HangChu

PhD Student in Computer Vision

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Mail
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Website
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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
English
Mandarin

Education

2016 - Now	**Ph.D. Student in Machine Learning** GPA: 4.00/4.00 Advisors: Raquel Urtasun and Sanja Fidler	University of Toronto
2013 - 2015	**M.S. in Electrical and Computer Engineering** GPA: 4.00/4.00 (rank 1/8) Thesis: Vision-based Localization with Map Information Advisors: Tsuhan Chen and Ashutosh Saxena	Cornell University
2009 - 2013	**B.S. in Information Engineering** 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	Shanghai Jiao Tong University

Experience

Work

05/17 - 08/17	**Research Intern** Worked with Utsav Prabhu and Andrew Gallagher, Machine Perception team. Video semantic understanding.	Google Research
06/15 - 10/15	**Research Intern** 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).	Toyota Technological Institute
06/14 - 08/14	**Research Intern** Worked with Anh Vu, Driving Assistance Systems team. Registration of high-resolution road-lane images for mapping.	Volkswagon Electronic Research Lab

Academic

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

Publications

Working Papers

[1] **Hang Chu**, Utsav Prabhu, Andrew Gallagher, Michael Nechyba
Video-Undirection: Discovering Video Scenes from Shot Sequences
Manuscript for Computer Vision and Pattern Recognition (CVPR), 2019.

Journal Papers

[2] 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 Papers

[3] **Hang Chu**, Daiqing Li, Sanja Fidler
A Face-to-Face Neural Conversation Model [pdf][demo]
Computer Vision and Pattern Recognition (CVPR), 2018.
[4] **Hang Chu**, Wei-Chiu Ma, Kaustav Kundu, Raquel Urtasun, Sanja Fidler
SurfConv: Bridging 3D and 2D Convolution for RGBD Images [pdf][code]
Computer Vision and Pattern Recognition (CVPR), 2018.
[5] 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.
[6] **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.
[7] **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.
[8] **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.
[9] **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 Papers

[10] **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.
[11] **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.
[12] **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.