Cheng-Han Yu

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Education

University of California, Santa Cruz, USA
- Ph.D. Candidate in Statistics and Applied Math. Advisor: Prof. Raquel Prado

Indiana University Bloomington, USA
- Ph.D. program in Statistics, Aug 2011 - May 2013. Advisor: Prof. Gabriel Huerta
- M.A. in Economics, May 2012.

National Chengchi University, Taiwan
- M.A. in Public Finance, July 2005. Advisor: Prof. K.L. Glen Ueng
- B.A. in Public Finance, June 2003.

Research Interests

Bayesian spatio-temporal modeling, high-dimensional data analysis, variable selection, Markov chain Monte Carlo methods, data visualization.

Publications/Projects

Published papers:

1. Feldman, S.R., R. Balkrishnan, H. C. Lin, **C. H. Yu**, and S.A. Davis (2014). Underuse of Early Follow-Up Visits: A Missed Opportunity to Improve Patients' Adherence. *Journal of Drugs in Dermatology*, 13(7):833-836.

2. Ueng, K.L.G. and **C. H. Yu** (2008). The Neutrality of Profit Tax - Two-Phase Decision Model Under Uncertainty of Economy. *Taiwan Public Finance Review*, 40, 4, 118-130.

3. **Yu, C. H.** (2005). Master thesis: *"The Output and Tax Evasion Decisions of Monopolistic Firm - Under the Conditions of Limited Liability and Market Uncertainty"*

Technical reports:

1. Liu, S. Z., **C. H. Yu**, F. H. Lin, W. L. Wang, C. L. Wu (2008). Research on Regional Characteristics, Industry Clusters and Competitiveness Assessment Index of Taiwan Districts, granted by National Science Council, Taiwan

Current research projects:

1. *Bayesian modeling of complex-valued signals and their latent structure*, with Prof. Raquel Prado

Course projects:

1. *Markov Random Fields and the Ising Model*, UCSC AMS263 Stochastic Processes (Prof. Athanasios Kottas)

2. *Linear regression for Boston Housing - model checking, crossvalidation, and variable selection*, UCSC AMS256 Linear Models (Prof. Abel Rodriguez)

3. *The Bayesian Hierarchical Linear Regresssion Model on the Temperature of the Surface of the Sea*, UCSC AMS207 Bayesian Modeling (Prof. Bruno Sanso)

4. *A Review of Sample-path Optimization*, IUB S710 Statistical Computing (Prof. Michael Trosset)

5. *Ordinary Kriging and Spline on the Unit Circle*, IUB S681 Spatial Statistics (Prof. Chunfeng Huang)

6. *A Review of Particle Filtering and Parameter Learning*, IUB S681 Bayesian Computation (Prof. Gabriel Huerta)

7. *Derivation and Applications of Black-Scholes Partial Differential Equation and Black-Scholes formulas*, IUB M442 Partial Differential Equations II (Prof. Norm Levenberg)

8. *Taiwan GDP Forecasting, an Appication of SARIMA models*, IUB S650 Time Series Analysis (Prof. Jerome Busemeyer)

Experience

Research Assistant with Prof. Shuen-Zen Liu, Center for Competitiveness and Innovation, Department of Accounting, National Taiwan University, 2007 - 2008
- analyzing financial and economic indices to examine the competitiveness of Taiwan companies
- reading literatures, compiling information to assist Prof. Liu in publishing his book about performance management[1]

Research Assistant with Prof. Li-Chen Hsu, Department of Public Finance, National Chengchi University, 2005
- Experimental Study on the Effects of Reputation and Fairness on Cooperation in the Voluntary Contribution Mechanism, granted by the National Science Council, Taiwan

Teaching Assistant
- University of California, Santa Cruz   Spring 2014, Winter 2015
    - Introduction to Probability Theory, Statistical Methods
- Indiana University Bloomington   Spring 2010 - Spring 2013
    - Introduction to Mathematical Statistics, Applied Linear Models, Bayesian Theory and Data Analysis, Statistical Methods (R lab), Calculus I.
- National Chengchi University   Fall 2003 - Spring 2005
    - Principle of Macroeconomics, Intermediate Microeconomics, Business Statistics.

R Workshop Assistant, Indiana Statistical Consulting Center   Fall 2012
- tutoring on data management, descriptive statistics, graphics, linear regression, testing, creating functions and basic if-else and for loop statement

Professional Certificates

Statistics
- Specialist of Applied Statistics (SAS programming on multivariate analysis), Taiwan Applied Statistics Association   2007

Programming
- C/C++ Training Program, Department of Computer Science and Information Engineering, National Taiwan University   2008

Finance
- Senior Securities Specialist, Taiwan Securities Association   2006
- Trust Specialist, Trust Association of Taiwan   2006
- Securities Investment Trust and Consulting Professionals, Securities Investment and Consulting Association of Taiwan   2006

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[1]http://www.readingtimes.com.tw/timeshtml/ad/DH0185/index.html

- Financial Planning Personnel, Taiwan Academy of Banking and Finance   2006
- Bank Internal Control and Audit, Taiwan Academy of Banking and Finance   2006

MOOC Certificates
Coursera
- Exploratory Data Analysis, Johns Hopkins University,   In progress
- The Data Scientist's Toolbox, Johns Hopkins University,   2014
- `R` Programming, Johns Hopkins University,   2014
- Getting and Cleaning Data, Johns Hopkins University,   2014
- Introduction to Python programming, University of Toronto   2013

Programming Languages
Scientific and Statistical Computing: Fluent: `R`, `MATLAB`, `WinBUGS/OpenBUGS`. Good: SAS, SPSS, Stata. Basic: Julia

General Programming: Good: `C/C++`, Python

Markup: Fluent: LaTeX. Good: HTML/CSS.

Academic Honors
Chanceller's Fellowship, University of California, Santa Cruz	2013
Graduate Scholarship, Taiwan Student Association, Indiana University	2009
Graduate Scholarship, American International Education Foundation	2008
Excellence during Military Service, Ministry of National Defense, Taiwan	2007
Honorary Member of the Phi Tau Phi Scholastic Honor Society of Taiwan	2005
Teaching Excellence Award (Microeconomics, Business Statistics)	2004, 2005
Department Graduate Fellowship, National Chengchi University	2004, 2005
Hsing-Hua Liu Scholarship, National Chengchi University	2002
National Chengchi University Presidential Awards	2001

Awarded to the top 5% students in each department