

Bangpeng Yao

CONTACT INFORMATION	Computer Science Building, Room 241 353 Serra Mall, Stanford University Stanford, CA 94305-9025, USA	bangpeng@cs.stanford.edu http://ai.stanford.edu/~bangpeng/
EDUCATION	Stanford University , Stanford, CA, USA <i>Ph.D. candidate in Computer Science</i>	09/2009 - Present
	Princeton University , Princeton, NJ, USA <i>Ph.D. student in Computer Science</i>	09/2008 - 08/2009
	Tsinghua University , Beijing, China <i>M.E. in Computer Science and Technology</i> <ul style="list-style-type: none">• Graduate <i>summa cum laude</i>.	09/2006 - 07/2008
	<i>B.E. in Automation</i> <ul style="list-style-type: none">• Graduate <i>summa cum laude</i>.	09/2002 - 07/2006
RESEARCH INTEREST	Computer Vision <ul style="list-style-type: none">• human action recognition, fine-grained image categorization, object detection, image retrieval, face recognition, human-object interaction understanding, human pose estimation, context modeling, natural scene classification, template matching, context modeling, low level feature description. Machine Learning <ul style="list-style-type: none">• conditional random field, sparse coding, max-margin learning, graphical models, decision trees and random forest, boosting, case-based reasoning, online learning. Computational Neuroscience <ul style="list-style-type: none">• fMRI analysis.	
PROFESSIONAL EXPERIENCE	Stanford University , Stanford, CA, USA <i>Research Assistant at the Stanford Vision Lab</i> <ul style="list-style-type: none">• Projects: Recognizing human actions and human-object interactions in still images; Fine-grained image categorization.• Advisor: Fei-Fei Li.	09/2009 - Present
	Willow Garage Inc. , Menlo Park, CA, USA <i>Summer Intern</i> <ul style="list-style-type: none">• Project: 3D object detection and recognition; Efficient template matching.• Mentor: Gary Bradski.	07/2011 - 09/2011
	Microsoft Research Cambridge , Cambridge, UK <i>Research Intern in the Machine Learning and Perception Group</i> <ul style="list-style-type: none">• Project: Image segmentation and de-noising.• Mentor: Carsten Rother; also work with Sebastian Nowozin and Pushmeet Kohli.	07/2010 - 09/2010
	Princeton University , Princeton, NJ, USA <i>Research Assistant at the Princeton Vision Lab</i> <ul style="list-style-type: none">• Project: Learning functional connectivity among brain regions in fMRI data.• Advisor: Fei-Fei Li.	10/2008 - 05/2009
	Tsinghua University , Beijing, China <i>Research Assistant at the Image and Vision Computing Group</i> <ul style="list-style-type: none">• Project: Face recognition in large-scale, real-world images.• Advisor: Haizhou Ai.	03/2006 - 06/2008
	<i>Undergraduate Researcher at the MOE Key Lab of Bioinformatics</i>	07/2005 - 02/2006

- Project: Microarray data classification.
- Advisor: Shao Li.

Shanghai Institute of Computer Technology, Shanghai, China

Software Engineer Intern at the Research and Development Center 06/2005 - 08/2005

- Project: Designing and implementing an embedded system for remote control.
- Mentor: Jianxin Tu.

PUBLICATIONS

B. Yao and L. Fei-Fei. Recognizing Human-Object Interactions in Still Images by Modeling the Mutual Context of Objects and Human Poses. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2011.

B. Yao, G. Bradski, and L. Fei-Fei. A Codebook-Free and Annotation-Free Approach for Fine-Grained Image Categorization. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. Providence, RI, USA. June 16-21, 2012. (Acceptance rate: 24.1%)

B. Yao, X. Jiang, A. Khosla, A. Lin, L. Guibas, and L. Fei-Fei. Human Action Recognition by Learning Bases of Action Attributes and Parts. *International Conference on Computer Vision (ICCV)*. Barcelona, Spain. November 6-13, 2011. (Oral presentation; Acceptance rate: 2.8%)

S. Nowozin, C. Rother, S. Bagon, B. Yao, T. Sharp, and P. Kohli. Decision Tree Fields. *International Conference on Computer Vision (ICCV)*. Barcelona, Spain. November 6-13, 2011. (Oral presentation; Acceptance rate: 2.8%)

B. Yao, A. Khosla, and L. Fei-Fei. Action Recognition by Modeling the Mutual Context of Objects and Human Poses. *International Conference on Machine Learning (ICML)*. Bellevue, WA, USA. June 28 - July 2, 2011. (Oral presentation in the cross-conference track)

B. Yao, A. Khosla, and L. Fei-Fei. Combining Randomization and Discrimination for Fine-Grained Image Categorization. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. Colorado Springs, CO, USA. June 20-25, 2011. (Acceptance rate: 26.4%)

B. Yao and L. Fei-Fei. Grouplet: A Structured Image Representation for Recognizing Human and Object Interactions. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. San Francisco, CA, USA. June 13-18, 2010. (Oral presentation; Acceptance rate: 4.5%)

B. Yao and L. Fei-Fei. Modeling Mutual Context of Object and Human Pose in Human-Object Interaction Activities. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. San Francisco, CA, USA. June 13-18, 2010. (Oral presentation; Acceptance rate: 4.5%; **Best Paper Honorable Mention Award**)

B. Yao and S. Li. ANMM4CBR: A Case-Based Reasoning Method for Gene Expression Data Classification. *Algorithms for Molecular Biology*. 5:14, 2010. (Highly accessed)

B. Yao, D. B. Walther, D. M. Beck, and L. Fei-Fei. Hierarchical Mixture of Classification Experts Uncovers Interactions between Brain Regions. *Annual Conference on Neural Information Processing Systems (NIPS)*. Vancouver, BC, Canada. December 7-10, 2009. (Acceptance rate: 23.8%)

B. Yao, H. Ai, and S. Lao. Building a Compact Relevant Sample Coverage for Relevance Feedback in Content-Based Image Retrieval. *European Conference on Computer Vision (ECCV)*, part I, pages 697-710. Marseille, France. October 12-18, 2008. (Acceptance rate: 27.9%)

B. Yao, H. Ai, and S. Lao. Logit-RankBoost with Pruning for Face Recognition. *IEEE International Conference on Automatic Face and Gesture Recognition (FG)*. Amsterdam, Nether-

lands. September 17-19, 2008.

B. Yao, H. Ai, and S. Lao. Person-Specific Face Recognition in Unconstrained Environments: A Combination of Offline and Online Learning. *IEEE International Conference on Automatic Face and Gesture Recognition (FG)*. Amsterdam, Netherlands. September 17-19, 2008.

B. Yao, H. Ai, and S. Lao. Matching Texture Units for Face Recognition. *IEEE International Conference on Image Processing (ICIP)*, pages 1920-1923. San Diego, CA, USA. October 12-15, 2008.

B. Yao, H. Ai, Y. Ijiri, and S. Lao. Domain-Partitioning RankBoost for Face Recognition. *IEEE International Conference on Image Processing (ICIP)*, volume 1, pages 129-132. San Antonio, TX, USA. September 16-19, 2007.

TEACHING
EXPERIENCE

The Cutting Edge of Computer Vision (CS223C), Stanford University
Assistant Instructor with Prof. Li Fei-Fei 2010 Winter & 2011 Spring

Structured Probabilistic Models: Principles and Techniques (CS228), Stanford University
Teaching Assistant with Prof. Daphne Koller 2009 Winter

INVITED
TALKS

Human Action Recognition by Learning Bases of Action Attributes and Parts. *International Conference on Computer Vision*. Barcelona, Spain. November 9, 2011.

Action Classification: An Integration of Randomization and Discrimination in A Dense Feature Representation. *ICCV Workshop on PASCAL Visual Object Classes Challenge*. Barcelona, Spain. November 7, 2011.

Combining Randomization and Discrimination for Fine-Grained Image Categorization. *CVPR Workshop on Fine-Grained Visual Categorization*. Colorado Springs, CO, USA. June 25, 2011.

Grouplet: A Structured Image Representation for Recognizing Human and Object Interactions. *IEEE Conference on Computer Vision and Pattern Recognition*. San Francisco, CA, USA. June 15, 2010.

OTHER
EXPERIENCE

Stanford Computer Forum
Student Ambassador 05/2011 - Present

The First Sino-USA Summer School in Vision, Learning, and Pattern Recognition (VLPR), Beijing, China
Publication Chair 07/2009

Graduate Union of Computer Science and Technology Department, Tsinghua University
Vice President 09/2006 - 10/2007

Yimeng Mountain Area, Shandong, China
Volunteer Teacher 07/2004 - 08/2004

SELECTED
AWARDS

Microsoft Research PhD Fellowship, 2012-2013.

Winner Prize on PASCAL VOC Action Classification Challenge, 2011.

CVPR Best Paper Honorable Mention Award, 2010.

SAP Stanford Graduate Fellowship, 2010-2012.

Princeton Graduate Student Fellowship, 2008.

Outstanding Master Graduate of Tsinghua University, 2008.

Outstanding Master's Degree Dissertation in Tsinghua University, 2008.

Excellent League Member of Tsinghua University, 2007.

Outstanding Student Research Training Project in Tsinghua University, 2006.

Outstanding Undergraduate of Tsinghua University, 2006.

Outstanding Bachelor's Degree Dissertation in Tsinghua University, 2006.

Outstanding College Graduate in Beijing City, 2006.

Scholarships: ESS Scholarship, 2007; Samsung Scholarship, 2005; Xianglu Scholarship, 2004; Schneider-Electric Scholarship, 2003.