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
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

05/18 - 08/18	**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.	

Publications

Journal

[1] 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

[2] 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.

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

[4] 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.

[5] 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.

[6] 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.

[7] 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.

[8] 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.

[9] 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 (ACM MM), 2012.

Workshop

[10] 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 (ICLR-W), 2016.

[11] 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 (NIPS-W), 2015.

[12] 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 (CVPR-W), 2014.