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July 2024

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PERSONAL INFORMATION

Gender: Male
Date of Birth: 10/02/1978
Citizenship: Taiwan

CURRENT EMPLOYMENT

Research Fellow, Institute of Economics, Academia Sinica,
April 2019 – present
Adjunct Professor, Department of Finance, National Central University,
August 2019 – present
Adjunct Professor, Department of Economics, National Chengchi University,
August 2019 – present
Researcher, CRETA, National Taiwan University
January 2019 -- present

PAST EMPLOYMENT

Associate Research Fellow, Institute of Economics, Academia Sinica,
November 2014 – April 2019
Adjunct Associate Professor, Department of Finance, National Central University,
August 2017 – August 2019
Adjunct Associate Professor, Department of Economics, National Chengchi University,
March 2018 – August 2019
Assistant Research Fellow, Institute of Economics, Academia Sinica,
August 2012 – November 2014
Assistant Professor, Department of Economics, University of Missouri at Columbia,
September 2010 -- May 2012

EDUCATION

Ph.D.	Economics, University of Texas at Austin	May 2010
	Dissertation: Three Essays on Hypotheses Testing Involving Inequality Constraints	
	Committee Chair: Stephen G. Donald	
M.S.	Economics, University of Texas at Austin	May 2006
M.A.	Economics, National Taiwan University, Taipei, Taiwan	May 2002
B.S.	Mathematics, National Taiwan University, Taipei, Taiwan	May 2000

FIELDS OF SPECIALIZATION

Econometric theory

PROFESSIONAL SERVICE

Associate Editor: Taiwan Economic Review, August 2018 – present
Taipei Economic Inquiry, August 2020 – present
Academia Economic Papers, September 2020 – present

FELLOWSHIPS, HONORS, AND AWARDS

Outstanding Research Award, Ministry of Science and Technology 2018, 2022
Best Paper Award, International Conference of Taiwan Risk and Insurance Association 2021
Academia Sinica Investigator Award, Academia Sinica (AS-IA-110-H01) 2021-2024
Fubon Paper Award, International Conference of Taiwan Finance Association 2019
" Monotonicity Test for Local Average Treatment Effects Under Regression Discontinuity" (shared with Shu Shen)
Young Scholar Award, Taiwan Econometric Society 2018
Young Scholar Award, TRIA Taiwan Risk and Insurance 2017
Young Scholar's Creativity Award, Foundation for the Advancement of Outstanding Scholarship, Taiwan 2017
TWAS Young Affiliate, The World Academy of Sciences 2016
Fubon Paper Award, International Conference of Taiwan Finance Association 2016
"Testing Cross-Sectional Stock Returns Predictability without Data Snooping Bias" (shared with Kendro Vincent)
Junior Research Investigators Award, Academia Sinica 2015
Career Development Award, Academia Sinica 2015-2019
Ministry of Science and Technology Wu Ta-Yu Memorial Award 2014
Young Faculty Award and Scholarship, (5-year term), Foundation for the Advancement of Outstanding Scholarship, Taiwan 2012-2017
Gordon Fellowship in Institutional Economics Fall 2008, Spring 2009
Hale Fellowship Summer 2007, 2008
Murray S. Johnson Fellowship in Economics Summer 2006, 2008, 2009
Phi-Tau-Phi Scholastic Honor of Society Award 2001

GRANTS

Ministry of Science and Technology--2030 Cross-Generation Young Scholars Program International Outstanding Young Scholars 110-2628-H-001-007 2021-2026
Ministry of Science and Technology Grant
107-2410-H-001-034-MY3 2018-2021
Ministry of Science and Technology Grant for Excellent Young Researcher
103-2628-H-001-001-MY4 2014-2018
National Science Council Grant
101-2410-H-001-109-MY2 2012-2014

PUBLICATIONS

1. "Change-point Estimation of Nonstationary I(d) Process," ***Economics Letters***, 98, 115-121, 2008 (joint with Chung-Ming Kuan).

2. "Assessing Value at Risk with CARE, the Conditional AutoRegressive Expectile Models," ***Journal of Econometrics***, 150, 261-270, 2009 (joint with Chung-Ming Kuan and Jin-Huei Yeh).

3. "Testing the Predictive Ability of Technical Analysis Using A New Stepwise Test without Data Snooping Bias," ***Journal of Empirical Finance***, 17, 471-484, 2010 (joint with Po-Hsuan Hsu and Chung-Ming Kuan).

4. "A New Test for Linear Inequality Constraints When the Variance Covariance Matrix Depends on the Unknown Parameters," ***Economics Letters***, 113, 241-243, 2011 (joint with Stephen G. Donald).

5. "Incorporating Covariates in the Measurement of Welfare and Inequality: Methods and Applications," ***Econometrics Journal***, 15, C1-C30, 2012 (joint with Stephen G. Donald and Garry F. Barrett).

6. "Cyclical Co-movement between Output, the Price Level, and Inflation," in Dek Terrell, Daniel Millimet (ed.) *30th Anniversary Edition (**Advances in Econometrics**, Volume 30)*, Emerald Group Publishing Limited, 359-384, 2012 (joint with Joseph H. Haslag).

7. "Estimation and Inference for Distribution Functions and Quantile Functions in Treatment Effect Models," ***Journal of Econometrics***, 178, 383-397, 2014 (joint with Stephen G. Donald).
   A previous version was circulated under the title "Testing for Stochastic Dominance in Treatment Effects."

8. "Testing Over-Identifying Restrictions without Consistent Estimation of the Asymptotic Covariance Matrix," ***Journal of Econometrics***, 181, 181-193, 2014 (joint with Wei-Ming Lee and Chung-Ming Kuan).

9. "Testing the Unconfoundedness Assumption via Inverse Probability Weighted Estimators of (L)ATT," ***Journal of Business and Economic Statistics***, 32, 395-415, 2014 (joint with Stephen G. Donald and Robert P. Lieli).
   This paper contains partial results of a paper which was previously circulated under the title "Inverse Propensity Score Weighted Estimation of Local Average Treatment Effects and a Test of the Unconfoudedness Assumption."

10. "A Generalized Stepwise Procedure with Improved Power for Multiple Inequalities Testing," ***Journal of Financial Econometrics***, 12, 730-755, 2014 (joint with Chung-Ming Kuan and Meng-Feng Yen).

11. "Inverse probability Weighted Estimation of Local Average Treatment Effects: A Higher Order MSE Expansions," ***Statistics and Probability Letters***, 95, 132-138, 2014 (joint with Stephen G. Donald and Robert P. Lieli).
    This paper contains partial results of a paper which was previously circulated under the title "Inverse Propensity Score Weighted Estimation of Local Average Treatment Effects and a Test of the Unconfoudedness Assumption."

12. "Robust Hypothesis Tests for M-Estimators with Possibly Non-differentiable Estimating Functions," ***Econometrics Journal***, 18, 95-116, 2015 (joint with Wei-Ming Lee and Chung-Ming Kuan).

13. "Trend Definition or Holding Strategy: What Determines the Profitability of Candlestick Technical Trading Strategies?" ***Journal of Banking and Finance***, 61, 172-183, 2015 (joint with Tsung-Hsun Lu and Yi-Chi Chen).

14. "Estimating Conditional Average Treatment Effects," ***Journal of Business and Economic Statistics***, 33, 485-505, 2015 (joint with Jason Abrevaya and Robert P. Lieli).

15. "Improving the Power of Tests of Stochastic Dominance," ***Econometric Reviews,*** 35, 553-585, 2016 (joint with Stephen G. Donald).

16. "Consistent Tests for Poverty Dominance Relations," ***Journal of Econometrics***, 191, 360-373, 2016 (joint with Garry F. Barrett and Stephen G. Donald).

17. "Consistent Tests for Conditional Treatment Effects," ***Econometrics Journal,*** 20, 1-22, 2017.

18. "Model Selection Tests for Conditional Moment Restriction Models," ***Econometrics Journal***, 20, 52-85, 2017 (joint with Xiaoxia Shi).

19. "Analyzing the Performance of Multi-Factor Investment Strategies under Multiple Testing Framework," ***Journal of Portfolio Management***, 44, 113-126, 2018 (joint with Kendro Vincent and Hsiou-Wei Lin).

20. "Nonparametric Estimation of Natural Direct and Indirect Effects Based on Inverse Probability Weighting," ***Journal of Econometric Methods***, 1, 2018 (joint with Martin Huber and Tsung-Chih Lai).

21. "Treatment Effect Models: A Brief Review," (in Chinese) ***Taiwan Economic Review***, 46, 501-521, 2018 (joint with Tsung-Chih Lai).

22. "Using the Area under an Estimated ROC Curve to Test the Adequacy of Binary Predictors," ***Journal of Nonparametric Statistics***, 31, 100-130, 2019 (joint with Robert P. Lieli).
    This article is based on two earlier working papers; one with the same title and one titled "The Null Distribution of the Empirical AUC for Classifiers with Estimated Parameters: a Special Case".

23. "Testing Treatment Effect Heterogeneity in Regression Discontinuity Design," ***Journal of Econometrics***, 208, 468-486, 2019 (joint with Shu Shen).

24. "Robust Uniform Inference for Quantile Treatment Effects in Regression Discontinuity Designs," ***Journal of Econometrics***, 211, 589-618, 2019 (joint with Harold D. Chiang and Yuya Sasaki).

25. "Testing Generalized Regression Monotonicity," ***Econometric Theory***, 35, 1146-1200, 2019 (joint with Chu-An Liu and Xiaoxia Shi).

26. "A Stochastic Frontier Model with Endogenous Treatment Status and Mediator," forthcoming in ***Journal of Business and Economic Statistics***, 38, 243-256, 2020 (joint with Yi-Ting Chen and

Hung-Jen Wang).

27. "Direct and Indirect Effects of Continuous Treatments Based on Generalized Propensity Score Weighting," ***Journal of Applied Econometrics***, 35, 814-840, 2020 (joint with Martin Huber, Ying-Ying Lee and Layal Pipoz).

28. "Partial Effects in Non-linear Panel Data Models with Correlated Random Effects," ***Econometrics Journal***, 24, 519-535, 2021 (joint with Jason Abrevaya).
A previous version was circulated under the title "Estimation of Partial Effects in Non-linear Panel Data Models."

29. "Nonlinear Panel Data Models with Distribution-Free Correlated Random Effects," ***Econometric Theory***, 37, 1075-1099, 2021 (joint with Ji-Liang Shiu).
A previous version was circulated under the title "Internally Consistent Estimation of Nonlinear Panel Data Models with Correlated Random Effects."

30. "Investment Styles and the Multiple Testing of Cross-Sectional Stock Return Predictability," ***Journal of Financial Markets***, 56, 2021 (joint with Hsiou-Wei Lin and Kendro Vincent).

31. "Quantile Structural Treatment Effect: Application to Smoking Wage Penalty and its Determinants," ***Econometric Reviews***, 40, 128-147, 2021(joint with Kamhon Kan and Tsung-Chih Lai).
A previous version was circulated under the title "Distribution and Quantile Structural Functions in Treatment Effect Models: Application to Smoking Effects on Wages."

32. "Testing Monotonicity of Conditional Treatment Effects under Regression Discontinuity Designs," ***Journal of Applied Econometrics***, 36, 271-366, 2021 (joint with Shu Shen). [link]
A previous version was circulated under the title "Monotonicity Test for Local Average Treatment Effects under Regression Discontinuity."

33. "Testing Identifying Assumptions in Fuzzy Regression Discontinuity Designs," ***Quantitative Economics***, 13, 1-28, 2022 (with Yoichi Arai, Toru Kitagawa, Ismael Mourifie and Yuanyuan Wan).

34. "Counterfactual Treatment Effects: Estimation and Inference," ***Journal of Business and Economic Statistics***, 40, 240-255, 2022 (joint with Tsung-Chih Lai and Robert P. Lieli).
A previous version was circulated under the title "Forecasting Treatment Effects" and "Estimation and Inference for Counterfactual Treatment Effects".

35. "Estimating Conditional Average Treatment with High-Dimensional Data," ***Journal of Business and Economic Statistics***, 40, 313-327, 2022 (joint with Qingliang Fan, Robert P. Lieli and Yichong Zhang).

36. "Estimation and Inference for Distribution Functions and Quantile Functions in Endogenous Treatment Effect Models," ***Econometric Reviews***, 41, 22-50, 2022 (joint with Tsung-Chih Lai and Robert P. Lieli).

37. "Two-step Series Estimation and Specification Testing of (Partially) Linear Models with Nonparametrically Generated Regressors," ***Econometric Reviews***, 41, 985-1007, 2022 (joint

with Jen-Che Liao and Eric S. Lin).

38. "The Use of Machine Learning in Treatment Effect Estimation," In F. Chan and L. Matyas (Eds.) ***Econometrics with Machine Learning***, Advanced Studies in Theoretical and Applied Econometrics, vol 53. 2022, Springer, (joint with Robert P. Lieli and Agoston Reguly).

39. "Testing Unobserved Heterogeneity of Individual Treatment Effects with Endogenous Treatment," ***Econometric Theory***, 39, 582-622, 2023 (joint with Ta-Cheng Huang and Haiqing Xu).

40. "Non-Representative Sample Networks: Estimation of Network Structural Properties by Weighting," ***Journal of Econometrics***, 240, 105689, 2024 (joint with Chih-Sheng Hsieh, Stanley Ko, Jaromir Kovarik, and Trevon D. Logan).

41. "Retrieving Almost Stochastic Dominance Momentum in Taiwan Stock Market," ***Pacific-Basin Finance Journal***, 83,102268, 2024 (joint with Mi-Hsiu Chiang and Hsin-Yu Chiu)."

42. Testing Monotonicity of Mean Potential Outcomes in a Continuous Treatment with High-Dimensional Data," forthcoming in ***Review of Economics and Statistics*** (joint with Martin Huber, Ying-Ying Lee and Chu-An Liu).

43. "Quantile Policy Effects: An Application to U.S. Macroprudential Policy," forthcoming in ***Journal of Business and Economic Statistics***, (joint with Hsin-Yi Lin and Yu-Hsiang Hsiao).

44. "Testing Identification Conditions of LATE in Fuzzy Regression Discontinuity Designs," forthcoming in ***Journal of Econometrics***, (joint with Ji-Liang Shiu and Yuanyuan Wan).

45. "Dynamic Regression Discontinuity under Treatment Effect Heterogeneity," forthcoming in ***Quantitative Economics,*** (joint with Shu Shen).

WORKING PAPERS

1. "Multiplier Bootstrap for Empirical Processes."

2. "Quantile Treatment Effects in Regression Discontinuity Designs with Covariates," (joint with Chung-Ming Kuan and Giorgio Teng-Yu Lo).

3. "Inference for ROC Curves Based on Estimated Predictive Indices," (joint with Robert P. Lieli).

4. "Subvector Inference for Varying Coeffcient Models with Partial Identification," (joint with Shengjie Hong and Yuanyuan Wan).

5. "Doubly Robust Estimation of Direct and Indirect Quantile Treatment Effects with Machine Learning," (joint with Martin Huber and Yu-Min Yen).

6. "A Consistent Test for Stochastic Dominance Relations under Multi-way Clustering," (joint with Yaqian Wu and Qingliang Fan).

7. "Lack of Identification Diagnostics in GMM Contexts," (joint with Stephen G. Donald and Shu Shen).

WORK IN PROGRESS

1. "Direct and Indirect Treatment Effects in Regression Discontinuity Models," (joint with Ying-Ying Lee and Shu Shen).

2. "Endogeneity in Semiparametric Nonseparable Models without Monotonicity," (joint with Ji-Liang Shiu and Xun Tang).

3. "Estimating Semi-parametric Measurement Error Models without Side Information," (joint with Ji-Liang Shiu).

4. "Testing Treatment Effect Monotonicity under Unconfoundedness Assumption," (joint with Tsung-Chih Lai, Ying-Ying Lee and Jen-Che Liao).

5. "Counterfactual Optimal Treatment Assignment Policy," (joint with Jen-Che Liao and Robert P. Lieli).

6. "Counterfactual Conditional Treatment Effects."

7. "Counterfactual Direct and Indirect Average Treatment Effects."

8. "High-dimensional Regression Discontinuity Estimation Away from the Cutoff," (joint with Shu Shen).

RESEARCH EXPERIENCE

Research Assistant, University of Texas at Austin

For Stephen G. Donald, Daniel S. Hamermesh and Yingyao Hu.	Spring 2007

Research Assistant, Academia Sinica, Taiwan

For Chung-Ming Kuan.	January 2004--June 2004

TEACHING EXPERIENCE

Instructor, University of Missouri at Columbia

Advanced Topics in Econometrics I (graduate)	Fall 2011
Introductory Econometrics (undergraduate)	Spring 2011, Spring 2012
Econometric Methods I (graduate)	Spring 2011, Spring 2012

Instructor, University of Texas at Austin

Math Camp for incoming Ph.D. students	Summer 2006, 2008, 2009

Teaching Assistant, University of Texas at Austin

Advanced Econometrics II: Panel Data	Spring 2009
Advanced Econometrics II: Time Series Econometrics	Fall 2008, Spring 2008
Econometrics II	Fall 2007, Fall 2006

Econometrics I	Spring 2006
Probability and Statistics	Fall 2005
Undergraduate Statistics	Spring 2005, Fall 2004

Teaching Assistant, National Taiwan University, Taiwan

Undergraduate Statistics	Fall 2000--Spring 2002

PROFESSIONAL SERVICE AND ACTIVITIES

Referee for:

Academia Economic Papers, Annals of Statistics, Economic Inquiry, Emerging Markets Finance and Trade, Econometric Reviews, Econometric Theory, Economics Bulletin, European Journal of Operational Research, International Economic Review, International Journal of Forecasting, Journal of Applied Econometrics, Journal of Business and Economic Statistics, Journal of Econometric Methods, Journal of Econometrics, Management Science, Mathematics and Computers in Simulation, Oxford Bulletin of Economics and Statistics, Pacific Economic Review, Review of Economics and Statistics, Statistics and Probability Letters, Taiwan Economic Review.

LANGUAGE

English (fluent), Chinese (native)