# Hsuan-Tien Lin
# 林軒田

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## EDUCATION

**California Institute of Technology**, Pasadena, CA, USA

Ph.D. in Computer Science                                                June 2008
M.S. in Computer Science                                                 June 2005
*GPA 4.2/4.0; Member of the Learning Systems Group; Advisor: Professor Yaser S. Abu-Mostafa*

**National Taiwan University**, Taipei, Taiwan

B.S. in Computer Science and Information Engineering                     June 2001
*GPA 4.0/4.0; Ranked 1st out of 78, with 7 President's Awards (top 5% each semester);*
*Member of the Machine Learning and Data Mining Group; Advisor: Professor Chih-Jen Lin*

## PROFESSIONAL SKILLS

- 7+ years of experience in machine learning: knowledgeable in state-of-the-art algorithms such as Neural Network, Support Vector Machine, and Adaptive Boosting and capable of designing new ones for specific applications

- 10+ years of programming experience on UNIX, MS Windows using C/C++, Java, Python, Delphi

- Experienced in programming with teammates under time pressure: prevailed in team programming contests such as ACM International Collegiate Programming Contest

## SELECTED EXPERIENCE

**California Institute of Technology**, Pasadena, CA, USA                 July 2003–Present
Research Assistant to Professor Yaser S. Abu-Mostafa

- Proposed novel and useful techniques for machine learning, such as the infinite ensemble learning framework which outperforms traditional techniques
- Studied the connections between the ordinal ranking setup and traditional machine learning setups, which results in new theoretical and algorithmic understanding that facilitates the design of better techniques for ordinal ranking

**California Institute of Technology**, Pasadena, CA, USA      Fall 2004, Fall/Winter 2006, Fall/Winter 2007
Teaching Assistant (CS129ab: Information and Complexity, CS156ab: Learning Systems)

- Held 2+ hours of TA session bi-weekly and discussed actively with students on course material and homework problems; answered daily email queries from students in addition to spending 2+ full days bi-weekly on grading homework sets
- Designed some fresh homework problems dynamically as course proceeded to strengthen students' understanding in Winter 2006

**National Taiwan University**, Taipei, Taiwan      September 2000–June 2001, March 2003–June 2003
Research Assistant to Professor Chih-Jen Lin

- Conducted research towards designing and implementing a better open-source software for Support Vector Machine: improved the efficiency and the stability of its probability estimate routine; analyzed its regression algorithms and demonstrated the usefulness of a simpler choice

**Websurf Company**, Taipei, Taiwan                                                                     June 2000–May 2001
Project Manager

- Led an investigation team of 3 people to build the prototype of an http-based forum system with an open protocol compatible with existing telnet-based forum systems in Taiwan

**Professional Technology Temple (PTT) BBS System**, Taipei, Taiwan                 January 1998–May 2001
Root and Core Administrator

- Collaborated with a team of $8+$ administrators to manage one of the largest bulletin board systems in Taiwan (around $120,000$ registered users at that time)
- Developed new features for the system, made professional decisions, and as a result doubled the number of concurrent users online ($2000 \Rightarrow 4000$) during my course as the root

## SELECTED HONORS

**Caltech Engineering and Applied Science Division Fellowship**                                    2005–2007

**Second Prize, Trend Student Million-Dollar Internet Programming Contest**                    2000
(with L.-C. Kung, K.-P. Chen, G.-W. Liu, C.-Y. Wu, and J. Lin)

**Asia Champion, ACM International Collegiate Programming Contest**                              1999
(also worldwide 10th prize, with L.-C. Kung and K.-P. Chen)

## SELECTED PUBLICATIONS

[1] **H.-T. Lin** and L. Li. "Support Vector Machinery for Infinite Ensemble Learning." *Journal of Machine Learning Research*, 9(2), 285–312, 2008.

[2] **H.-T. Lin**, C.-J. Lin, and R. C. Weng. "A Note on Platt's Probabilistic Outputs for Support Vector Machines." *Machine Learning*, 68(3), 267–276, 2007.

[3] L. Li and **H.-T. Lin**. "Ordinal Regression by Extended Binary Classification." *Advances in Neural Information Processing Systems 19: NIPS 2006*, 865–872, 2007.

[4] **H.-T. Lin** and L. Li. "Large-Margin Thresholded Ensembles for Ordinal Regression: Theory and Practice." *Algorithmic Learning Theory: ALT 2006*, 319–333, 2006.

[5] L. Li, A. Pratap, **H.-T. Lin**, and Y. S. Abu-Mostafa. "Improving Generalization by Data Categorization." *Proceedings of PKDD 2005*, 157–168, 2005.

[6] S.-P. Liao, **H.-T. Lin**, and C.-J. Lin. "A Note on the Decomposition Methods for Support Vector Regression." *Neural Computation*, 14, 1267–1281, 2002.

## SELECTED PROFESSIONAL ACTIVITIES

**Paper Reviewer**
IEEE Transactions on Neural Networks, IEEE Transactions on Pattern Analysis and Machine Intelligence, Neurocomputing Journal, Conference on Neural Information Processing Systems (NIPS 2007), IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2006)

**Technical Discussion Forum Moderator**
Kernel Machines Blackboard (http://kernel-machines.org)

- Contributed to the forum with 8% of the total posts and answered technical questions ranging from learning theory to practical software usage