Jun Young (Jun) Park

Contact Information

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Research Interests

Methodological: Modeling of correlated data (multivariate time-series, spatiotemporal data);
Resampling-based inference (permutation and bootstrapping);
Integration of high-dimensional data.

Scientific: Neuroimaging (fMRI, MRI), statistical genetics, integrative genomics

Current Position

July 2020 –   **Assistant Professor**, University of Toronto
Department of Statistical Sciences and Department of Psychology

Education

May 2020   **PhD in Biostatistics**, University of Minnesota – Twin Cities
Advisor: Mark Fiecas
On military leave: 2014-2016

June 2012   **BA in Mathematics/Statistics**, Carleton College

Publications & Manuscripts

Published/accepted

1. **Jun Young Park**, Chong Wu, Saonli Basu, Matt McGue, Wei Pan
   Adaptive SNP-set association testing in generalized linear mixed models with application to family studies.
   Behavior Genetics, 2018, 48(1):55-66. doi: 10.1007/s10519-017-9883-x

2. **Jun Young Park**, Chong Wu, Wei Pan
   An adaptive gene-level association test for pedigree data.
   BMC Genetics, (Genetic Analysis Workshop (GAW) 20)*, 2018, 19(Supp 1):68. doi: 10.1186/s12863-018-0639-2

3. Chong Wu, **Jun Young Park**, Weihua Guan, Wei Pan
   An adaptive gene-based test for methylation data.
   BMC Proceedings, (Genetic Analysis Workshop (GAW) 20), 2018, 12(Supp 1):68. doi: 10.1186/s12919-018-0126-9

4. **Jun Young Park**, Eric F. Lock
   Integrative factorization of bidimensionally linked matrices.
   Biometrics, 2020, 76(1):61-74. doi: 10.1111/biom.13141

5. **Jun Young Park**, Joerg Polzehl, Snigdhansu Chatterjee, André Brechmann, Mark Fiecas
   Semiparametric modeling of time-varying activation and connectivity in task-based fMRI data.
   Computational Statistics & Data Analysis, 2020. doi: 10.1016/j.csda.2020.107006
   **This manuscript won student paper awards in JSM 2019 (runner-up, Statistics in Imaging section) and SMI 2019.

Submitted/under review

6. Eric F. Lock, **Jun Young Park**, Katherine A. Hoadley
   Bidimensional linked matrix factorization for pan-omics pan-cancer analysis. *Under revision*.

7. **Jun Young Park**, Mark Fiecas
   Permutation-based inference for spatially localized signals in longitudinal MRI data. *Submitted*.
   **This manuscript won a student paper award in JSM 2020 (runner-up, Statistics in Imaging section).

8. Katherine St.Clair, **Jun Young Park**, Brian R. Gray, Robert S. Capers
   Modeling occupancy probabilities hierarchically, given misclassification and spatial dependence. *Submitted*.

In preparation

9. **Jun Young Park**, Mark Fiecas

   Permutation-based spatial scanning for detecting fMRI group-level activation clusters.

Awards & Honors

2020	Student Paper Award (runner-up)	American Statistical Association (Section in Imaging)
2019	Student Paper Award (runner-up)	American Statistical Association (Section in Imaging)
2019	Student Award	Statistical Methods in Imaging (SMI) conference
2019	Biostatistics Best Student Paper Award	Division of Biostatistics, University of Minnesota
2019	MnDRIVE PhD Informatics Fellowship*	University of Minnesota
2014	Outstanding Teaching Assistant Award	Division of Biostatistics, University of Minnesota
2013	Dean's PhD Scholar's Award	School of Public Health, University of Minnesota

A selective 1-year fellowship for pursuing methodological research on brain disorders.

Presentations

Talks

2020	Permutation-based inference for spatially localized signals in longitudinal MRI data
	- Joint Statistical Meeting (JSM) 2020 (virtual)
	- Eastern North American Region (ENAR) 2020 (virtual)
2019	Integrative factorization of bidimensionally linked matrices
	- International Chinese Statistical Association (ICSA) Applied Statistics Symposium 2019
2019	Semiparametric modeling of time-varying activation and connectivity in task-based fMRI data
	- Joint Statistical Meeting (JSM) 2019
	- Statistical Methods in Imaging (SMI) 2019
	- Eastern North American Region (ENAR) 2019
2018	Adaptive SNP-set association testing in generalized linear mixed models with application to family studies
	- Eastern North American Region (ENAR) 2018
2012	Dirichlet process prior in a catch-effort hierarchical model for animal abundance
	- Northfield Undergraduate Mathematics Symposium 2012

Posters

2019	Integrative factorization of bidimensionally linked matrices
	- Twin Cities ASA Chapter Meeting, Spring 2019
	- UMN School of Public Health (SPH) Research Day 2019
2017	An adaptive gene-level association test for family studies
	- UMN Minnesota Supercomputing Institute (MSI) Research Exhibition 2017
	- UMN School of Public Health (SPH) Research Day 2017

Teaching

Course instructor (University of Toronto)

Winter 2020	STA2006S: Stochastic Processes
Fall 2020	STA1008H: Applications of Statistics

Teaching assistant (University of Minnesota)

2013–2018	Biostatistical literacy, Biostatistics I, Exploring and visualizing data in R, Clinical trials, Statistical methods for correlated data, Linear models, Statistical learning and data mining

Services

Service to the profession:

Conferences

        Session chair, ICSA Applied Statistics Symposium 2019

        Session chair, ENAR 2019

Journal review

        NeuroImage

Service to the university/department

2020–	Faculty member, Univ of Toronto Department of Statistical Sciences graduate committee
2018–2020	Student representative, Univ of Minnesota Biostatistics faculty meeting
2018–2019	Reviewer, Univ of Minnesota Council of Graduate Students (COGS) grants application review committee

Miscellaneous

Citizenship	Republic of Korea (South Korea)
Languages	English, Korean