

## TONY SIT 薛賢鴻

Associate Professor  
Director, M.Sc. in Risk Management Science  
Programme

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### Education background

- 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), "Monotone Density Estimation in Multidimensional 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. Chu, C.W., Sit, T. and Xu, G. (2019+), "Transformed Dynamic Quantile Regression on Censored Data," To appear in *Journal of the American Statistical Association*.
12. Sit, T., Yu, Y. and Ying, Z. (2020+), "Event History Analysis of Dynamic Communication Networks," To appear in *Biometrika*.
13. Cai, Z. and Sit, T. (2020+), "Quantile Regression Model with Time-Varying Covariates under Length-Biased Sampling," To appear in *Biometrics*.
14. Chan, K.C.G., Ling, H.K., Sit, T. and Yam, S.C.P. (2020+),

"Grenander-type Nature of Monotone NPMLE of Multi-sample Biased Sampling Models," Under revision.

15. Lee, S.M., Sit, T. and Xu, G. (2021+), "Efficient Estimation for Censored Quantile Regression," Under revision.
16. Xing, Y., Sit, T. and Wong, H.Y. (2021+), "Variance Reduction for Risk Measure Estimation with Importance Sampling," Submitted.
17. Chu, C.W. and Sit, T. (2021+), "Locally Homogeneous Censored Quantile Regression Model with Time-Dependent Covariates," Submitted.
18. Tsang, M.Y., Sit, T. and Wong, H.Y. (2021+), "Robust Portfolio Optimization with respect to Spectral Risk Measures under Correlation Uncertainty," Submitted.
19. Sit, T. and Xing, Y. (2021+), "Distributed Censored Quantile Regression," Submitted.
20. Chan, K.C.G., Ling, H.K., Sit, T. and Yam, S.C.P. (2021+), "Semiparametric Multi-sample Biased Sampling Models under Monotonicity," (Manuscript).
21. Sit, T., Xu, G. and Huang, C.-Y. (2021+), "Proportional Likelihood Ratio Models for Competing Risks," (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. (2019+), "Tetraspanin CD9 is a Potential Target for Treatment of Pediatric B-precursor Acute Lymphoblastic Leukemia," To appear in *Leukemia*.
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. (2019+) "A Validated Composite Model to Predict Risk of Curve Progression in Adolescent Idiopathic Scoliosis," To appear in *EClinicalMedicine*.

### 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.
3. Yue Xing (co-supervised with Prof. Hoi Ying Wong), M.Phil. in Risk Management Science, CUHK.
4. Arthur Sze Ming Lee, M.Phil. in Risk Management Science, CUHK.
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. Ongoing.
7. Andrian Dzi Hin Wong (co-supervised with Dr Philip Pak Kuen Lee), M.Phil. in Risk Management Science, CUHK. Ongoing.
8. Zexi Cai, M.Phil. in Risk Management Science, CUHK. Ongoing.

9. Sihan Chen, M.Phil. in Risk Management Science, CUHK. Ongoing.

## **Teaching**

RMSC2001 - Introduction to Risk Management  
STAT5010 - Advanced Statistical Inference  
STAT5102 - Regression in Practice

Last updated on 1st January 2021