K. L. Barry**Fung**

medical imaging researcher

about

Berkeley, CA
United States

barry@klfung.ca
http://www.klfung.ca

languages

english
limited proficiency in
cantonese and french

programming

Python, C/C++/C#
MATLAB/Octave
Verilog HDL
Bash, Git
TensorFlow
SQL, Flask, Jekyll
LaTeX

technical skills

algorithm design
circuit design
optical design
FPGA programming
PCB layout
embedded systems
IoT programming
full-stack web design

hobbies

classical vocal music
piano
biking

fields of interest

medical imaging, device engineering, MRI, magnetic particle imaging, image reconstruction, digital signal processing, machine learning

education

since 08/17 **JtPh.D.** student in Bioengineering — UCSF/UC Berkeley, California, USA
Biomedical Imaging & Instrumentation

09/12–06/17 **B.A.Sc. with High Honours** — University of Toronto, Toronto, Canada
Engineering Science, Major in Engineering Physics
Monte Carlo simulation of polarization-sensitive second-harmonic generation
Supervised by: Dr. I. A. Vitkin

09/08–06/12 **Ontario Scholar** — Markham District High School, Markham, Canada
Advanced Placement in Physics, Biology and Calculus

experience (research)

12/17-02/18 **Vandsburger Lab, UC Berkeley, Berkeley, USA** — Rotation Student
Compressed sensing in CEST MRI

09/17-12/17 **Conolly Lab, UC Berkeley, Berkeley, USA** — Rotation Student
Studying the behaviour of superparamagnetic iron oxide

06/17-08/17 **XLV Diagnostics, Toronto, Canada** — Engineering Intern
All-purpose device engineering intern

05/16-04/17 **University Health Network, Toronto, Canada** — Undergraduate Researcher
MC Simulation of p-SHG

05/15-05/16 **XLV Diagnostics, Toronto, Canada** — Engineering Intern
All-purpose device engineering intern

05/14-08/14 **Baycrest Health Sciences, Toronto, Canada** — Undergraduate Researcher
Algorithms for functional connectivity in fMRI datasets

experience (misc)

01/18-03/19 **Bioengineering Association of Students @ UC Berkeley** — Treasurer
Managing financial transactions and funding for the graduate association

05/16-04/17 **IEEE U of T Student Branch** — Director of Events, Electronics Chapter
Directed and assisted in organization of electronics education events

05/16-04/17 **Hart House Chorus** Vice Executive Secretary and Librarian
Organized events, and managed the repertoire of the chorus

09/16-12/16 **Division of Engineering Science** Teaching Assistant, ESC103H1
Led 2-hour linear algebra tutorials, rated 6.4/7 by students

07/14-11/16 **Engineering Science Discipline Club** Webmaster
Maintained website and handled registration systems for events

publications

Monte Carlo simulation of polarization-sensitive second-harmonic generation and propagation in biological tissue
K.L.B. Fung, M. Samim, A. Gribble, V. Barzda, and I. A. Vitkin
Journal of Biophotonics (In Submission), Wiley VCH

posters/talks

08/2016 **Monte Carlo simulation of second-harmonic polarimetry**
K.L.B. Fung, M. Samim and I. A. Vitkin
Undergraduate Engineering Research Day and Medical Biophysics Summer Student Conference

08/2014 **Assessing Test-Retest Stability of Resting-state Functional MRI Metrics**
K.L.B. Fung and J. J. Chen
Medical Biophysics Summer Student Conference

honours

12/12-06/17 **Dean's List** U of T Faculty of Applied Science and Engineering
Awarded for academic achievement

08/2016 **2nd Place** U of T MBP Summer Student Conference
Awarded for research in MC simulation of p-SHG

05/2016 **FASE Undergraduate Research Fellowship** U of T Engineering
Awarded to do research in MC simulation of p-SHG

05/2015 **Engineering Society Award** U of T Faculty of Applied Sciences and Engineering
Awarded for academic and extracurricular achievement

05/2015 **Rita K Teetzel In Course Scholarship** U of T Engineering
Awarded for academic achievement

05/2014 **Jack Gorrie Memorial Undergraduate Scholarship** U of T Engineering
Awarded for academic achievement

05/2014 **Undergraduate Student Research Award** NSERC
National research grant for algorithm development at Baycrest

04/2012 **Grade 10 Piano** Royal Conservatory of Music
National title of achievement in theoretical and practical piano examinations