Yu Xiang

CONTACT INFORMATION	University of Washington Computer Science & Engineering 185 Stevens Way, Paul G. Allen Center Seattle, WA 98195-2350	734-277-4576 yuxiang@cs.washington.edu http://yuxng.github.io/

RESEARCH INTERESTS

Computer Vision, Robotics, Machine Learning, Deep Learning

EDUCATION

University of Michigan, Ann Arbor, Michigan, USA — Sep 2010 – Dec 2015
Ph.D. in Electrical Engineering: Systems
Dissertation: 3D Object Representations for Recognition
Advisor: Prof. Silvio Savarese

Fudan University, Shanghai, China — Sep 2007 – Jul 2010
M.S. in Computer Science
Dissertation: Graphic Models for Semantic Context Modeling in Automatic Image Annotation
Advisor: Prof. Xiangdong Zhou

Fudan University, Shanghai, China — Sep 2003 – Jul 2007
B.S. in Computer Science

EXPERIENCE

University of Washington, Seattle, Washington, USA — Aug 2016 – present
Postdoctoral Researcher
- Advisor: Prof. Dieter Fox

Stanford University, Stanford, California, USA — Jan 2016 – Jul 2016
Postdoctoral Researcher
- Advisor: Prof. Silvio Savarese

Stanford University, Stanford, California, USA — Sep 2013 – Dec 2015
Visiting Student Researcher
- Advisor: Prof. Silvio Savarese

NEC Laboratories America, Inc., Cupertino, California, USA — Jun 2015 – Sep 2015 / May 2014 – Aug 2014
Summer Research Intern
- Department: Media Analytics

PUBLICATIONS

DA-RNN: Semantic Mapping with Data Associated Recurrent Neural Networks
Yu Xiang and Dieter Fox
In *Robotics: Science and Systems (RSS)*, 2017.

Subcategory-aware Convolutional Neural Networks for Object Proposals and Detection
Yu Xiang, Wongun Choi, Yuanqing Lin and Silvio Savarese
In *IEEE Winter Conference on Applications of Computer Vision (WACV)*, 2017.

Anticipating Accidents in Dashcam Videos
Fu-Hsiang Chan, Yu-Ting Chen, *Yu Xiang* and Min Sun
In *Asian Conference on Computer Vision (ACCV)*, 2016 (Oral).

ObjectNet3D: A Large Scale Database for 3D Object Recognition
Yu Xiang, Wonhui Kim, Wei Chen, Jingwei Ji, Christopher Choy, Hao Su, Roozbeh Mottaghi, Leonidas Guibas and Silvio Savarese
In *European Conference on Computer Vision (ECCV)*, pp. 160-176, 2016 (Spotlight Oral).

Pose Estimation Errors, the Ultimate Diagnosis
Carolina Redondo-Cabrera, Roberto López-Sastre, *Yu Xiang*, Tinne Tuytelaars and Silvio Savarese
In *European Conference on Computer Vision (ECCV)*, pp. 118-134, 2016.

Deep Metric Learning via Lifted Structured Feature Embedding
Hyun Oh Song, *Yu Xiang*, Stefanie Jegelka and Silvio Savarese

In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 4004-4012, 2016 (Spotlight Oral).

Learning to Track: Online Multi-Object Tracking by Decision Making
Yu Xiang, Alexandre Alahi and Silvio Savarese
In *International Conference on Computer Vision (ICCV)*, pp. 4705-4713, 2015 (Oral).

Data-Driven 3D Voxel Patterns for Object Category Recognition
Yu Xiang, Wongun Choi, Yuanqing Lin and Silvio Savarese
In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 1903-1911, 2015 (Oral).

A Coarse-to-Fine Model for 3D Pose Estimation and Sub-category Recognition
Roozbeh Mottaghi, *Yu Xiang* and Silvio Savarese
In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 418-426, 2015.

Monocular Multiview Object Tracking with 3D Aspect Parts
*Yu Xiang**, Changkyu Song*, Roozbeh Mottaghi and Silvio Savarese (*equal contribution)
In *European Conference on Computer Vision (ECCV)*, pp. 220-235, 2014.

Beyond PASCAL: A Benchmark for 3D Object Detection in the Wild
Yu Xiang, Roozbeh Mottaghi and Silvio Savarese
In *IEEE Winter Conference on Applications of Computer Vision (WACV)*, pp. 75-82, 2014.

Object Detection by 3D Aspectlets and Occlusion Reasoning
Yu Xiang and Silvio Savarese
In *IEEE Workshop on 3D Representation and Recognition (3dRR)*, pp. 530-537, 2013.

Object Co-detection
Sid Yingze Bao, *Yu Xiang* and Silvio Savarese
In *European Conference on Computer Vision (ECCV)*, vol. 7572, pp. 86-101, 2014.

Estimating the Aspect Layout of Object Categories
Yu Xiang and Silvio Savarese
In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 3410-3417, 2012.

Semantic Context Modeling with Maximal Margin Conditional Random Fields for Automatic Image Annotation
Yu Xiang, Xiangdong Zhou, Zuotao Liu, Tat-Seng Chua and Chong-Wah Ngo
In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 3368-3375, 2010.

Learning Contextual Metrics for Automatic Image Annotation
Zuotao Liu, Xiangdong Zhou, *Yu Xiang* and Yan-Tao Zheng
In *Advances in Multimedia Information Processing - PCM*, vol. 6297, pp. 124-135, 2010.

A Revisit of Generative Model for Automatic Image Annotation using Markov Random Fields
Yu Xiang, Xiangdong Zhou, Zuotao Liu, Tat-Seng Chua and Chong-Wah Ngo
In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 1153-1160, 2009.

Adaptive Model for Web Image Semantic Automatic Image Annotation
Hongtao Xu, Xiangdong Zhou, *Yu Xiang* and Baile Shi
In *Journal of Software (in Chinese)*, vol. 21, no. 9, pp. 2183-2195, 2009.

Exploiting Flickr's Related Tags for Semantic Annotation of Web Images
Hongtao Xu, Xiangdong Zhou, *Yu Xiang* and Baile Shi
In *ACM International Conference on Image and Video Retrieval (CIVR)*, no. 46, 2009.

Automatic Web Image Annotation via Web-Scale Image Semantic Space Learning
Hongtao Xu, Xiangdong Zhou, Lan Lin, *Yu Xiang* and Baile Shi
In *Advances in Data and Web Management*, vol. 5446, pp. 211-222, 2009.

TEACHING
EXPERIENCE

The C Programming Language, Fudan University, Shanghai, China   Sep 2009 – Jan 2010
 Teaching Assistant

AWARDS AND
HONORS

Outstanding Master's Thesis Award of Shanghai   2012

PROFESSIONAL SERVICE	Journal Reviewer
	• IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) • International Journal of Computer Vision (IJCV) • Computer Vision and Image Understanding (CVIU) • IEEE Transactions on Circuits and Systems for Video Technology (TCSVT) • IEEE Transactions on Multimedia (TMM) • IEEE Robotics and Automation Letters (RA-L)

Conference Reviewer
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
- International Conference on Computer Vision (ICCV)
- European Conference on Computer Vision (ECCV)
- Asian Conference on Computer Vision (ACCV)
- British Machine Vision Conference (BMVC)
- Neural Information Processing Systems (NIPS)
- IEEE International Conference on Robotics and Automation (ICRA)
- International Conference on Intelligent Robots and Systems (IROS)

Program Chair
- 5th International IEEE Workshop on 3D Representation and Recognition, 2015

Program Committee
- 4th International IEEE Workshop on 3D Representation and Recognition, 2013

Tutorial Organizer
- 3D Object Geometry from Single Image Tutorial at International Conference on 3D Vision, 2016

SKILLS AND LANGUAGES

Programming Languages: C/C++, MATLAB, Python, CUDA, JAVA

Libraries: Tensorflow, Caffe, OpenCV, OpenGL

Operating Systems: Linux, Windows and Mac OS X

Languages: English, Chinese