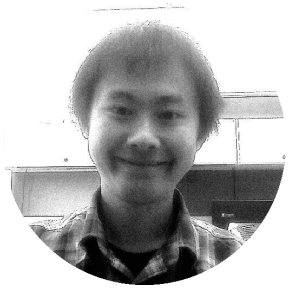

HangChu

PhD Student in Computer Vision

Tel & Skype
+1-647-627-8109
hangchu1122

Mail
chuhang1122@
gmail.com

Website
chuhang.github.io

Programming
Proficient in
C/C++
Matlab
Python
Experience in
HTML/Javascript
VHDL
Lua

Software Skills
ROS
OpenCV
Halide
WebGL
LabVIEW
Caffe
TensorFlow
Torch
PyTorch
LaTeX

Languages
Mandarin (*native*)
English (*proficient*)
Spanish (*beginner*)

Education

2016 - Now **Ph.D. Student in Machine Learning** — University of Toronto
GPA: 4.00/4.00
Advisors: Raquel Urtasun and Sanja Fidler

2013 - 2015 **M.S. in Electrical and Computer Engineering** — Cornell University
GPA: 4.00/4.00 (rank 1/8)
Thesis: Vision-based Localization with Map Information
Advisors: Tsuhan Chen and Ashutosh Saxena

2009 - 2013 **B.S. in Information Engineering** — Shanghai Jiao Tong University
Major GPA: 3.90/4.30 (91.2/100) (rank 20/290)
Thesis: A Heat-Map-based Algorithm for Group Activity Recognition
Excellent Bachelor Thesis Award (3/290)
Advisors: Weiyao Lin and Wu-Jun Li

Experience

05/19 - 08/19 **Research Intern** — Facebook Reality Labs
Worked with Shugao Ma, Pittsburgh Team.
Facial avatar generation.

05/18 - 04/19 **Research Intern** — Nvidia Research
Worked with Sanja Fidler, Deep Learning Team.
3D content generation.

05/17 - 08/17 **Research Intern** — Google Research
Worked with Utsav Prabhu and Andrew Gallagher, Machine Perception Team.
Video semantic understanding.

10/15 - 06/16 **Visiting Researcher** — University of Toronto
Worked with Raquel Urtasun and Sanja Fidler, Machine Learning Group
Semantic scene understanding.

06/15 - 10/15 **Research Intern** — Toyota Technological Institute
Worked with Matthew Walter, Robot Intelligence Through Perception Lab.
Cross-view localization of a ground image in a satellite image.
Localization in forest environment (Collaboration with MIT Lincoln Lab).

06/14 - 08/14 **Research Intern** — Volkswagon Electronic Research Lab
Worked with Anh Vu, Driving Assistance Systems team.
Registration of high-resolution road-lane images for mapping.

Courses

Undergraduate

Linear Algebra (A+)
Discrete Math (A+)
Probability & Statistics (A)
Image Processing (A)
Signal Processing (A)

Graduate

Computer Vision (A+)
Medical Image Analysis (A+)
Generative Models (A+)
Blockchain (A+)
Robot Learning (A)
Numerical Analysis (A)
Heuristic Optimization (A-)

Certified

Machine Learning
Graphical Models

Services

Conference Reviewer

CVPR-19,20
ICCV-17,19
ECCV-20
NIPS-16
AAAI-20
ICRA-19,20
IROS-16
BMVC-17
ICME-18,19,20

Journal Reviewer

IEEE-PAMI
IEEE-CSVT
IEEE-ITS
IEEE-NNLS
IEEE-Cybernetics
Springer-CSSP
Elsevier-VCIR
Elsevier-SPIC
Wiley-SCN

Awards

UofT Fellowship
2016-2020
ICCV Doctral Consortium
2019
ICRA Travel Award
2015
Bachelor Thesis Award
2013
ACM MM Travel Award
2012
Pan Wen Yuan Scholarship
2010
SJTU Scholarship
2009-2013

Places Lived

Toronto, ON
Pittsburgh, PA
Chicago, IL
Bay Area, CA
Ithaca, NY
Shanghai, China
Shijiazhuang, China

Publications

Patent

[1] Partitioning Videos
Hang Chu, Michael Nechyba, Andrew Gallagher, Utsav Prabhu
US Patent App. 15/813978, Google, 2019.

Journal

[2] A Heat-Map-based Algorithm for Recognizing Group Activities in Videos [pdf][demo]
Weiyao Lin, **Hang Chu**, Jianxin Wu, Bin Sheng, and Zhenzhong Chen
IEEE Transactions on Circuits and Systems for Video Technology (**T-CSVT**), 2013.

Conference

[3] Neural Turtle Graphics for Modeling City Road Layouts [pdf][code][demo]
Hang Chu, Daiqing Li, David Acuna, Amlan Kar, Maria Shugrina, Xinkai Wei, Ming-Yu Liu, Antonio Torralba, Sanja Fidler
International Conference on Computer Vision (**ICCV**), **oral**, 2019.

[4] Single Image Intrinsic Decomposition without a Single Intrinsic Image [pdf]
Wei-Chiu Ma, **Hang Chu**, Bolei Zhou, Raquel Urtasun, Antonio Torralba
European Conference on Computer Vision (**ECCV**), 2018.

[5] A Face-to-Face Neural Conversation Model [pdf][demo]
Hang Chu, Daiqing Li, Sanja Fidler
Computer Vision and Pattern Recognition (**CVPR**), 2018.

[6] SurfConv: Bridging 3D and 2D Convolution for RGBD Images [pdf][code]
Hang Chu, Wei-Chiu Ma, Kaustav Kundu, Raquel Urtasun, Sanja Fidler
Computer Vision and Pattern Recognition (**CVPR**), 2018.

[7] TorontoCity: Seeing the World with a Million Eyes [pdf]
Shenlong Wang, Min Bai*, Gellert Mattyus*, **Hang Chu***, Wenjie Luo, Bin Yang, Justin Liang, Joel Cheverie, Sanja Fidler, Raquel Urtasun
International Conference on Computer Vision (**ICCV**), 2017.

[8] HouseCraft: Building Houses from Rental Ads and Street Views [pdf][demo][code]
Hang Chu, Shenlong Wang, Raquel Urtasun, Sanja Fidler
European Conference on Computer Vision (**ECCV**), 2016.

[9] You Are Here: Mimicking the Human Thinking Process in Reading Floor-Plans [pdf][demo]
Hang Chu, Dong-Ki Kim, Tsuhan Chen
International Conference on Computer Vision (**ICCV**), 2015.

[10] Consistent Ground-Plane Mapping: A Case Study Utilizing Low-Cost Sensor Measurements and a Satellite Image [pdf][demo]
Hang Chu, Anh Vu
International Conference on Robotics and Automation (**ICRA**), 2015.

[11] A New HeatMap-based Algorithm for Human Group Activity Recognition [pdf][demo]
Hang Chu, Weiyao Lin, Jianxin Wu, Xingtong Zhou, Yuanzhe Chen, Hongxiang Li
ACM Multimedia (**SIGMM**), 2012.

Workshop

[12] Song From PI: A Musically Plausible Network for Pop Music Generation [pdf][demo]
Hang Chu, Raquel Urtasun, Sanja Fidler
International Conference on Learning Representations Workshop (**ICLRW**), 2016.

[13] Accurate Vision-based Localization by Transferring Between Ground and Satellite Images [pdf]
Hang Chu, Hongyuan Mei, Mohit Bansal, Matthew Walter
Neural Information Processing Systems Workshops (**NIPSW**), 2015.

[14] GPS Refinement and Camera Orientation Estimation from a Single Image and a 2D Map [pdf][demo][code]
Hang Chu, Andrew Gallagher, Tsuhan Chen
Computer Vision and Pattern Recognition Workshops (**CVPRW**), 2014.