

# Yuh-Jye Lee

## Curriculum Vita

### University Address:

Computer Sciences Department  
University of Wisconsin-Madison  
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### Biographical Data

Male.  
Born January 27, 1968 in Taipei, Taiwan.

### Education

Ph.D. in Computer Sciences, University of Wisconsin-Madison, August 2001 (expected).  
M.S. in Applied Mathematics, National Tsing Hua University, Taiwan, June 1992.  
B.S. in Applied Mathematics, Chinese Culture University, Taiwan, June 1990.

### Research interests

My research interests are Data Mining, Machine Learning, Operations Research and Mathematical Programming. I develop the new algorithms for large data mining problems such as classification problem, clustering and regression (linear and nonlinear). Using the methodologies such as support vector machines, chunking and smoothing techniques allow us to get a very robust solution (prediction) for a large dataset. I also apply these methods to solve many real world problems. An important aspect of my research is the use of data mining techniques in the breast cancer prognosis.

## Teaching interests

I am interested in teaching courses such as Data Mining, Artificial Intelligence, Machine Learning and Optimization (linear, nonlinear, integer and dynamic programming). These courses can be ranged over a broad spectrum that encompass undergraduate level as well as graduate school level. I can also teach many mathematical and statistical courses such as Calculus, Linear Algebra, Numerical Analysis, Probability, Stochastic Process and Statistical Inference.

## Work Experience

1999-present: Research Assistant, O. L. Mangasarian,  
Computer Sciences Department, University of Wisconsin-Madison.

1996-1999: Teaching Assistant,  
Computer Sciences Department, University of Wisconsin-Madison.

1994-1995: Administration Assistant, International Mathematics Olympiad,  
Mathematics Department, National Taiwan Normal University.

1992-1994: Platoon leader, R.O.C. Marine.

## Publications

Survival-Time Classification of Breast Cancer Patients  
Yuh-Jye Lee, O. L. Mangasarian and W.H. Wolberg  
Data Mining Institute Technical Report 01-03, Mrach, 2001,  
DIMACS Workshop: Data Mining and Scalable Learning Algorithms, Rutgers University,  
August 22-24, 2001, submitted. <ftp://ftp.cs.wisc.edu/pub/dmi/tech-reports/01-03.ps>

RSVM: Reduced Support Vector Machines  
Yuh-Jye Lee and O. L. Mangasarian  
Data Mining Institute Technical Report 00-07, July, 2000,  
*First SIAM International Conference on Data Mining, Chicago, April 5-7, 2001.*  
<ftp://ftp.cs.wisc.edu/pub/dmi/tech-reports/00-07.ps>

Breast Cancer Survival and Chemotherapy: A Support Vector Machine Analysis  
Yuh-Jye Lee, O. L. Mangasarian and W.H. Wolberg  
Data Mining Institute Technical Report 99-10, December, 1999,  
DIMACS *Series in Discrete Mathematics and Theoretical Computer Science*,  
Vol. 55 (2000), 1-10. <ftp://ftp.cs.wisc.edu/pub/dmi/tech-reports/99-10.ps>

SSVM: Smooth Support Vector Machine for Classification  
Yuh-Jye Lee and O. L. Mangasarian  
Data Mining Institute Technical Report 99-03, September, 1999,  
*Computational Optimization and Applications*, to appear.  
<ftp://ftp.cs.wisc.edu/pub/dmi/tech-reports/99-03.ps>

A Non-weakly Balanced Game with Nonempty Bargaining Set  
Chih Chang and Yuh-Jye Lee  
*Journal of Mathematical Economics* 22 (1993), 195-198.

## Conference Presentations

Survival-Time Classification of Breast Cancer Patients  
UW-Madison Data Mining Institute Annual Review, June 1, 2001.

RSVM: Reduced Support Vector Machines  
First SIAM International Conference on Data Mining, Chicago, April 5-7, 2001.

Smooth Support Vector Machines & Breast Cancer Prognosis with Chemotherapy  
UW-Madison Data Mining Institute Annual Review, June 2, 2000.

SSVM: Smooth Support Vector Machines  
Institute for Operations Research and the Management Sciences Fall 1999 Meeting,  
Philadelphia, Pennsylvania, November 9, 1999.

## Professional Activities and Services

Member of INFORMS

Journal Referee :

Optimization Methods and Software  
Journal of Optimization Theory and Applications

## Honors and Awards

Member, Phi Tau Phi Honorary Society, 1992.

SIAM Student Travel Award, 2001,

First SIAM International Conference on Data Mining.

## Technical Skills

Experience and knowledge in:

Programming Languages: C++, Java

Mathematical tools: MATLAB, GAMS, CPLEX

Operating systems: Windows 95/98/NT, UNIX

Application software: Excel, PowerPoint

## Research and Academic References

Professor Olvi L. Mangasarian, Computer Sciences Department, University of Wisconsin-Madison, 1210 West Dayton Street, Madison, WI 53706 U.S.A.  
Telephone: 002-1-608-262-6593. Email: [olvi@cs.wisc.edu](mailto:olvi@cs.wisc.edu)

Professor Jude W. Shavlik, Computer Sciences and Biostatistics & Medical Informatics, University of Wisconsin-Madison, 1210 West Dayton Street, Madison, WI 53706 U.S.A.  
Telephone: 002-1-608-262-7784. Email: [shavlik@cs.wisc.edu](mailto:shavlik@cs.wisc.edu)

Professor Chih Chang, Mathematics Department, National Tsing Hua University, 101 Section 2 Kuang Fu Road, Hsinchu, Taiwan 300  
Telephone: 011-886-3-5715131 ext. 3117. Email: [cchang@math2.math.nthu.edu.tw](mailto:cchang@math2.math.nthu.edu.tw)