

# HUBERT LIN

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## EDUCATION

Cornell University, PhD  
Computer Science

Aug 2016 – Present

University of Toronto, HBSc

June 2016

Major in Computer Science, Major in Physics, Minor in Mathematics | CGPA: 3.99 / 4.00

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## PUBLICATIONS

See website: [www.cs.cornell.edu/~hubert](http://www.cs.cornell.edu/~hubert)

- **Materials In Paintings (MIP): An interdisciplinary dataset for perception, art history, and computer vision.**
    - Van Zuijlen, M.; [Lin, H.](#); Bala, K.; Pont, S.C.; Wijntes, M.W.A. PLOS One 2021.
  - **AutoPhoto: Aesthetic Photo Capture using Reinforcement Learning.**
    - Al-Zayer, H.; [Lin, H.](#); Bala, K. IROS 2021.
  - **What Can Style Transfer and Paintings Do For Model Robustness?.**
    - [Lin, H.](#); Van Zuijlen, M.; Wijntes, M.W.A.; Pont, S.C.; Bala, K. CVPR 2021.
  - **Insights from a Large-Scale Database of Material Depictions in Paintings.**
    - [Lin, H.](#); Van Zuijlen, M.; Wijntes, M.W.A.; Pont, S.C.; Bala, K. FAPER ICPR 2020.
  - **Silva: Interactively Assessing Machine Learning Fairness Using Causality.**
    - Yan, J.N.; Gu, Z.; [Lin, H.](#); Rzeszotarski, J; CHI 2020.
  - **DeepSemanticHPPC: Hypothesis-based Planning over Uncertain Semantic Point Clouds.**
    - Han, Y.\*; [Lin, H.\\*](#); Banfi, J.\*; Bala, K.; Campbell, M. ICRA 2020.
  - **Block Annotation: Better Image Annotation with Sub-Image Decomposition.**
    - [Lin, H.](#); Upchurch, P.; Bala, K. ICCV 2019.
  - **Learning Material-Aware Local Descriptors for 3D Shapes.**
    - [Lin, H.](#); Averkiou, M.; Kalogerakis, E.; Kovacs, B.; Ranade, S.; Kim, V. G.; Chaudhuri, S.; Bala, K. 3DV 2018.
  - **Identifying and avoiding confusion in dialogues of people with Alzheimer's Disease.**
    - Chinaei, H.; Chan Currie, L.; Danks, A.; [Lin, H.](#); Mehta, T.; Rudzicz, F. Computational Linguistics 2017.
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## PRESENTATIONS

CVPR 2021

Virtual

V-VSS 2021

Virtual

ICCP Posters 2021

Virtual

The Skin of Things 2021

Virtual

FAPER ICPR 2020

Virtual

ICRA 2020

Virtual

Cornell Graphics / Vision Retreat Winter 2020

Cornell University

ICCV 2019

Seoul, Korea

Cornell Graphics / Vision Seminar Fall 2018

Cornell University

3DV 2018

Verona, Italy

DCS Undergraduate Student Research Program 2015

University of Toronto

Canadian Undergraduate Physics Conference 2014

Queen's University

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## PROFESSIONAL EXPERIENCE

### Research Intern

Waymo

May 2021 – Sept 2021

- Self-supervised 2D camera detection from camera+lidar videos

### Research Assistant

Cornell University

Jan 2017 – Present

- Learning robust visual recognition models from paintings
- Visual perception for robust autonomous navigation
- Image annotation

University of Toronto

May 2015 – Dec 2015

- Noise models for 3D protein reconstruction from electron cryomicroscopy images
- Guiding cognitively-impaired persons through a picture-description task with a communicative robot

University of Waterloo May 2014 – Aug 2014  
• Closing the gap in quantum bit error rate for secure key generation in the six-state QKD protocol

**Teaching Assistant**

CS2112: Honors Object Oriented Programming Sept 2016 – June 2017  
CS2800: Discrete Structures  
CSC108: Introduction to Computer Programming Sept 2014 – Dec 2014

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**HONORS AND AWARDS**

- NSERC Postgraduate Scholarship D 2018
    - CAD\$63,000
  - NSERC Canada Graduate Scholarship M 2016
    - Awarded and declined
  - NSERC Undergraduate Student Research Award 2015
    - Computer Science, University of Toronto
    - CAD\$6,000
  - NSERC Undergraduate Student Research Award 2014
    - Physics, University of Waterloo
    - CAD\$8,000
  - Course Scholarships (various), University of Toronto
    - CAD\$28,967
  - Top 15 Junior Canadian Computing Competition 2011
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**COMMUNITY SERVICE**

- Reviewer: CVPR, ICCV, 3DV, IJCAI, ICRA, AURO, SIGGRAPH
  - Expanding Your Horizons at Cornell, Workshop Leader, 2017
  - University of Toronto, University Physics Competition Preparation Session Speaker, 2015
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**SKILLS**

Proficient with: Python, PyTorch, Tensorflow, Vim, LaTeX, Git  
Working familiarity with: C/C++, Java, Matlab, AWS EC2, Caffe

**Work Authorization:** US Citizen