

# CURRICULUM VITAE

**Name:**

Kenny Jing Xu PhD

**E-mail Address:**

[kenny.xu@duke-nus.edu.sg](mailto:kenny.xu@duke-nus.edu.sg)

**Contact (mobile):**

(+61) 0415132739-Australia, (+65) 85103883-Singapore

**Postal Address:**

8 College Road, Duke-NUS Medical School, Singapore, 169857

**Current Position:**

Research Assistant Professor, *Centre for Quantitative Medicine and Programme in Health Services and Systems Research, Duke-NUS Graduate Medical School, Singapore.* 2021-2023

**Previous Position Held:**

Assistant Professor, *Data Science Programme, Division of Science and Technology, Beijing Normal University-Hong Kong Baptist University United International College, Zhuhai, Guangdong, China.* 2020-2021

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

Postdoc Research Fellow (Supervisor: Associate Professor Bibhas Chakraborty) in Biostatistics, *Centre for Quantitative Medicine, Duke-NUS Graduate Medical School, Singapore.* 2017-2021

Our research focus in this role is in the field of mobile health (mHealth). We collaborate with both medical and computing experts from America, Europe and Australia. Our lab propose experimental designs, draft statistical analysis plans, calculate sample sizes, perform data analysis, develop novel statistical methodologies and the corresponding R packages and Shiny apps, write manuscripts for our mHealth projects. In this role, I also provide statistical consulting services for both internal and external clients, as well as mentor junior researchers.

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

I provided statistical support for the clinical trial studies, including study design, sample size estimation, patient randomization, statistical analyses; statistical inputs for manuscript, research consultation and mentoring clinical researchers.

Biostatistician, *Memory Ageing and Cognition Centre, National University Of Singapore, Singapore.*  
2015-2016 I provided high level statistical advice and support for paper publications and research  
grand application. I also provide data analysis training for research students.

Biostatistician (Supervisor: Professor Henry Brodaty), *Dementia Collaborative Research Centre,  
The University of New South Wales, Australia.* 2013-2014  
I provided high level statistical and research design advice and support for various dementia research  
projects led by the Dementia Research Centre.

### **Internship:**

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

### **Teaching Experience:**

Assistant Professor, *Data Science Programme, Division of Science and Technology, Beijing Normal  
University-Hong Kong Baptist University United International College, Zhuhai, Guangdong, China.*  
2020-2021

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

Biostatistician, *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:**

Assistant Professor, *Health Services and Systems Research, Duke-NUS Graduate Medical School,  
Singapore.* 2021-2023

Postdoc Research Fellow, *Centre for Quantitative Medicine, Duke-NUS Graduate Medical School,  
Singapore.* 2017-2021

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

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

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

### **Consulting Experience:**

Assistant Professor, *Health Services and Systems Research, Duke-NUS Graduate Medical School,  
Singapore.* 2021-2023

Postdoc Research Fellow, *Centre for Quantitative Medicine, Duke-NUS Graduate Medical School,  
Singapore.* 2017-2021

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

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

**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, *Variance*. 2016

Travel Grant, *AOPMC conference, Manila, Philippines*. 2016

Postgraduate Scholarship, *Australian Mathematical Science Institute (AMSI)*. 2012-2013

Australian Postgraduate Awards (APA). 2009-2012

Postgraduate Research Fund, *Macquarie University*. 2011

**Research Interest:**

Survival analysis, longitudinal analysis, micro-randomized trial design for just-in-time adaptive intervention of mobile health, applied statistics in medicine.

**Research Projects:**

Biostatistics Collaborator, *Developing a Digital Solution for Salutogenic Brain Health: A BISI pilot study, National University of Singapore, Singapore*. 2022-Present

Biostatistics Collaborator, *The LIVEPLUS Trial, The University of Sydney, Australia*. 2021-Present

Biostatistics Collaborator, *Stay Well at Home: a Text-messaging Study Social Distancing, University of California, Berkeley*. 2020-Present

Biostatistics Collaborator, *Diabetes and Depression Text Messaging Intervention (DIAMANTE), University of California, San Francisco*. 2019-Present

**Google Scholar:**

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

**Articles:**

Aguilera, A., Hernandez-Ramos, R., Haro, A.Y., Boone, C.E., Luo, T., **Xu, J.**, Chakraborty, B., Karr, C., Darrow, S. and Figueroa, C.A. (2021). StayWell at Home: A Text Messaging Intervention

to Counteract Depression and Anxiety during COVID-19 Social Distancing JMIR Mental Health. e25298.

**Xu, J.**, Yan, X., Figueroa, C.A., Williams, J.J. and Chakraborty, B. (2022). A Flexible Micro-Randomized Trial Design and Sample Size Considerations. Submitted to Statistical Methods in Medical Research.

Figueroa, C.A., Deliu, N., Chakraborty, B., **Xu, J.**, Modiri, A., Aggarwal, J., Williams, J.J., Lyles, C., Aguilera, A. (2022). Daily Motivational Text-messages to Promote Physical Activity in University Students: Results from a Micro-Randomized Trial. *Annals of Behavioral Medicine*.56(2), 212-218.

Figueroa, C.A., Hernandez-Ramos, R., Boone, C., Gomez, L., Yip, V., Luo, T., Sierra, V., **Xu, J.**, Chakraborty, B., Darrow, S., Aguilera, A. (2020). A text-messaging study to help cope with social distancing: clinical trial protocol for the Stay Well at Home study. *Journal of Medical Internet Research Research Protocols*. 2020;10.2196/23592. doi:10.2196/23592

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*. 10: e034723. doi:10.1136/bmjopen-2019-034723

**Xu, J.**, Bandyopadhyay, D., Mirzaeic, S., Michalowicz, B. and Chakraborty, B. (2019). 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., Fung, T., October 2020

<https://cran.r-project.org/web/packages/survivalMPLdc/index.html>

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/>

FlexiMRT-SS Calculator: A Sample Size Calculator for the Flexible Micro-Randomized Trials. **Xu, J.** and Yan, X. 2020. <https://kennyxu.shinyapps.io/FlexiMRT-SS/>

### **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

Journal of Computational and Graphical Statistics, 2022

Biometrics, 2022

**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:**

Assoc. Prof. Bibhas Chakabrotty  
Centre for Quantitative Medicine  
Duke-NUS Medical School, 16985, Singapore  
Ph: +65 6576-7377, Mob: +65 91824514  
Email: [bibhas.chakraborty@duke-nus.edu.sg](mailto:bibhas.chakraborty@duke-nus.edu.sg)

Prof. Dipankar Bandyopadhyay  
Department of Biostatistics,  
Virginia Commonwealth University, Richmond, VA 23298-0032, USA  
Ph: +1 804-827-2058, Mob: +1 843-513-8330  
Email: [dbandyop@vcu.edu](mailto:dbandyop@vcu.edu)

Assoc. Prof. Jun Ma  
Department of Mathematics and Statistics  
Macquarie University, Sydney, NSW, 2109, Australia  
Ph: +61 (2) 9850-8548, Mob: +61 410309278  
Email: [jun.ma@mq.edu.au](mailto:jun.ma@mq.edu.au)

Prof. Henry Brodaty  
Dementia Collaborative Research Centre Assessment and Better Care  
The University of New South Wales, Sydney, NSW, 2052, Australia  
Ph: +61 (2) 9385-2585, Mob: +61 434185939  
Email: [h.brodaty@unsw.edu.au](mailto:h.brodaty@unsw.edu.au)

Prof. Greg Taylor  
UNSW Business School  
The University of New South Wales, Sydney, NSW, 2052, Australia

Ph: +61 (2) 9385-3391, Mob: +61 421338448  
Email: [greg\\_taylor60@hotmail.com](mailto:greg_taylor60@hotmail.com)