

# CURRICULUM VITAE

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4 Eames Ave, Baulkham Hills, NSW, 2153, Australia

**Current Position:**

Adjunct Research Fellow, *Centre for Quantitative Medicine, Duke-NUS Graduate Medical School, Singapore.* 2019-Present

**Previous Position Held:**

Cancer Data Scientist, *Children Medical Research Institute, The University of Sydney, Australia.* 2019-2020

Research Fellow (Supervisor: Associate Professor Bibhas Chakraborty) in Biostatistics, *Centre for Quantitative Medicine, Duke-NUS Graduate Medical School, Singapore.* 2017-2019

Biostatistician, *Singapore Clinical Research Institute, Singapore.* 2016-2017

Biostatistician, *Memory Ageing and Cognition Centre, National University Of Singapore, Singapore.* 2015-2016

Biostatistician (Supervisor: Professor Henry Brodaty), *Dementia Collaborative Research Centre, The University of New South Wales, Australia.* 2013-2014

**Internship:**

Research Assistant (Supervisor: Professor Greg Taylor), *Taylor Fry, Sydney, Australia.* 2012-2013

**Teaching Experience:**

Statistical supervisor, *Memory Ageing and Cognition Centre, National University Of Singapore, Singapore.* 2015-2016

Statistical supervisor, *Dementia Collaborative Research Centre, The University of New South Wales, Australia.* 2013-2014

Tutor, *Department of Statistics, Macquarie University, Australia.* 2009-2013

### **Research Grant Application Experience:**

Statistical collaborator, *School of Social Welfare, University of California, Berkeley, US.* 2019-2019

Statistical advisor, *Centre for Quantitative Medicine, Duke-NUS Graduate Medical School, Singapore.* 2019-2019

Statistical advisor, *Health Services and Systems Research, Duke-NUS Graduate Medical School, Singapore.* 2017-2017

Statistical advisor, *Singapore Clinical Research Institute, Singapore.* 2016-2017

Statistical advisor, *Memory Ageing and Cognition Centre, National University Of Singapore, Singapore.* 2015-2016

Statistical advisor, *Dementia Collaborative Research Centre, The University of New South Wales, Australia.* 2013-2014

### **Consulting Experience:**

Statistical consultant, *KroniKare-Advancing MedTech, Singapore.* 2018

Statistical consultant, *Health Services and Systems Research, Duke-NUS Graduate Medical School, Singapore.* 2017

Statistical consultant, *Singapore Clinical Research Institute, Singapore.* 2016

Statistical consultant, *Iluka Resources, Australia.* 2012

Statistical consultant, *Department of Education, Macquarie University, Australia.* 2011

Statistical consultant, *Department of Accounting, Macquarie University, Australia.* 2010

### **Citizenship:**

Australian

### **Education:**

Doctor of Philosophy of Statistics (Supervisor: Associate Professor Jun Ma), Department of Mathematics and Statistics, Macquarie University, Australia. 2014

Bachelor of Statistics (Honours, Class 1), Department of Mathematics and Statistics, Macquarie University, Australia. 2009

### **Certificate:**

Actuarial Part I exemption, Actuaries Institute, Australia. 2009

## Prizes and Scholarship:

Best paper prize, <i>Variance</i> .	2016
Travel Grant, <i>AOPMC conference, Manila, Philippines</i> .	2016
Postgraduate Scholarship, <i>Australian Mathematical Science Institute (AMSI)</i> .	2012-2013
Australian Postgraduate Awards (APA).	2009-2012
Postgraduate Research Fund, <i>Macquarie University</i> .	2011

## Research Interest:

Survival analysis, sequential randomized trial for adaptive intervention and applied statistics in medicine.

## Google Scholar:

<https://scholar.google.com.sg/citations?user=uxLxUrAAAAAJ&hl=en>

## Articles:

**Xu, J.**, Yan, X., Figueroa, C., Williams, J.J. and Chakraborty, B. (2020). Multi-Level Micro-Randomized Trial for Detecting the Proximal Effect of a Mobile Application Messages on Physical Activity in Diabetes and Depression. arXiv, stat.ME, 2007.13741.

Aguilera, A., Figueroa, C.A., Hernandez-Ramos, R., Sarkar, U., Cemballi, A.G., Gomez-Pathak, L., Miramontes, J., Avila-Garcia, P., Tov, E.Y., Chakraborty, B., Yan, X., **Xu, J.**, Modiri, A., Aggarwal, J., Williams, J.J., Lyles, C.R. (2020). An mHealth app using machine learning to increase physical activity in diabetes and depression: clinical trial protocol for the DIAMANTE Study. BMJ Open. **Accepted**

**Xu, J.**, Bandyopadhyay, D., Mirzaei, S., Michalowicz, B. and Chakraborty, B. (2020). SMARTp: A SMART design for non-surgical treatments of chronic periodontitis with spatially-referenced and non-randomly missing skewed outcome. Biometrical Journal, 62, 282-310. **Selected as a high-impact finding in the Behavioral and Social Sciences Research category, and included in the Director's Report to the United States NIH National Advisory Dental and Craniofacial Research Council, Jan 2020**

**Xu, J.**, Ma, J., Connors, M.H. and Brodaty, H. (2018) Proportional hazard model estimation under dependent censoring using copulas and penalized likelihood. Statistics in Medicine, 37(14), 2238-2251.

**Xu, J.**, Ma, J. and Prvan, T. (2017) Nonparametric hazard estimation with dependent censoring using penalized likelihood and copula, Communication in Statistics-Theory and Methods, 46:22, 11383-11403.

Tan, H., **Xu, J.**, Teoh, H.L., Chan, B., Seet, R., Ramani, D., Sharma, V.K., Chen, C., Dong, Y. (2017) Decline in Changing Montreal Cognitive Assessment (MoCA) Scores is Associated with Post-Stroke Cognitive Decline Determined by a Formal Neuropsychological Evaluation. PLOS ONE, 12(3), 1-8.

- Xu, J.** and Ma, J. (2016) Fitting finite mixture model by iterative Monte Carlo classification, *Communication in Statistics-Theory and Methods*, 46(13), 6684-6693.
- Wan, E.Y.S., Shaik, M.A., Adhha, A., Ng, R.M.H, Thompson, C., Ong, I., **Xu, J.**, Chen, C.L., Dong, Y. (2016) Pilot evaluation of the informant AD8 as a case finding instrument for cognitive impairment in general practitioner clinics of Singapore: A brief report. *J Am Med Dir Assoc*, 17(12), 1147-1150.
- Suministrado, M.S.P., Shuang, E.W.Y., **Xu, J.**, et al. (2016) Post-stroke cognitive decline is independent of longitudinal changes in cerebral hemodynamics parameters. *Journal of Neuroimaging*. [doi:10.1111/jon.12395](https://doi.org/10.1111/jon.12395)
- Shaik, M.A., Khoo, C.H., Thiagarajah, A.G., Tan, N.C., Chen, C., **Xu, J.**, Dong, Y. (2016) Pilot evaluation of a dementia case finding clinical service using the informant AD8 for at-risk older adults in primary healthcare: A brief report. *Journal of the American Medical Directors Association*, 17, 673.e5-8.
- Dong, Y., **Xu, J.**, et al. (2016) The Montreal Cognitive Assessment is superior to National Institute of Neurological Disease and Stroke-Canadian Stroke Network 5-minute protocol in Predicting Vascular Cognitive Impairment at 1 year. *BMC Neurology*, 16(46), 1-6.
- Heffernan, M., Mather, K.A., **Xu, J.**, Assareh, A., Kochan, N.A., Reppermund, S., Draper, B., Trollor, J., Sachdev, P. and Brodaty, H. (2016) Alcohol Consumption and Incident Dementia: Evidence from the Sydney Memory and Ageing Study. *Journal of Alzheimer's Disease*, 52, 529-538.
- Chan, C.L., Shaik, A.M., **Xu, J.**, Xu, X., Chen, C., Dong, Y. (2016) The combined utility of a brief functional measure and performance-based screening test for case finding of cognitive impairment in primary healthcare. *Journal of the American Medical Directors Association*, 17, 372.e9-372.e11.
- Shaik, A.M., Chan, Q.L., **Xu, J.**, Xu, X., Hui, R., Chong, S., Chen, C.H.L., Dong, Y. (2016) Risk factors of cognitive impairment and brief cognitive tests to predict cognitive performance determined by a formal neuropsychological evaluation of primary healthcare patients. *JAMDA*, 17, 343-347.
- Taylor, G. and **Xu, J.** (2016) An empirical investigation of the value of finalisation count information to loss reserving. *Variance*, 10:1, 75-120.
- Dong, Y Koay, W.I., Yeo, L.L.L., Chen, C.L., **Xu, J.**, Seet, R.C.S. and Lim, E.C.H. (2015) Rapid Screening for Cognitive Impairment in Parkinson's Disease: A Pilot Study. *Parkinson's Disease*, 2015, 1-6.
- Connors, M.H., Sachdev, P., Kochan, N. A., **Xu, J.**, Draper, B., Brodaty, H. (2015) Cognition and Mortality in Older People: The Sydney Memory and Ageing Study. *Journal of Age and Ageing*, 44, 1049-1054.
- Brodaty, H., Connors, M.H., **Xu, J.**, Woodward, M. and Ames, D. (2015) The Course of Neuropsychiatric Symptoms in Dementia: A Three Year Longitudinal Study. *Journal of the American Medical Directors Association*, 16, 380-387.
- Low, L.F., Brodaty, H., Goodenough, B., Fletcher, J., **Xu, K.**, Casey, A.N., Fleming, R., Spitzer, P., Bell, J.P., Chenoweth, L. (2014). The effects of humour therapy on nursing home residents measured observational methods: the SMILE study. *Journal of the American Medical Directors Association*, 15, 8, 564-569.

Brodaty, H., Connors, M.H., **Xu, J.**, Woodward, M., Ames, D. (2014) Predictors of Institutionalization in Dementia: A three Year Longitudinal Study. *Journal of Alzheimer's Disease*, Vol. 40(1), 221-226.

McNeil, M., Gosper, M. and **Xu, J.** (2012) Assessment choices to target higher order learning outcomes: the power of academic empowerment. *Research in Learning Technology*, Vol. 20.

### **R Pacakges:**

survivalMPLdc: Fit Cox Proportional Hazard Regression Model under dependent right censoring via MPL and Archimedean Copulas: Version 0.1.0. **Xu, J.**, Ma, J., 2020

SMARTp: Sample Size for SMART Designs in Non-Surgical Periodontal Trials: Version 0.1.1. **Xu, J.**, Bandyopadhyay, D., Azevedo, D., Chakraborty, B., May 2019 <https://cran.r-project.org/web/packages/SMARTp/index.html>

### **R Shiny:**

SMARTp-SS Calculator: A Sample Size Calculator for the Sequential Multiple Assignment Randomized Trials for Periodontitis. **Xu, J.** and Bandyopadhyay, D. 2020. <https://kennyxu.shinyapps.io/SMARTp-SS/>

MLMRT-SS Calculator: A Sample Size Calculator for the Multi-Level Micro-Randomised Trials. **Xu, J.** and Yan, X. 2020. [https://kennyxu.shinyapps.io/mlmrt\\_shinyapps/](https://kennyxu.shinyapps.io/mlmrt_shinyapps/)

### **Conference Presentation:**

“A Multi-Level Micro-Randomized Trial for Detecting the Proximal Effect of a Mobile Application Messages on Physical Activity in Diabetes and Depression.” Global Scientist Interdisciplinary Forum SUSTech 2020, Shenzhen, Guangdong, China.

“A SMART design for non-surgical treatments of chronic periodontitis with spatially-referenced and non-randomly missing skewed outcomes.” ISCB 2018, Melbourne, Australia.

“Proportional hazard model estimation under dependent censoring using copulas and penalized likelihood.” ECOSTA 2018, Hong Kong, China.

“Neuropsychological profile of patients with Parkinson’s Disease in Singapore.” AOPMC 2016, Manila, Philippines.

“The Decline Of The Montreal Cognitive Test Can Detect Post-stroke Cognitive Decline Determined By A Formal Neuropsychological Evaluation.” American Heart Association Conference 2015, Orlando, USA.

“Neuropsychological profile of patients with Parkinson’s Disease in Singapore.” INS/ASSBI Pacific Rim Conference 2015, Sydney, Australia.

“An empirical investigation of the value of finalisation count information to loss reserving.” Accelerate Australian-AMSI 2013, Canberra, Australia.

“Cox proportional hazard model estimation under dependent censoring by maximum penalized likelihood.” The International Society for Clinical Biostatistics 2011, Ottawa, Canada.

“Copula based non-parametric hazard estimation under dependent censoring by maximizing penalized likelihood.” Australian Statistical Conference 2010, Fremantle, Australia.

“Fitting finite mixture model by iterative Monte Carlo classification”. SSAI’s Young Statisticians Conference 2009, Sydney, Australia

### **Seminar Presentation:**

“SMARTp: A SMART design for non-surgical treatments of chronic periodontitis with spatially-referenced and non-randomly missing skewed outcomes”, Centre for Quantitative Medicine, Duke-NUS Graduate Medical School, Singapore, 2019

“Fitting finite mixture model by iterative Monte Carlo classification”, Department of Statistics, Macquarie University, Australia, 2009

### **Reviewer for Journals:**

Journal of Computational and Graphical Statistics, 2019

### **Computing Skill:**

Microsoft, LaTeX, SQL, SPSS, STATA, Matlab, R, SAS, Windows and Mac operating systems

### **Languages Skill:**

English (fluent), Mandarin (native) and Cantonese (fluent)

### **Referees:**

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