

K. L. BarryFung

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
L^AT_EX

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, magnetic particle imaging, MRI image reconstruction, signal processing

education

- since 08/17 **JtPh.D.** student in Bioengineering UCSF/UC Berkeley, California, USA
Biomedical Imaging & Instrumentation
Supervised by: Dr. S. M. Conolly
- 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

experience (research)

- since 5/18 **Berkeley Imaging Systems Lab , UC Berkeley** Graduate Student Researcher
Leukocyte Magnetic Particle Imaging, MPI physics, and device engineering
- 09/17-4/18 **Conolly/Vandsburger/Diederich Lab, UC Berkeley/UCSF** Rotation Student
SPIO studies, Compressed Sensing in CEST, PCB design
- 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, Wiley VCH, 2018
<https://doi.org/10.1002/jbio.201800036>

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