Shimin FU

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EDUCATION

Master of Advanced Study, Mathematics *2020.10-2021.6*
- University of Cambridge, Cambridge, UK
- Overall mark 66/100. 75/100 in Stochastic Calculus & Applications. Essay: A Century of Randomisation Inference

Bachelor of Science, Honours Mathematics, Minor Economics *2016.9-2020.5*
- McGill University, Montréal, QC, Canada
- First Class Honours in Mathematics, GPA 3.96/4.00, Grad Excellence Award,
- Jeanne Bell Science Undergraduate Research Award (SURA) and Math & Stat Undergrad Award, Faculty of Science Scholarships (top 5%), Dean's Honour List (top 10%), Tomlinson Undergraduate Award

RESEARCH PROJECTS & ACADEMIC ACTIVITIES

Uniform spanning tree *2019.5-2019.8*
- McGill University, Montréal, QC, Canada
- Studied concepts and arguments completely new to me, by independently exploring supplementary books and resources, and collaboration with other students in reading papers, with guidance from Louigi Addario-Berry, my supervisor.
- Researched into uniform spanning trees and Aldous-Broder algorithm on graphs, involving perspectives from configuration model, Pitman's process, Markov chain and mixing, and uniform sampling through Lovász Local Lemma.

Tree search and applications *2019.1-2019.3*
- McGill University, Montréal, QC, Canada
- Studied new contents by independently reading selected sections in the textbook, Graph Theory with Applications by J. A. Bondy and U. S. R. Murty, with suggestions from Dmitry Jakobson, my supervisor.
- Researched into BFS, DFS, their applications in finding cut vertices and blocks of a graph, Kruskal's algorithm and Prim's algorithm in finding minimum-weight spanning trees.

McGill Directed Reading Program (DRP) *2019.1-2019.3*
- McGill University, Montréal, QC, Canada
- Explored the "Futurama Theorem" in the weekly 1-on-1 meetings with Corentin Perret-Gentil, my mentor.

Institut des Sciences Mathématiques Discovery School-Dynamics of Random Processes *2019.6*
- L'Université du Québec à Montréal (UQAM), Montréal, QC, Canada
- Attended a series of mini-courses and seminars provided by multiple professors from Oxford, McGill, ETH Zürich and TU Berlin respectively, and communicated with instructors about advanced topics such as Schramm–Loewner evolution.

EXTRA-CURRICULAR ACTIVITIES

Tutor - Maths Helpdesk, McGill University *2019.1-2019.5; 2019.9-2020.4*
- Provided tutoring for the students who dropped in at a random pace, and asked questions across a wide range of Maths courses based on their different major backgrounds such as physics, economics and maths, every week.
- Actively comprehended each peer student's questions, adapted my expressions to their academic backgrounds, and inspired them with foresighted learning methodology.

Mentor - Peer Mentor Buddy Program, Dept. of Math and Stats, McGill University *2019.9-2020.4*
- Provided 1-to-1 peer support and referred the mentee to appropriate resources, ranging from academic advisory services to the campus payment system.

Volunteer - International Student Buddy Program, McGill University *2018.9-2018.12; 2019.9-2020.4*
- Was paired with multiple newly admitted international students as a registered volunteer, providing a current student perspective about life at McGill and in Montréal.

AWARDS & SCHOLARSHIPS

Gowrisankaran Prize in Math/Stats - Faculty of Science, McGill University, Canada *2020.5*
- Established in 2010 by Professor Kohur Gowrisankaran with additional contributions from family and friends for outstanding students in their second or final year of a full-time Honours undergraduate degree program in the Faculty of Science with Mathematics as at least one component.

Brennen, Herbert Scholarships - Faculty of Science, McGill University, Canada *2019.8*
- Established in 1992 by a bequest from H.J. Brennen, B.Sc. 1919, for deserving students majoring in Chemistry or Mathematics. Awarded by the Faculty of Science Scholarships Committee.

SKILLS & INTERESTS

Skills LaTeX, Python including Jupyter Lab and Notebook, R, MySQL, Markdown, actively learning programming using Github; MS Word, Excel, Powerpoint and Outlook; Flash and Photoshop experience, HTML & CSS, designing webpages, logos
Languages Mandarin Chinese (native); English (fluent); French (basic).
Interests Interaction between Mathematical researches and real-world human activities, and introducing the art of Maths to public. Erhu (Chinese traditional musical instrument)[17 years]. Chinese and Western calligraphy. Photography. Singing. Jazz dance. Figure skating.