

Yuanqing Lin

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EDUCATION

- 2003-2008 *University of Pennsylvania* Philadelphia, PA
Ph.D. in Electrical Engineering. Advisor: Dr. Daniel D. Lee
Thesis project: “ l_1 -norm sparse Bayesian learning: theory and applications”
- 1996-1999 *Tsinghua University* Beijing, China
M.S. in Optical Engineering. Advisor: Dr. Yang Zhao
Thesis project: “Frequency stabilization of LD-pumped 1064nm Nd:YVO4 laser to Fabry–Perot cavity using derivative spectroscopy”
- 1991-1995 *Beijing Institute of Technology* Beijing China
Undergraduate. Major: Optical Engineering

RESEARCH/ LEADERSHIP EXPERIENCE

- 2012-now *NEC Labs America* Cupertino, CA
Head of Media Analytics Department
Our group focuses on two major directions: fine-grained image recognition (e.g., for mobile search), and 3D scene understanding (e.g., for autonomous driving).
- 2008-2012 *NEC Labs America* Cupertino, CA
Research Staff Member, Department of Media Analytics
Large-scale image classification, unsupervised feature learning, and sparse learning.
- 2003-2008 *University of Pennsylvania* Philadelphia, PA
Ph.D. student, General Robotics, Automation, Sensing and Perception (GRASP) Lab.
Advisor: Dr. Daniel D. Lee.
Bayesian framework for l_1 -norm sparse learning, acoustic signal processing using sparse learning, large-scale convex optimization, graphic model sparse structure learning using ensembles of trees.
- 2000-2002 *University of Pennsylvania* Philadelphia, PA
Chief research engineer, Functional Near-infrared Continuous-wave Imager (fNIR-CWI) Research Group in Dr. Britton Chance’s Lab. Advisor: Dr. Britton Chance.
Design and construct a new generation of fNIR-CWI, and investigate breast cancer imaging, brain functional imaging and muscle functional imaging using the fNIR-CWI.
- 1996-1999 *Tsinghua University* Beijing, China

M.S. student, State Key Laboratory of Precision Measurement Technology and Instruments (PMT&I). Advisor: Dr. Yang Zhao.

Frequency stabilization of LD-pumped 1064nm Nd:YVO4 laser to Fabry–Perot cavity using derivative spectroscopy.

PROFESSIONAL ACTIVITIES

- Area Chair for NIPS 2015.
- Co-chairs of International Workshop on Large Scale Visual Recognition and Retrieval for 2012, 2014 and 2015, respectively.
- PhD Thesis Committee Member for Olga Russakovsky (Stanford, Computer Science Department).
- Invited speaker at University of Pennsylvania Robotics Industry Day (2014).
- Invited speaker at Bay Area Vision Meeting in 2012 and 2014, respectively.

AWARDS AND HONORS

- NEC Labs America Technology Contribution Award (4 times, 2012~2015)
- The First Grade Contribution Award (2012) (company-wide award at NEC)
- Winner of the ImageNet Large Scale Visual Recognition Challenge 2010 (team leader)
- University of Pennsylvania Fellowship (2003-2008)
- Tsinghua University Outstanding Student Award (1998)
- Xu Teli Fellowship (北京理工大学徐特立奖学金, awarded as a high-school senior) (1991)

JOURNAL PUBLICATIONS

1. Shiliang Zhang, Ming Yang, Xiaoyu Wang, Yuanqing Lin, and Qi Tian, “Semantic-aware co-indexing for image retrieval”, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Accepted, 2015.
2. Wengang Zhou, Ming Yang, Houqiang Li, Xiaoyu Wang, Yuanqing Lin, Qi Tian, “Towards Codebook-free: Scalable Cascaded Hashing for Mobile Image Search”, *IEEE Transactions on Multimedia*, 16(3): 601-611 (2014)
3. Fei Sha, Yuanqing Lin, Daniel D. Lee, and Lawrence K. Saul, “A multiplicative update rule for nonnegative quadratic programming”, *Neural Computation*, **19**(8): 2004-2031 (2006);
4. Yuanqing Lin, Daniel D. Lee, “Bayesian Regularization And Nonnegative Deconvolution (BRAND) for room impulse response estimation”, *IEEE Trans. Signal Processing*, 54(3): 839-847 (2006);
5. Neil G. Hockstein, Erica R. Thaler, Yuanqing Lin, Daniel D. Lee, C. William Hanson, “Correlation of Pneumonia score with electronic nose signature: a prospective study”, *Annals of Otolaryngology, Rhinology, and Laryngology*, 114(7): 504-508 (2005);
6. Ryotaro Kime, Joohee Im, Danile Moser, Yuanqing Lin, Shoko Nioka, Toshihito Katsumura, and Britton Chance, “Reduced Heterogeneity of Muscle Deoxygenation during Heavy Bicycle Exercise”, *Medicine and Science in Sports and Exercise*, 37(3): 412-417 (2005);

7. Yuanqing Lin, Gwen Lech, Shoko Nioka, Xavier Intes, and Britton Chance, “Noninvasive, low-noise, fast imaging of blood volume and deoxygenation changes in muscles using light-emitting diode continuous-wave imager”, *Review of Scientific Instruments*, 73(8): 3065-3074 (2002);
8. Yuanqing Lin, Yang Zhao, “High-sensitivity spectroscopy for laser frequency stabilization”, *Optical Technology* (in Chinese), 139(5): 62-64(1999).

REFEREED CONFERENCE PROCEEDINGS

1. Yu Xiang, Wongun Choi, Yuanqing Lin and Silvio Savarese, “Data-Driven 3D Voxel Patterns for Object Category Recognition ”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* 2015;
2. Saining Xie, Tianbao Yang, Xiaoyu Wang and Yuanqing Lin, “Hyper-class Augmented and Regularized Deep Learning for Fine-grained Image Classification ”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* 2015;
3. Qi Qian, Rong Jin, Shenghuo Zhu and Yuanqing Lin, “Fine-Grained Visual Categorization via Multi-stage Metric Learning ”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* 2015;
4. Will Zou, Xiaoyu Wang, Miao Sun and Yuanqing Lin, “Generic Object Detection with Dense Neural Patterns and Regionlets”, *British Machine Vision Conference (BMVC)* 2014;
5. Chengjiang Long, Xiaoyu Wang, Gang Hua, Ming Yang and Yuanqing Lin, “Location Relaxation for Efficient and Accurate Object Detection”, *Asian Conference on Computer Vision (ACCV)* 2014;
6. Xiaoyu Wang, Ming Yang, Shenghuo Zhu and Yuanqing Lin, “Regionlets for Generic Object Detection”, *International Conference on Computer Vision (ICCV)* 2013;
7. Shiliang Zhang, Ming Yang, Xiaoyu Wang, Yuanqing Lin and Qi Tian, “Semantic-aware Co-indexing for Image Retrieval”, *International Conference on Computer Vision (ICCV)* 2013;
8. Sid Yingze Bao, Manmohan Chandraker, Yuanqing Lin and Silvio Savarese, “Dense Object Reconstruction with Semantic Priors”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* 2013;
9. Anelia Angelova, Shenghuo Zhu and Yuanqing Lin, “Image segmentation for large-scale subcategory flower recognition”, *IEEE Workshop on Applications of Computer Vision (WACV)* 2013;
10. Olga Russakovsky, Yuanqing Lin, Kai Yu and Fei-Fei Li, “Object-centric Spatial Pooling for Image Classification”, *European Conference on Computer Vision (ECCV)* 2012;
11. Chunhui Gu, Pablo Arbelaez, Yuanqing Lin, Kai Yu and Jitendra Malik, “Multi-Component Models for Object Detection”, *European Conference on Computer Vision (ECCV)* 2012;
12. Kai Yu, Yuanqing Lin and John Lafferty, “Learning Image Representations from the Pixel Level via Hierarchical Sparse Coding”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* 2011;
13. Yuanqing Lin, Liangliang Cao, Fengjun Lv, Shenghuo Zhu, Ming Yang, Timothee Cour, Kai Yu and Thomas Huang, “Large-scale Image Classification: Fast Feature Extraction and SVM Training ”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* 2011;
14. Yuanqing Lin, Tong Zhang, Shenghuo Zhu and Kai Yu, “ Deep Coding Network ”, *Advances in Neural and Information Processing Systems (NIPS)* 2010;

15. Yuanqing Lin, Shenghuo Zhu, Daniel D. Lee and Ben Taskar, “ Learning sparse Markov network structure via ensemble-of-trees models ”, International Conference on Artificial Intelligence and Statistics (AISTATS) 2009;
16. Yuanqing Lin, Jingdong Chen, Youngmoo Kim, and Daniel D. Lee, “Blind channel identification for speech dereverberation using l_1 -norm sparse learning”, *Advances in Neural and Information Processing Systems* (NIPS) 2007;
17. Yuanqing Lin, Jingdong Chen, Youngmoo Kim, and Daniel D. Lee, “Blind sparse-nonnegative (BSN) channel identification for acoustic time-difference-of-arrival estimation”, *IEEE Workshop on Applications of Signal Processing to Audio and Acoustics* (WASPAA) 2007;
18. Yuanqing Lin, Daniel D. Lee, “Bayesian l_1 -norm sparse learning”, *International Conference on Acoustics, Speech, and Signal Processing* (ICASSP) V: 605-608 (2006);
19. Yuanqing Lin, Daniel D. Lee, “Bayesian Regularization and Nonnegative Deconvolution (BRAND) for acoustic echo cancellation”, *IEEE Workshop on Applications of Signal Processing to Audio and Acoustics* (WASPAA) 2005;
20. Yuanqing Lin, Daniel D. Lee, “Relevant deconvolution for acoustic source estimation”, *International Conference on Acoustics, Speech, and Signal Processing* (ICASSP) V: 529-532 (2005);
21. Yuanqing Lin, Daniel D. Lee, “Bayesian regularization and nonnegative deconvolution for time delay estimation”, *Advances in Neural and Information Processing Systems* (NIPS) 17: 809-816 (2005) ;
22. Yuanqing Lin, Paul Vernaza, Jihun Ham, and Daniel D. Lee, “Cooperative relative robot localization with audible acoustic sensing”, *IEEE/ISJ International Conference on Intelligent Robotics and Systems* (IROS): 662-667 (2005);
23. Jihun Ham, Yuanqing Lin and Daniel D. Lee, “Learning nonlinear appearance manifolds for robot localization”, *IEEE/ISJ International Conference on Intelligent Robotics and Systems* (IROS): 1239-1244 (2005);
24. Yuanqing Lin, Daniel D. Lee, and Lawrence K. Saul, “Nonnegative deconvolution for time of arrival estimation”, *International Conference on Acoustics, Speech, and Signal Processing* (ICASSP) II: 377-380 (2004);

ADDITIONAL INFORMATION

1998~2000 Cofounder of the Beijing Allgood Advertising LLC, Beijing, China.
2010~now Cofounder of www.bio-protocol.org.