

Ji Yeh Choi

Department of Psychology
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Professional Affiliation

July/2019 - Present Assistant Professor, Department of Psychology, York University
July/2017 – June/2019 Assistant Professor, Department of Psychology, National University of Singapore

Education

May/2017 **Ph.D.**, *Quantitative Psychology*, McGill University, Montreal, QC, Canada
Dissertation: Bayesian Generalized Structured Component Analysis
(Supervisor: Dr. Heungsun Hwang)
May/2010 **B.A.**, *Psychology*, University of British Columbia, Vancouver, BC, Canada

Awards

2015 Michael Quek Teaching Assistant Award (McGill University)
2014 Graduate Excellence Fellowship (McGill University)
Michael Quek Teaching Assistant Award (McGill University)
2013 Graduate Excellence Fellowship (McGill University)
Michael Quek Teaching Assistant Award (McGill University)
2012 GREAT Travel Award (McGill University)
2011 Graduate Excellence Award (McGill University)
2009 Awards of Golden Key International Honour Society (University of British Columbia)

Research Interests

Structural equation modeling
Functional data analysis
Multivariate analysis
Bayesian analysis
Cluster analysis
High-dimensional data analysis (e.g., neuroimaging data, genetic data, etc.)

Grants

2017 Bayesian approach to component-based structural equation modeling. Start-up grant, Faculty of Arts & Social Science, National University of Singapore (Principal Investigator), SGD\$180,000

2017 Analysis of Big Data with Multivariate Statistics in Social and Behavioral Sciences. HSS Seed Fund Track 1 (Principal Investigator: Dr. Mike Cheung)
Co-Investigator, SGD\$20,000

Publications

Refereed Articles

Choi, J. Y., Kyung, M., Hwang, H., & Park, J-H. (Revised and Resubmitted). Bayesian extended redundancy analysis: a Bayesian approach to component-based regression with dimension reduction. *Multivariate Behavioral Research*.

Choi, J. Y., & Hwang, H. (Accepted with minor revision). Bayesian generalized structured component analysis. *British Journal of Mathematical and Statistical Psychology*.

Choi, Y. W., Son, H. Y., Chae, B. R., **Choi, J. Y.**, ..., & Yoon, H. Y. (In press). Formation of phospholipid complex of telmisartan and self-microemulsifying drug delivery system formulation using D-optimal mixture design. *PLoS ONE*.

Choi, J. Y., Yang, S., Tenenhaus, A., & Hwang, H. (2018). Three-way Generalized Structured Component Analysis. In Wiberg M., Culpepper S., Janssen R., Gonzalez J., Molenaar D. (Eds) *Quantitative Psychology: The 82nd Annual Meeting of the Psychometric Society*. (pp. 195-209). Switzerland: Springer International Publishing.

Choi, J. Y., Hwang, H., & Timmerman, M.E. (2018). Functional parallel factor analysis for functions of multidimensional arguments. *Psychometrika*, 1-20.

Kim, S., **Choi, J. Y.**, & Hwang, H. (2017). Two-way regularized fuzzy clustering of multiple correspondence analysis. *Multivariate Behavioral Research*, 52, 31-46.

Choi, J. Y., Hwang, H., Yamamoto, M., Jung, K., & Woodward, T. S. (2017). A unified approach to functional principal component analysis and functional multiple-set canonical correlation analysis. *Psychometrika*, 82, 427-441.

Tan, T., **Choi, J. Y.**, & Hwang, H. (2015). Fuzzy clusterwise functional extended redundancy analysis. *Behaviormetrika*, 42(1), 37-62.

Suk, H. W., **Choi, J. Y.**, & Hwang, H. (2013). Hierarchically structured fuzzy c-means clustering. *Behaviormetrika*, 40(1), 1-17.

Journal Articles Under Review or In Preparation

Kok, B. C., Choi, J. S., Oh, H., & **Choi, J. Y.** (Under Review). Sparse extended redundancy analysis: variable selection via the Exclusive Lasso. *Multivariate Behavioral Research*.

Chan, H. Y., **Choi, J. Y.**, & Henn-Haase, C. (Under Review). The Role of Cognitive Emotion Regulation in Stress and Psychosocial Outcomes. *Personality and Individual Differences*.

Ranjith, V., & **Choi, J.Y.**, Jung, E. H. (In Preparation). A unified neural network framework for path analysis models with latent variables.

Choi, J. Y., Jung, S., Suk, H. W., Hwang, H. (In Preparation). Regularized generalized structured component analysis with measurement errors incorporated.

Choi, J. Y., & Kyung, M. (In Preparation). Bayesian latent variables modeling with Lasso priors.

Conference Presentations

- July/2016 **Choi, J. Y.**, Hwang, H. Bayesian Generalized Structured Component Analysis. *Paper presented at the 31st International Congress of Psychology, Yokohama, Japan.*
- May/2016 **Choi, J. Y.**, Hwang, H., & Timmerman, M.E. Functional parallel factor analysis for functions of multidimensional arguments. *Paper presented at the 2016 Modern Modeling Methods, Storrs, CT, USA.*
- September/2015 **Choi, J. Y.**, Hwang, H. A unified approach to functional principal component analysis and functional multiple-set canonical correlation analysis. *Paper presented at the Eight International Workshop on Simulation, Vienna, Austria.*
- May/2015 **Choi, J. Y.**, Hwang, H., Yamamoto, M., Jung, K., & Woodward, T. S. A unified approach to functional principal component analysis and functional multiple-set canonical correlation analysis. *Paper presented at the 2015 Modern Modeling Methods, Storrs, CT, USA.*
- July/2014 **Choi, J. Y.**, Hwang, H., Yu, H.T. Simultaneous three-way clustering of parallel factor analysis. *Paper presented at the 2014 International Meeting of the Psychometric Society, Madison, WI, USA.*
- June/2013 **Choi, J. Y.**, & Hwang, H. Testing and probing moderation and mediation effects in Generalized Structured Component analysis. *Poster presented at the 2013 Canadian Psychological Association conference, Quebec, QC, CANADA*
- July/2012 Suk, H. W., **Choi, J. Y.**, & Hwang, H. Hierarchically structured fuzzy c-means clustering. *Paper presented at the 2012 International Meeting of the Psychometric Society, Lincoln, NE, USA.*

Teaching Experiences

- Instructor **PL2132: Research and Statistical Methods II**
Department of Psychology, National University of Singapore
Winter 2019
- PL5225: Structural Equation Modeling**
Department of Psychology, National University of Singapore
Winter 2019
- PL2132: Research and Statistical Methods II**
Department of Psychology, National University of Singapore
Winter 2018

Teaching Assistant **PSYC 305: Statistics for Experimental Design** (Instructor: Prof. Rhonda Amsel)
Department of Psychology, McGill University
Winter 2013, Fall 2013, Summer 2014, Summer 2015, Summer 2016

Statistics for Experimental Design (Instructor: Prof. Hsiu-Ting Yu)
Department of Psychology, McGill University
Winter 2015

Statistics for Experimental Design (Instructor: Prof. Heungsun Hwang)
Department of Psychology, McGill University
Winter 2016

PSYC 204: Introduction to Psychological Statistics (Instructor: Prof. David J. Ostry)
Department of Psychology, McGill University
Winter 2014

Introduction to Psychological Statistics (Instructor: Prof. Rhonda Amsel)
Department of Psychology, McGill University
Fall 2012, Fall 2014, Fall 2015

Mentoring and Advising Chan, Hui Yu (2017 – 2018) Master's thesis
Ho, Shi Yun (2017 – 2018) Master's thesis
Kok, Bing Cai (2018 – Present) Undergraduate Honours' thesis
Cheong, Kah Yin (2018 – Present) Undergraduate Honours' thesis
Lee, Si Ying (2018 – Present) Undergraduate Honours' thesis

Programming Skills

MATLAB, R, SAS, SPSS, Mplus, WinBUGS

Professional Activity

ad hoc reviewer Behaviormetrika
Frontiers in Psychology
Multivariate Behavioral Research
Psychometrika
Zeitschrift fur Psychologie