

*Curriculum Vitae***KWONG Koon Shing****Current Employment and Position**

- Professor of Statistics (Education), School of Economics (SOE), Singapore Management University (SMU) since July 2012

Degrees

- Ph.D. in Statistics, Temple University, USA, 1992
 - Thesis Title: Evaluation and applications of the multivariate normal distribution with a singular negative product correlation structure
 - Thesis Supervisor: Professor Boris Iglewicz
- M.S. in Statistics, Temple University, USA, 1989
- B.B.A. in Industrial Management, Northeast Louisiana University (renamed University of Louisiana at Monroe in 1999), USA, 1987

Past Employment and Positions

- January 2007 – June 2012, Practice Associate Professor, SMU
- July 2004 – December 2006, Associate Professor, National University of Singapore (NUS)
- August 1999 – June 2004, Assistant Professor, NUS
- May 1993 – July 1999, Lecturer, NUS

Research Interests

- Multiple Comparison Procedures
- Non-inferiority Inference
- Life Annuity and Pension
- Equity Release Products

Memberships in Professional Organizations

- The Royal Statistical Society
- The Society of Actuaries
- Singapore Actuarial Society

Honors, Awards and Achievements

- Fellow of the Society of Actuaries (FSA) in 2013
- Chartered Enterprise Risk Analyst (CERA) in 2011
- Teaching Excellence Award in the SOE, SMU, in 2013
- Nominated for Innovative Teacher Award by SOE, SMU in 2011/2012
- Nominated for Distinguished Teacher Award by SOE, SMU in 2010/2011
- Nominated for Innovative Teacher Award by SOE, SMU in 2009/2010
- Three Teaching Excellence Awards in the Faculty of Science, NUS, 2000/2001, 2001/2002, 2003/2004
- Meritorious Teaching Award in the Faculty of Science, NUS, 1998/1999
- Teaching Excellence Award in the Faculty of Arts and Social Sciences, NUS, 1995/1996
- First Annual Student Award (held by Biometrics Section of American Statistical Association in 1992)

Publications – Refereed Journals

1. Kwong Koon-Shing, Tse Yiu-Kuen & Chay Junxing. (2021). A Hybrid Equity Release Plan for Retirement Financing, *Asia-Pacific Journal of Risk and Insurance*, **15**, 23-46
2. Kwong Koon-Shing & Chan Wai-Sum & Siu-Hang Li Johnny. (2019). Actuarial Modeling and Analysis of the Hong Kong Life Annuity Scheme, *Asia-Pacific Journal of Risk and Insurance*, **14**, 1-12
3. Zhong, Junjiang, Wen, Miin-Jye, Kwong, K. S., and Cheung, Siu Hung. (2018) Testing of non-inferiority and superiority for three-arm clinical studies with multiple experimental treatments. *Statistical Methods in Medical Research*, **27**, 1751-1765
4. Kwong, K. S., Tse, Yiu Kuen and Chan, Wai Sum. (2017). Singapore's LIFE Program: Actuarial Framework, Longevity Risk and Impact of Annuity Fund Return. *Singapore Economic Review*, DOI:10.1142/S0217590817500199
5. Kwong, K. S., Tse, Yiu Kuen and Chan, Wai Sum. (2017). Enhancing Singapore's Pension Scheme: A Blueprint for Further Flexibility. *Risks*, **5**, 25; DOI:10.3390/risks5020025
6. Chu, Chi Wing, Chan, Kevin L.K., Chan, Wai-Sum and Kwong, K.S. (2017). Multiple solution problems in a statistics classroom: an example. *International Journal of Mathematical Education in Science and Technology*, DOI:10.1080/0020739X.2017.1338770
7. Huang, Li-Ching, Wen, Miin-Jye, Cheung, Siu Hung and K. S. Kwong (2017). Non-inferiority studies with multiple reference treatment. *Statistical Methods in Medical Research*, **26**, 1295-1307
8. Kwong, K. S., Cheung, Siu Hung and Hayter, Anthony J. (2016). Step-up procedures for non-inferiority tests with multiple experimental treatments. *Statistical Methods in Medical Research*, **25**, 1290-1302
9. Lin, Yueqiong, Kwong, K. S., Cheung, Siu Hung and Poon, Wai-Yin (2014). Step-up testing procedure for multiple comparisons with a control for a latent variable model with ordered categorical response. *Statistics in Medicine* **33**, 3629-3638
10. Kwong, K. S., Cheung, Siu Hung, Hayter, Anthony J. and Wen, Minn-Jye (2012). Extension of three-arm non-inferiority studies to trials with multiple new treatments. *Statistics in Medicine* **31**, 2833-2834
11. Kwong, K. S. and Cheung, Siu Hung (2012). Optimal design of p -value consistent step-up procedures for multiple comparisons with a control in direction-mixed families. *Computational Statistics and Data Analysis* **55**, 4157-4164
12. Kwong, K. S., Cheung, Siu Hung and Wen, Miin Jye (2010). Sample size determination in step-up testing procedures for multiple comparisons with a control. *Statistics in Medicine* **29**, 2743-2756
13. Kwong, K. S. and Chan, Yiu Man (2008). On the evaluation of the joint distribution of order statistics. *Computational Statistics and Data Analysis* **52**, 5091-5099
14. Kwong, K. S., Cheung, Siu Hung, Holland, Burt and Wang Yanhui (2007). Three p -value consistent procedures for multiple comparisons with a control in direction-mixed families. *Statistics in Medicine* **26**, 4253-4272
15. Kwong, K. S., Cheung, Siu Hung and Chan, Wai Sum (2004). Multiple testing to establish superiority/equivalence of a new treatment compared with k standard treatments in the unbalanced designs. *Biometrics* **60**, 491-498
16. Cheung, Siu Hung, Kwong, K. S., Chan, Wai Sum and Leung, Shun Piu (2004). Multiple comparisons with a control in families with both one-sided and two-sided hypotheses. *Statistics in Medicine Vol.23/Issue 19*, 2975-2988

17. Liu, Wei and Kwong, K. S. (2003). A multiple directional decision procedure for successive comparisons of treatment effects. *Journal of Statistical Planning and Inference* **116**, 49-59
18. Kwong, K. S. and Wong, Ee Hwee (2002). A more powerful step-up procedure for controlling the false discovery rate under independence. *Statistics & Probability Letters* **56**, 217-225
19. Kwong, K. S., Holland, Burt and Cheung, Siu Hung (2002). A modified Benjamini-Hochberg procedure for controlling false discovery rate. *Journal of Statistical Planning and Inference* **104**, 351-362
20. Bai, Zhi Dong and Kwong, K. S. (2002). Solution to Dalal and Mallows conjecture on monotone property of the joint distribution of order statistics. *Statistics & Probability Letters* **59**, 29-35
21. Kwong, K. S. (2001). An algorithm for construction of multiple hypothesis testing. *Computational Statistics* **16**, 165-171
22. Kwong, K. S. (2001). A modified Dunnett and Tamhane step-up approach for establishing superiority/equivalence of a new treatment compared with k standard treatments. *Journal of Statistical Planning and Inference* **97**, 359-366
23. Genz, Alan and Kwong, K. S. (2000). Numerical evaluation of singular multivariate normal distribution. *Journal of Statistical Computational and Simulation* **68**, 1-21
24. Kwong, K. S. and Liu, Wei (2000). Calculation of critical values for Dunnett and Tamhane's step-up multiple test procedure. *Statistics & Probability Letters* **49**, 411-416
25. Kwong, K. S. (1998). On sample size and quick simultaneous confidence interval estimations for multinomial proportions. *Journal of Computational and Graphical Statistics* **7**, 212-222
26. Kwong, K. S. and Iglewicz, Boris (1996). On singular multivariate normal distribution and its applications. *Computational Statistics and Data Analysis* **22**, 271-285 [Professor Iglewicz was my Thesis Supervisor]
27. Kwong, K. S. (1996). A note on simultaneous confidence intervals for multinomial proportions. *Journal of Statistical Computation and Simulation* **55**, 111-120
28. Kwong, K. S. (1995). Evaluation of one-sided percentage points of the singular multivariate normal distribution. *Journal of Statistical Computation and Simulation* **51**, 121-135

Research Grants

- SMU Internal Grant, Ministry of Education Tier 1 (2022) on the project "Sustainable Retirement Funding with Equity Release Products," Principal investigator
- SMU Internal Grant, Ministry of Education Tier 1 (2017) on the project "Fine-Tuning Singapore Pension System," Principal investigator
- Research Grant from SMU (2014) on the project "Pricing models for Singapore CPF LIFE Scheme," Principal investigator
- Society of Actuaries Educational Institution Grant, USA, (2013)
- Research Grant from SMU (2012) on the project "Sample size determination for a latent variable model with ordered categorical responses," Principal investigator
- Research Grant from SMU (2011) on the project "Step-up procedures for non-inferiority tests with multiple experimental treatments," Principal investigator
- Research Grant from SMU (2010) on the project "Power study of single-step multiple comparisons procedures in direction-mixed families," Principal investigator

- Research Grant from SMU (2009) on the project “Design of p -value consistent procedures for multiple comparisons with a control in direction-mixed families,” Principal investigator
- Research Grant from SMU (2008) on the project “Sample size determination of step-up procedures,” Principal investigator
- Research Grant from SMU (2007) on the project “Discussion on the evaluation of the joint distributions of order statistics,” Principal investigator
- Academic Research Fund Research Grant, NUS, (2005) on the project “Stepwise procedures for multiple comparisons with a control in directional-mixed families of inference,” Principal investigator
- Society of Actuaries educational research grant, USA, (2004)

Recent Conferences Attended

- IAA Life Section Colloquium 2016 held in Hong Kong on 25-27 April 2016; Plenary Speaker
- Insurance Risk & Finance Research Conference (IRFRC) 2015 held in Singapore on 25-26 June 2015; Invited Speaker
- Singapore Actuarial Society Health & Retirement Conference 2015 held in Singapore on 22-23 October 2015; Invited Speaker
- The 9th ICSA International Conference held in Hong Kong on 20-23 December 2013; Invited Speaker
- Insurance Risk & Research Conference held by NTU on 25 June 2012
- SKBI Annual Conference on Financial Economics held at SMU on 7-8 May 2012
- SMU’s Inaugural Teaching Innovation Pedagogy Fair at SMU on 9 September 2011; Exhibitor
- Inaugural SKBI Conference on Financial Economics held at SMU on 5 May 2011
- First Singapore Conference in Statistical Science held at NUS on 18 November 2010; Invited Speaker
- World Risk & Insurance Economics Congress held at SMU, in July 2010
- 7th Bernoulli Society World Congress and 71st IMS Annual Meeting held at NUS, Singapore in July 2008

Ad Hoc Reviewer for International Journals

- *North American Actuarial Journal*
- *Statistics in Medicine*
- *Biometrical Journal*
- *Empirical Economics*
- *Journal of Pension Economics and Finance*
- *Statistics and Probability Letters*
- *Journal of Biopharmaceutical Statistics*
- *Communication in Statistics: Theory & Methods*
- *Communication in Statistics: Simulation & Computation*
- *Journal of Multivariate Analysis*
- *Statistics in Biopharmaceutical Research*
- *Statistica Neerlandica*
- *Sankhya*
- *Journal of the American Statistical Association*

- *Journal of Statistical Computation and Simulation*
- *Statistical Methodology*
- *Pakistan Journal of Statistics*
- *Journal of Applied Entomology*
- *Journal of Statistical Planning and Inference*

Professional Activities and Services

- Served as an External Examiner (Programme) for Bachelor of Science (Honours) in Actuarial Studies and Insurance Programme in The Hang Seng University of Hong Kong for the period: September 2017 – Present
- Served as UCSI University's External Assessor on the following programs: Bachelor of Science (Hons) Actuarial Science, Bachelor of Science (Hons) Actuarial Science and Finance, and Master of Science (Actuarial Management) 2016-2019
- Served as an invited speaker in the Institute and Faculty of Actuaries' Continuing Professional Development (CPD) event on 27 July 2015
- Served as external examiner of Ph.D. dissertation proposal (in 2013) and dissertation defense (in 2014) in the National Cheng Kung University, Taiwan
- Served as statistics textbook reviewer for McGraw-Hill in 2011
- Served as reviewer for Research Grants Council (Hong Kong) in 2010
- Served as external examiner of 5 Master theses and 1 Ph.D. thesis for the Chinese University of Hong Kong during the period from 2005 to 2010
- Served as external assessor of the research grant proposal for the City University of Hong Kong in 2008
- Served as proposal reviewer for National Science Foundation (USA) in 2005
- Member of local organizing committee for the 7th Bernoulli Society World Congress and 71st IMS Annual Meeting held at NUS, Singapore in July 2008
- Member of local organizing committee for the 6th ICSA International Conference held at NUS, Singapore in July 2004

University Courses Taught

- At NUS
 - Elementary Statistics
 - Design of Experiments
 - Statistical Quality Control
 - Financial and Actuarial Mathematics
 - Financial and Insurance Statistics
 - Actuarial Statistics
 - Actuarial Loss Models
 - Statistics for Life Sciences
- At SMU
 - Introductory Statistics
 - Probability Theory and Statistical Inference
 - Probability Theory and Applications
 - Life Contingent Risks
 - Quantitative Risk Analysis
 - Financial Mathematics
 - Statistical Learning with R

➤ Applied Statistics for Data Analysis

Education Program Taught

- Master of Science in Accounting (Data & Analytics) at SMU for four years from 2018 to 2021

SMU University Program Director

- Actuarial Science Program from 2019 to Present
- Data Science and Analytics from 2019 to 2020
- Applied Statistics Program from 2009 to 2018

Contact Information

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