Curriculum Vitae

LIWEI WANG

PERSONAL DETAILS

Address: Key Laboratory of Machine Perception (MOE)
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EDUCATION

Ph.D. in Applied Mathematics, 2005. School of Mathematical Sciences
Peking University, China
Dissertation: *Learning Image Classification with Similarities and Distances*
Supervisor: Prof. Qingyun Shi and Prof. Jufu Feng

M.S. in Electronics Engineering, 2002.
Tsinghua University, China
Thesis: *Statistical Model Based Speaker Adaptation Algorithms*
Supervisor: Prof Zuoying Wang

B.S. in Electronics Engineering, 1999.
Tsinghua University, China

PROFESSIONAL POSITIONS

Aug. 2012- present   Professor, Department of Machine Intelligence, Peking University.

Aug. 2006 –July. 2012   Associate Professor, Department of Machine Intelligence, Peking University.

Mar. 2010 – Aug. 2010:   Visiting Researcher, Microsoft Research Asia.

Oct. 2007 – Sep. 2008:   Visiting Researcher, Tokyo Institute of Technology.

July 2005 – July 2006:   Assistant Professor, Department of Machine Intelligence, Peking University.

HORNORS AND AWARDS

- AI's 10 to Watch (2010)
- Pattern Recognition Letters Top Cited Article (2005-2010) Award, 2010.
- Founder Outstanding Teacher Award, Peking University, 2010.
- Outstanding Paper Award, the 11th Meeting on Image Recognition and Understanding, 2008.
- Outstanding Ph.D. Thesis Award, Peking University, 2005.
- Top Ten Ph.D. Students, Peking University, 2005.
- Qingyun Shi Best Student Paper Award, 2004.

TEACHING ACTIVITIES

Courses

Machine Learning (for Yao Class at Tsinghua University)
Information Theory
Statistical Learning Theory

PROFESSIONAL ACTIVITIES

Journal Editorial Board:

Journal of Computer Science and Technology
New Generation Computing Journal, (Guest editor, Apr. 2009)

PUBLICATIONS (Out of date)

Journal Articles:

[1] Cheng Yang, <u>Liwei Wang</u>, Jufu Feng, "A Novel Margin Based Algorithm for Feature Extraction," *New Generation Computing*, vol. 27, no. 4, pp. 285-305, 2009.

[2] <u>Liwei Wang</u>, Masashi Sugiyama, Cheng Yang, Kohei Hatano, Jufu Feng, "Theory and Algorithm for Learning with Dissimilarity Functions," *Neural Computation*, vol. 21, no. 5, pp. 1459-1484, 2009.

[3] Masashi Sugiyama, Takafumi Kanamori, Taiji Suzuki, Shohei Hido, Jun Sese, Ichiro Takeuchi, <u>Liwei Wang</u>, "A Density-ratio Framework for Statistical Data Processing", Information and Media Technologies, vol. 4, no. 4, pp. 962-987, 2009.

[4] Cheng Yang, <u>Liwei Wang</u>, Jufu Feng, "On Feature Extraction via Kernels", *IEEE Transactions on Systems, Man and Cybernetics, Part B*, vol.38, no. 2, pp. 553-557, 2008.

[5] Xichen Sun, <u>Liwei Wang</u>, Jufu Feng, "Further Results on the Subspace Distance," *Pattern*

Recognition，vol. 40, no.1, pp.328-329, 2007.

[6] <u>Liwei Wang</u>, Jufu Feng, "Comments on 'Fundamental Limits of Reconstruction-Based Superresolution Algorithms under Local Translation'", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 28, no. 5, pp. 846, 2006.

[7] <u>Liwei Wang</u>, Xiao Wang, Jufu Feng, "Subspace Distance Analysis with Application to Adaptive Bayesian Face Recognition," *Pattern Recognition*, vol. 39, no. 3, pp. 456-464, 2006.

[8] <u>Liwei Wang</u>, Xiao Wang, Jufu Feng, "On Image Matrix Based Feature Extraction Algorithms," *IEEE Transactions on Systems, Man and Cybernetics, Part B*, vol. 36, no. 1, pp. 194-197, 2006.

[9] <u>Liwei Wang</u>, Yan Zhang, Jufu Feng, "On the Euclidean Distance of Images," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 27, no. 8, pp. 1334-1339, 2005.

[10] <u>Liwei Wang</u>, Xiao Wang, Ming Chang, Jufu Feng, "Is Two-Dimensional PCA a New Technique?" *Acta Automatica Sinica*, vol. 31, no. 5, pp.782-787, 2005.

[11] <u>Liwei Wang</u>, Ming Chang, Jufu Feng, "Parallel and Sequential Support Vector Machines for Multi-label Classification," *International Journal of Information Technology*, vol. 11, no. 9, pp. 11-18, 2005.

[12] <u>Liwei Wang</u>, Xiao Wang, Jufu Feng, "Intrapersonal Subspace Analysis with Application to Adaptive Bayesian Face Recognition," *Pattern Recognition*, vol. 38, no. 4, pp. 617-621, 2005.

[13] <u>Liwei Wang</u>, Xiao Wang, Xuerong Zhang, Jufu Feng, "The Equivalence of Two-Dimensional PCA to Line-Based PCA," *Pattern Recognition Letters*, vol. 26, no. 1, pp. 57-61, 2005.

[14] <u>Liwei Wang</u>, Zuoying Wang, "Structural Risk Minimization Principle Based Gaussian Mixture Modeling," *Acta Acustica*，vol. 28, no. 5, pp. 403-408, 2003. (in Chinese)

Conference Papers:

[15] MingYang Jiang, Chunxiao Li, Jufu Feng, <u>Liwei Wang,</u> "Towards Hypothesis Testing and Lossy Minimum Description Length: A Unified Segmentation Framework," ACCV, 2010.

[16] MingYang Jiang, Chunxiao Li, Jufu Feng, <u>Liwei Wang,</u> "Segmentation via NCuts and Lossy Minimum Description Length: A Unified Approach," ACCV, 2010.

[17] <u>Liwei Wang</u>, "Sufficient Conditions for Agnostic Active Learnable," NIPS 2009.

[18] Bing Sun, Jufu Feng, <u>Liwei Wang</u>, "Learning IMED via Shift-Invariant Transformation," CVPR 2009.

[19] Cheng Yang, <u>Liwei Wang</u>, Jufu Feng, "A Comparative Study of Two Kernel Ideas for Nonlinear Feature Extraction," Proceedings of SPIE, 2009.

[20] <u>Liwei Wang</u>, Masashi Sugiyama, Cheng Yang, Zhi-Hua Zhou, Jufu Feng, "On the Margin Explanation of Boosting Algorithms," COLT, 2008.

[21] <u>Liwei Wang</u>, Cheng Yang, Jufu Feng, "On Learning with Dissimilarity Functions," ICML, 2007.

[22] <u>Liwei Wang</u>, Jufu Feng, "Rademacher Margin Complexity," COLT, 2007.

[23] <u>Liwei Wang</u>, Jufu Feng, "MDL Transduction," *International Conference on Machine Learning and Cybernetics*, 2005.

[24] <u>Liwei Wang</u>, Jufu Feng, "Learning Gaussian Mixture Models by Structural Risk Minimization," *International Conference on Machine Learning and Cybernetics,* 2005.

[25] <u>Liwei Wang</u>, Ming Chang, Jufu Feng, "Parallel and Sequential Support Vector Machines for Multi-label Classification," *International Conference on Intelligent Computing*, 2005.

[26] <u>Liwei Wang</u>, Jufu Feng, "Maximum a Posteriori Transduction," *International Conference on Machine Learning and Cybernetic*, 2004.

[27] <u>Liwei Wang</u>, Zuoying Wang, "Testing the Hypothesis of Multivariate Normality in Bayesian Approaches to Speaker Adaptation," *International Symposium on Chinese Spoken Language Processing*, 2002.

Refereed Workshop Papers:

[28] Masashi Sugiyama, Takafumi Kanamori, Taiji Suzuki, Shohei Hido, Jun Sese, Ichiro Takeuchi, <u>Liwei Wang</u>, "Direct importance estimation---A new versatile tool for statistical pattern recognition," Meeting on Image Recognition and Understanding (MIRU), Nagano, Japan, Jul. 29-31, 2008

[29] <u>Liwei Wang</u>, Masashi Sugiyama, "Equilibrium Margin: A New Concept for Characterizing the Generalization Error of Voting Classifiers", Workshop on Information Based Induction Sciences (IBIS)*,* Tokyo, Japan, 2007.

Book Chapters:

[30] <u>Liwei Wang</u>, Zhaoxiang Jing, "Theoretical Explanations of Boosting Algorithms", in Machine Learning and Applications, Z. Zhou and J. Wang eds., 2009.