

NUTTANAN WICHITAKSORN

CONTACT INFORMATION

Postal Address:

School of Engineering, Computer and Mathematical Sciences,
Auckland University of Technology, Private Bag 92006
Auckland 1142, New Zealand

E-mails:

nuttanan.wichitaksorn@aut.ac.nz
nuttanan.wichitaksorn@gmail.com

EDUCATION

Ph.D. in Econometrics, March 2013
University of Sydney, New South Wales, Australia

M.A. in Economics, December 2008
Rutgers University, New Brunswick, New Jersey, USA

Master of Economics, December 2002
Chulalongkorn University, Bangkok, Thailand

B.Sc. in Cooperative Economics, November 1994
Kasetsart University, Bangkok, Thailand

RESEARCH AND TEACHING INTERESTS

Statistics and Econometrics with emphasis on Bayesian and parallel computing methodologies and applications in economics, finance, health science, and sport science

PUBLISHED ARTICLES IN REFEREED JOURNALS

Wichitaksorn, N. 2022. Analyzing and forecasting Thai macroeconomic data using mixed-frequency approach. *Journal of Asian Economics*. <https://doi.org/10.1016/j.asieco.2021.101421>.

Wichitaksorn, N., Wongjirasak, S., and Tharisung, K. 2022. Assessing impact of goals by foreign players on football match outcomes using Poisson and ordered logistic regression models: An evidence from Thailand premier league. *Journal of Applied Statistics and Information Technology*. (Forthcoming)

Hassell Sweatman, C.Z.W., Wichitaksorn, N., Jiang, A., Farrell, T., Bootland, N., Miskell, G., Pritchard, G., Chrystall, C., and Robinson, G. 2020. Challenge from Transpower: Determining the effect of the aggregated behaviour of solar photovoltaic power generation and battery energy storage systems on grid exit point load in order to maintain an accurate load forecast. *ANZIAM Journal*. 60: M1-M40.

Wichitaksorn, N. 2019. Analyzing multiple vector autoregressions through matrix-variate normal distribution with two covariance matrices. *Communications in Statistics - Theory and Methods*. 49(8): 1801-1817.

Nagahara, R., Haramura, M., Takai, Y., Oliver, J.L., Wichitaksorn, N., Sommerfield, L. M., and Cronin, J.B. 2019. Age-related differences in kinematics and kinetics of sprinting in young female. *Scandinavian Journal of Medicine & Science in Sports*. 29(6): 800-807.

Nguyen, H.V., Naeem, M.A., Wichitaksorn, N., and Pears, R. 2019. A smart system for short-term price prediction using time series models. *Computers and Electrical Engineering*. 76: 339-352.

Wichitaksorn, N., Gerlach, R., and Choy, S.T.B. 2019. Efficient MCMC estimation of some elliptical copula regression models through scale mixtures of normal. *Applied Stochastic Models in Business and Industry*. 35(3): 808-822.

Wichitaksorn, N., Wang, J.J.J., Choy, S.T.B., and Gerlach, R. 2015. Analysing return asymmetry and quantiles through stochastic volatility models using asymmetric Laplace error via uniform scale mixtures. *Applied Stochastic Models in Business and Industry*. 31(5): 584-608.

Wichitaksorn, N., Choy, S.T.B., and Gerlach, R. 2014. A generalized class of skew distributions and associated robust quantile regression models. *Canadian Journal of Statistics*. 42(4): 579-596.

Wichitaksorn, N. and Tsurumi, H. 2013. Comparison of MCMC algorithms for the estimation of Tobit model with non-normal error: The case of asymmetric Laplace distribution. *Computational Statistics & Data Analysis*. 67: 226-235.

Choy, S.T.B. and Wichitaksorn, N. 2011. Discussion on Bayesian variable selection for random intercept modeling of Gaussian and non-Gaussian Data. *Bayesian Statistics 9*. 189-191.

Wichitaksorn, N. 2005. Can Thailand have higher trade with Latin America? *Chulalongkorn Journal of Economics*. 17(2): 197-262.

Vongvipanond, P. and Wichitaksorn, N. 2004. Thailand's corporate restructuring experience through formal bankruptcy procedures: Economic and legal perspectives. *ASEAN Economic Bulletin*. 21(1): 54-80.

**REFEREED
BOOK
CHAPTERS**

Wichitaksorn, N. and Choy, S.T.B. 2015. Bayesian Parallel Computation for Intractable Likelihood using Griddy-Gibbs Sampler. In S.K. Upadhyay, U. Singh, D.K. Dey, and A. Loganathan (eds.), *Current Trends in Bayesian Methodology with Applications*, 619-630. Florida: CRC Press, Taylor & Francis Group.

Wichitaksorn, N. and Choy, S.T.B. 2015. Assessing sectoral risk through skew-error capital asset pricing model: Empirical evidence from Thai stock market. In V.-N. Huynh, V. Kreinovich, S. Sriboonchitta, and K. Suriya, *Econometrics of Risk*, Studies in Computational Intelligence Series 583, 435-447. Switzerland: Springer Verlag.

**REFEREED
CONFERENCE
PROCEEDINGS**

Klee, T., Stokes, S.F., Reese, E., Jørgensen, R.N., Bleses, D., Gavin, W.J., and Wichitaksorn, N. 2017. Factors associated with the early language development of New Zealand children. *14th International Congress for the Study of Child Language*, July 17-21, Lyon, France.

Klee, T., Stokes, S.F., Reese, E., Jørgensen, R., Bleses, D., Gavin, W., and Wichitaksorn, N. 2014. The KidsWords project: factors associated with the early language development of children growing up in New Zealand. *Paper presented at the International Association for the Study of Child Language*, July 14-18, Amsterdam, Netherlands.

Wichitaksorn, N. and Choy, S.T.B. 2012. Modeling Dependence of Bivariate Seemingly Unrelated Tobit Model through Copula. *Proceedings of the Fourth International Conference of the Thailand Econometric Society*, January 13-14, 2011, Chiang Mai, Thailand.

WORKING PAPERS

Kapoor, G., Wichitakorn, N., and Zhang, W. 2022. *Forecasting Half-Hourly Electricity Prices using a Mixed-Frequency Structural VAR framework*.

Zhang, H., Wichitakorn, N., and Yongchareon, S. 2022. *Predicting Early Repayment of Loans using Specific Behavioural Features*.

Khanthaporn, R., and Wichitakorn, N. 2021. *Modeling Stock Returns using Asymmetric GARCH-ICAPM with Mixture and Heavy-Tailed Distributions: An Application to COVID-19 Pandemic Forecasts*, <http://ssrn.com/abstract=3814533>.

Kapoor, G., Wichitakorn, N., and Zhang, W. 2021. *Analyzing and Forecasting Electricity Price using Regime-Switching Models: The Case of New Zealand Market*, <https://ssrn.com/abstract=3788508>.

Klee, T., Stokes, S.F., Reese, E., Jørgensen, R.N., Bleses, D., Gavin, W.J., and Wichitakorn, N. 2019. *Early Language Development of New Zealand Children: National Norms for English*.

Wichitakorn, N., Choy, S.T.B., and Gerlach, R. 2012. *Estimation of Bivariate Copula-based Seemingly Unrelated Tobit Models*, <http://ssrn.com/abstract=2122388>.

WORK IN PROGRESS

Random Feature Selection using Random Subspace Logistic Regression

Modified Logistic Coreset

Analyzing and Forecasting Multiple Time Series

Construction of Labor Market Condition Index in Thailand

Portfolio Analysis using Loss

Analysis of Demand for Migrant Workers in Thailand: Determinants and Trend Projection

Dynamics of the Thai Labor Market and Its Determinants

Multivariate Stochastic Volatility Models

Child Language and Quantile Regression

HONORS AND AWARDS

SSRN's Top Ten Download List for a Paper Posted under Economic Growth & Aggregate Productivity in Developing Economies, Economic Growth (Econometrics), and Price Level; Inflation; Deflation, as of June 7, 2021

SSRN's Top Ten Download List for a Paper Posted under Prices Forecasting, and Econometric Modeling: Forecasting eJournal, as of May 19, 2021

Dean's Citation Award for Tutoring (Teaching in Tutorials) in Semester 2, 2012 from University of Sydney Business School, awarded in May 2013

SSRN's Top Ten Download List for a Paper Posted under Econometrics: Econometric & Statistical Methods - General eJournal, as of October 2, 2012

Honorable Mention as a Finalist (among Four Finalists) for NISS/ASA Best y-BIS Paper Award 2012 by National Institute of Statistical Sciences and American Statistical Association

ISBA 2012 World Meeting Junior Travel Award from Japanese Ministry of Education, Science, Sports, Culture and Technology

Award for Excellence in Postgraduate Research by Statistical Society of Australia, Inc., New South Wales Branch, 2011

Level I Tutor Certification, Rutgers University, 2008

SCHOLARSHIPS AND GRANTS Research Grant (10 Million Baht or USD equivalent 303,030) from the Program Management Unit-B of Thailand for the Project Titled "Workforce Preparation in the post-COVID-19 Era", 2021-2023

Research Grant (2.44 Million Baht or USD equivalent 81,000) from the National Research Council of Thailand for the Project Titled "Policy and Measure: Analysis of Fiscal Burden for Aging Informal Labor's Welfare Package", 2021-2022

Fellowship Grant (NZD 7,625) from Callaghan Innovation (in collaboration with Harmony) for the Project Titled "Predicting Early Repayment of Loans using Specific Behavioural Features", 2021

Research Grant (200,000 Baht or USD equivalent 6,500) from the Puey Ungphakorn Institute for Economic Research under the Central Bank of Thailand for the Project Titled "Analyzing and Forecasting Thai Macroeconomic Data using Mixed-Frequency Approach", 2019-2020

Fellowship Grant (NZD 93,525) from Callaghan Innovation (in collaboration with Genesis Energy) for the Project Titled "Analysis of Electricity Capped Option Pricing and Risk Management Strategy", 2018-2021

Research Grant (2 Million Baht or USD equivalent 60,000) from Thailand Science and Research Innovation Office for the Project Titled "Construction of Labor Market Condition Index in Thailand", 2019-2020

Research Grant (850,000 Baht or USD equivalent 24,000) from International Organization for Migration for the Project Titled "Thai Labor Market Assessment", 2016

Research Grant (10,000 CHF or USD equivalent 11,500) from ETH and Ministry of Education, Switzerland for the Project Titled "Development and Application of Advanced Risk Management Tools for Stabilizing the Economic and Financial System in Thailand", 2015-2016, with Marc Paoella (PI) and Paul Embrechts

Research Grant (USD 100,000) from Food and Agriculture Organization for the Project Titled "Rice Balance Sheet: An Estimation of Uses of Rice in Thailand", 2015

Postgraduate Research Scholarship for PhD Study from University of Sydney Business School, 2009-2012

Research Grant (240,000 Baht or USD equivalent 8,000) from the Young Researchers Scheme by Thailand Research Fund for the Project Titled "Competitive Behavior of Thai Commercial Banks", 2004-2005

Thesis Scholarship from Graduate School of Chulalongkorn University and Ministry of University Affairs, Thailand, 2001

Tuition, Fees, and Stipend Scholarship from Faculty of Economics, Chulalongkorn University, 1999

**FUNDED
RESEARCH
PROJECTS**

Project Titled “Upskilling Thai Farmers”, funded by Agricultural Research Development Agency (approx. USD 79,000), 2019-2020

Project Titled “Social Investment in Thailand”, funded by Thai Health Foundation (approx. USD 500,000), 2015-2017

Project Titled “Construction of Rule of Law Index for Thailand”, funded by Thailand Institute of Justice (approx. USD 150,000), 2015-2016

Project Titled “Migrant Workers in Thailand: Trend and Impact on Policy Management”, funded by Thailand Research Fund (approx. USD 30,000), 2015-2016

Project Titled “Police Corruption in Thailand”, funded by National Economic and Social Advisory Council (approx. USD 15,000), 2004-2005

Project Titled “Survey on Chlorofluorocarbons Use in Thailand”, funded by World Bank (approx. USD 33,000), 1999-2000

**RELEVANT
EXPERIENCE**

Senior Lecturer in Analytics/Statistics **September 2019-Present**
Lecturer in Analytics/Statistics **June 2017-September 2019**
School of Engineering, Computer and Mathematical Sciences, Auckland University of Technology, Auckland, New Zealand

Visiting Research Advisor **May 2020-present**
Thailand Development Research Institute, Bangkok, Thailand

Research Fellow **December 2014-June 2017**
Thailand Development Research Institute, Bangkok, Thailand

Adjunct Fellow **February 2015-January 2018**
School of Mathematics and Statistics and Department of Communication Disorders, University of Canterbury, Christchurch, New Zealand

Consultant **January 2014-December 2014**
Thailand Development Research Institute, Bangkok, Thailand

Lecturer in Statistics **February 2013-January 2015**
School of Mathematics and Statistics, University of Canterbury, Christchurch, New Zealand

Research Assistant **October 2011-November 2012**
Discipline of International Business, University of Sydney Business School, New South Wales, Australia

Research Assistant **July 2009-November 2012**
Discipline of Business Analytics, University of Sydney Business School, New South Wales, Australia

Research Assistant **September 2007-December 2008**
Department of Economics, Rutgers University, New Brunswick, New Jersey, USA

Researcher **December 2002-August 2006**
Thailand Development Research Institute, Bangkok, Thailand

Researcher **November 2003-January 2005**
Institute for Social and Economic Studies, Dhurakijpundit University, Bangkok, Thailand

Research Assistant **April 2000-December 2002**
Faculty of Economics, Chulalongkorn University, Bangkok, Thailand

Project Manager **July 1999-September 2000**
Informedia International Ltd., Bangkok, Thailand

Research Assistant **September 1996-October 1996**
Department of Cooperative, Faculty of Economics, Kasetsart University, Bangkok, Thailand

Research Assistant **February 1995-July 1996**
Tara Siam Business Information Ltd., Bangkok, Thailand

Research Assistant **November 1994-February 1995**
Center for Applied Economics Research, Faculty of Economics, Kasetsart University, Bangkok, Thailand

**STUDENT
SUPERVISION
EXPERIENCE**

Provide research supervision to postgraduate students.

Current:

- PhD (AUT, 2018-Present): Rewat Khanthaporn and Gaurav Kapoor
- PhD (AUT, 2022-Present): Faqiang Zhang and Amanda Thilakarathna

Completed:

- Masters: Xixi He, Deepti Duvvuri, Siqi Liu, Wenqiang Liu, Khurram Farrukh, Siddarth Kumara Vadivel, Gaman Sethi, Albert Zhang, Jiayun Liu, Ruvinika Jayasundera, Muhammad Kundi, Kaushalya Panagoda, Lee Long Sin, Zhiman Cai, Weizheng Wang, Huy Nguyen, Harish Mohanaselvam, Tom Davidson, Ying Zhang (AUT)
- Honors: Thomas Doehring (University of Canterbury)

**THESIS
EXAMINATION
EXPERIENCE**

Examined theses at postgraduate level for students from University of Canterbury (Claudia Seibold, MSc) and Lincoln University (Christian Biney, PhD).

**OTHER
EXPERIENCE**

Convener, B.Sc. refresh-Analytics Major, Department of Mathematical Sciences, Auckland University of Technology, 2020-present

Postgraduate Programme Leader/Advisor in Mathematical Sciences, Department of Mathematical Sciences, Auckland University of Technology, 2020-Present

Co-Founder and Organizer, AUT Master of Analytics Mix & Mingle, Auckland Uni-

versity of Technology, 2018-2020

Co-Organizer, AUT Mathematical Science Research Symposium, Auckland University of Technology, 2017-2019

Organizer, TDRI International Conference on Quantitative Risk Management and Financial Econometrics, Thailand Development Research Institute, Bangkok, August 21, 2015

300-Level Courses Coordinator, School of Mathematics and Statistics, University of Canterbury, 2014

Organizer, Canterbury Statistics Open Day, Department of Mathematics and Statistics, University of Canterbury, November 20, 2013

Panel Member to draft curriculums on B.Sc. and M.Sc. in Financial Engineering Programme, School of Mathematics and Statistics, University of Canterbury

Seminar Organizer, School of Mathematics and Statistics, University of Canterbury, 2013-2014

Organizer, The 13th Annual J. B. Douglas Postgraduate Awards Day and Annual Dinner, Statistical Society of Australia Inc. New South Wales Branch, November 20, 2012

**SELECTED
CONFERENCE/
WORKSHOP
PRESENTA-
TIONS**

The Impact of Income Diversification on Vietnamese Household Welfare. Talk given at 2020 International Conference in Business, Economics, and Finance, Can Tho University, December 17, 2020, Can Tho, Vietnam (invited-online). Joint work with Nguyen Tuan Kiet, Danh Thi Hai Yen, Kaesinee Tharisung, and Nattanun Svavasu.

Modeling Non-linear Dependence of Bivariate Seemingly Unrelated Tobit Models through Copulas. Talk given at 2019 International Conference in Economics and Business, Can Tho University, December 6, 2019, Can Tho, Vietnam (invited). Joint work with Richard Gerlach and S.T. Boris Choy.

Analyzing Stock Returns through Mixture of Normal and Generalized Pareto Distributions. Talk given at 2019 Sydney Time Series and Forecasting Symposium, University of Sydney Business School, November 11-12, 2019, Sydney, Australia (invited). Joint work with Rewat Khanthaporn.

A & I (Analytics & Industry): Two Cases from Our Partners in Electricity Industry. Talk given at 2019 AUT AI Day, Auckland University of Technology, April 4, 2019, Auckland, New Zealand (invited).

Analyzing Multiple Vector Autoregressions through Matrix-variate Normal Distribution with Two Covariance Matrices. Talk given at 2018 Sydney Time Series and Forecasting Symposium, University of Sydney Business School, November 13-14, 2018, Sydney, Australia (invited).

Modeling Non-linear Dependence of Bivariate Seemingly Unrelated Tobit Models through Copulas. Talk given at 2017 Mathematical Science Research Symposium, Auckland University of Technology, November 23, 2017, Auckland, New Zealand. Joint work with Richard Gerlach and S.T. Boris Choy.

On the Matrix Copula with Application to Portfolio Analysis. Talk given at 1st International Conference on Econometrics and Statistics, Hong Kong University of Science and Technology, June 15-17, 2017, Hong Kong.

Forecasting Registered Migrant Workers and Analysis of Demand for Migrant Workers in Thailand. Talk given at Workshop on Developing a Labour Market Assessment Methodology for Thailand by International Labour Organization and Ministry of Labour, May 4, 2016, Bangkok, Thailand (invited).

Demand for Rice in Thailand. Talk given at Final Workshop for Agricultural Market Information System Project by Food and Agriculture Organization, November 24, 2015, Bangkok, Thailand (invited).

MAR2CO: Matrix Autoregressive Model with Two Covariance Matrices. Talk given at Canterbury Statistics Open Day, University of Canterbury, November 12, 2014, Christchurch, New Zealand.

Efficient Estimation of Some Elliptical Copula Regression Models through Scale Mixtures of Normal. Talk given at Department of Statistics research seminar, University of Auckland, February 13, 2014, Auckland, New Zealand (invited).

Bayesian Parallel Computation for Intractable Likelihood. Talk given at 2013 Joint NZSA+ORSNZ Conference, November 26, 2013, Hamilton, New Zealand.

Bayesian Parallel Computation for Intractable Likelihood. Talk given at the Discipline of Business Analytics research seminar, University of Sydney Business School, October 18, 2013, Sydney, Australia (invited).

Scale Mixtures of Uniform Representation for a Class of Skew Distributions. Talk given at the Department of Mathematics and Statistics primer series, University of Canterbury, September 13, 2013, Christchurch, New Zealand (invited).

A Generalized Class of Skew Distributions and Parametric Quantile Regression Models. Poster presented at 7th Rimini Bayesian Econometrics Workshop, June 25-26, 2013 Rimini, Italy. Joint work with S.T. Boris Choy and Richard Gerlach.

A Generalized Class of Skew Distributions and Parametric Quantile Regression Models. Talk given at the Department of Mathematics and Statistics research seminar, University of Canterbury, October 23, 2012, Christchurch, New Zealand. Joint work with S.T. Boris Choy and Richard Gerlach.

Efficient Estimation of Some Elliptical Copula Regression Models through Scale Mixtures of Normal. Poster presented at the International Society for Bayesian Analysis 2012 World Meeting, June 25-29, 2012, Kyoto, Japan. Joint work with Richard Gerlach and S.T. Boris Choy.

Bayesian Analysis of Multivariate Regression Model through Elliptical Copulas and Scale Mixtures of Normal. Paper presented at the International Symposium on Business and Industrial Statistics 2012, June 17-21, 2012, Bangkok, Thailand. Joint work with Richard Gerlach and S.T. Boris Choy.

Modeling Australian Excess Return through Quantile Regression and Asymmetric Laplace Distribution by Scale Mixture of Normals. Paper presented at International Workshop on Statistical Computing in Quantitative Finance and Biostatistics, Decem-

ber 20-21, 2011, Taichung, Taiwan. Joint work with S.T. Boris Choy.

Bayesian Analysis of Bivariate Seemingly Unrelated Tobit through Copula and Scale-Mixture Margins. Poster presented at AFM Smith Conference, June 1-6, 2011, Crete, Greece. Joint work with S.T. Boris Choy.

Modeling Dependence of Bivariate Seemingly Unrelated Tobit Model through Copula. Paper presented at the Fourth International Conference of the Thailand Econometric Society, January 13-14, 2011, Chiang Mai, Thailand. Joint work with S.T. Boris Choy.

Bayesian Analysis of Stochastic Volatility Model with Asymmetric Laplace Error through Scale Mixture of Uniform. Poster presented at Bayes on the Beach Conference, October 4-5, 2010, Gold Coast, Australia. Joint work with Joanna J.J. Wang and S.T. Boris Choy.

A Bayesian Analysis of Tobit Model with Non-Gaussian Error: The Case of Three-Parameter Asymmetric Laplace Distribution. Paper presented at the Business Analytics Discipline Seminar, University of Sydney Business School, April 24, 2009, Sydney, Australia. Joint work with Hiroki Tsurumi.

Thailand corporate restructuring and pre- and post-crisis ownership and control. Paper presented at RIETI International Workshop on “Reform of Corporate Governance, Corporate Rehabilitation in East Asia and its lessons for China”, November 19, 2005, Tokyo, Japan. Joint work with Pairoj Vongvipanond.

An empirical study of Thailand post crisis corporate restructuring. Paper presented at RIETI International Workshop on Insolvency Reform, March 7-8, 2005, Tokyo, Japan. Joint work with Pairoj Vongvipanond.

EDITORIAL SERVICE

Guest Editor, Special Issue on Financial Econometrics, Econometrics-Open Access Journal, and World Food Policy Journal

REFEREEING

American Journal of Mathematical and Management Sciences, Applied Stochastic Models in Business and Industry, Australian & New Zealand Journal of Statistics, Communications in Statistics-Simulation and Computation, Computational Statistics, Computational Statistics & Data Analysis, Electronics, Energies, Fluctuation and Noise Letters, IEEE Transactions on Neural Systems & Rehabilitation Engineering, International Journal of Environmental Research and Public Health, International Journal of Theoretical and Applied Finance, Journal of Applied Probability and Statistics, Journal of Business and Economic Statistics, Journal of Risk and Financial Management, Journal of Statistical Computation and Simulation, Risks, Studies in Nonlinear Dynamics & Econometrics, and Transactions on Knowledge Discovery from Data

PROFESSIONAL MEMBERSHIP/SOCIAL SERVICES

Member
The International Society for Bayesian Analysis

August 2019-Present

Member
The American Statistical Association

August 2017-Present

Member
The New Zealand Statistical Association

July 2017-Present

Council Committee

July 2011-December 2016

*The young Business and Industrial Statisticians (y-BIS) in the International Society
for Business and Industrial Statistics (ISBIS)*

Councillor **February 2012-February 2013**
Statistical Society of Australia Inc., New South Wales Branch

Fellow **June 2009-June 2011**
Royal Statistical Society, UK

Assistant Secretary **May 2005-March 2006**
*Sub-Committee to Study Development Approaches for Human Security under National
Reconciliation Commission of Thailand*

as of March 23, 2022