Professor Yang Chen
Teaching

Teaching and Supervision

I taught for almost 20 years "Tensor Calculus and General Relativity" to **Third and Fourth Year Undergraduates** in the **Mathematics Department** of **Imperial College**. In the beginning, the class size was 12 to 13, and increased over the years to 85 in 2012, the year I left Imperial College to move to the University of Macau.

I taught "Mathematical Methods" to **Third and Fourth year Mathematics Undergraduates from 2010 to 2012,** class size about 75.

My teaching profile consists of Lectures, Exercise Sheets, and Problem Sessions where students work on problems in exercise sheets, and I come around to answer questions and provide guidance. Students are encouraged to come and see me in my office without appointment. In addition, for a number of years, I taught Mathematics to First and Second Year students from the Chemistry Department, mainly on advanced calculus, ode, linear algebra, so that they would be ready to handle courses on Quantum Chemistry.

In addition to teaching to Undergraduate students, I carry out one-on-one supervision of small research projects with first year Mathematics Undergraduates, where the individual student choose a project from a list. The projects are essentially a small extension of what they learn in class, involving interesting topics. The second year—more substantial research projects—are group projects where 3 to 4 and sometimes 5 second year undergraduates working together, typically, on Fourier transform, and its applications to the inversion of Singular Integrals, first on $(0, \infty)$ and finally on (a, b). This prepares the ground for those students who would wish to continue their Ph. D. studies with me after graduation.

I pay close attention to my students' work, my teaching philosophy is to encourage, and to bring them along, and to provide guidance and advice whenever needed.

At the University of Macau, I have taught a course on introduction to Fourier Analysis (based on Steins and Shakarchi, Fourier Analysis: An introduction), a course on Complex Analysis (based on Stein and Shakarchi, Complex Analysis, and on Brown and Churchill, Complex Variables and Applications.) A course on Topics on Mathematics for Master Students; essentially on my subject, Random Matrices (based on my notes) and a course on introduction to Partial Differential Equations (Brown and Churchill, Fourier Series and Boundary Value Problems.)

Ph. D. supervision in Macau

Zhang Yashan (Graduated, August 2017), University of Macau.
Post-Doc, Beijing Univeristy.

Ao Jian Yu (2012—). To defend thesis September 2018.

Min Chao (Graduated, May 2016), University of Macau.
Now Assistant Professor Hua Qiao University.

Lyu Shulin (Graduated, July 2017), University of Macau.
Now Research Fellow at Zhong Shan University.

Chen Min (Graduated, May 2016), University of Macau. Now Post-Doc at Fudan University.

Chen Hongmei (Graduated, November 2018), University of Macau. Co-Supervisor, Professor Galina Filipuk, Assistant Professor, Faculty of Mathematics, Informatics and Mechanics, University of Warsaw.

Han Pengju (current Ph. D. student, September 2016), successful thesis defense, 10 September 2018.

Zhu Meng Kun (current Ph. D. student, September 2016), successful thesis defense, 10 September 2018. To become Assistant Professor at Qilu University of Technology (Shandong Academy of Sciences).

Zhan Long Jun (current Ph. D. student, September 2016). To defend thesis early 2019.

Hu Jie, (Current Ph. D. student, August 2018). On going. Co-Supervisor Professor Galina Filipuk, Assistant Professor, Faculty of Mathematics, Informatics and Mechanics, University of Warsaw.

Wang Dan, (Current Ph. D. student, August 2018). On going. Co-Supervisor Professor Galina Filipuk, Assistant Professor, Faculty of Mathematics, Informatics and Mechanics, University of Warsaw.

Master supervision at Imperial College (Graduation date in bracket)

Kasper Eriksen (1995)

Cyrus Turani (2009)

Tao Gao (2010), Keti Suri (2010), Paul Dambricourt (2010).

Samuel Goldstein (2012), Yao Han (2012), Ji Chenhui (2012), Yang Tao (2012)

Master supervision at the University of Macau

Cao Man, graduated 2014.
Geng Si Hang, graduated 2015.
Deng Man Yao (Starting October 2017)
Juno Wong (Starting October 2017)

MSci Project supervision at Imperial College (Graduation date in bracket)

Alexei Turturea (2001), Kais Dukes (2001)

Judith Escoda (2003)

Francesca Harris (2004)

Sarah Lobb (2005)

Neil Threadgold (2005).

Nazmus Haq (2007)

Saba Shafi (2008), Rezzi (2008).

Ari Knutti (2010).