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About

Tony is currently an Associate Professor in the Department of Statistics at the Chinese University of Hong Kong, his alma mater from which he received his B.Sc. and M.Phil. degrees in Risk Management Science. His research interests lie primarily in the areas of survival analysis, quantile regression and risk management. Meanwhile, he is studying problems related to social networks and climate modelling as well. In addition to his academic areas of interest, Tony also collaborates with professionals from pharmaceutical and algorithmic trading businesses.

Education

2006	B.Sc. in Risk Management Science, The Chinese University of Hong Kong
2008	M.Phil. in Risk Management Science, The Chinese University of Hong Kong
2012	Ph.D. in Statistics, Columbia University

Research Interests

Survival analysis; Quantile regression; Network modelling; Risk management

Publications and Preprints

Acknowledgement: research is/was supported by HKSAR RGC ECS/GRF Grants

Statistical Methodology Papers

1. Kim, J.P., Lu, W., Sit, T and Ying, Z. (2013), “A Unified Approach to Semiparametric Transformation Models under General Biased Sampling Scheme,” *Journal of American Statistical Association*, 108, 217–27.

2. Brown, M., de la Pena, V.H. and Sit, T. (2015), “From Boundary Crossing of Non-random Functions to Boundary Crossing of Stochastic Processes” *Probability for Engineering and Information Science*, 29, 345–59.

3. Sit, T., Liu, M., Shnaidman, M., and Ying, Z. (2016), “Design and Analysis of Clinical Studies in the Presence of Delayed Treatment Effect,” *Statistics in Medicine*, 35, 1774–9.

4. Kim, J.P., Sit, T. and Ying, Z. (2016), “Accelerated Failure Time Model under General Biased Sampling Scheme,” *Biostatistics*, 17, 576–88.

5. Chan, N.H. and Sit, T. (2016), “Artifactual Unit Root Behavior of Value at Risk (VaR),” *Statistics and Probability Letters*, 116, 88–93.

6. Brown, M., de la Pena, V. H., Klass, M. and Sit, T. (2016), “On an Approach to Boundary Crossing by Stochastic Processes,” *Stochastic Processes and their Applications*, 126, 3843–53.

7. Xu, G., Sit, T., Wang, L. and Huang, C.-Y. (2017), “Estimation and Inference of Quantile Regression for Survival Data under Biased Sampling,” *Journal of the American Statistical Association*, 112, 1571–86.

8. Chan, K.C.G., Ling, H.K., Sit, T. and Yam, S.C.P. (2018), “Estimation of a Monotone Density in S-sample Biased Sampling Models,” *The Annals of Statistics*, 46, 2125–52.

9. Sit, T., Xing, Y., Xu, Y. Z. and Gu, M.G. (2019), “Pseudo Value Method for Ultra High-dimensional Semiparametric Models with Life-time Data,” *Statistica Sinica*, 29, 1939–61.

10. Chen, J., Sit, T. and Wong, H. Y. (2019), “Simulation-based Value-at-Risk for Nonlinear Portfolios,” *Quantitative Finance*, 19, 1639–58.

11. Cai, Z. and Sit, T. (2020), “Quantile Regression Model with Time-Varying Covariates under Length-Biased Sampling,” *Biometrics*, 74, 1201-1215.

12. Chu, C.W., Sit, T. and Xu, G. (2021), “Transformed Dynamic Quantile Regression on Censored Data,” *Journal of the American Statistical Association,* 116, 874-886.

13. Sit, T., Ying, Z. and Yu, Y. (2021), “Event History Analysis of Dynamic Networks,” *Biometrika*, 108, 223-230.

14. Chan, K.C.G., Ling, H.K., Sit, T. and Yam, S.C.P. (2021), “On Asymptotic Equivalence of the NPMLE of a Monotone Density and a Grenander-type Estimator in Multi-sample Biased Sampling Models,” *Electronic Journal of Statistics*, 15, 2876-904.

15. Xing, Y., Sit, T. and Wong, H.Y. (2022), “Variance Reduction for Risk Measure Estimation with Importance Sampling,” *Quantitative Finance*, 22, 657-673.

16. Tsang, M.Y., Sit, T. and Wong, H.Y. (2022), “Robust Portfolio Optimization with respect to Spectral Risk Measures under Correlation Uncertainty,” *Applied Mathematics & Optimization*, 86, Article number: 8.

17. Lee, S.M., Sit, T. and Xu, G. (2021+), “Efficient Estimation for Censored Quantile Regression,” To appear in *Journal of the American Statistical Association*.

18. Sit, T. and Xing, Y. (2022+), “Distributed Censored Quantile Regression,” To appear in *Journal of Computational and Graphical Statistics*.

19. Chu, C.W. and Sit, T. (2023+), “Censored Interquantile Regression Model with Time-Dependent Covariates,” To appear in *Journal of the American Statistical Association*.

20. Cai, Z. and Sit, T. (2023+), “Interquantile Smoothness in Censored Quantile Regressions via Induced Smoothing,” To appear in *Biometrics*.

21. Tsang, M.Y., Sit, T. and Wong, H.Y. (2023+), “Adaptive Robust Online Portfolio Section,” Under revision.

22. Chu, C.W., Sit, T. and Ying, Z. (2023+), “Censored Quantile Regression with Time-Dependent Covariates” Under revision.

23. Chen, S., Sit, T. and Yu, Y. (2023+), “Variable Selection for High-Dimensional m-Dependent Network Data,” (Manuscript).

24. Tsang, M.Y., Sit, T.† and Wong, H.Y. (2023+), “Contextual Quantile Minimization for Two-stage Stochastic Programs,” (Manuscript).

25. Li, M., Sit, T., Xu, G. and Huang, C.-Y. (2023+), “Competing Risks Analyses with Semiparametric Density Ratio Models,” (Manuscript).

26. Chan, K.C.G., Ling, H.K., Sit, T. and Yam, S.C.P. (2023+), “Semiparametric Multi-sample Biased Sampling Models under Monotonicity,” (Manuscript).

Interdisciplinary Research

1. Brown, M., de la Pena, V.H., Kushnir, Y., Ravindarath, A. and Sit, T. (2011), “On a new approach for estimating threshold crossing times with an application to global warming,” Proceeding of the New York Workshop on Computer, Earth, and Space Sciences 2011, Goddard Institute for Space Studies (GISS), National Aeronautics and Space Administration (NASA).

2. Lam, H.S., Sit, T., Chau, C.L., Cheung, H.M., Wong, P.S. and Ng, P.C. (2016), “Attitudes of Parents and Health Care Workers to Major Surgery for High-Risk Preterm Infants,” *The Journal of Paediatrics*, 177, 78–83.e3.

3. Leung, K.T., Lam, H.S., Chan, K.Y.Y., Sit, T., Wong, R.P.O., Yu, J.W.S., Li, K. and Ng, P.C. (2016), “Regulation of Circulating Hematopoietic Stem/Progenitor Cells in Preterm Infants with Septicemia,” *Stem Cells and Development*, 25, 1780–7.

4. Ng, P.C., Chan, K.Y.Y., Ma, T.P.Y., Sit, T., Lam, H.S., Leung, K.T., Wong, R.P.O., Chan, C.N.L., Pang, L.I.Y. Cheung, H.M., Chu, W.C.W. and Li, K. (2019), "Plasma miR-1290 is a Novel and Specific Biomarker for Early Diagnosis of Necrotizing Enterocolitis in Preterm Infants – Biomarker Discovery and a Prospective Cohort Evaluation," *The Journal of Paediatrics*, 205, 83–90.e10.

5. Leung, K.T., Ng, P.C., Li, K., Chan, K.Y.Y., Leung, A.W.K., Ng, M.H.L., Zhang, X.-B., Tsang, K.S., Sit, T., Yu, J.W.S., Wong, Y.T.S., Cheng, F.W.T, Leung, T.F. and Li, C.K. (2020), "CD9 Blockade Suppresses Disease Progression of High-risk Pediatric B-cell Precursor Acute Lymphoblastic Leukemia and Enhances Chemosensitivity," *Leukemia*, 34, 709-20.

6. Zhang, J., Cheuk, K.-Y., Xu, L., Wang, Y., Feng, Sit, T., Cheung, K.-L., Nepotchatykh, E., Lam, T.-P., Liu, Z., Hung, A.L.H., Zhu, Z., Moreau, A., Cheng, J.C.Y., Qiu, Y. and Lee, W.Y.W. (2020) "A Validated Composite Model to Predict Risk of Curve Progression in Adolescent Idiopathic Scoliosis," *EClinicalMedicine* 18:100236.

7. Ng, P.C., Chan, K.Y.Y., Lam, H.S., Wong, R.P.O., Ma, T.P.Y., Sit, T., Leung, K.T., Chan, L.C.N., Pang, Y.L.I., Cheung, H.M., Chiu, W.W.C. and Li, K. (2020) "A Prospective Cohort Study of Fecal miR-223 and miR-451a as Non-invasive Specific Biomarkers for Diagnosis of Necrotizing Enterocolitis in Preterm Infants," *Neonatology*, 117, 555-561.

8. Lin, P.H., Shen, B.R., Ling, A., Wong, K.C., Chan, N.H., Sit, T., Chan, P.P., Tham, C.C. and Cheung, Y.L. (2022+), "Early Rate of Optical Coherence Tomography Angiography Changes is Associated with Normal Tension Glaucoma Progression Risk," (Manuscript).

9. Yeung, K., Sit, T., and Fujii, K. (2023+), "Transformer-based Neural Marked Spatio-temporal Point Process Model for Football Match Events Analysis," (Manuscript).

Graduate Students

1. Junyao Chen (co-supervised with Prof. Hoi Ying Wong), M.Phil. in Risk Management Science, CUHK.

2. George Chi Wing Chu, M.Phil. in Risk Management Science, CUHK. Assistant Professor at City University of Hong Kong upon obtaining his Ph.D. degree in Statistics at Columbia University.

3. Yue Xing (co-supervised with Prof. Hoi Ying Wong), M.Phil. in Risk Management Science, CUHK. Pursuing Ph.D. in Statistics at Purdue University.

4. Arthur Sze Ming Lee, M.Phil. in Risk Management Science, CUHK. Pursuing Ph.D. in Statistics at London School of Economics.

5. Yuxin Li (co-supervised with Prof. Ngai Hang Chan), Ph.D. in Statistics, CUHK.

6. Tim Man Yiu Tsang (co-supervised with Prof. Hoi Ying Wong), M.Phil. in Risk Management Science, CUHK. Pursuing Ph.D. in Industrial and Systems Engineering at Lehigh University.

7. Andrian Dzi Hin Wong (co-supervised with Dr Philip Pak Kuen Lee), M.Phil. in Risk Management Science, CUHK.

8. Zexi Cai, M.Phil. in Risk Management Science, CUHK. Pursuing Ph.D. in Biostatistics at Columbia University.

9. Sihan Chen, M.Phil. in Risk Management Science, CUHK. Pursuing Ph.D. in at King Abdullah University of Science and Technology.

10. Yu Guo, Ph.D. in Statistics, CUHK.

11. Si Cheng Fong, Ph.D. in Statistics, CUHK.

Teaching

RMSC2001 – Introduction to Risk Management
RMSC6007 – Risk and Financial Data Analytics with Python
STAT5010 – Theory of Statistics
STAT5102 – Regression in Practice (2016-21)
RMSC6006 – Portfolio Theory from Risk Management Perspectives (2018-20)

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