

Kuan-ming Lin

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Education

Ph.D. Candidate in Computer Science and Certificate Graduate Student in Computational Biology and Bioinformatics, Duke University, 2004 to present. Advisor: Lawrence Carin

Master of Science, National Taiwan University, Taiwan (NTU), 2000 to 2002
Major: Computer Science and Information Engineering. Adviser: Chih-Jen Lin.

Bachelors of Engineering and Science, NTU, 1996 to 2000
First Major: Computer Science and Information Engineering. Second Major: Mathematics.

Skills

Proficient in most **operating systems** (Windows NT/2000/data center, *NIX), **DBMS** (DB2, MySQL, MS SQL Server, Access), **Web developers** (Apache, Tomcat, Java Web Start, PHP, ASP, JSP, XML, Java Applet, Javascript), and **programming languages** (8051 assembly, C, C++, Java, Matlab, R, PERL, Python). Also a support vector machine (SVM) expert and a skilled math/algorithm problem solver.

Honors and Awards

Final Contestant Prize, Hewlett-Packard Taiwan IA-Design Contest, 2000.
Presidential Awards for five semesters, NTU, 1996 to 1998.
Bronze Medal, 37th International Mathematics Olympiad (IMO), Mumbai, India, 1996.

Employment History

Advisee and Research Assistant **CS Department, North Carolina State University**
August 2005 to December 2006 **Raleigh, North Carolina, USA**

Worked with Dr. Jaewoo Kang on integrating biological database maintenance/query, which is an inter-disciplinary project across database integration and bioinformatics data analysis. The research on microarray data integration and inter-gene analysis yielded a publication in March 2007.

Research Assistant **IIS, Academia Sinica**
January 2004 to August 2004; May 2005 to July 2005 **Taipei, Taiwan**

Worked for the Web Knowledge Discovery (WKD) laboratory in the Institution of Information Science (IIS), focusing on concept search engines. Assisted in the implementation and extension of LiveClassifier, an on-line classifier using Web corpora (e.g. search engine output) instead of manually-labeled corpora. Also gave lectures on Machine Learning.

Second Lieutenant, Program Design Officer **Military Service**
July 2002 to January 2004 **Kaohsiung, Taiwan**

Responsible for all IT-related tasks and the quality of network services, such as Microsoft Active Directory, Microsoft Outlook, Microsoft SQL Server 2000, Microsoft Access, Microsoft IIS Web server, and ISS firewall. The users are officers and assistants in a military command with about one hundred computers and ten servers. Also designed the announcement system for the command.

Part-time Researcher **Castles Technology**
July 2000 to August 2001 **Taipei, Taiwan**

Worked in the R&D section to write USB and PS/2 drivers for Smartcard reader devices. Wrote the first Linux drivers for EZ Smartcard reader series. Assisted in Smartcard reader function and testbed API design. Also gave lectures on security functions for Smartcards.

Research Interests

Massive biological data analysis, Bayesian modeling, data mining, cryptography, algorithms.
Current research focuses on applying Bayesian nonparametric to clinical applications.

Publications and Theses

- K.-M. Lin, J. Kang (2007). **Exploiting Inter-gene Information for Microarray Data Integration**. In *Bioinformatics Track in The ACM Symposium on Applied Computing (SAC)*, pp. 123-127.
- K.-M. Lin, J. Zheng, J. Zhang (2006). **Automatic Structure Prediction of HIV Coreceptor CCR5**. *Proceedings of Bioinformatics in Taiwan Symposium (BIT)*.
- C.-C. Huang, K.-M. Lin, L.-F. Chien (2005). **Automatically Training Corpora Acquisition through Web Mining**. *Proceedings of 2005 IEEE/WIC/ACM Conference on Web Intelligence (WI)*.
- K.-M. Lin, C.-J. Lin (2003). **A Study on Reduced Support Vector Machines**. *IEEE Transactions on Neural Networks (TNN)*, Volume 6, pp. 1449-1459.
- K.-M. Lin (2002). **Reduction Techniques for Support Vector Machines**. Master's thesis, NTU.

Teaching Experiences

Spring 2006 Teaching Assistant for Software Design and Implementation, Duke University

Helped students in evolving their own group projects, and assisted in grading them.

Fall 2005 Teaching Assistant for Introduction to Database Systems, Duke University

Established a MySQL+PHP+Apache example platform term projects. Also responsible for grading assignments and writing sample solutions.

Fall 2001 Teaching Assistant for Statistical Learning Theory, NTU

Responsible for grading assignments. Also worked with the instructor on final grading.

Relevant Coursework (cumulative GPA: 3.735; all from A- to A+)

Fall 2004: Advanced Computer Architecture

Spring 2005: Advanced Database Systems, Computational Complexity, Computer and Network Security

Fall 2005: Algorithms for Computational Biology, Statistical Learning – Algorithms and Theory

Spring 2006: Statistical Methods for Computational Biology, Bayesian Inference and Decision

Summer 2006: The 2006 International Machine Learning Summer School (MLSS) in Taiwan

Fall 2006: Computational Biology of Gene Regulation

Spring 2006(audit): Algorithms in Structural Molecular Biology

Selected Extracurricular Activities

Event Organization Manager
January 2005 to January 2006

Duke Taiwanese Student Association
North Carolina, USA

Responsible for organizing Taiwanese Student Association events, including orientations, welcome receptions, festival celebrations, farewell parties, and other events in coordination with the International House at Duke University.

Finance Manager
May 1998 to May 1999

Departmental Student Association, National Taiwan University
Taipei, Taiwan

Responsible for collecting dues from students and monitoring the income/cost of the association. Initiated and posted monthly financial reports open to all computer science students, which was not done before my entrance. Also participated in monthly and other major meetings of the association.

Bass Part Leader and Singer
Singers
Singers
Fall 1996 to present

National Taiwan University Chorus
Taipei Philharmonic Chorus; Refugium Ensemble
Duke Chapel Choir; Duke Chorale; Choral Society of Durham
Taipei, Taiwan; North Carolina, USA

Responsible as a Bass Part Leader for continuously monitoring attendance and music quality of the bass singers, and functioning as a bridge between bass part and music director group. Responsible as singers for active participation in weekly rehearsals, monthly performances, and social events.