

Xuelei Hu

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Education	2001 - 2005	The Chinese University of Hong Kong	Hong Kong
	Doctor of Philosophy, Computer Science and Engineering		
	<ul style="list-style-type: none"> Thesis title: investigation on Bayesian Ying-Yang learning for model selection in unsupervised learning. 		
	1999 - 2001	Nanjing University of Science and Technology	Nanjing
	Master, Pattern Recognition and Intelligence System		
	<ul style="list-style-type: none"> Graduated Summa Cum Laude. Thesis title: Computer assisted puncture based on stereo vision techniques. 		
	1995 - 1999	Nanjing University of Science and Technology	Nanjing
	Bachelor, Computer Software		
	<ul style="list-style-type: none"> Graduated Summa Cum Laude. Thesis title: X-ray image real time processing used for the computer aided puncture based on two X-ray devices. 		
Research Experience	2009 - present	Robotics Institute, Carnegie Mellon University	Pittsburgh
	Visiting Postdoctoral Fellow		
	2006 - present	School of Computer Science and Technology, Nanjing University of Science and Technology	Nanjing
	Associate Professor		
	<ul style="list-style-type: none"> Leading several research projects on machine learning and related applications. Developing efficient active learning methods for mobile robot perception and learning algorithms for high dimensional problem. 		
	2005 - 2006	School of Computer Science and Technology, Nanjing University of Science and Technology	Nanjing
	Assistant Professor		
	<ul style="list-style-type: none"> Participated in several research projects on autonomous vehicle, computer vision, and data mining in Traditional Chinese Medicine. Investigated on model selection and regularization, particularly learning sparse representations for classification, regression, and density estimation. 		
	2001 - 2005	Department of Computer Science and Engineering, The Chinese University of Hong Kong	Hong Kong
	Doctoral Research (Advisor: Prof. Lei Xu)		
	<ul style="list-style-type: none"> Analyzed model selection methods in unsupervised learning such as principal component analysis (PCA), factor analysis, clustering, and density estimation. Developed data smoothing regularization method for small sample size problem. 		
	1999 - 2001	School of Computer Science and Technology, Nanjing University of Science and Technology	Nanjing
	Master's Research (Advisor: Prof. Jingyu Yang)		
	<ul style="list-style-type: none"> Participated in "Computer Assisted Puncture" project (Key Project in the National Science & Technology Pillar Program). Applied computer vision technology to the computer assisted puncture. 		

Research Grants	Principal Investigator <ul style="list-style-type: none"> ▪ National Natural Science Foundation of China (NSFC) Grant, "Active Learning for Mobile Robotic Perception", Jan. 2008 - Dec. 2010. ▪ Natural Science Foundation of Jiangsu Province Grant, "Active Learning for Robotic Perception", July. 2007 - Dec. 2009. ▪ "The Six Top Talents" of Jiangsu Province Grant, "Network Intrusion Detection based on Machine Learning Techniques", Jan. 2008 - Dec. 2010. ▪ Scientific Research Foundation of Nanjing University of Science and Technology Grant, "Automatic Dimension Reduction Methods", Jan. 2007 - Dec. 2008. 																		
Publications	Please see List of Publications on my web page.																		
Journal Reviewer	<ul style="list-style-type: none"> ▪ Journal of Machine Learning Research ▪ IEEE Transaction on Neural Networks ▪ Neurocomputing ▪ Neural Information Processing - Letters & Reviews 																		
Program Committee Member	<ul style="list-style-type: none"> ▪ International Symposium on Neural Networks 2007 ▪ International Conference on Machine Learning and Cybernetics 2007 ▪ International Conference on Machine Learning and Cybernetics 2008 ▪ IEEE International Conference on Networking, Sensing and Control 2008 																		
Presentations	<ul style="list-style-type: none"> ▪ "Investigation on Sparse Kernel Density Estimator Via Harmony Data Smoothing Learning", the 4th International Symposium on Neural Networks (ISNN2007), Nanjing, China, June 3-7, 2007. ▪ "A Comparative Study on Selection of Cluster Number and Local Subspace Dimension in the Mixture PCA Models", the Third International Symposium on Neural Networks (ISNN2006), Chengdu, China, May 28-June 1, 2006. ▪ "Automatic Cluster Number Determination via BYY Harmony Learning", the First International Symposium on Neural Networks (ISNN 2004), Dalian, China, Aug. 19-21, 2004. ▪ "A Comparative Study of Several Cluster Number Selection Criteria", the Fourth International Conference on Intelligent Data Engineering and Automated Learning (IDEAL 2003), Hong Kong, March 21-23, 2003. 																		
Teaching Experience	<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">2006 - present</td> <td style="width: 60%;">Nanjing University of Science and Technology</td> <td style="width: 25%; text-align: right;">Nanjing</td> </tr> <tr> <td></td> <td>Associate Professor</td> <td></td> </tr> <tr> <td></td> <td colspan="2"> <ul style="list-style-type: none"> ▪ Supervised master students and undergraduate final year projects. ▪ Taught postgraduate courses in Machine Learning, Artificial Intelligence, Seminar on Machine Learning Theory and Applications, and undergraduate course in Data Structure. </td> </tr> <tr> <td>2001 - 2004</td> <td>The Chinese University of Hong Kong</td> <td style="text-align: right;">Hong Kong</td> </tr> <tr> <td></td> <td>Teaching Assistant</td> <td></td> </tr> <tr> <td></td> <td colspan="2"> <ul style="list-style-type: none"> ▪ Assisted with courses in Introduction to Theoretical Computer Science, Numerical Computation, Design and Analysis of Algorithms, Computer Organization, Digital Logic & Systems, Computer System Architecture, Computer Design. </td> </tr> </table>	2006 - present	Nanjing University of Science and Technology	Nanjing		Associate Professor			<ul style="list-style-type: none"> ▪ Supervised master students and undergraduate final year projects. ▪ Taught postgraduate courses in Machine Learning, Artificial Intelligence, Seminar on Machine Learning Theory and Applications, and undergraduate course in Data Structure. 		2001 - 2004	The Chinese University of Hong Kong	Hong Kong		Teaching Assistant			<ul style="list-style-type: none"> ▪ Assisted with courses in Introduction to Theoretical Computer Science, Numerical Computation, Design and Analysis of Algorithms, Computer Organization, Digital Logic & Systems, Computer System Architecture, Computer Design. 	
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Awards and Honors	<ul style="list-style-type: none"> ▪ Outstanding Research Award, Nanjing University of Science and Technology, 2007. ▪ Postgraduate Studentship, the Chinese University of Hong Kong, 2001 - 2004. ▪ Excellent Graduate Student, Nanjing University of Science and Technology, 2001. ▪ Outstanding Graduate Prize, China North Industries Group Corporation, 1999. ▪ Top Class Scholarship, Nanjing University of Science and Technology, 1995 – 1999 (only awarded to 1% outstanding students). 																		