

Joseph J. Lim

CONTACT INFORMATION	32 Vassar St, 32-D466 Cambridge, MA 02139	<i>Vocie:</i> (650) 353-6737 <i>E-mail:</i> lim@csail.mit.edu http://csail.mit.edu/~lim
RESEARCH INTERESTS	Computer Vision, Machine Learning, Graphics, and Robotics	
CURRENT AFFILIATION	Massachusetts Institute of Technology , Cambridge, MA <i>Postdoctoral Associate in Electrical Engineering and Computer Science</i> <ul style="list-style-type: none">• Advisor: Bill Freeman	2015-Present
EDUCATION	Massachusetts Institute of Technology , Cambridge, MA <i>Ph.D. in Electrical Engineering and Computer Science</i> <ul style="list-style-type: none">• Advisor: Antonio Torralba• Thesis Committee: Jitendra Malik (UC Berkeley) and Bill Freeman (MIT) Massachusetts Institute of Technology , Cambridge, MA <i>S.M. in Electrical Engineering and Computer Science</i> <ul style="list-style-type: none">• Advisor: Antonio Torralba• Thesis title: Transfer Learning by Borrowing Examples for Multiclass Object Detection University of California, Berkeley , Berkeley, CA <i>B.A. in Computer Science</i> <ul style="list-style-type: none">• Overall GPA: 3.97/4.00• Highest Honors (<i>Summa Cum Laude</i>)	Graduated Sept. 2015 Gradated June 2012 Graduated May 2009
RESEARCH EXPERIENCE	Massachusetts Institute of Technology - CSAIL <i>Postdoctoral Associate</i> , Advisor: Bill Freeman	2015-Present
	Massachusetts Institute of Technology - CSAIL <i>Graduate Research Assistant</i> , Advisor: Antonio Torralba	2009-2015
	Microsoft Research - Interactive Visual Media , Redmond, Washington, USA <i>Research Intern</i> , Mentors: Piotr Dollar and Larry Zitnick Developed an algorithm for learning mid-level representation used for contour and object detections, published in CVPR 2013. There is a pending patent on this summer project.	2012
	Adobe - Creative Technologies Lab , San Francisco, California USA <i>Research Intern</i> , Mentor: Lubomir Bourdev Developed a human part segmentation algorithm (e.g. segmenting face, torso, lower body, etc) by combining top-down and bottom-up evidences.	2010
	University of California - Berkeley <i>Undergraduate Research Assistant</i> , Advisor: Jitendra Malik Developed algorithms for object recognition using low-level segmentation.	2007-2009
	University of California - Irvine <i>Undergraduate Research Assistant</i> , Advisor: Max Welling	2006-2007

AWARDS	2nd Best Presentation Award, MIT CSAIL Student Workshop (CSW)	2014
	National Science Foundation (NSF) Graduate Fellowship	2009-2014
	UC Berkeley Outstanding Undergraduate Research Award	2009
	ACM International Collegiate Programming Contest (Team: UCB BLUE) - World Final	2009
	Haas Scholar - Fellowship for Independent Research (\$12,600)	2008-2009
	Undergraduate Research Opportunities Program - Research Grant	Fall 2006
	USA Computing Olympiad - Finalist and All-American Team	

PEER-REVIEWED PUBLICATIONS Total of 784 citations

14. Tianfan Xue*, Jiajun Wu*, **Joseph J. Lim**, Yuandong Tian, Josh Tenenbaum, Antonio Torralba, William Freeman. (anonymous title). In submission for *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2016.
13. Jiajun Wu, **Joseph J. Lim**, Josh Tenenbaum, William Freeman. (anonymous title). In submission for *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2016.
12. Jiajun Wu*, Ilker Yildirim*, **Joseph J. Lim**, William Freeman, and Josh Tenenbaum. Galileo: Perceiving Physical Object Properties by Integrating a Physics Engine with Deep Learning. In *Advances in Neural Information Processing Systems (NIPS)*, 2015.
11. **Joseph J. Lim***, Phillip Isola*, and Edward Adelson. Discovering States and Transformations in Image Collections. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2015.
10. **Joseph J. Lim**, Aditya Khosla, and Antonio Torralba. FPM: Fine Pose Parts-Based Model with 3D CAD Models. In *European Conference on Computer Vision (ECCV)*, 2014.
9. **Joseph J. Lim***, Aditya Khosla*, Byoung Kwon An*, and Antonio Torralba. Looking Beyond the Visible Scene. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2014.
8. **Joseph J. Lim**, Hamed Pirsiavash, and Antonio Torralba. Parsing IKEA Objects: Fine Pose Estimation. In *IEEE International Conference on Computer Vision (ICCV)*, 2013.
7. **Joseph J. Lim**, C. Lawrence Zitnick, and Piotr Dollar. Sketch Tokens: A Learned Mid-level Representation for Contour and Object Detection. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2013.
6. **Joseph J. Lim**, Ruslan Salakhutdinov, and Antonio Torralba. Transfer Learning by Borrowing Examples for Multiclass Object Detection. In *Advances in Neural Information Processing Systems (NIPS)*, 2011.
5. Pablo Arbelaez, Bong-Gyoon Han, Dieter Typke, **Joseph J. Lim**, Robert M. Glaeser, Jitendra Malik. Experimental Evaluation of Support Vector Machine-based and Correlation-based Approaches to Automatic Particle Selection. *Journal of Structural Biology* 2011.
4. Myung Jin Choi, **Joseph J. Lim**, Antonio Torralba, Alan S. Willsky. Exploiting Hierarchical Context on a Large Database of Object Categories. In *Computer Vision and Pattern Recognition (CVPR)*, 2010.
3. **Joseph J. Lim**, Pablo Arbelaez, Chunhui Gu, Jitendra Malik. Context by Region Ancestry. In *IEEE International Conference on Computer Vision (ICCV)*, 2009.

2. Chunhui Gu, **Joseph J. Lim**, Pablo Arbelaez, Jitendra Malik. Recognition using Regions. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2009.

1. Max Welling and **Joseph J. Lim**. A Distributed Message Passing Algorithm for Sensor Localization. In *International Conference on Artificial Neural Networks*, 2007.

PROFESSIONAL EXPERIENCE **Microsoft Research - Interactive Visual Media**, Redmond, Washington, USA **2012**
Research Intern

Adobe - Creative Technologies Lab, San Francisco, California USA **2010**
Research Intern

Google, Mountain View, California USA **2009**
Software Engineer

JavaGround, Irvine, California USA **2006**
Tool Developer

Microsoft Corporation, Redmond, Washington USA **2006**
Software Design Engineer Intern

MENTORING Erika Lu (Undergraduate, 2015-present)
 Katie Bartel (Undergraduate, 2015-present)
 Jiajun Wu (Master's, 2015-present)
 Hyodong Lee (Master's, 2015-present)
 Hairuo Guo (Undergraduate, 2014-present)
 Supervising through MIT's Undergraduate Research Opportunities Program (UROP). It started on May 2014. The topic is related to 3D object recognition.
 Byoung Kwon An (Master's, 2013)
 Supervised over 3 months on a navigation problem using Google street view images. This work is published at one of top computer vision conferences (CVPR 2014).

ACADEMIC EXPERIENCE **Guest Lecturer**, Massachusetts Institute of Technology **Fall 2015**
 6.869 - Advances in Computer Vision

IAP Course Instructor, Massachusetts Institute of Technology **Winter 2014**
 6.S093 - Visual Recognition through Machine Learning Competition
 Lecturer Evaluation: 6.8/7.0

Teaching Assistant, Massachusetts Institute of Technology **Spring 2010**
 6.869 - Advances in Computer Vision: Learning and Interfaces

Grader, University of California - Berkeley **Spring 2009**
 CS 188 - Introduction to Artificial Intelligence

Grader, University of California - Berkeley **Fall 2008**
 CS 188 - Introduction to Artificial Intelligence

Team Leader, Cal RoboCup, University of California - Berkeley **2007-2008**
 Served the CS team as the leader in the Cal Robocup group.

- PATENTS U.S. Patent Application, MS# 338110.01, "Learned Mid-level Representation for Contour and Object Detection" by P. Dollar, C.L. Zitnick, and J. Lim, filed Mar 11 2013.
- PROFESSIONAL ACTIVITY Organization:
- **Co-organizer - 1st Workshop on Object Understanding for Interaction** at IEEE International Conference on Computer Vision (ICCV) 2015
 - **CMT Assistant** - IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2015
- Reviewer:
- Springer International Journal of Computer Vision (IJCV) 2014-2015
 - IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI) 2014-2015
 - IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2011-2016
 - IEEE International Conference on Computer Vision (ICCV) 2011-2015
 - European Conference on Computer Vision (ECCV) 2012-2014
- Committee:
- PC - 3D from a single image workshop at CVPR 2015
 - PC - Storytelling with Images and Videos (VisStory) at ECCV 2014
 - PC - Scene Understanding Workshop (SUNw) at CVPR 2013
- INVITED TALKS "Toward visual understanding of everyday objects for interaction," Graphics Seminar, MIT, Dec. 2015.
- "Toward visual understanding of everyday objects for interaction," University of Southern California, Sept. 2015.
- "Toward visual understanding of everyday objects for interaction," University of California - Irvine, Sept. 2015.
- "Discovering States and Transformations in Image Collections," CVPR Oral 2015.
- "Toward visual understanding of everyday objects," University of Minnesota, April 2015.
- "Toward visual understanding of everyday objects," Brown University, April 2015.
- "Toward understanding everyday objects," Toyota Technological Institute at Chicago (TTIC), Mar 2015.
- "3D Object Understanding," Vision and Graphics Seminar, MIT, Dec 2014.
- "3D Object Understanding," VASC, Carnegie Mellon University, Dec 2014.
- "3D Object Understanding," University of California - Irvine, Nov 2014.
- "3D Object Understanding," Vision Lab, Stanford University, Nov 2014.

“Parsing IKEA Objects: Fine Pose Estimation,” MIT CSAIL Student Workshop, Oct 2014.

“Enabling Machines to See Using Crowdsourced Data,” Korea Advanced Institute of Science and Technology, Jul 2014.

“Enabling Machines to See Using Crowdsourced Data,” POSTECH, Jul 2014.

“Enabling Machines to See Using Crowdsourced Data,” Seoul National University, Jul 2014.

“Ground-truth image dense correspondence database,” CVPR tutorial talk, June 2014.

“Parsing IKEA Objects: Fine Pose Estimation,” MIT CSAIL Alliance Program, May 2014.

“Transfer Learning by Borrowing Examples for Multiclass Object Detection,” Korea Advanced Institute of Science and Technology, Jan 2012.

“Transfer Learning by Borrowing Examples for Multiclass Object Detection,” Vision and Graphics Seminar, MIT, Jan 2012.

“Recognition using Regions,” Seoul National University, June 2009.

“Recognition using Regions,” Haas Scholar, UC Berkeley, April 2009.

“Recognition using Regions,” University of California - Irvine, Feb 2009.

TECHNICAL
SKILLS

Languages: C/C++, Java, Matlab, Javascript, PHP

Development Environment: Linux/Unix, Mac OS, and Windows.

Fluent in English and Korean (U.S. citizen)