

# Xiao-Yue Gong

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## EDUCATION

GRE: 337/340; GRE Mathematics Subject: 97%.

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<b>Massachusetts Institute of Technology</b> Operations Research (Ph.D)	2017.8-present Boston GPA: 5.0/5.0
<b>New York University Shanghai</b> Honors Mathematics (B.S.) Interactive Media Arts (B.S.)	2013.6-2017.5 Shanghai major honors & summa cum laude
<b>New York University</b> [Phi Beta Kappa honor society]	2015.8-2017.1 New York
<b>New York University Tel Aviv</b>	2014.7-2014.7 Istanbul
<b>Budapest Semesters in Mathematics</b>	2015.6-2015.8 Budapest
<b>Tel Aviv University</b> Business Entrepreneurship Program	2014.6-2014.7 Tel Aviv
<b>No.2 High School of East China Normal University</b>	2010.8-2013.6 Shanghai
<b>Lake Forest High School</b> High School Exchange Program	2011.9-2011.10 Illinois

## MERIT AWARDS & SCHOLARSHIPS

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• MIT Bitcoin Hackathon 2018 ARCC Prize	Asia Reserve Currency Coin
• MIT IDEAS Global Challenge 2018 winner	MIT
• 1 of 14 shortlisted finalists for Rhodes Scholarships (China)	The Rhodes Trust
• Provost's Award 2017	NYU Shanghai
• summa cum laude	New York University
• Phi Beta Kappa	Phi Beta Kappa Society
• Major Honors in Honors Mathematics	NYU Shanghai/NYU
• 2016 United Nations Youth Assembly Resolution Fellowship	The Resolution Project
• President's Service Award 2016	New York University
• Summer Undergrad Research Experience	NYU Courant Institute
• NYU Shanghai Dean's Undergraduate Research Fund 2016	NYU Shanghai
• Venturewell 2016 Entrepreneurs-Team	Venturewell
• NYU Reynolds Changemaker Challenge Champion 2015	NYU Reynolds Program
• 2015 Autodesk IMA Smart Home Design Challenge Winner	Autodesk
• CPB Scholarship 2014	Israeli Government
• Dean's List 2013-2016	NYU Shanghai
• Recognition Award 2013-2016	NYU Shanghai
• Resident Assistant Scholarship 2014-2015	NYU Shanghai
• Intel 26th Shanghai Adolescents Science&Tech Innovation Fair 1st Prize	Intel

## MATHEMATICAL STUDIES

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<b>Researcher, NYU Shanghai Computer Science Lab</b>	2017.6-2017.8+
• Coauthored paper "Efficient Entropy for Policy Gradient with Multi-Dimensional Action Space" was accepted at ICRL Conference's workshop.	
<b>Student, Courant Institute of Mathematical Sciences</b>	2015.9-2017.1

- Graduate/PhD level classes: Real Variables, Random Graphs, Stochastic Calculus, Harmonic Analysis, Differential Geometry I, Topology I, Functional Analysis, Advanced Topics in Probability: Entropy and Ergodic Theory.

**Student, Budapest Semesters in Mathematics** 2015.6-2015.8

- Advanced Combinatorics, Conjecture and Proof, Real Functions and Measures

**President, New York University Mathematics Society** New York, 2016.5-2017.1

- Arranged weekly math talks and maintained a speaker and member database.
- Made yearlong plan and raised the club budget received by 17%.
- Allocated tasks and managed the executive board.
- Organized participation in mathematical conferences and competitions.
- Facilitated communications among the math community of undergrads, grads and faculty at NYU.

**Undergraduate Researcher, Courant Institute of Mathematical Sciences** New York, 2016.3-present

- Drafted a research proposal under the supervision of Professor Efe Ok
- Studied the theory of the Möbius functions and applied this theory to finding characterisation of the Myerson value and the Shapley value in cooperative games in game theory
- Illustrated and summarised the results in the format of a complete research paper
- Presented the work at Summer Undergraduate Research Experience Symposium at Courant Institute of Mathematical Sciences

**Teaching Assistant/Tutor/Grader, Courant Institute of Mathematical Sciences** 2015.10-2017.1

- Worked as a teaching assistant/tutor/grader for Calculus I, Linear Algebra, and Introduction to Web Development & Programming

## ENVIRONMENTAL DESIGN & ENGINEERING

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**Founder & CEO, Aeolian Inc.** Shanghai + New York, 2015.9-present

- Envisioned and founded Aeolian as a social venture that combats the severe health effects of indoor air pollution in China by providing a smart air-purifying system
- Recruited team members and assigned responsibilities.
- Worked with legal consultants in drafting legal documents and patent applications
- Worked with journalists and public relation professionals to inform potential customers, investors and mentors about Aeolian
- Conducted industry research and customer survey with team members
- Identified and communicate with mentors and potential investors
- Worked with team members on business plans, financial projections and market research
- Presented and pitched in different formats in front of a variety of audience

**Researcher, Project: Air Butler-Indoor Air Purifying System** Shanghai, 2015.1-2015.6

- Conducted prior art search for similar products
- Designed and prototyped
- Entered Autodesk IMA Smart Home Design Challenge 2015 and was one of the two winners

**Student Researcher, Project: Application of Dye-Sensitized Solar Cells** Shanghai, 2010.10-2011.4

- Prepared and produced dye-sensitised solar cells for use on sunglasses at the Advanced Materials Department of Fudan University
- Documented the lab results in the form of a scientific paper and received Shanghai Pudong Tomorrow's Science & Technology Star Best Speech Award in addition to a couple of scholarships
- Obtained a design patent in China for this invention

**Student Researcher, Project: Segmented Usage of Alkaline Cells** Shanghai, 2011.10-2012.4

- Surveyed neighborhood committees in Zhabei District on disposal of used alkaline cells
- Received Environmental Science First Prize and scholarships at Intel 26th Shanghai Adolescents Science&Technology Innovation Fair

## **ENTREPRENEURSHIP**

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**Team Leader, NYU Reynolds Changemaker Challenge** New York, 2015.9-present

- Conducted customer survey and industry research with the team
- Drafting the business plan and financial documents with the team
- Received NYU Reynolds Best Overall Venture award with \$10,000 grant
- Kept track of venture funds and budget

**Team Leader, Venturewell E-Team Program** New York+Boston, 2016.1-present

- Prepared the business proposal and visual documents
- Identified and solicited recommendation letters from mentors and potential investors
- Successfully entered Stage-1 E-Teams with \$5,000 grant.
- Currently working with mentors to develop the venture further to continue onto Stage 2

**Student, Tel Aviv University** Tel Aviv, 2014.6-2014.7

- Attended the Business Entrepreneurship Summer Program on full scholarships

**Co-Organizer, HackShanghai** Shanghai, 2014.5-2015.11

- Organized the largest international college hackathon in China with a team of 12 students, which inaugurated an annual tradition at NYU Shanghai
- Advocated hackathon culture in China
- Provided hardware, legal, operational and marketing support
- Identified and negotiated with sponsors, and maintained a database of sponsors

## **CRISIS RESPONSE & CONFLICT RESOLUTION**

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**Resident Assistant** Shanghai, 2014.8-2015.5

- Acted as a first-responder to emergencies and crises that occur in a residence hall with 600+ students
- Mediated roommate agreements and resolved conflicts among residents
- Conducted 1-on-1 meetings with 30+ residents each semester
- Documented illegal/prohibited incidences and enforced university residence hall policies
- Provided medical chaperone and guarantee of payment/insurance support
- Organised university-wide networking/musical events that engaged students, faculty and staff
- Provided a safe, caring special interest community environment for the purpose of fostering personal growth of residents

**Cultural Ambassador** Shanghai, 2014.1

- Facilitated NYU Abu Dhabi students' transition to the Shanghai campus

## **PUBLIC OUTREACH & ENGAGEMENT**

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**Dance Workshop Facilitator and Volunteer, The Renewal Center** Shanghai, 2013.10-2014.7

- Set up dance/physical education workshops at the Renewal Center, a place that provides shower, clean clothing, education and sometimes housing for the displaced
- Registered visitors for showers and handed out clean clothes of appropriate sizes and toothbrushes
- Organised donations of cash and of men's clothes to the Renewal Center from NYU Shanghai at the end of the 2014 spring semester

**XLSforKids Volunteer Dance Workshop Facilitator, OKiki Kindergarten** Shanghai, 2015.1-2015.5

- Set up volunteer dance workshops for kids at Okiki Kindergarten instructed by members of Xiao Long Shaker Dance Club
- Led the dance workshops with other members of NYU Shanghai XLS Dance Club to engage children in dancing, which became a traditional cooperation at Okiki Kindergarten and XLS Dance Club

**Workshop Instructor, MakeForKids** Shanghai, 2014.1-2015.8

- Designed and instructed Makeforkids workshops at hackspaces in Shanghai
- Educated young kids in the subject of electronics by helping them accomplish themed projects in each workshop

## WORK EXPERIENCE

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**Legal Summer Intern, Citibank China** Shanghai, 2014.7-2014.9

- Understood corporate authorization & prepared guidance notes on powers of attorney
- Conducted legal research on topics including Anti-Bribery Cases, Bank regulation, Company Law, Conflict of Law issues, Corporate Governance, Employment cases, Free Trade Zone, Funds Sales, Internet Banking, Litigation Case Updates, Securities Laws & Regulations
- Prepared Transaction Summaries, FAQs & Legal Case Studies, litigation timelines & summaries
- Familiarized with basic Citi Products: GCG & ICG
- Conducted ad-hoc analysis and translation of legal terms

**Lab Student Worker, NYU Shanghai Interactive Media Arts Lab** Shanghai, 2014.3-2015.1

- Assisted the daily management of IMA Lab;
- Provided tutoring for student hardware and software projects

## PUBLICATIONS & CONFERENCES

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Yiming Zhang, Quan Vuong, Kenny Song, **Xiao-Yue Gong**, Keith Ross, “Efficient Entropy for Policy Gradient with Multi-Dimensional Action Space” *Sixth International Conference on Learning Representations (Workshop Track)* Vancouver, Canada, 2018

**Xiaoyue Gong**, “A Unified Approach to characterization of the Myerson Value and the Shapley Value Through Application of the Möbius Functions” *Courant Summer Undergraduate Research Experience Symposium*. New York, United States. October, 2016

**Xiao-Yue Gong**, “Contemplation in Boisterousness”(in Chinese). *Science&Vie*. Shanghai: Shanghai Art and Literature Publishing House. January, 2011. Print.

## Projects and Prizes

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“**Juretheum**”—an affordable distributed justice system built on Ethereum smart contracts technology, Prize: Asia Reserve Currency Coin \$3000 MIT Bitcoin Hackathon, March, 2018

“**Transparency Dashboard**”—an online analytics tool for machine learning decisions, Prize: 3rd Place \$500 Hack for Inclusion (Bias in Machine Learning Track), March, 2018

**Federal and state level data-driven policy recommendation paper for Internet and Cybersecurity Challenge**, Prize: finalist \$500 MIT Policy Hackathon, April, 2018

## ATHLETICS & ARTS

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**Soccer:** Midfielder in NYU Shanghai Women Soccer Team

**Dance:** Co-founder&Vice President of NYU Shanghai Xiao Long Shaker Dance Club; Beijing dance Academy Chinese Dance Level Eleven;

Sample Performance: Youtube keyword: “Moonlight contemporary Chinese Xiaoyue Gong”.

## OTHER LANGUAGES

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**Mandarin:** native; **Wu(Shanghainese):** native.