

Fang Xi LIN

CONTACT INFORMATION

ADDRESS: 243 Montrose Ave, Toronto, Ontario, Canada, M6G 3G6

CELL: +1 (438) 488-8120

EMAIL: flin@physics.utoronto.ca

WEBSITE: <http://fangxilin.com>

SUMMARY OF QUALIFICATIONS

- PhD Candidate at the University of Toronto in theoretical condensed matter physics.
- BSc in Mathematics and Physics with first class honours and Masters of Advanced Studies in Mathematics.
- Quick learner with strong analytical and effective problem-solving skills.
- Excellent communications skills demonstrated by years of student leadership and tutoring experience.

EDUCATION

SEPT. 2016- Present	PhD Candidate in THEORETICAL CONDENSED MATTER University of Toronto , Toronto, Ontario Coursework: Quantum Theory of Solids I and II. Advanced Statistical Mechanics. Many Body Physics.
OCT. 2015- JUNE 2016	Masters of Advanced Studies in APPLIED MATHEMATICS University of Cambridge , Cambridge, UK Coursework: Quantum Field Theory. Advanced QFT. Applications of Differential Geometry to Physics. Cosmology. General Relativity. Black Holes. Statistical Field Theory. Lie Groups, Lie Algebras & Their Representations. Essay: Chern-Simons Theory and Knot Theory.
SEPT. 2011- JUNE 2014	Bachelors of Science in MATHEMATICS and PHYSICS CGPA 3.72/4, <i>First Class Honours</i> , McGill University , Montréal, Québec 2 nd Year Coursework: General Relativity. Quantum Information Theory. 3 rd Year Coursework: Algebraic Geometry. Representation Theory. Quantum Field Theory I. Differential Geometry. Research Project in SUSY. Quantum Field Theory II.
SEPT. 2009- JUNE 2011	Diplôme d'études collégiales in PURE AND APPLIED SCIENCE R-SCORE 33.259, Marianopolis College , Canada

RESEARCH EXPERIENCE

- SEPT. 2016-
PRESENT | **Quantum Spin Liquids (Advisor: Yong Baek Kim)**
University of Toronto, Toronto, Ontario
Project TBD.
- JAN. 2014-
MAY 2014 | **Coleman–Mandula Theorem and SUSY (Advisor: Keshav Dasgupta)**
McGill University, Montréal, Québec
Presented the proof of the Coleman–Mandula no-go theorem. Worked to understand the proof of Haag–Lopuszanski–Sohnius theorem as a workaround for the Coleman–Mandula theorem. Learned about Lie superalgebras and some notions of Supersymmetry such as the superspace formalism.
- FEB. 2012-
DEC. 2013 | **Search for Cosmic Strings (Advisor: Robert Brandenberger)**
McGill University, Montréal, Québec
Learned about inflationary cosmology. Worked to understand mechanism of spontaneous symmetry breaking and the generation of topological defects in the context of cosmology. Learned about the evolution of the cosmic string network and its influence in structure formation. Programmed simulations of viewing cosmic strings wakes through telescopes using C.

WORK EXPERIENCE

- SINCE
SEPT. 2007 | **Physics and Mathematics Tutor**
Worked for École secondaire Pierre-Laporte as a peer tutor in high school Mathematics. Worked for Marianopolis College as a peer tutor in Calculus and Linear Algebra. Worked as a private tutor in various areas of undergraduate Mathematics and Physics.

CONFERENCES, WORKSHOPS, AND SEMINARS

- OCT. 2015-
JUNE 2016 | **Weekly seminars in Cosmology, String Theory, and General Relativity.**
University of Cambridge, Cambridge, UK
Participant
- JULY 2015 | **Mini-course on Cluster algebras, Poisson structures, Networks, and Integrable systems**
Université de Montréal, Montréal, Québec
Participant
- JAN. 2014,
JAN. 2015 | **Seminars in Undergraduate Mathematics in Montreal**
Université de Montréal, Montréal, Québec
Participant
- OCT. 2012 | **Searching for Cosmic Strings in New Observational Windows**
McGill University, Montréal, Québec
Participant

AWARDS AND SCHOLARSHIPS

- SEPT. 2016 | **University of Toronto Graduate Award (\$ 3,000)**
- JUNE 2011 | **Marianopolis Ernest Fox Award for Excellence in Mathematics**
- SEPT. 2009 | **Recipient of the Canadian Millenium Foundation Regional Scholarship (\$ 4,500)**
- MAY 2009 | **Québec Lieutenant Governor's Youth Medal**

EXTRACURRICULAR ACTIVITIES

- SUMMER 2013 | Conference Organizer for STUDENT SUMMER COLLOQUIUM
McGill University, Montréal, Québec
Contacted and scheduled potential speakers. Created and maintained colloquium website. Archive available at <http://www.mcgillssc.ca>.
- MAY 2012-
MAY 2013 | President of MCGILL SOCIETY OF PHYSICS STUDENTS
McGill University, Montréal, Québec
Presided over society of more than 300 undergraduates. Organized diverse physics activities and interdepartmental activities. Received “event of the year” award for the event “Awkward Semi-Formal”. Oversaw gender equality survey for physics students. Created online social media presence. Created and maintained server for undergraduate physics students.
- SEPT. 2011-
MAY 2012 | First Year Representative of MCGILL SOCIETY OF PHYSICS STUDENTS
McGill University, Montréal, Québec
Assisted in organization of physics student activities. Maintained communications between first year students, upper year students, and administration members.
- SEPT. 2010-
JUNE 2011 | Co-President of MARIANOPOLIS MATH AND PHYSICS CLUB
Marianopolis College, Montréal, Québec
Organized various Mathematics and Physics related competitions and events. Contacted university professors to give lectures to college students. Awarded “Marianopolis Club of the Year”.

LANGUAGES

- MANDARIN: Native speaker
ENGLISH: Fluent
FRENCH: Fluent

COMPUTER SKILLS

- Created and maintained servers used by student clubs and physics undergraduates.
- Excellent knowledge of \LaTeX and data visualization with gnuplot.
- Working knowledge of C, C++, Python, Matlab, Mathematica for data analysis and numerical work.