JIANG Xilin

British Heart Foundation Career Development Fellow

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Brief Summary

- British Heart Foundation Career Development Fellowship, Cambridge DPHPC.
- Scholar addressor for Rhodes scholar class of 2017 https://www.youtube.com/watch?v=1zVKDZMq66A

Education

Harvard University   2021-2022
- Visiting doctorate student with Professor Alkes Price at Havard School of Public health.

University of Oxford   2017-2022
- Rhodes Scholarship and Wellcome Trust Studentship, 2017-2022
- DPhil in Genomic Medicine and Statistics, with Prof. Gil McVean and Prof. Chris Holmes
- Part-time course: Concurrency and Distributed System, top in class (MSc in Software engineering)

Fudan University   2013-2017
- School of Life Science: GPA 3.87/4.0 Rank 1/136, sit in exams of 150% of required credits
- Faculty of Natural Science: GPA 3.95/4.0 Rank 1/517

National University of Singapore   2016 Jan-May
- Department of Statistics and Applied Probability: CAP 4.9/5.0, 60% of courses bell curved top 3%.

Research

Publications

- Jiang, X., Zhang, M., Zhang, Y., Inouye, M., Holmes, C., Price, A., & McVean, G. (2022). Age-dependent topic modelling of comorbidities in UK Biobank identifies disease subtypes with differential genetic risk. *medRxiv*. In press *Nature Genetics*.
- Jiang, X. (2023). Identifying genetic subtypes of disease from hospital diagnosis records. (Research Briefing) *Nature Genetics*
- Zhang, Y., Jiang, X., Mentzer, A. J., McVean, G., & Lunter, G. (2023). Topic modeling identifies novel genetic loci associated with multimorbidities in UK Biobank. Cell Genomics.
- Jiang, X., Holmes, C., & McVean, G. (2021). The impact of age on genetic risk for common diseases. PLoS genetics, 17(8), e1009723.
- Jiang, X., Gong, W., Gao, Y., Fraser, C., & Holmes, C. (2021). Modelling the impact of rapid tests, tracing and distancing in lower-income countries suggest optimal policies vary with rural-urban settings. *medRxiv*.

Conference publications:

- Age-dependent topic modelling of comorbidities in UK Biobank identifies disease subtypes with differential genetic risk. Oral presentation (Platform, top 8%), ASHG 2022, Los Angles, USA   **2022 Oct**
- How genetic risk for common disease changes with age. Oral presentation, Probabilistic Modeling in Genomics 2019, Aussois, France   **2019 Oct**

Professional services

- Ad-hoc reviewer, PLOS Genetics   **2022 -**
- Ad-hoc reviewer, JAMA Cardiology   **2022 -**

Invited presentations:

- RSF seminar series, the Alan Turing institute   **2022 July**
- Statistical genetics meeting, Harvard-MIT Broad institute   **2022 April**
- PGSG Seminar, Harvard School of Public health   **2021 Nov**
- Phenome seminar, Big Data Institute, University of Oxford   **2019 Nov**

Active funding:

- Wellcome Early-Career award 227566/Z/23/Z (PI: Xilin Jiang). Total direct cost: £629,281. (2023-2028)

Past funding:

- British Heart Foundation Career Development Fellowship CH/12/2/29428 (recipient, PI: John Danesh). Total direct cost: £74,713. (2022-2023)

- Wellcome Trust Student ship 215096/Z/18/Z (recipient, PI: Julian Knight). (2017-2022)

Academic appointments

British Heart Foundation Career Development Fellowship, Cambridge University 2022 April -2023 July
- Cambridge University Department of Public health (Collaborators: Mike Inouye and John Danesh) and Harvard School of Public health (Collaborator: Alkes Price); Funded by BHF award CH/12/2/29428 (by John Danesh).

Visiting scholar/research fellow, Harvard University   **2021 June -**
- Program in Genetic Epidemiology and Statistical Genetics, Harvard School of Public health.

Teaching assistant, Fudan University   **2017 Jan-June**
- Data Visualization, third year core course for BSc in data science.

Summer research intern, New York University   **2016 May-Aug**
- Center for Neural Science, New York University, fully funded by NYUSH grant.
- I worked with Professor David Heeger (email: david.heeger@nyu.edu), with whom I finished 3 projects on computational cognitive neurosciences.

Research Intern, National University of Singapore   **2016 Jan-May**
- Computational Brain Imaging Group, National University of Singapore
- I worked in at the Clinical Image Research Center (CIRC), where my research focused on applying topic model to the brain imaging data set (Structural MRI). I worked with Professor Thomas Yeo (email: thomas.yeo@nus.edu.sg)

Non-academic appointments

Junior Consultant, Bill & Melinda Gates foundation   **2020 March-Dec**
- I work for the pandemic response group joint by Chinese Center for Disease Control and Prevention (CCDC) and Bill & Melinda Gates foundation, on multiple modeling tasks. My work contributed to a few internal references.

Machine learning engineer, BoHong Capital   **2017 Sept-Dec**
- The company is a spin-out fund from CICC, focusing on Chinese stock market. I am in charge of building the non-linear strategy of the quantitative branch of the fund from scratch. The strategy we built out-perform SSE Composite Index by ~10% per-year on historical data set.

Internship, Novartis (CNIBR)   **2017 Aug-Sept**
- Computer Aided Drug Design (CADD)
- Project 1: I built a software which serves as an interface for protein structure visualization, making it possible to visualize the data away from the cluster. This software is in use.
- Project 2: I built a deep learning framework for prediction of drug toxicity, where compound fingerprint is extracted into a CNN based model.

Internship, Novartis (CNIBR)   **2017 June-Aug**
- Novartis Young Explorer Program (NYEP), Drug discovery group
- NYEP award, best scientific project
- I worked on both in *slilico* and wetlab, on the function of a novel protein which play key role in epigenetics regulation. Our project was voted the best scientific project by the senior scientists in Novartis, among our cohort of 16 interns.

Team leader, iGEM   **2015 Jan-Sep**
- I was the team leader of Fudan iGEM team competing in 2015. I also serve as advisor for shanghai NYU team, and the Fudan team competing for 2016 and 2017. Team 2017 won best therapeutics projects and 4 nominations.
- ***circular RNA regulating onco-miR in cancer Cell*** http://2015.igem.org/Team:Fudan

Activities

Schwarzman college leadership program   **2021 Aug-**
- I am the facilitator for the two-day leadership program of Schwarzman scholar class of 2021, at Tsinghua University.

Rhodes outreach research intern   **2021 June-Sept**

- I work with the Rhodes outreach team to promote the scholarship around the world.

Press   **2020 Aug**
- I was interviewed by the New Yorkers on the Chinese response to the pandemic:
  https://www.newyorker.com/magazine/2020/08/17/how-china-controlled-the-coronavirus

Post on COVID-19   **2020 Jan**
- I posted an article discussing the accuracy of modeling studies on COVID initial transmission, which received more than 1.5 million views over the first 3 days and more than 20,000 comments on the NetEast platform. Example reprint: https://mp.weixin.qq.com/s/J-TvlK4u4RJZW7nkxWkvrg

Delegate   **2019 Sept**
- I was the only scholar accompanying Warden of Rhodes House, Dr Elizabeth Kiss, for her visit to Shanghai and Beijing on September 16th- 18th. The mission of the delegate was to secure funding for Rhodes scholarship in China and to build connections with Chinese top universities.

Scholar addressor   **2019 June**
- I spoke with Sir John Hood, chair of Rhodes Trustees, at the going down dinner (Rhodes term for graduation ceremony) of class of 2017 https://www.youtube.com/watch?v=1zVKDZMq66A

Leading organizer   **2018, 2019**
- Rhodes China Trip is a tow-week study trip for Rhodes scholars in Resident to explore China. The trip remains to be the longest and most popular (in terms of the number of attendees) among the four annual Rhodes trips. In 2018, I set up the trip which visit Shanghai, Beijing and Hangzhou, while in 2019, I bring in four scholars to organize the trip together, extending the trip to Hong Kong. The report of the trip is available on request.

Panelist   **2019 Feb**
- I was on the education panel of the so-called "Sino-British Summit" at Dorchester Hotel, London. https://sinobritishsummit-en.org/xilin-jiang Along with me on the panel, there were Dr Elizabeth Kiss (Warden of Rhodes House), Katharine Carruthers (Pro-Vice Provost of UCL), and Prof. Becky Francis (Director, Institute of Education). Some more information is available online. https://www.ftchinese.com/story/001082308?archive

Delegate   **2018 Oct**
- I was one of the six Rhodes scholar delegates who gave mini presentations to and dined with Hillary Rodham Clinton, former secretary of USA.

Delegate   **2018 May**
- I received the Rhodes Tanenbaum Fellowship to Israel.

Member   **2014-2017**
- SiYuan program for excellent students, Fudan University & Yonggeng Fundation https://en.wikipedia.org/wiki/Siyuan_Programme

Class President   **2013-2017**
- School of Life Sciences, Fudan University
- Natural Sciences, Fudan University

Organizer   **2015 Aug**
- We brought 30 students for a social practice in GuangDong province, China. We aimed to understand the pattern of fast-growing enterprises and the policies facilitating economic development in ShenZhen and GuangZhou. Our project is Awarded as outstanding social practice project in Shanghai, 2015.

Delegate   **2015 July**
- Though several rounds of interviews, I was selected as one of the 10 representatives from Chinese universities to attend Asian Pacific Islander American Public Affairs (APAPA) annual conference (California, U.S.A.) Our trip is fully funded by YongGeng foundation.

Organizer, aid education   **2014 July**
- I was one of the key organizers of an aid-education team consist of 30 Fudan students. Our teaching is in Yongping, Yunnan province, where we taught science and English to ~150 high school students for two weeks. Our focus is to improve their performance in the standard college entrance exam. Yongping is one of the poorest mountainous villages in western China. I was responsible for coordinate all the teaching material preparation and lectures, while teaching mathematics and doing research on the education system there.

Athletics
Oxford triathlon club (OUTriC)   **2018-2020**

Fudan university Sports Meeting   **2014, 2017**
- 2014 Gold for 1500m and 5000m (non-registered athlete group)
- 2017 Gold for 1500m and 5000m (non-registered athlete group)

NUEC   **2014, 2015, 2016, 2017**
- Representing Fudan in Nike University Elite Challenge (NUEC) relays for four years

Shanghai University Sports Meeting   **2016 Nov**
- Silver: male 1500m
- Silver: male 4*400m relay

The 14th shanghai sports meeting   **2014 Nov**
- Bronze: male 1500m (university group)

Shanghai College Track & Field Championship   **2013 Nov**
- Gold: male 1500m
- Gold: male 4*400m relay

Awards (Selected)

NYEP Award   **2017 Aug**
- Novartis Young Explorer Program (NYEP) Award. Awarded to the best project among the Novartis summer interns at Shanghai research institute.

Graduate Award, Fudan University   **2017 April**
- 复旦大学毕业之星, Fudan University, 10 from all graduates

Rhodes Scholarship, China   **2016 Nov**
- I was the first Chinese Rhodes scholar who is from a science background. The Rhodes scholarship select four Chinese passport holders each year, starting from 2015.

Leadership Award   **2015 Oct**
- 优秀学生干部标兵, Fudan University. 10 each year for student leader, ranked NO 1

National Scholarship   **2014, 2015**
- I was awarded national scholarships for two consecutive years, which is the highest academic award for college students in China. I was also covered by several media outlets as an example recipient of the scholarship across China.
- news example: http://newspaper.jfdaily.com/jfrb/html/2014-12/24/content_51257.htm

Youth Award   **2014 Nov**
- 上海市优秀共青团员, the award for college students who stands out academically and show strong leadership, only one for each university in Shanghai (This honor could be a key factor considered when applying for position in public sector)