

# PIOTR DOLLÁR

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## Education

UNIVERSITY OF CALIFORNIA, SAN DIEGO San Diego, CA  
Ph.D. in Computer Science, 2007.  
Dissertation: *Learning from Local Image Regions*  
Advisor: Serge Belongie.

HARVARD UNIVERSITY Cambridge, MA  
S.M. (Master of Science) in Computer Science, 2002.  
A.B. Cum Laude in Computer Science, 2002.

## Research Experience

MICROSOFT RESEARCH Redmond, WA  
Researcher. Nov. 2011 - present.

CALIFORNIA INSTITUTE OF TECHNOLOGY Pasadena, CA  
Postdoctoral Fellow, Senior Postdoctoral Fellow. Sept. 2007 - Oct. 2011.

TANDENT VISION SCIENCE San Francisco, CA  
Consultant. June 2006 - March 2007.

SIEMENS CORPORATE RESEARCH Princeton, NJ  
Intern under Zhuowen Tu, Integrated Data Systems Department. Summer 2005.

UNIVERSITY OF CALIFORNIA, SAN DIEGO San Diego, CA  
Graduate Student Researcher under Serge Belongie. Feb. 2004 - Sept. 2007.

UNIVERSITY OF MICHIGAN Ann Arbor, MI  
Research Assistant under Marshall Van Alstyne. June 2000 - Sept. 2002.

ARGONNE NATIONAL LABORATORY Argonne, IL  
Research Assistant under James Jorgensen. Summer 1999.

## Teaching Experience

CALIFORNIA INSTITUTE OF TECHNOLOGY Pasadena, CA  
CS148 - *Selected Topics in Computational Vision* Spring 2010: Guest Lecturer

UNIVERSITY OF CALIFORNIA, SAN DIEGO San Diego, CA  
CSE150 - *Artificial Intelligence* Winter 2004: Teaching Assistant  
CSE166 - *Image Processing* Fall 2003, Fall 2004: Teaching Assistant; Guest Lecturer

HARVARD UNIVERSITY Cambridge, MA  
CS181 *Intelligent Machines* Spring 2002: Teaching Fellow

Supervised students: *Yi Wang*, undergraduate thesis, 2008; *Asif Khan*, Summer Undergraduate Research Fellowship, 2010 (co-supervised with Michael Maire); *Justin Johnson*, Summer Undergraduate Research Fellowship, 2010 (co-supervised with Michael Maire).

## Professional Activities

Reviewer: Pattern Analysis and Machine Intelligence (PAMI), Computer Vision and Pattern Recognition (CVPR), International Conference on Computer Vision (ICCV), European Conference on Computer Vision (ECCV), Neural Information Processing Systems (NIPS), British Machine Vision Conference (BMVC), International Journal of Computer Vision (IJCV), Transactions on Image Processing (TIP), Machine Vision and Applications Journal (MVA), Journal of Machine Learning Research (JMLR).

Program Committee: CVPR 2009 International Workshop on Visual Scene Understanding (Panelist); CVPR 2010 Workshop on Advancing Computer Vision with Humans in the Loop; ECCV 2010 International Workshop on Sign Gesture Activity; CVPR 2011 Workshop on Human Activity Understanding from 3D Data.

Judge: Siemens Competition in Math, Science and Technology 2009, 2010.

## Software

Piotr's Image & Video Matlab Toolbox: open source computer vision library with emphasis on efficiency. Approximately 22,500 visitors between 2008-2010 (~102,000 page views). <http://vision.ucsd.edu/~pdollar/toolbox/doc/index.html>

Other Matlab packages (available upon request): Behavior Recognition Toolbox (272 requests between 2006-2010), Locally Smooth Manifold Learning Toolbox (45 requests between 2008-2010), Cascaded Pose Regression Toolbox (5 requests in 2010).

## Seminars

"Supervised Learning of Edges and Object Boundaries," University of Maryland, April 2007; Johns Hopkins, April 2007; Caltech, April 2007; Applied Physics Laboratory, April 2007; CMU, April 2007.

"Locally Smooth Manifold Learning," UCLA, Feb. 2008.

"Multiple Component Learning for Object Detection," UC Irvine, Oct. 2008; EPFL Sep. 2009.

"Pedestrian Detection: The State of the Art," Jet Propulsion Laboratory, March 2009; UC Irvine, Oct. 2009; Microsoft Research, July 2010; Intel Labs Seattle, July 2010.

"The Fastest Pedestrian Detector in the West," UC Irvine, Oct. 2010; Caltech May 2010.

"Towards a Trainable Animal Tracking System," HHMI Janelia Farm, Nov. 2010.

"Detection and Tracking," Berkeley, Feb. 2011.

"Object-Centered Visual Recognition," Microsoft, March 2011; U. Washington, May 2012.

## Publications

**Remark:** All citation counts, when available, were obtained via Google Scholar in 5/2012.

X.P. Burgos-Artizzu, P. Dollár, D. Lin, D.J. Anderson, P. Perona, "Social Behavior Recognition in Continuous Videos," *Computer Vision and Pattern Recognition (CVPR)*, 2012.

P. Dollár, C. Wojek, B. Schiele, and P. Perona, "Pedestrian Detection: An Evaluation of the State of the Art," *Pattern Analysis and Machine Intelligence (PAMI)*, 2012 [**8** citations].

D. Lin, M. Boyle, P. Dollár, H. Lee, P. Perona, E. Lein, D. Anderson, "Functional identification of an aggression locus in the mouse hypothalamus," *Nature*, 2011 [**32** citations].

- C. Hsu, P. Dollár, D. Chang, and A. Steele, “Daily timed sexual interaction induces moderate anticipatory activity in mice,” *PLoS ONE*, 2010 [1 citation].
- P. Dollár, S. Belongie, and P. Perona, “The Fastest Pedestrian Detector in the West,” *British Machine Vision Conference (BMVC)*, 2010 [13 citations].
- P. Dollár, P. Welinder, and P. Perona, “Cascaded Pose Regression,” *Computer Vision and Pattern Recognition (CVPR)*, 2010 [8 citations].
- P. Dollár, Z. Tu, P. Perona and S. Belongie “Integral Channel Features,” *British Machine Vision Conference (BMVC)*, 2009 [28 citations].
- P. Dollár, C. Wojek, B. Schiele, and P. Perona, “Pedestrian Detection: a Benchmark,” *Computer Vision and Pattern Recognition (CVPR)*, 2009 [168 citations].
- P. Dollár, B. Babenko, S. Belongie, P. Perona, and Z. Tu, “Multiple Component Learning for Object Detection,” *European Conference on Computer Vision (ECCV)*, 2008 [54 citations].
- B. Babenko, P. Dollár, Z. Tu and S. Belongie, “Simultaneous Learning and Alignment: Multi-Instance and Multi-Pose Learning,” *European Conference on Computer Vision: Faces in Real-Life Images (ECCV Faces)*, 2008 [29 citations].
- Z. Tu, K. L. Narr, P. Dollár, I. Dinov, P. M. Thompson, and A. W. Toga, “Brain Anatomical Structure Parsing by Hybrid Discriminative/Generative Models,” *Transactions on Medical Imaging (TMI)*, 2008 [87 citations].
- D.S. Touretzky, A.S. Gupta, M.C. Fuhs, P. Dollár, A.P. Maurer, B.L. McNaughton, “Reconstructing the Topologies of Hippocampal Cognitive Maps,” *Society for Neuroscience (SFN)*, 2007.
- B. Babenko, P. Dollár and S. Belongie, “Task Specific Local Region Matching,” *International Conference on Computer Vision (ICCV)*, 2007 [14 citations].
- P. Dollár, V. Rabaud and S. Belongie, “Non-Isometric Manifold Learning: Analysis and an Algorithm,” *International Conference on Machine Learning (ICML)*, 2007 [33 citations].
- P. Dollár, Z. Tu, H. Tao and S. Belongie, “Feature Mining for Image Classification,” *Computer Vision and Pattern Recognition (CVPR)*, 2007 [57 citations].
- P. Dollár, V. Rabaud and S. Belongie, “Learning to Traverse Image Manifolds,” *Neural Information Processing Systems (NIPS)*, 19, 2006 [19 citations].
- P. Dollár, Z. Tu and S. Belongie, “Supervised Learning of Edges and Object Boundaries,” *Computer Vision and Pattern Recognition (CVPR)*, 2006 [117 citations].
- P. Dollár, V. Rabaud, G. Cottrell and S. Belongie, “Behavior Recognition via Sparse Spatio-Temporal Features,” *International Conference on Computer Vision - Visual Surveillance and Performance Evaluation of Tracking and Surveillance (ICCV VS-PETS)*, 2005 [705 citations].
- S. Belongie, K. Branson, P. Dollár, and V. Rabaud, “Monitoring Animal Behavior in the Smart Vivarium,” *Measuring Behavior*, 2005 [16 citations].
- P. Dollár, P. Laskowski and M. Van Alstyne, “Simulating the Growth and Diffusion of Knowledge in Agent Societies,” *Conference on Computational Analysis of Social and Organization Systems (CASOS)*, 2002.
- O. Chmaissem, J.D. Jorgensen, H. Shaked, P. Dollár, J.L. Tallon, “Crystal and magnetic structure of ferromagnetic superconducting  $\text{RuSr}_2\text{GdCu}_2\text{O}_8$ ,” *Physics Review B*, 61, 2000 [228 citations].

Updated: May 20, 2012.