



HangChu

PhD Student in Computer Vision

Tel & Skype

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hangchu1122

Mail

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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
L^AT_EX

Languages

English (proficient)
Mandarin (native)

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

Work

- 05/17 - 08/17 **Research Intern** [Google Research](#)
Worked with Utsav Prabhu and Andrew Gallagher, Machine Perception team.
Video semantic 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.

Academic

- 10/15 - 06/16 **Visiting Researcher** [University of Toronto](#)
Semantic scene understanding, Machine Learning group.
- 01/13 - 05/13 **Student** [INSA Lyon-SJTU](#)
Image technologies, Specific Program in Engineering.
- 08/12 - 09/12 **Student** [RWTH Aachen University](#)
Automation and simulation, summer school.

Courses Publications

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+)
Robot Learning (A)
Numerical Analysis (A)
Heuristic Optimization (A-)

Certified

Machine Learning
Graphical Models

Services

Conference Reviewer

ICCV 2017
NIPS 2016
IROS 2016

Journal Reviewer

Circuits Systems and Signal
Processing
Visual Communication and
Image Representation
Security and Communication
Networks

Places Lived

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

Journal

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

Conference

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

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

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

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

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

Workshop

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

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

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

Honors & Awards

ICRA Student Travel Award, 2015
ACM Multimedia Student Travel Award, 2012
SJTU Excellent Bachelor Thesis Award, 2013 (3/290)
SJTU Pan Wen Yuan Scholarship, 2010 (15/630)
SJTU Student Scholarship, 2009-2013 (60/630)