

# HARRIS CHAN

Vector Institute, 661 University Ave., Suite 710. Toronto, ON M5G 1M1

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## RESEARCH INTERESTS

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Optimization and generalization for deep neural networks, reinforcement learning with natural language and computer vision, generative models for graphs and discrete structures.

## EDUCATION

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**Master of Science, Computer Science** September 2017 - January 2019 (Expected)  
Machine Learning Group CGPA: A+  
University of Toronto, Toronto, Ontario  
Supervisor: Prof. Jimmy Ba and Prof. Sanja Fidler

**Bachelor of Applied Science in Engineering Science (ECE Option)** September 2011 - June 2016  
University of Toronto, Toronto, Ontario CGPA: 3.92  
Thesis Supervisor: Prof. Deepa Kundur

## HONOURS & AWARDS

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NSERC Canada Graduate Scholarship (CGS-M), University of Toronto (Declined) 2016  
Engineering Science Award of Excellence, University of Toronto 2016  
Dean's List for all semesters, University of Toronto 2011-2016  
Herbert Gladish Memorial Award, University of Toronto 2013  
Walberg Memorial Award, University of Toronto 2012  
Engineering Science Research Opportunities Program (ESROP) Fellowship, University of Toronto May 2012  
Engineering Entrance Scholarships, University of Toronto 2011  
Queen Elizabeth II Aiming for the Top, University of Toronto 2011 - 2016

## PUBLICATIONS

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Investigating the impact of intrusion detection system performance on communication latency and power system stability. **Harris Chan**, Eman Hammad, Deepa Kundur. In *Proceedings of the Workshop on Communications, Computation and Control for Resilient Smart Energy Systems*, 2016.

## RESEARCH EXPERIENCE

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**Undergraduate Thesis Student** September 2017 - Present  
*University of Toronto*  
Supervisor: Prof. Deepa Kundur

- Research topic: Investigating the impact of intrusion detection system performance on communication latency and power system stability

**Research Student** May 2012 - August 2012  
*Condensed Matter Physics, University of Toronto*  
Supervisor: Prof. Young-June Kim

- Research topic: 3-Omega method for measuring thermal conductivity for thermoelectric materials

## TEACHING EXPERIENCE

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### Teaching Assistant

September 2017 - Present

*University of Toronto*

- CSC411 Introduction to Machine Learning, Fall 2017
- CSC321 Introduction to Neural Networks, Winter 2018

## PROFESSIONAL EXPERIENCE

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### SoC Design Engineer

August 2016 - September 2017

*Intel Programmable Solutions Group, Toronto, Canada*

- Usability Tools Team in the OpenCL Group for Intel FPGA

### Co-founder and developer

May 2013 - September 2013

*Nanomaps, Entrepreneurship Hatchery, University of Toronto*

- Worked with a team of two other Engineering Science students to develop a proof of concept interactive indoor map of commercial areas on Android, with extension to mobile navigation system for the blind
- Searched and contacted relevant stakeholders such as retail storeowners and marketing director of the mall, and conducted surveys among venue visitors

### Engineering Intern, Video Processing Group

May 2014 - September 2015

*Qualcomm Canada, Markham, Canada*

- Designed and performed image and video quality assessment for Display Stream Compression (DSC) technology
- Created a Kivy application for subjective image quality trials according to proposed standard ISO/IEC DIS 29170-2 for testing nearly lossless coding, and conducted the experiment to verify results from Samsung
- Modelled in C the pipeline of video post processing algorithms, for use in conjunction with hardware design verification

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## INVITED TALKS

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Closing the generalization gap in stochastic optimization through Fisher gradient noise. Vector Institute, Toronto, Canada. February, 2018

## EXTRA-CIRRICULAR ACTIVITIES

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### Co-Vice President Youth Engagement

June 2013 - April 2014

*Engineers Without Borders (EWB), University of Toronto Chapter*

- Coordinated 3 programs which aim to empower youth in social change: School Outreach (SO), Youth Development program (YD), Social Change and Youth Leadership Conference (SCYLC)

### Co-Subcommittee Chair

May 2013 - September 2013

*Engineering Frosh Week Charity Buskerfest Event, University of Toronto*

- Organized a buskerfest performed by first year engineering students to raise awareness and money for the Princess Margaret Cancer Foundation, resulting in \$5979.25 donated to the charity