






# Jihui Lee

 [github.com/jihuilee](https://github.com/jihuilee)  [jihuilee.github.io](https://jihuilee.github.io)  [linkedin.com/in/jihuilee](https://linkedin.com/in/jihuilee)  
 +1 917 929 1479  [jihui.lee@columbia.edu](mailto:jihui.lee@columbia.edu)  
 722 West 168th Street, 6th Floor, New York, NY 10032

## Education

<b>Columbia University</b> , New York, NY PhD in Biostatistics	2018
<ul style="list-style-type: none"><li>➤ Advisors : Dr. Jeff Goldsmith and Dr. Gen Li</li><li>➤ Dissertation : Varying-Coefficient Models and Functional Data Analyses for Dynamic Networks and Wearable Device Data</li></ul>	
<b>Seoul National University</b> , Seoul, Korea MS in Statistics	2013
<b>University of Seoul</b> , Seoul, Korea BS in Statistics (Highest Honors); BA in Urban Administration	2011

## Research Interests

- Functional Data Analysis
- Statistical Analysis of Complex Networks
- Data Mining and Machine Learning

## Academic Honors

2018	<b>Presidential Teaching Award for Graduate Student Instructors</b> , Columbia University, NY
2018	<b>Travel Fellowship Award (NSF)</b> , Political Networks Workshops and Conference, Arlington, VA
2017-2018	<b>Huo Family Foundation Scholarship</b> , Columbia University, New York, NY
2017	<b>Travel Fellowship Award (NSF)</b> , Political Networks Workshops and Conference, Columbus, OH
2017	<b>Distinguished Student Paper Award</b> , Eastern North American Region (ENAR), Washington, DC
2016	<b>First Runner-Up</b> , Columbia Data Science Institute Poster Social and Competition, New York, NY
2013-2016	<b>Biostatistics Fellowship</b> , Columbia University, New York, NY
2012	<b>Brain Korea 21 Scholarship</b> , Seoul National University, Seoul, Korea
2009	<b>Seoul Mayor's Fellowship</b> , University of Seoul, Seoul, Korea
2007-2010	<b>Academic Excellence Scholarship</b> , University of Seoul, Seoul, Korea

## Research Experience

06/2017 - 07/2018	<b>International Center for AIDS Care and Treatment Program (ICAP)</b> Research Assistant	New York, NY
<ul style="list-style-type: none"><li>➤ Conduct statistical analysis and produce tables for Population-based HIV Impact Assessment (PHIA) project</li></ul> <div><span>SAS</span> <span>Survey Method</span></div>		
12/2014 - 11/2015	<b>Simons Foundation Autism Research Initiative (SFARI)</b> Research Assistant	New York, NY
<ul style="list-style-type: none"><li>➤ Conduct latent class analysis (LCA) to identify the patterns of abnormality in cognitive, behavioral, neurological, and anthropometric phenotypes among 16p11.2 deletion/duplication children</li><li>➤ Simons Variation in Individuals Project (SVIP) quantitative analysis using linear mixed models</li></ul> <div><span>SAS</span> <span>R</span> <span>Missing Data</span> <span>LCA</span> <span>Mixed effects model</span></div>		

09/2012 - 05/2013	<b>International Vaccine Institute (IVI)</b> <b>Research Assistant</b> <ul style="list-style-type: none"> <li>Statistical analysis) Case fatality rate and length of hospital stay among patients with typhoid intestinal perforation in developing countries : A systematic literature review, 2014</li> <li>Data management and literature review regarding typhoid vaccine</li> </ul> <div> R SAS Stata Simulation Efficacy Cost-Effectiveness Analysis </div>	Seoul, Korea
09/2010 - 02/2011	<b>Office of Admissions, University of Seoul</b> <b>Data Analyst</b> <ul style="list-style-type: none"> <li>Statistical analysis for publishing annual report</li> </ul> <div> R SAS SPSS </div>	Seoul, Korea

## Publications

---

### Published

- Julia P. Owen, Polina Bukshpun, Nicholas Pojman, Tony Thieu, Qixuan Chen, **Jihui Lee**, Debra D'Angelo, Orit A. Glenn, Jill V. Hunter, Jeffrey I. Berman, Timothy P. Roberts, Randy Buckner, Srikantan S. Nagarajan, Pratik Mukherjee, and Elliott H. Sherr. **"Brain MR Imaging Findings and Associated Outcomes in Carriers of the Reciprocal Copy Number Variation at 16p11. 2."** Radiology (2017) : 162934.

### Submitted

- Jihui Lee**, Gen Li, and James D. Wilson. **"Varying-Coefficient Models for Dynamic Networks."** (Submitted) Computational Statistics & Data Analysis. Preprint available at arXiv :1702.03632 (2017).  
\*A version of this manuscript won an ENAR 2017 Student Paper Award.
- Jihui Lee**, Gen Li, William F. Christensen, Gavin Collins, Matthew Seeley, Anton Bowden, David Fullwood, and Jeff Goldsmith. **"Functional Data Analyses of Gait Data Measured Using In-Shoe Sensors."** (Under Revision) Statistics in Biosciences. Preprint available upon request (2017).

### In Preparation

- Yoonjung Lee, Jesse Hammond, and **Jihui Lee**. **"Detecting Changes in Congressional Twitter Networks."**
- Anthony Diaz, **Jihui Lee**, Jaspreet Kaur, Arman Mushtaq, and Margaret Omatsone. **"Effect of Co-Administration of Long-Acting Insulin in Acute Management of Diabetic Ketoacidosis."**
- Jihui Lee**, Qixuan Chen, LeeAnne G. Snyder, Roger Vaughan, Raphael Bernier, Kyle J. Steinman, Ellen Hanson, Robin P. Goin-Kochel, Arianne S. Wallace, Jennifer Gerds, Stephen Kanne, Leandra Berry, Anne Snow, Elliot Sherr, Christa L. Martin, David H. Ledbetter, John E. Spiro, and Wendy K. Chung. **"Examining Patterns of Abnormality in Multiple Phenotype Traits among 16p11.2 Deletion/ Duplication Children."**
- Jihui Lee**, Jeff Goldsmith, and Gen Li. **"Functional Data Approaches for Continuous-Time Event-Based Dynamic Networks."**
- Jihui Lee**, Gen Li, and Jeff Goldsmith. **"Functional Registration of Three-Dimensional Graphs."**

## Teaching Experience

---

**Instructor** : Full responsibility of curriculum, lectures, homework and exams

### **Columbia University**

New York, NY

- Statistical Computing with SAS (P6110 : Master Level) Spring 2016 - 2018; Fall 2016 - 2017; Summer 2018
- Introduction to Biostatistics (P6103 : Master Level) Summer 2014 - 2018
  - Biostatistics Enrichment Summer Training Diversity Program (BEST)
  - Columbia Summer Institute for Training in Biostatistics (CSIBS)

**Teaching Assistant** : Holding regular office hours & tutorials and grading assignments

### Columbia University

New York, NY

- > Theory of Statistical Inference 2 (P9110 : Ph.D. Level) Spring 2016 - 2017
- > Theory of Statistical Inference 1 (P9109 : Ph.D. Level) Fall 2014 - 2016
- > Linear Regression Models (P8111 : Master Level) Spring 2015
- > Introduction to Biostatistical Methods (P6104 : Master Level) Summer 2014, 2017

### Seoul National University

Seoul, Korea

- > Statistical Seminar (Undergraduate Level) Spring & Fall 2012

### University of Seoul

Seoul, Korea

- > Mathematical Statistics (Undergraduate Tutor) Fall 2011

## Talks

---

- |            |  |                |
|------------|--|----------------|
| 06/08/2017 | <b>Political Networks (PolNet) Workshops and Conference</b><br><i>Detecting Changes in Congressional Twitter Networks</i><br><i>The 11th Annual Political Networks Workshops and Conference</i>            | Arlington, VA  |
| 04/02/2018 | <b>Columbia University</b><br><i>Functional Data Approaches to Temporally Heterogeneous Data</i><br><i>Doctoral Research Symposium</i>   | New York, NY   |
| 03/25/2018 | <b>Eastern North American Region (ENAR)</b><br><i>Functional Data Analyses of Gait Data</i><br><i>ENAR 2018 : Poster presentation</i>  | Atlanta, GA    |
| 03/21/2018 | <b>Columbia University</b><br><i>Functional Data Analyses of Gait Data</i><br><i>Graduate Student Research Seminars (GSRS)</i>   | New York, NY   |
| 02/06/2018 | <b>Columbia University</b><br><i>Functional Data Analyses of Gait Data</i><br><i>Functional Data Analysis Working Group (FDAWG)</i>  | New York, NY   |
| 07/31/2017 | <b>Joint Statistical Meetings (JSM)</b><br><i>Varying-coefficient models for dynamic networks</i><br><i>JSM 2017 : Speed oral and poster presentations</i>   | Baltimore, MD  |
| 07/28/2017 | <b>North American Social Networks (NASN) Conference</b><br><i>Varying-coefficient models for dynamic networks</i><br><i>The 1st NASN of the International Networks for Social Network Analysis (INSNA)</i> | Washington, DC |
| 06/16/2017 | <b>Political Networks (PolNet) Workshops and Conference</b><br><i>Varying-coefficient models for dynamic networks</i><br><i>The 10th Annual Political Networks Workshops and Conference</i>                | Columbus, OH   |
| 04/05/2017 | <b>Data Science Institute (DSI), Columbia University</b><br><i>Varying-coefficient models for dynamic networks</i><br><i>Data Science Day : Poster presentation</i>  | New York, NY   |
| 03/14/2017 | <b>Eastern North American Region (ENAR)</b><br><i>Varying-coefficient models for dynamic networks</i><br><i>ENAR 2017 : Contributed papers</i>   | Washington, DC |

02/23/2017	<b>Columbia University</b> <i>The beauty of <code>ggplot2</code></i> <i>Columbia Biostatistics Computing Club (CBCC)</i>	New York, NY
10/13/2016	<b>Columbia University</b> <i>Incorporating the Function-on-Scalar Regression with Curve Registration via Variational Bayes</i> <i>Graduate Student Research Seminars (GSRS)</i>	New York, NY
10/11/2016	<b>Columbia University</b> <i>A Family of Functional Exponential Random Graph Models for Dynamic Networks with Temporal Heterogeneity</i> <i>Functional Data Analysis Working Group (FDAWG)</i>	New York, NY
09/29/2016	<b>Data Science Institute (DSI), Columbia University</b> <i>Functional Exponential Random Graph Models for Time-Varying Networks</i> <i>DSI Poster Social and Competition (First runner-up)</i>	New York, NY
03/29/2016	<b>Columbia University</b> <i>Functional Exponential Random Graph Models for Smoothly Transitioning Networks</i> <i>Functional Data Analysis Working Group (FDAWG)</i>	New York, NY
03/24/2016	<b>Columbia University</b> <i>Functional Exponential Random Graph Models for Smoothly Transitioning Networks</i> <i>Graduate Student Research Seminars (GSRS)</i>	New York, NY
03/03/2015	<b>Columbia University</b> <i>Weighted and Generalized Least Squares</i> <i>P8111 Linear Regression Models (Guest Lecturer)</i>	New York, NY
02/24/2015	<b>Columbia University</b> <i>Data Visualization with <code>ggplot2</code></i> <i>Functional Data Analysis Working Group (FDAWG)</i>	New York, NY

## Skills

- › R, SAS, SPSS, C++, Python
- ›  $\text{\LaTeX}$ , Microsoft Office
- › English, Korean

## Membership

- › American Statistical Association (ASA)
- › Eastern North American Region (ENAR)
- › Korean Statistical Society (KSS)
- › International Chinese Statistical Association (ICSA)

## Software Development

### R Package 'VCERGM'

- › Implement varying-coefficient random graph models (VCERGMs) on dynamic networks
- › R package is available at <https://github.com/jihuilee/VCERGM>.

## Academic Activities

### Functional Data Analysis Working Group (FDAWG)

Department of Biostatistics, Columbia University  
Active Member

New York, NY  
2013 - 2018

### Graduate Student Research Seminar

Department of Biostatistics, Columbia University

New York, NY  
2016 - 2017

Group Organizer

**Stony Brook University**

Exchange Program in Applied Mathematics and Statistics (AMS)

Stony Brook, NY

Spring 2010

Service

---

**Healthcare Data Analytics Career Panel**, Columbia University  
Career Panel

New York, NY

04/25/2018

**ENAR 2018 Spring Meeting**

Session Chair : Electronic Health Records

Atlanta, GA

03/28/2018

**ENAR 2017 Spring Meeting**

Poster Judging Coordination

Washington, DC

03/12/2017

**Doctoral Program Subcommittee on Biostatistics (DPSOB)**, Columbia University

Student Representative

New York, NY

2016 - 2018

**Biostatistics Student Cohort (BSC)**, Columbia University

Ph.D. Representative

New York, NY

2014 - 2018

**KSS Spring Conference of Probability and Statistics**

Conference Coordination : Hosting international participants as a translator

Seoul, Korea

07/01/2017 - 07/02/2017

**Uijeongbu Girls' High School**

Mathematics Tutor

Uijeongbu, Gyeonggi, Korea

Summer & Winter 2008

**Department of Statistics**, University of Seoul

Departmental Student Representative

Seoul, Korea

2007 - 2009