EUNJEE LEE

Department of Information and Statistics
Chungnam National University
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RESEARCH INTERESTS

Bayesian statistics, Functional data analysis, Survival analysis, Variable selection methods, Low rank matrix factorization, Imaging genetics

EMPLOYMENT

Sep 2018~Present	**Assistant Professor**, Department of Information and Statistics, Chungnam National University
Sep 2016~Aug 2018	**Research Assistant Professor**, Department of Biostatistics, University of Michigan

EDUCATION

August 2016	**Ph.D. in Statistics**
	University of North Carolina, Chapel Hill, NC, USA
	-Dissertation: Advanced Bayesian Models for High-dimensional Biomedical Data
	-Advisors: Professor Joseph G. Ibrahim and Professor Hongtu Zhu
February 2011	**M.S. in Statistics**
	Korea University, Seoul, Korea
	-Dissertation: A study on Penalized Support Vector Machines
	-Advisor: Professor Ja-Yong Koo
February 2009	**B.S. in Statistics**
	Korea University, Seoul, Korea

PUBLICATIONS

1. Jacob Bundy, Anthony Hage, Ravi Srinivasa, Joseph Gemmete, Rajiv Srinivasa, Neil Jairath, Rohit Anand, Narasimham Dasika, Nikunj Chauhan, **Eunjee Lee**, Jeffrey Forris Beecham Chick, Intra-Arterial Ampicillin and Gentamicin and the Incidence of Splenic Abscesses Following Splenic Artery Embolization: A 20-Year Case Control Study, *Clinical Imaging* (Accepted)

2. Anthony Hage, Evan Johnson, Jacob Bundy, Jawad Hussain, Joseph Gemmete, Michael Cline, Nishant Patel, Rajiv Srinivasa, Ravi Srinivasa, **Eunjee Lee**, Jeffrey Chick, Trends in Interventional Radiology Publications Through the Eye of the Journal of Vascular and Interventional Radiology: A 27-Year History, *Current Problems in Diagnostic Radiology* (Accepted)

3. Dehan Kong, Joseph G. Ibrahim, **Eunjee Lee**, and Hongtu Zhu. FLCRM: Functional linear cox regression model, *Biometrics 74 (1), 2018, pp. 109-117*

4. Fatemeh Seyednasrollah, Devin C. Koestler, ..., Justin Guinney, James C. Costello, and Prostate Cancer DREAM Challenge Community [including a collaborator **Eunjee Lee**], A DREAM Challenge to Build Prediction Models for Short-Term Discontinuation of Docetaxel in Metastatic Castration-Resistant Prostate Cancer, *JCO Clinical Cancer Informatics, DOI: 10.1200/CCI.17.00018, published online August 4, 2017*

5. **Eunjee Lee**, Kelly S. Giovanello, Andrew J. Saykin, Fengchang Xie, Dehan Kong, Yue Wang, Liuqing Yang, Joseph G. Ibrahim, P. Murali Doraiswamy, and Hongtu Zhu. SNPs are associated with cognitive decline at AD conversion within MCI patients. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring 8, 2017, pp. 86-95*

6. Justin Guinney, Tao Wang, Teemu D Laajala, Kimberly Kanigel Winner, J Christopher Bare, Elias Chaibub Neto, Suleiman A Khan,Gopal Peddinti, Antti Airola, Tapio Pahikkala, Tuomas Mirtti, Thomas Yu, Brian M Bot, Liji Shen, Kald Abdallah, Thea Norman, Stephen Friend, Gustavo Stolovitzky, Howard Soule, Christopher J Sweeney, Charles J Ryan, Howard I Scher, Oliver Sartor, Yang Xie, Tero Aittokallio, Fang Liz Zhou, James C Costello and Prostate Cancer Challenge DREAM Community [including a collaborator **Eunjee Lee**], Prediction of overall survival for patients with metastatic castration-resistant prostate cancer: development of a prognostic model through a crowdsourced challenge with open clinical trial data. *Lancet Oncology 18(1), 2017 pp. 132-142*

7. Genevera I Ellen, Nicola Amoroso, ..., **Eunjee Lee**,..., et al., Crowdsourced Estimation of Cognitive Decline and Resilience in Alzheimer's Disease, *Alzhiemer's and Dementia 12(6), 2016, pp. 645-653*

8. **Eunjee Lee**, Hongtu Zhu, Dehan Kong, Yalin Wang, Kelly Sullivan Giovanello, Joseph G Ibrahim and for the Alzheimer's Disease Neuroimaging Initiative, BFLCRM: A Bayesian Functional Linear Cox Regression Model for Predicting Time to Conversion to Alzheimer's Disease, *Annals of Applied Statistics 9(4), 2015, pp. 2153-2178*

9. Dehan Kong, Kelly S Giovanello, Yalin Wang, Weili Lin, **Eunjee Lee**, Yong Fan, P Murali Doraiswamy, Hongtu Zhu, Predicting Alzheimer's Disease Using Combined Imaging-Whole Genome SNP Data, *Journal of Alzheimer's Disease: JAD 46(3), 2015, pp. 695-702*

10. Kyu-Dong Cho, **Eunjee Lee**, Taehee Seo, Kwang-Rae Kim, Ja-Yong Koo, Visualization of Bottleneck Distances for Persistence Diagram, *Korean Journal of Applied Statistics 25(6), 2012, pp.1009-1018*

PAPERS UNDER REVIEW

1. **Eunjee Lee**, Joseph G Ibrahim, Yong Fan, Hongtu Zhu, Bayesian Low-rank Graph Regression Models for Mapping Human Connectome Data.

2. Matthew S. Davenport, Jeffrey Montgomery, Lakshmi Priya Kunju, Javed Siddiqui, Virginia Rogers, Thekkelnaycke Rajendiran, **Eunjee Lee**, Xia Shao, Morand Piert, 18F-choline PET/mpMRI for Detection of Significant Prostate Cancer, Part 1: Improved Risk Stratification for MRI-guided Transrectal Prostate Biopsies.

3. Neemuchwala F, Ghadimi Mahani M, Pang, Y, **Lee E**, Johnson, TD, Galban CJ, Fortuna AB, Sanchez R, Flask CA, Nasr SZ, Utility of Pulmonary T1 Mapping Magnetic Resonance Imaging for the Evaluation of the Different Stages of Pediatric Pulmonary Cystic Fibrosis – A Pilot Study

PAPERS IN PREPARATION

1. **Eunjee Lee**, Joseph G Ibrahim, Hongtu Zhu, Bayesian Bi-level Variable Selection in Accelerated Failure Time Models

2. Andre Zapico, **Eunjee Lee**, Characterization of Faster Onset of Alzheimer's Disease within Mild Cognitive Impairment Patients by Brain Functional Connectivity and Genetic Variants.

3. **Eunjee Lee**, Bayesian Low-rank Joint Models for Brain Functional Connectivity and Genetic Variants.

RESEARCH EXPERIENCE

2013~2016   **Member of Biostatistics and Imaging Analysis Lab in UNC at Chapel Hill**

(Leader: Professor Hongtu Zhu and Professor Joseph G. Ibrahim)

- Developed various Bayesian survival models applicable to functional data and high-dimensional data, such as brain imaging data and SNP data.
- Developed Bayesian methods to extract key features from brain connectivity data and to construct hierarchical prediction models for outcomes of interest.
- Explored genetic data to detect important signals associated with accelerated cognitive decline within mild cognitive impairment (MCI) subjects.

2009~2011   **Member of SDM Lab in Korea University**

(Leader: Professor Ja-Yong Koo)

- Developed a visualization method for Persistence diagram.
- Studied penalization methods in support vector machine.

TEACHING EXPERIENCE

2014~2016   **Instructor of STOR 155: Introductory Statistics**
Department of Statistics and Operations Research, UNC at Chapel Hill

Taught introductory statistics course for about 50 undergraduate students. Prepared lecture notes, homework, and examinations.

2011 Spring   **Instructor of Introduction to Statistics**
Department of International Business, Dongduk Women's University, Korea

Taught introductory statistics course for about 100 undergraduate students. Prepared lecture notes, homework, and examinations.

PRESENTATIONS

2018   IISA, Gainesville, FL (**Invited**)

- Bayesian Low-rank Graph Regression Models for Mapping Human Connectome Data

2018   ENAR, Atlanta, GA (**Invited**)

- Bayesian Low-rank Graph Regression Models for Mapping Human Connectome Data

2017   JSM, *Baltimore, MD* (**Invited**)

- Bayesian Low-rank Graph Regression Models for Mapping Human Connectome Data

2017   ENAR, *Washington, DC*

- Bayesian Low-rank Graph Regression Models for Mapping Human Connectome Data

2016   Bioinformatics and Computational Biology seminar in MD Anderson, *Houston*, TX (**Invited**)

- Bayesian Analysis in Brain Imaging

2016   Biostatistics seminar in University of Michigan, *Ann Arbor, MI* (**Invited**)

- Bayesian Survival Models with Application to Genetic Data

2016   JSM, *Austin, TX*

- Bayesian Bi-level Variable Selection in Accelerated Failure Time Models

2016	NIH/NCI Biostatistics Branch special seminar, *Rockville, MD* (**Invited**)
2015	iBright in MD Anderson, *Houston, TX*
2014	10th Conference on Bayesian Nonparametrics, *Raleigh, NC*
2014	ENAR, *Miami, FL*
2014	JSM, *Boston, MA*

- BFLCRM: A Bayesian Functional Linear Cox Regression Model for Predicting Time to Conversion to Alzheimer's Disease

AWARDS AND SCHOLARSHIPS

2017	The First Place Winner of ASA Statistics in Imaging Section Student Paper Competition
2016	Travel Grant for iBright 2015, MD Anderson
2015	ENAR's Distinguished Student Paper Award

- BFLCRM: A Bayesian Functional Linear Cox Regression Model for Time to Conversion to Alzheimer's Disease

| 2008 | Inchon Scholarships (full scholarship) |
| 2007 | Choi Byungsun Scholarship |

PROFESSIONAL SERVICES AND MEMBERSHIPS

2014~present	Member: Eastern North American Region, American Statistical Association
2015	Member: International Society for Bayesian Analysis
2015	10th Conference on Bayesian Nonparametrics, Chair for Session: High-dimensional Models and Sparsity
2016~present	Reviewer: Journal of the American Statistical Association, Computational Statistics and Data Analysis, Statistics in Biosciences, IEEE Transactions on Biomedical Engineering, Brain Connectivity, Human Brain Mapping