

JIANG Xilin

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Brief Summary

- Wellcome Trust Early-Career Fellow, Cambridge DPHPC.
- Scholar addressor for Rhodes scholar class of 2017 <https://www.youtube.com/watch?v=1zVKDZMq66A>

Education

University of Oxford

2017-2022

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

Harvard University

2021-2022

- Visiting doctorate student with Professor Alkes Price at Harvard School of Public health.

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 ranked top 3% (A+).

Research

Publications

- [Jiang, X.](#), Price, A. L., Danesh, J., McVean, G., Inouye, M., Urbut, S., & Durvasula, A. (2025). Exposure accumulation drives age-dependent disease architectures and polygenic risk scores. *medRxiv*, 2025-08. (Under consideration since 09/02/25, *Nature Genetics*)
- Zhao, Y., Strober, B. J., Hou, K., Kerner, G., Danesh, J., Gazal, S., ... Price, A. L.*, & [Jiang, X.*](#). (2025). Pleiotropic heritability quantifies the shared genetic variance of common diseases. *medRxiv*, 2025-06. (Under Revision, *Nature Genetics*)
- Foguet, C., [Jiang, X.](#), Ritchie, S. C., Persyn, E., Xu, Y., Ben-Eghan, C., ... & Inouye, M. (2025). Metabolic reaction fluxes as amplifiers and buffers of risk alleles for coronary artery disease. *Molecular Systems Biology*, 1-20.
- Tokolyi, A., Persyn, E., Nath, A. P., Burnham, K. L., Marten, J., Vanderstichele, T., Tardaguila, M., Stacey, D., Farr, B., Iyer, V., [Jiang, X.](#), ... & Paul, D. S. The contribution of genetic determinants of blood gene expression and splicing to molecular phenotypes and health outcomes. *Nature Genetics* (2025): 1-10.
- Urbut, S., Ding, Y., [Jiang, X.](#), Hornsby, W., Gusev, A., Natarajan, P., & Parmigiani, G. (2024). Aladyn Individual: Bayesian Hierarchical Dynamic Genetic Modeling of Comorbidity Progression. *medRxiv*.
- Ritchie, S. C., [Jiang, X.](#), Pennells, L., Xu, Y., Coffey, C., Liu, Y., ... & Inouye, M. (2023). Cardiovascular risk prediction using metabolomic biomarkers and polygenic risk scores: A cohort study and modelling analyses. *medRxiv*, 2023-10. (In press, *European Heart Journal*)
- [Jiang, X.*](#), Zhang, M. J., Zhang, Y., Durvasula, A., Inouye, M., Holmes, C., Price, A. L.*, & McVean, G*. (2023). Age-dependent topic modeling of comorbidities in UK Biobank identifies disease subtypes with differential genetic risk. *Nature Genetics*, 1-12.
- [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*, 3(8).
- [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 presentations:

- Identifying cell types that mediate the impact of metabolic risk factors on coronary artery disease (Chen, S., Inouye, M.*, [Jiang, X.*](#)). Reviewer's Choice Abstract (top 10%), ASHG 2025. **2025 Oct**

- Exposure accumulation drives age-dependent disease architectures and polygenic risk scores ([Jiang, X.*](#), Durvasula, A.*). Reviewer's Choice Abstract (top 10%), ASHG 2025. **2025 Oct**
- Quantifying shared genetic variance of common diseases with other complex traits using pleiotropic heritability (Zhao, Y., Price, A. L.*, [Jiang, X.*](#)). Oral presentation (Platform, top 8%), ASHG 2024. **2024 Nov**
- Age-dependent topic modelling of comorbidities in UK Biobank identifies disease subtypes with differential genetic risk ([Jiang, X.](#), ... Price, A. L.*, McVean, G.*). Oral presentation (Platform, top 8%), ASHG 2022, Los Angeles, USA **2022 Oct**
- How genetic risk for common disease changes with age ([Jiang, X.](#), Holmes, C. C., McVean, G.). Oral presentation, Probabilistic Modeling in Genomics 2019, Aussois, France **2019 Oct**

Journal review services

- Ad-hoc reviewer, Journal of the American Statistical Association **2025 –**
- Ad-hoc reviewer, Nature Aging **2025 –**
- Ad-hoc reviewer, Nature **2025 –**
- Ad-hoc reviewer, eLife **2025 –**
- Ad-hoc reviewer, Nature Communications **2024 –**
- Ad-hoc reviewer, EBioMedicine **2024 –**
- Ad-hoc reviewer, Advanced Intelligence Systems **2024 –**
- Ad-hoc reviewer, AJHG **2024 –**
- Ad-hoc reviewer, Nature Genetics **2023 –**
- Ad-hoc reviewer, PLoS Genetics **2022 –**

Grant review services

- Reviewer, project grant, British Heart Foundation **2025 –**

Invited presentations

- Medical Population Genetics meeting, Harvard-MIT Broad institute **2025 April**
- External Speaker StatGen/CompBio Series, 23andme **2023 April**
- 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

- “Integration of polygenic risk scores and clinical data into an open platform that enables pragmatic trials”, Wellcome Early-Career award 227566/Z/23/Z (PI: Xilin Jiang). Total direct cost: £660,053. (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)

Advisees

- Postdoctoral researcher (2024-present): Pearl Liu.
- PhD Dissertaion Student (2024-present, co-mentor Michael Inouye): Siyuan Chen.
- Visiting PhD Student (2023-present, co-mentor Alkes Price): Yujie Zhao.
- MPhil Dissertation Student (2023-2024): William Marella. Position after training: Senior Data Analyst, Columbia University.
- MPhil Dissertation Student (2023-2024): Yi Wang, BSc (Hons) Mathematics, University of Liverpool.

Qualification Exam Committee Membership

- James Lane, MRC Biostatistics Unit, 2023.

Teaching

MPhil dissertation supervisor, University of Cambridge

- 2023-2024: 2 students (MPhil in Population Health Sciences)
- Supervisions, University of Cambridge:
- Principle of Statistics (Cambridge Math Tripo): 3 pairs (2023).
- Teaching Assistant, Fudan University
- Data visualization (School of data science, 3rd year undergraduate core).

Academic appointments

Wellcome Early-Career Fellowship	2023 - now
<ul style="list-style-type: none"> • Cambridge University Department of Public health; Funded by Wellcome Trust. 	
Visiting scholar/Department Associate, Harvard University	2021 - now
<ul style="list-style-type: none"> • Program in Genetic Epidemiology and Statistical Genetics, Harvard School of Public health. 	
British Heart Foundation Career Development Fellowship	2022 -2023
<ul style="list-style-type: none"> • 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). 	
Summer research intern, New York University	2016
<ul style="list-style-type: none"> • Center for Neural Science, New York University, fully funded by NYUSH grant. • Supervisor: Professor David Heeger (email: david.heeger@nyu.edu) 	
Research Intern, National University of Singapore	2016
<ul style="list-style-type: none"> • Computational Brain Imaging Group, National University of Singapore • Supervisor: Professor Thomas Yeo (email: thomas.yeo@nus.edu.sg) 	

Non-academic appointments

Junior Consultant, Bill & Melinda Gates foundation	2020
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • NYEP award, best scientific project (Novartis Young Explorer Program, NYEP). • Project 1: I worked on both in <i>silico</i> 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. • Project 2: 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 3: I built a deep learning framework for prediction of drug toxicity, where compound fingerprint is extracted into a CNN based model. 	
Team leader, iGEM	2015
<ul style="list-style-type: none"> • 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. • <i>circular RNA regulating onco-miR in cancer Cell</i> http://2015.igem.org/Team:Fudan 	

Services

Rhodes Scholarship selection panel (semi-finalist round)	2023 - now
Schwarzman college leadership program	2021
<ul style="list-style-type: none"> • I am the facilitator for the two-day leadership program of Schwarzman scholar class of 2021, at Tsinghua University. 	
Rhodes outreach research intern	2021
<ul style="list-style-type: none"> • I work with the Rhodes outreach team to promote the scholarship around the world. 	
Press	2020
<ul style="list-style-type: none"> • 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

<ul style="list-style-type: none"> 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-TvIK4u4RJZW7nkxWkvrg 	
Delegate, fundraising	2019
<ul style="list-style-type: none"> I was the one of the three delegates including Warden of Rhodes House, Dr Elizabeth Kiss, for a 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> I was on the education panel of the so-called “Sino-British Summit” at Dorchester Hotel, London. Along with me on the panel 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> I received the Rhodes Tanenbaum Fellowship to Israel. 	
Member	2014-2017
<ul style="list-style-type: none"> SiYuan program for excellent students, Fudan University & Yonggeng Foundation https://en.wikipedia.org/wiki/Siyuan_Programme 	
Class President	2013-2017
<ul style="list-style-type: none"> School of Life Sciences, Fudan University Natural Sciences, Fudan University 	
Organizer	2015
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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

Cambridge and Coleridge Athletics	2022-now
Oxford triathlon club (OUTriC)	2018-2020
Fudan university Sports Meeting	2014, 2017
<ul style="list-style-type: none"> 2014 Gold for 1500m and 5000m (non-registered athlete group) 2017 Gold for 1500m and 5000m (non-registered athlete group) 	
Nike University Elite Challenge	2014-2017
<ul style="list-style-type: none"> Representing Fudan in Nike University Elite Challenge (NUEC) relays for four years 	
Shanghai University Sports Meeting	2016
<ul style="list-style-type: none"> Silver: male 1500m Silver: male 4*400m relay 	
The 14th Shanghai sports meeting	2014

- Bronze: male 1500m (university group)
- Shanghai College Track & Field Championship** **2013**
- Gold: male 1500m
 - Gold: male 4*400m relay
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Awards (Selected)

Wellcome Early-Career Award **2023**

NYEP Award **2017**

- 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**

- 复旦大学毕业之星, Fudan University, 10 from all graduates

Rhodes Scholarship, China **2016**

- 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 (selected through competitive process) **2015**

- 优秀学生干部标兵, Fudan University. 10 each year for student leader, ranked first.

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)