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EDUCATION

California Institute of Technology, Electrical Engineering Dept., **Ph.D.**, 2001-2005
(Advisors: Prof. Pietro Perona (primary), Prof. Christof Koch (secondary))
California Institute of Technology, Electrical Engineering Dept., **M.S.**, 2000-2001
(Advisors: Prof. Pietro Perona (primary), Prof. Christof Koch (secondary))
Princeton University, Physics Dept. **B.A.**, 1995-1999

PROFESSIONAL EXPERIENCE

Assistant Professor, Computer Science Dept., Princeton University, Princeton, NJ
(2007.01 – present)
Associated Assistant Professor, Psychology Dept., Princeton University, Princeton,
NJ (2007.09 – present)
Associated Assistant Professor, Electrical Engineering Dept., Princeton University,
Princeton, NJ (2007.09 – present)
Assistant Professor, Electrical and Computer Dept., University of Illinois at Urbana-
Champaign, Urbana, IL (2005.08 – 2006.12)
Associated Assistant Professor, Psychology Dept., University of Illinois at Urbana-
Champaign, Urbana, IL (2005.08 – 2006.12)
Visiting Research Scientist, Microsoft Research Center Cambridge, Cambridge, UK
(2005.03 – 2005.06)
Research Assistant, California Institute of Technology, Pasadena, CA (2000.09 –
2005.02)
Research Intern, Microsoft Research Center Cambridge, Cambridge, UK (2004.05 –
2004.07)

ACADEMIC HONORS, AWARDS AND SCHOLARSHIPS

1st Place in the Semantic Robot Vision Challenge Software League. An NSF and
AAAI sponsored visual recognition competition. 2007.
Microsoft Research New Faculty Fellowship. A highly selective fellowship awarded to
“the best new professors in computing disciplines today.” 2006.
IEEE ICCV Best Short Course Prize (w. R. Fergus and A. Torralba). 2005
National Science Foundation Postgraduate Fellowship. 1999-2002
Paul and Daisy Soros Fellowship for New Americans. 1999-2002
Princeton University Martin Dale '53 Fellowship. 1999-2000
Princeton University Kusaka Memorial Prize in Physics. 1999

PROFESSIONAL ACTIVITIES

Area Chair

- IEEE International Conference of Computer Vision (ICCV), 2007
- IEEE Conference of Computer Vision and Pattern Recognition (CVPR), 2009

Program Committee Member

- IEEE International Conference on Computer Vision (ICCV), 2005
- European Conference on Computer Vision (ECCV), 2004, 2006, 2008
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2004, 2006, 2007, 2008
- Neural Information Processing Systems (NIPS), 2008
- International Conference on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR), 2007
- IEEE International Conference on Pattern Recognition (ICPR), 2006
- IEEE Conference on Computer Vision and Pattern Recognition 2nd International Workshop on Generative-Model based Vision (2004)

Workshop, Tutorial and Course Organizer or Chair-person

- Co-Chair, International Workshop in 3D Representation for Recognition, IEEE Conference on Computer Vision (ICCV), 2007
- Co-Organizer, Tutorial on Recognizing and Learning Object Categories, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2007
- Co-Chair, Vision Sciences Society (VSS) Annual Meeting Satellite Symposium: Natural Scene Understanding: Statistics, Recognition and Representation, 2007
- Co-Chair, International Workshop in Computer Vision (in collaboration with Microsoft MSRA), Tibet, 2006
- Co-Organizer, Tutorial on Recognizing and Learning Object Categories, IEEE International Conference on Computer Vision (ICCV), 2005

Journal Reviewer

- Computer Vision: International Journal of Computer Vision (IJCV), IEEE Transaction in Pattern Analysis and Machine Intelligence (PAMI), Computer Vision and Image Understanding (CVIU), ACM Transaction on Applied Perception (TAP)
- Human Vision: Cognitive Psychology, Journal of Vision (JOV), NeuroImage, Journal of Experimental Psychology (JEP), ACM Transaction on Applied Perception (TAP)

Reviewer or Review Committee, Funding Agencies

- NSF, CAREER, proposal panelist, 2006
- NSF, Cognitive Neuroscience, reviewer, 2008
- NSF, Perception, Action and Cognition, reviewer, 2008

SEMINARS AND INVITED TALKS

Tutorials and Courses

- *Object Recognition: an Introduction and a Few Case Studies*. Keynote Speech. International Computer Vision Summer School, Sicily, Italy, 2007.07
- *Computer Vision : Discovering Meaning in the Visual World*. Lecturer, IPAM, UCLA, 2007.07
- *Recognizing and Learning Object Categories: Year 2007*. Short course tutorial, International Conference on Computer Vision. 2007.06
- *Generative Models for Visual Objects and Object Recognition via Bayesian Inference*. Carnegie Mellon University Machine Learning Autumn School, 2006.09

Invited Talks and Seminars

- *Telling the Story of an Image*. Google Research Center, China. 2008.07
- *Telling the Story of an Image*. Chinese Academy of Science, 2008.07
- *Telling the Story of a Scene: from Humans to Computers*. Rutgers University, 2nd Annual Perceptual Science Forum, keynote, 2008.05
- *Telling the Story of a Scene: from Humans to Computers*. University of Maryland, 2008.03
- *Telling the Story of an Image*. ONR MURI workshop, Caltech, 2007.12
- *Discovering Meaning in the Visual World*. Microsoft Research Center Asia (MSRA), Beijing, 2007.08
- *Discovering Meaning in the Visual World*. Google, NYC, 2007.06
- *Discovering Meaning in the Visual World*. MIT Machine Vision Colloquium. 2007.05
- *Modeling real-world objects: a statistical approach*. COSYNE 2007 Workshop "How can we understand shape coding in higher level visual areas?", 2007.02
- *Nature Scene Classification Using Distributed fMRI Activity*. Scene Understanding Symposium, MIT, 2007.02
- *Unsupervised Learning of Human Action Categories Using Spatial-Temporal Words*. Carnegie Mellon University Machine Learning CALD Seminar Series, 2006.09
- *Object and Scene Recognition*. School of Information Engineering, Beijing University of Post and Telecommunication, 2006.08
- *Nature Scene Classification Using Distributed fMRI Activity*. Scene Understanding Symposium, MIT, 2007.02
- *Natural Scene Categorization: From Humans to Computers*. Scene Understand Symposium, MIT. 2006.02
- *A Bayesian Framework for Natural Scene Categorization*. Graphics Lunch Seminar Series, Princeton University, 2005.12
- *A Hierarchical Bayesian Model for Learning Natural Scene Categories*. Sarnoff Corporation and Siemens Corporation, 2005.12
- *Natural Scene Categorization: from Humans to Computers*. Coordinated Sciences Laboratory Seminars, UIUC, 2005.09
- *Natural Scene Categorization in Humans and Computers*. AIVRH Seminar Series, UIUC, 2006.01
- *A Hierarchical Bayesian Model for Learning Natural Scene Categories*. Oxford University Visual Geometry Group Seminar, Oxford University, 2005.04
- *A Bayesian Framework for Unsupervised One-Shot Learning of Object Categories*. SHAPE Seminar Series, Brown University, 2004.02
- *One-Shot Learning of Object Categories*. Electrical Engineering Dept., Princeton University, 2004.02
- *One-Shot Learning of Object Categories*. Computer Science Dept., New York University, 2003.12
- *A Bayesian Framework for Unsupervised One-Shot Learning of Object Categories*. Louvain University, Belgium, 2003.10
- *Natural Scene Categorization Without Attention*. Katholieke Universiteit Leuven, Belgium, 2003.10
- *Natural Scene Categorization With little Attention*. Statistics Dept., University of California Los Angeles, 2003.05
- *Natural Scene Categorization Without Attention*. Brain and Cognitive Sciences Dept., MIT, 2003.02

- *Natural Scene Categorization Without Attention*. Plymouth University, UK, 2003.01
- *Natural Scene Categorization Without Attention*. CNRS Toulouse, France, 2002.12
- *Natural Scene Categorization Without Attention*. Psychology Dept., Princeton University, 2002.10

ADVISING

Graduate Students

- Juan Carlos Niebles (Ph.D. 2005 – present, EE, Princeton)
- Jia Li (Ph.D. 2006 – present, ECE, UIUC)
- Eamon Caddigan (Ph.D. 2006 – present, Psych, UIUC, co-advised by Prof. Diane Beck)
- Min Sun (Ph.D. 2007 – present, CS, Princeton)
- Jia Deng (Ph.D. 2007 – present, CS, Princeton, co-advised by Prof. Kai Li)

Undergraduate Students

- Brendan Collins (A.B., 2007 – 2008, CS, Princeton)
- Paul Kompfer (A.B., 2007 - 2008, CS, Princeton)
- Douglas Horhensee (B.E., 2007 – 2008, CS, Princeton)
- Brian Leo Quanz (B.E., 2006 – 2007, ECE, UIUC)
- Justas Birgiolos (B.E., 2006 – 2007, ECE and Psych, UIUC)

Former Students

- Liangliang Cao (Ph.D. 2006, ECE, UIUC)
- Gang Wang (Ph.D. 2006 – 2007.06, ECE, UIUC)

TEACHING EXPERIENCES

- Instructor, Computer Vision (COS429), Princeton University, Fall 2007
- Instructor, High-Level Recognition in Computer Vision (COS598), Princeton University, Spring 2007
- Instructor, Computer Vision (ECE546), University of Illinois at Urbana-Champaign, Fall 2006
- Instructor, Special Topics: Readings in Computer Vision and Learning (ECE598), University of Illinois at Urbana-Champaign, Fall 2005
- Teaching Assistant, California Institute of Technology, 2000 - 2003

FUNDING

Current

- **UIUC Critical Research Initiative (CRI)**, “Pattern Recognition and Mind Reading: An Emerging Field” (co-PI with Diane Beck), \$50,000, 2006.07 – 2007.07, 50%
- **NIH**, “CRCNS: fMRI pattern analysis of neural correlates of natural scene categories.” (PI, co-PI: Diane Beck (UIUC)), \$1,148,972, 2008.09 – 2011

PUBLICATIONS

Thesis

- **L. Fei-Fei**. Visual Recognition: Computational Models and Human Psychophysics. Ph.D. Thesis, Electrical Engineering Dept., California Institute of Technology, February, 2005.

Refereed Journals and Conference Papers

- 1) J.C. Niebles, B. Han, A. Ferencz and **L. Fei-Fei**. Extracting Moving Humans from Internet Videos. *IEEE European Conf. Computer Vision*, 2008.
- 2) B. Collins, J. Deng, K. Li and **L. Fei-Fei**. Towards scalable dataset construction: An active learning approach. *IEEE European Conf. Computer Vision*, 2008.
- 3) S. Savarese and **L. Fei-Fei**. View synthesis for recognizing unseen poses of object classes. *IEEE European Conf. Computer Vision*, 2008.
- 4) J.C. Niebles, H. Wang and **L. Fei-Fei**, Unsupervised Learning of Human Action Categories Using Spatial-Temporal Words. *International Journal of Computer Vision (IJCV)*, DOI 10.1007/s11263-007-0122-4, 2008.
- 5) S. Savarese, A. Del Pozo, J.C. Niebles, **L. Fei-Fei**, "Spatial-Temporal Correlations for Unsupervised Action Classification", *IEEE Workshop on Motion and Video Computing*, Copper Mountain, Colorado January 8-9, 2008.
- 6) S. Savarese and **L. Fei-Fei**. 3D generic object categorization, localization and pose estimation. *IEEE Intern. Conf. in Computer Vision (ICCV)*. 2007.
- 7) L. J. Li and **L. Fei-Fei**. What, where and who? Classifying event by scene and object recognition. *IEEE Intern. Conf. in Computer Vision (ICCV)*. 2007.
- 8) L. Cao and **L. Fei-Fei**. Spatially coherent latent topic model for concurrent object segmentation and classification. *IEEE Intern. Conf. in Computer Vision (ICCV)*. 2007.
- 9) D. B. Walther and **L. Fei-Fei**. Measuring the cost of deploying top-down visual attention. *Journal of Vision*, 7(11):9, 1-12, <http://journalofvision.org/7/11/9/>, doi:10.1167/7.11.9. 2007.
- 10) **L. Fei-Fei**, R. Fergus and P. Perona. Learning generative visual models for 101 object categories. *Computer Vision and Image Understanding*. 2007.
- 11) L.J. Li, J.C. Niebles and **L. Fei-Fei**. OPTIMOL: a framework for Online Picture collection via Incremental Model Learning., *Association for the Advancement of Artificial Intelligence (AAAI) 2007 Robot Competition and Exhibition*, 2007
- 12) L.J. Li, G. Wang and **L. Fei-Fei**. OPTIMOL: automatic Object Picture collection via Incremental Model Learning. *IEEE Computer Vision and Pattern Recognition (CVPR)*. 2007. (*)
- 13) J.C. Niebles and **L. Fei-Fei**. A hierarchical model of shape and appearance for human action classification. *IEEE Computer Vision and Pattern Recognition (CVPR)*. 2007.
- 14) **L. Fei-Fei**, Iyer, A., Koch, C., & Perona, P. What do we perceive in a glance of a real-world scene? *Journal of Vision*, 7(1):10, 1-29, <http://journalofvision.org/7/1/10/>, doi:10.1167/7.1.10. 2007.
- 15) J.C. Niebles, H. Wang, **L. Fei-Fei**. Unsupervised learning of human action categories using spatial-temporal words. *British Machine Vision Conference (BMVC) 2006*.
- 16) A. Kushal, M. Rahrkar, J. Ponce, T. Huang and **L. Fei-Fei**. Audio-Visual Speaker Localization Using Graphical Models. *Int. Conf. Patt. Recog.* 2006.
- 17) J. Tu, A. Ivanovic, T. Huang, and **L. Fei-Fei**. Variational Shift Invariant Probabilistic PCA for Face Recognition. *Int. Conf. Patt. Recog.* 2006
- 18) **L. Fei-Fei**. Knowledge transfer in learning to recognize visual object classes. *IEEE ICDL*. 2006

- 19) G. Wang, Y. Zhang, and **L. Fei-Fei**. Using dependent local regions for categorizing objects in a generative framework. *IEEE CVPR*. 2006.
- 20) **L. Fei-Fei**, R. Fergus and P. Perona. One-Shot Learning of 100 Object Categories. *IEEE Trans. Pattern Analysis and Machine Intelligence*. Vol28(4), 594 - 611, 2006.
- 21) R. VanRullen, L. Reddy and **L. Fei-Fei**. Binding for natural objects. *Vision Research*. Vol45(25-26), 3133-3144. 2005.
- 22) **L. Fei-Fei**, R. Fergus, and P. Perona. Learning generative visual models for 101 object categories. *Computer Vision and Image Understanding*, 2006.
- 23) R. Fergus, **L. Fei-Fei**, P. Perona and A. Zisserman. Learning Object Categories from Google's Image Search. *ICCV*. 2005.
- 24) **L. Fei-Fei** and P. Perona. A Bayesian Hierarchical Model for Learning Natural Scene Categories. *IEEE CVPR*. 2005.
- 25) **L. Fei-Fei**, R. VanRullen, C. Koch and P. Perona. Why does natural scene categorization require little attention? Exploring attentional requirements for natural and synthetic stimuli. *Visual Cognition*. 2005.
- 26) **L. Fei-Fei**, R. VanRullen, C. Koch and P. Perona. Why does natural scene recognition require little attention? Exploring attentional requirements for natural and synthetic stimuli. *Visual Cognition*. 12(6): pp893-924. 2005.
- 27) **L. Fei-Fei**, R. Fergus and P. Perona. Learning generative visual models from few training examples: an incremental Bayesian approach tested on 101 object categories. *CVPR, Workshop on Generative-Model Based Vision*. 2004.
- 28) S. Savarese, **L. Fei-Fei** and P. Perona, "What do reflections tell us about the shape of a mirror?", in *Applied Perception in Graphics and Visualization [sponsored by ACM SIGGRAPH]*, Los Angeles, August 7-8, 2004.
- 29) **L. Fei-Fei**, R. Fergus and P. Perona. A Bayesian approach to unsupervised One-Shot learning of Object categories. *Proc. International Conference on Computer Vision*. 2003.
- 30) **F.F. Li**, R. VanRullen, C. Koch and P. Perona. Rapid natural scene categorization in the near absence of attention. *Proc. Natl. Acad. Sci.* 99, 8378 – 8383, 2002. (*)
- 31) G.B. Stanley, **F.F. Li**, and Y. Dan. Reconstruction of natural scenes from ensemble responses in the LGN, *Journal of Neuroscience*, 19(18):8036-8042, 1999.

Book and Book Chapter (Non Vision Related)

- **F. F. Li**, R. Sabella, D. Liu, editors. Nanking 1937: Memory and Healing. *M.E. Sharpe*. 2000.
- V. Adams and **F. F. Li**. Integration or erasure? Modernizing medicine at Lhasa's Mentsikhang. In L. Pordie, ed., *Exploring Tibetan medicine in contemporary context: perspectives in social sciences*. *in press*. 2007.

Conference Abstracts

- D. B. Walther, E. Caddigan, J. Birgiolas, **L. Fei-Fei** and D. Beck. Decoding distributed patterns of activity associated with natural scene categorization. *13th Annual Meeting of Human Brain Mapping*. Chicago, June 10-14, 2007.
- E. Caddigan, D. B. Walther, J. Birgiolas, J. Weissman, D. Beck, **L. Fei-Fei**. Decoding distributed patterns of activity associated with natural scene categorization. *Vision Sciences Society*, Sarasota, May, 2007.
- D. Walther, **L. Fei-Fei**, and K. Koch. Measuring the cost of deploying visual attention. *Vision Sciences Society*, Sarasota, May, 2006.

- **Fei-Fei, L.**, Iyer, A., Koch, C and Perona, P. What do we see when we glance at a scene? *Vision Sciences Society*, Sarasota, April, 2004.
- **Li, F-F.**, VanRullen, R., Koch, C. and Perona, P. Natural scene categorization in the near absence of attention: further explorations. *Proceedings of the Vision Sciences Society annual meeting*, Sarasota, April, 2003.
- S. Savarese, **L. Fei-Fei**, and P. Perona. Can we see the shape of a mirror? *Proceedings of the Vision Sciences Society annual meeting*, Sarasota, April, 2003.
- VanRullen, R., Reddy, L., **Li, F-F.**, Perona, P. & Koch, C. A neural framework for visual search and attention. *Munich Visual Search Symposium*, Munich, Germany. 2003.
- **F.F. Li**, R. VanRullen, C. Koch & P. Perona. Rapid natural scene categorization in the near absence of attention. *Proceedings of the Vision Sciences Society annual meeting*, Sarasota, 2002.
- **Li, F-F.**, VanRullen, R., Koch, C. & Perona, P. Rapid natural scene categorization without attention. *Society for Neuroscience meeting*, San Diego (California, USA). 2001.
- **F.F. Li**, L. Luobu, Duoji, C. Pincuo and Bazhu. A Preliminary Study on Tibetan Medical Treatment of Symptomatic Patients with H. pylori Infection. *Alternative Therapies*, 7(3):S-20, 2001.

News and Press Reviews of ()**

- M. Reilly. Robots surf the web to learn about the world. *NewScientist*. Issue 2617, August, 2007.
- J. Braun. Natural scenes upset visual applectart. *Trends in Cognitive Neuroscience*. 2002.
- R. Jones. Visual attention: now you see it.... *Nature Reviews Neuroscience* Vol 3, pp589, 2002.

OTHER EXPERIENCES

Researcher, One H.E.A.R.T. Foundation, Utah, USA - Tibet (2002 – 2004)

- Involved in ethnographic researches on maternal health in rural and nomadic Tibet.

Principle Investigator, Tibetan Medicine Hospital (Mentsikhang) Lhasa, Tibet (1999 – 2000),

- A clinical study on Tibetan medicine treatment for *Helicobacter pylori* infection in rural and nomadic Tibetan population.