

Department of Mathematics



UCL



*MSc Financial Mathematics &
MSc Mathematical Modelling
Yearbook 2019/20*

Artwork provided by student Jiaqi Zhang



Financial Mathematics

ZHIBEK BAKHYTZHANOVA

JIANMING CAI

KUAN-WEI CHEN

QIAN CHEN

WENDONG CHEN

JAMES DAI

YIMING DI

JUNQI FU

GOWZEIGAN GOWRYTHASAN

MENGJIE HUO

HON LI

MENGYUAN LI

KATHY LIN

MEIJUN LIU

RUI LIU

TATSUYA OTAKI

HAONAN PAN

YIHANG PAN

SHU PENG

JIAHUI QIU

DANNI REN

ZIHAO SHEN

YINGFAN WANG

ZECHAO WANG

ZEYANG WANG

HONGHUI XIE

LIN YAN

JIAQI ZHANG

LETAO ZHANG

YARONG ZHANG

TONG ZHAO

XUANYU ZHAO

YI ZHAO

ZICHUN ZHAO

Mathematical Modelling

AHMED ABDIRAHMAN

TAMANNA AHMED

KARTIK CHAUDHARY

DIANA CHINALIEVA

ANATOLE CHOUARD

SIMON COLLIER

GAILA COMESAÑA GONZÁLEZ

RENHAO GAO

KIERAN HOB DEN

KAIHAO HU

JIAHONG LENG

QINGSONG LIU

NARGIZ NASRULLAYEVA

YICHEN SONG

ZHIHAN WANG

YIYANG ZHANG

From Professor Helen Wilson Head of Department



Congratulations to the MSc Class of 2020!

You had a strange hybrid degree: completely normal until March, then the sudden crisis of Covid-19, and then 6 months of academia's "new normal" of online delivery. You've watched us all learn to deliver mathematics online – and we've learnt a lot this year.

Usually at this stage I'd reflect on everything you have learnt in the last year, but to be honest, this time I think the staff might have learnt even more!

We in the Mathematics Department love to know what happens to our graduates. So please do keep in touch. Join the alumni community; keep following @MathematicsUCL on twitter; and drop an email to your personal tutor when you have some news. I wish you the very best of luck in your next steps.

Helen



Dr Sergei Timoshin

Graduation is a moment to reflect on your year at UCL and remember everything that was good or bad, your new lecturers, new friends and, not the least, the new ideas and thoughts for the future that emerged in the course of your study and especially during the research project. This is on a normal year. Your year at UCL was far from normal of course. We just about managed to complete the taught courses when the UK went into a lockdown and the rest of the programme needed to be adjusted facing the realities of a global pandemic.

Many things changed at that moment, including the way we organise the exams and the summer projects, all in an online format. What did not change was your determination to continue your studies. Those first few weeks into the lockdown were chaotic to say the least, but that was precisely the time when, with many of you still sitting on unpacked suitcases after an emergency trip home, the cohort collectively produced a most inspired piece of investigation into opinion dynamics in the assignment for the Frontiers in Mathematical Modelling. The extension part of the coursework was full of ideas that could open new avenues in research. At that point I knew that the class 2019-2020 had everything that was needed to finish the programme successfully.

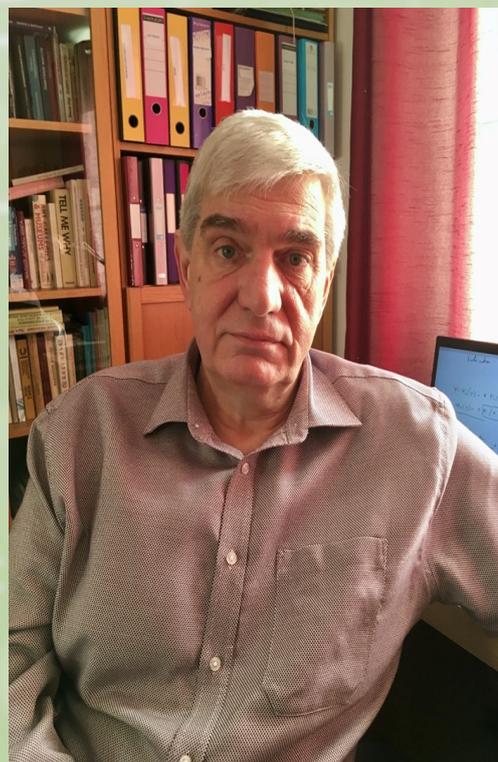
With many technical and formal adjustments needed to prepare our systems for the online exams I was really surprised how smoothly it all went. The same is true for the summer projects. Of course, every step in the usual processing on the UCL side was taking much longer, and we really appreciate your patience.

On this programme our lecturers aim to give you the mathematical skills needed to succeed in this competitive world. It is quite possible that in the future you will not be using every bit of mathematics taught on our MSc. Some of it will be forgotten.

This is normal. However I hope that you will remember the enthusiasm of our lecturers and our passion for what we do. If I were to name one or two main skills you will need in the future I would say it is flexibility, the ability to adapt to fast changing circumstances and counter the adversity with resilience. You certainly had plenty of practice in this on the MSc this year!

Congratulations to all MSc Mathematical Modelling 2019-2020 graduates and I wish you success in your next steps!

Sergei.



Dr Andrea Macrina

What an extraordinary academic year 2019/20 was! I have fond memories of the induction day at the end of September 2019 when I had the opportunity to welcome you on the UCL MSc in Financial Mathematics. It was a great pleasure to have you in my lectures on Asset Pricing in Continuous Time, and to participate in the discussions ensuing from the many thought-provoking questions you asked during class and office hours. Then, in March 2020 the pandemic changed just about everything we were accustomed to: all interaction became digital, electronic, via a computer screen, and all that within days. Undoubtedly this phenomenal change produced enormous challenges for all of us. But what I will treasure from this experience is having witnessed your resilience, your drive and your understanding during very difficult times. These are some of the qualities which took you to the completion of your studies and a very important chapter of your lives. Well done all!

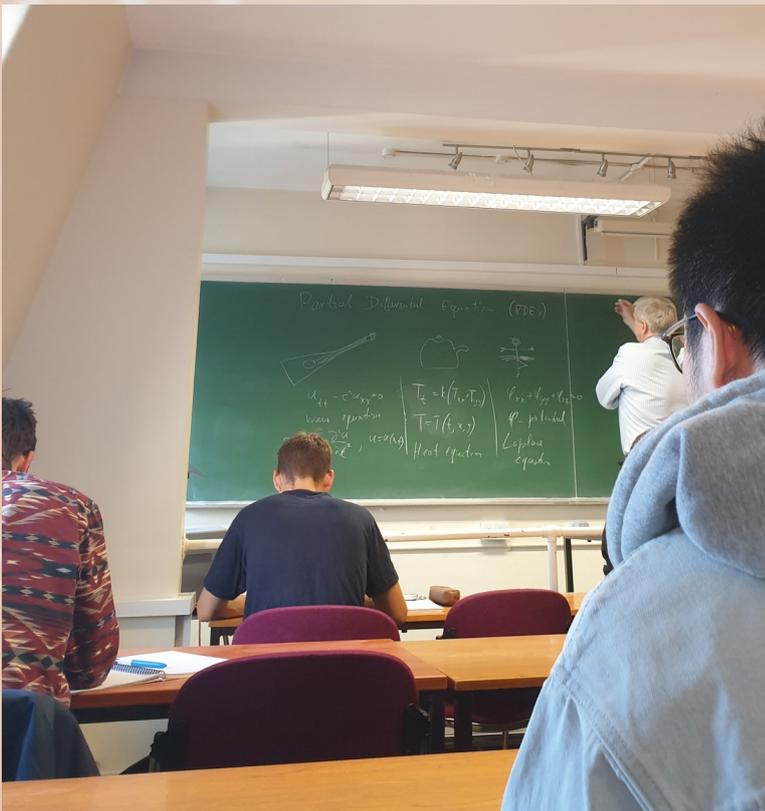
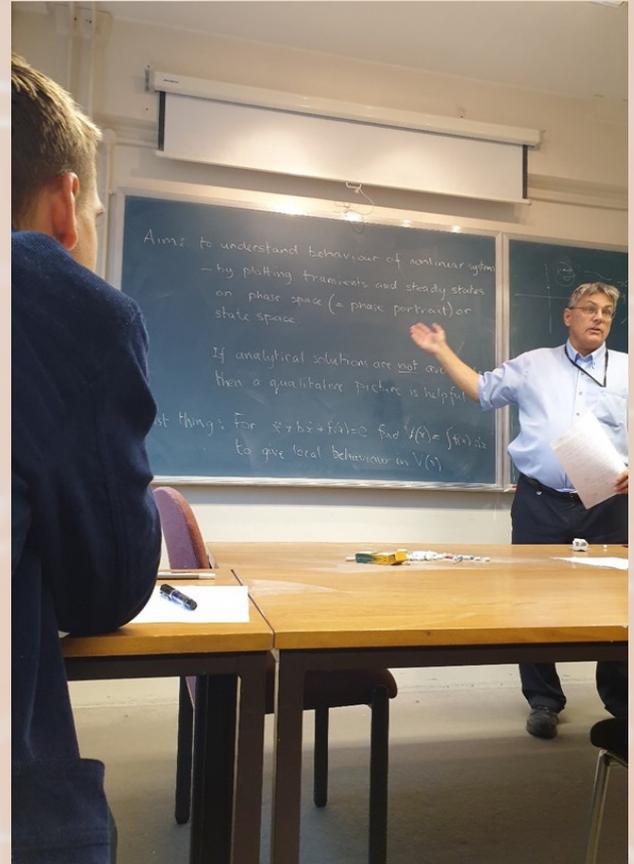
It is my hope that you will keep in touch, perhaps by sending from time to time a little message. I am convinced that all lecturers on the Financial Mathematics MSc would be pleased to hear from you and to discover where curiosity, ambition, and serendipity may have taken you next. We all wish you continued success and that you can further develop as it suits you best. On a more personal note, above all, I wish you and your loved ones good health and peace.

Dr Andrea Macrina

Student contributions

'A lecture you never wanted to come to without having finished the "optional" coursework.'

- Diana C



'First class of the best lecturer and professor I've ever had: Dr Sergei Timoshin. You cannot teach about partial differential equations without the real-life examples of a typical morning routine for a Russian.'

- Diana C

Kieran Hobden



"The infamous Banksy of the UCL maths department. Using a pseudonym to sign his art, of course."

Kartik Chaudhary Simon Collier



Student contributions



First lunch of almost all of the classmates of MSc Financial Mathematics in Chinatown

Simon Collier, Kieran Hobden, Nargiz Nasrullayeva, Diana Chinalieva, and Tamanna Ahmed (photo by KH)



Zeyang Wang

On the last night in London, I came to see UCL for the last time. I have many days of thinking and studying alone here, and this learning experience has given me unimaginable inspiration and growth. I will miss it and love you UCL.



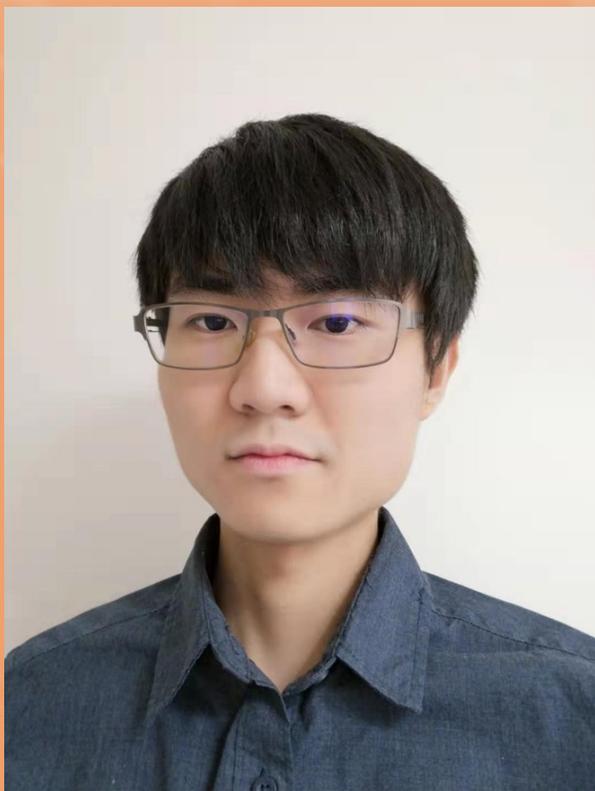
Kathy Lin

Thanks for all the wonderful memories. I hope this isn't our last goodbye.

Student contributions



Danni Ren



The time in quiet libraries.

Kuan-Wei Chen

Student contributions



Simon Collier
and
Kieran Hobden



Successful trip to Rye. Photo by Diana C
(including Tamanna Ahmed)

Student contributions



This special year spent with UCL is so wonderful that I could hardly just use a single photograph to summarize, so here are some of my favorites. This photograph was taken on Christmas Eve when I have already stayed in London for 4 months and began to find a balance between study and life. That is one of the happiest moments for me in UK. A lot of unusual experiences though we had in this year, like quarantining due to the Covid-19 and studying remotely off the campus, I still appreciate this magic year which not only made me a better person but also brought me and my friends together in UCL. May we all have bright futures.

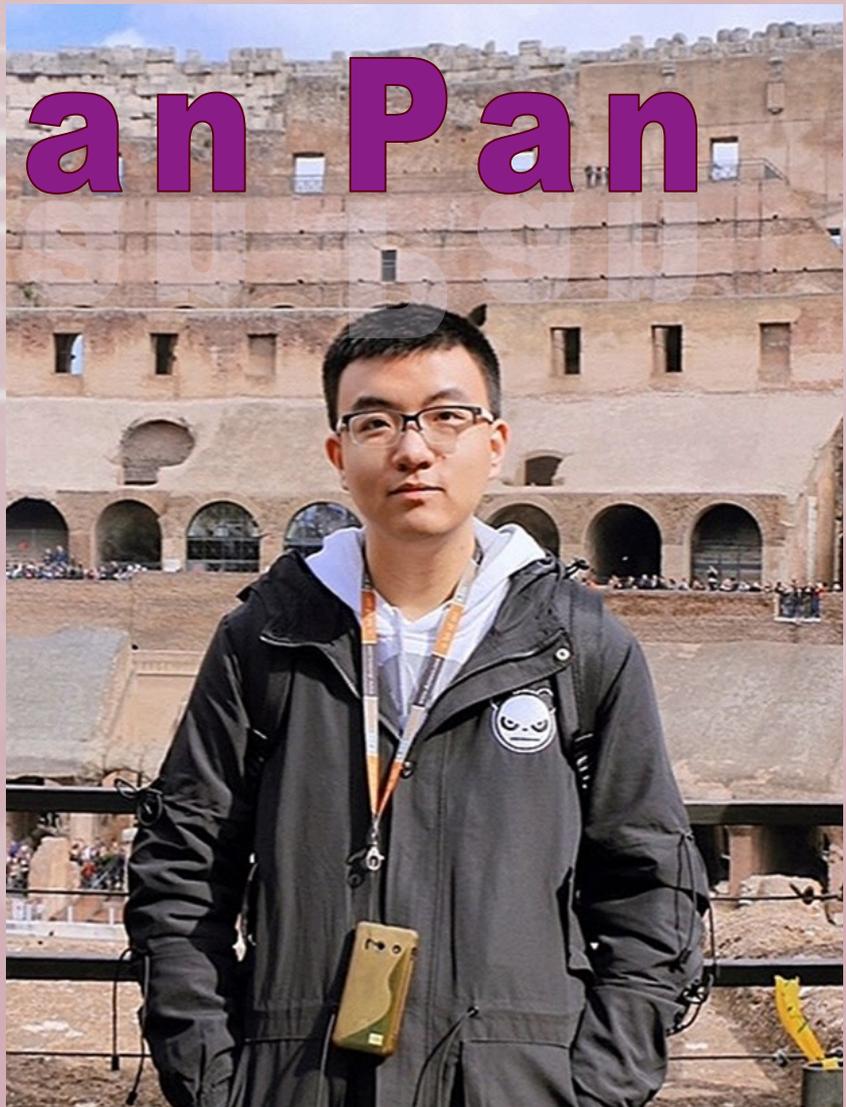
- Yarong Zhang



Yarong
Zhang

Haonan Pan

*"What's past
is prologue."*



Diana C



This year has had its ups and downs, and it wasn't the easiest. I will always appreciate the people I've met, the new friendships created, the amazing and unforgettable memories we made, the help and kindness that was shown at difficult times, and the support we've given each other during the lockdown. It was all worth it.



Although I only spent a single year at UCL (which was rudely interrupted by the pandemic), I had a busier and more exciting year in London than any of my previous years of university - thanks to the great friends I made on my course! The lecturers varied from Mexican to Italian, and from tediously detailed to refreshingly considerate, but I'm grateful to all of them for helping me achieve a Master's degree. Numerous afternoons spent in Phineas and Mully's with good booze and great company will never be forgotten.

Jiaqi Zhang

There is in London
all that life can
afford; there is in
UCL all that life
can create.



I am the guardian of our sweetest
memories.

Zihao Shen



Prof Steven Bishop

For students from the Mathematics Department who undertook the MSc in Mathematical Modelling, can I take this opportunity to offer my own congratulations to you on your achievements. It was a good year. In the Nonlinear systems course, which I teach, I saw the best mark that I have seen to date - so well done, one and all.

I usually attend the graduation ceremonies and I am always pleased when I see Masters students, since their course will have finished almost a year before the ceremony itself. This does, however, mean that students will have moved on to other things and it is therefore a great opportunity to find out just what people are up to. Sadly, this year, this will not be possible but you can still let us know where you have moved on to - I am sure that Dr Timoshin would be pleased to hear from you. But, can I also encourage you to keep in touch with your classmates - you never know when this may come in useful and, in later years, you will find common recollections enjoyable. I still regularly speak to one of my classmates from my own MSc and that was 40 years ago!

I will be teaching my course again this year in a new style. The exam for the year just gone, was sat over a 24-hour period - something that perhaps you will be interested to note since, in your year, there were bitter complaints that the exam was too long! Your comments have helped improve the course and the exam, so thanks for the feedback. My project students this year are currently studying the spread of forest fires and models for development aid. I also had a good project on the growth of rice shoots, in an attempt to develop a strain that can grow in compacted soil. I am on the hunt for students to follow these up for PhD studies - so if you are interested, then get in touch. Meanwhile, my student Carmen is on the run in to completing her PhD, studying scaling laws of accidents, crime and other factors influenced by city size. Can I finally wish you all the success in your future - whatever lies ahead of you. I am hoping that the approach that I took in my teaching helps you to face the challenges ahead, whether they be quantitative or qualitative in nature. The key to success in many cases is creating a narrative and dialogue to help see both the problem and solution.

Best wishes, Professor Steven Bishop



Dr Riaz Ahmad

Dear MSc. Financial Mathematics Class of 2020

It's been a year of difficulties and great uncertainty. Despite this you have continued to put in a lot of hard work to complete your MSc - congratulations! I had the privilege of working with you throughout terms 1 and 2, which I enjoyed - thank you for your interest. Best wishes for good health, success, and prosperity in everything that you do.

Dr Riaz Ahmad

Associate Prof Alejandro Diaz De La O

Dear students,

I had the privilege of teaching you Operational Research. The excellent quality of the group, your constant participation and your insightful questions have made me a better academic. As you may remember from our course, sometimes the challenge of posing a good question is equal or greater than that of finding a good answer. Now it's your turn to go out to the world to do mathematics. I wish that you are able to find great questions and to obtain impactful answers. Go leave your mark.

Best wishes to all of you.

Alex Diaz