



THE UNIVERSITY *of* EDINBURGH  
**informatics**

**TOP CAREER PROSPECTS**

**4TH** IN UK FOR EMPLOYABILITY

**98%** OF OUR STUDENTS GET RELEVANT JOBS

PAST STUDENTS WORK IN LARGE **TECH** COMPANIES, CENTRAL  
**BANKS, FINTECHS**





**EDINBURGH**









**\*CRIES IN ITALIAN\***



THE UNIVERSITY *of* EDINBURGH  
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**13TH** BEST STUDENT CITY IN THE WORLD

**2ND** BEST STUDENT CITY IN THE UK

**LARGEST FINANCIAL CENTRE** IN THE UK OUTSIDE LONDON



The background of the image is a dark, high-angle view of a city skyline at night, with lights from buildings and streets visible. Overlaid on this background are several semi-transparent icons and lines. These include a dollar sign in a circle, a padlock, a camera, a person silhouette, a gear, and a document. These icons are connected by thin lines, suggesting a network or system. In the foreground, a hand is holding a smartphone, which is partially visible at the bottom of the frame. The text is centered over the image in a large, bold, white font.

# **WHY THEM SC IN ADVANCED TECHNOLOGY FOR FINANCIAL COMPUTING?**



The background is a dark, high-angle view of a city at night, with light trails from traffic on highways. Overlaid on this is a network of white icons connected by thin lines. The icons include a dollar sign, a padlock, a camera, a book, a person silhouette, a gear, a building, and a stack of coins. In the center, a hand holds a smartphone that displays a similar cityscape image, with a large dollar sign icon overlaid on the screen.

UNIQUE BLEND OF **INFORMATICS, BUSINESS, AND MATHS**





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**FLEXIBILITY** IN BUILDING YOUR OWN PATH





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**FLEXIBILITY** IN BUILDING YOUR OWN PATH

**CUTTING EDGE**, TECH COURSES





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## **MANDATORY COURSES (60 CREDITS)**

### **FINANCIAL NETWORKS**

INTRODUCTORY APPLIED MACHINE LEARNING

INFORMATICS RESEARCH REVIEW

RESEARCH METHODS IN FINANCIAL COMPUTING





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**ELECTIVE COURSES (60 CREDITS)**

**HALF OF THE CREDITS ARE ELECTIVE COURSES**

SUGGESTED PATHS FOR **DIFFERENT TYPES OF LEADERS:**  
FINTECH STRATEGIST, QUANT DEVELOPER, FINANCIAL  
SYSTEMS ARCHITECT

...OR **BUILD YOUR OWN** FROM 100+ COURSES!





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## **MSC DISSERTATION**

3 MONTHS OF **RESEARCH** WORK

POSSIBILITY TO WORK ON **REAL-WORLD DATA** AND REAL-WORLD PROBLEMS

WE WORK WITH A LOT OF **COMPANIES** AND THEY LIKE OUR STUDENTS!



# **NETWORK ANALYSIS OF CARD TRANSACTIONS**

DATA FROM **MASTERCARD** AND **BANKS**

IDENTIFY **SPENDING BEHAVIOURS**

**REDUCE CO<sub>2</sub> EMISSIONS** THROUGH INCENTIVES



A complex network diagram with numerous nodes of varying sizes and colors (dark blue, teal, and green) connected by thin lines. Some nodes are highlighted with dashed circles. The background is a solid dark gray.

**PREDICTING START-UP SUCCESS**

DATA FROM **CRUNCHBASE**

**ANALYSIS OF NETWORK** PROPERTIES IN START-UPS

**BETTER PREDICTION** OF START-UP SUCCESS!



# **IDENTIFYING TRADING SIGNALS FROM STOCK PRICE PATTERN RECOGNITION AND TECHNICAL INDICATORS**

**REAL-WORLD HISTORICAL STOCK DATA**

**CUTTING-EDGE MACHINE LEARNING TECHNIQUES**

**IDENTIFICATION OF SIGNALS**





# **ALUMNI PANEL AND Q&A**

**LIXINYIWANG**- RISK MODELLING, NATWEST

**TEOFEBANO KRISTO**- FINANCIAL DATA SCIENTIST, FNA

**VLAD MATEI**- QUANT DEVELOPER, UBS



# Linxinyi Wang

MSc Advanced Technology for Financial Computing, 2022-2023



Hometown: Kunming, China  
Current Location: Edinburgh, UK  
Career Interests: Data Analytics,  
Machine Learning, Risk Modelling

2018 – 2022:

- BSc (hons) Statistics, University of Nottingham (2+2)
- Example of Courses: Stochastic Models, Optimization, Scientific Computing and C++, Mathematics Finance, Time Series Analysis, Multivariate Analysis

2022 – 2023:

- MSc Advanced Technology for Financial Computing, University of Edinburgh
- Example of Courses:  
Algorithmic Game Theory, Blockchain, Data-driven Business and Behaviour Analytics, Machine learning
- Dissertation:  
A Case Study in Data Engineering on Companies House Dataset
  - Industry Partner: Datactics, data company in Belfast
  - Supervisor: Chris Williams

2023 – 2024:

- Risk Modelling Graduate Scheme, Natwest, Edinburgh
  - Unsecured Modelling (loan, credit card, overdraft)
  - Predict credit score using decision tree models

2025 onwards:

- Risk Model Validator, Natwest, Edinburgh
  - Validate Finance & Forecast models



The University of  
Nottingham



NatWest

Royal Bank  
of Scotland



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extraordinary futures await





# Teofebano Kristo

DATA SCIENTIST @FNA

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- 🏠 Jakarta, Indonesia
- 🌐 <https://www.linkedin.com/in/teofebano-kristo/>



**2012**

Began studying Software Engineering @ Institut Teknologi Bandung (ITB), Indonesia

**2014**

Joined Artificial Intelligence Laboratory in ITB as Teaching Assistant

**2016**

Graduate from ITB and joined Xendit, leading Payment Gateway company in Indonesia, as Software Engineer

**2021**

Successfully build global financial infrastructure to support Wise, Moneygram, and many other companies

**2023**

Began studying Advanced Technology in Financial Computing @ University of Edinburgh

**2024**

Graduate from UoE and joined FNA, global leader in advanced financial network analytics, as Data Scientist



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# Vlad Matei

- 24 years old – currently working and living in London
  - Quant Developer at UBS
  - Currently working in a Delta One trading team, previous experience in Quant Analytics and Data Engineering in Algorithmic Trading
  - Day to day work consists of projects supporting the trading / sales desks
- BEng Computer Systems Engineering at Sheffield University
- Quite active person outside work and studies
  - Boxed for 12 years + running recently



Ultra X 110 Morocco –  
November 2023



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# Experience on the programme

- Why Edinburgh?
  - Reputation
  - Course structure
  - City – culture, natural landscape, food, student experience
    - The opportunity to study at such a historical university, while experiencing a city that everyone I had spoken to was praising highly
- Favourite courses on the programme?
  - Data-Driven Business and Behaviour Analytics
  - Text Technologies for Data Science
  - Financial Mathematics





# Masters and my current job

- Helped in moving across teams into more business focused roles
- Directly applying financial market knowledge developed through courses (DDBBA / Financial Mathematics)
- Technical skills
  - Software Engineering, Quantitative Modelling, Mathematics
  - General problem solving
- Soft Skills
  - Working in teams, managing a demanding workload and juggling multiple deadlines at one time

