

# Jihui Lee

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## Education

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<b>Weill Cornell Medicine</b> , New York, NY Postdoctoral Associate Division of Biostatistics & Epidemiology, Department of Healthcare Policy & Research	10/2018 - 9/2020
<b>Columbia University</b> , New York, NY PhD in Biostatistics <ul style="list-style-type: none"><li>&gt; Dissertation : Varying-Coefficient Models and Functional Data Analyses for Dynamic Networks and Wearable Device Data</li><li>&gt; Advisors : Drs. Jeff Goldsmith and Gen Li</li></ul>	2018
<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

## Academic Honors

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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

## Academic Appointments

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09/2020 Present	<b>Instructor</b> Division of Biostatistics, Department of Population Health Sciences, Weill Cornell Medicine	New York, NY
01/2019 07/2019	<b>Lecturer</b> Department of Biostatistics, Columbia University <ul style="list-style-type: none"><li>&gt; Instructor of Statistical Computing with SAS</li></ul>	New York, NY

### Peer-Reviewed Manuscript

1. Ronald Chow, James Im, Nicholas Chiu, Leonard Chiu, **Jihui Lee**, Young-Geun Choi, Elizabeth Horn Prsic, and Hyun Joon Shin. **“The protective association between statins use and adverse outcomes among COVID-19 patients : a systematic review and meta-analysis.”** PLOS ONE (Accepted; 2021). Preprint available at Medrxiv.
2. Rahul Sharma, **Jihui Lee**, Rachel Liou, Catherine McManus, James A. Lee, and Jennifer H. Kuo, MD. **“Optimal Surgeon-Volume Threshold for Neck Dissections in the Setting of Primary Thyroid Malignancies.”** Surgery (Accepted; 2021).
3. Nabeel Wahid, **Jihui Lee**, William Schpero, Alyson Kaplan, Brett E. Fortune, Monika M. Safford, Robert S. Brown, Jr., and Russell Rosenblatt. **“Medicaid Expansion Association with End-Stage Liver Disease Mortality Depends on Leniency of Medicaid Hepatitis C Virus Coverage.”** Liver Transplantation (2021).
4. Jo Anne Sirey, Nili Solomonov, Arielle Guillod., Paula Zanotti, **Jihui Lee**, Mohamed Soliman, and George S. Alexopoulos. **“PROTECT : A novel psychotherapy for late life depression in elder abuse victims.”** International Psychogeriatrics (2021).
5. **Jihui Lee\***, Meghan R. Turchioe\*, Ruth M. Creber, Angelo Biviano, Kathleen Hickey, and Suzanne Bakken. **“Phenotypes of Engagement with Mobile Health Technology for Heart Rhythm Monitoring.”** JAMIA Open (2021).
6. Elizabeth Mauer, **Jihui Lee**, Justin Choi, Hongzhe Zhang, Katherine L. Hoffman, Imaani J. Easthausen, Mangala Rajan, Rainu Kaushal, Monika M. Safford, Peter A. D. Steel, and Samprit Banerjee. **“A Predictive Model of Clinical Deterioration among Hospitalized COVID-19 Patients by Harnessing Hospital Course Trajectories.”** Journal of Biomedical Informatics (2021).
7. Russell Rosenblatt, Nabeel Wahid, Karim J. Halazun, Alyson Kaplan, Arun Jesudian, Catherine Lucero, **Jihui Lee**, Lorna Dove, Alyson Fox, Elizabeth Verna, Benjamin Samstein, Brett E Fortune, and Robert S. Brown Jr. **“Black Patients Have Unequal Access to Listing for Liver Transplantation in the United States.”** Hepatology (2021).
8. **Jihui Lee**<sup>†</sup>, Gen Li, and James D. Wilson. **“Varying-Coefficient Models for Dynamic Networks.”** Computational Statistics & Data Analysis 152 (2020) : 107052.  
\*A version of this manuscript won an ENAR 2017 Student Paper Award.
9. Nili Solomonov, **Jihui Lee**, Samprit Banerjee, Christoph Flückiger, Dora Kanellopoulos, Jo Anne Sirey, Conor Liston, Patrick J. Raue, Patricia A. Areán, Faith M. Gunning, and George S. Alexopoulos. **“Modifiable predictors of nonresponse to psychotherapies for late-life depression with executive dysfunction : a machine learning approach.”** Molecular Psychiatry (2020) : 1-9.
10. **Jihui Lee**<sup>†</sup>, 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.”** Statistics in Biosciences (2019) : 1-26.
11. 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 286, no. 1 (2018) : 217-226.

### Abstract

1. Khalid Fahoum, Nicole T. Shen, Elora Basu, **Jihui Lee**, Alyson Kaplan, Annaheta Salajegheh, Russell Rosenblatt, Arun Jesudian, Catherine Lucero, Brett Fortune, Monika Safford, and Robert S. Brown. **“Transplant-free survival in alcohol-related liver disease (ALD) patients presenting with first evidence of ascites.”** American Transplant Congress (ATC) (2021). Accepted for poster presentation.

2. Nabeel Washid, **Jihui Lee**, William Schpero, Russell Rosenblatt, Monika Safford, and Robert Brown. **“Association Between Medicaid Expansion Under the Affordable Care Act and Racial-, Ethnic-, and Gender-Related Disparities in Hepatitis C Virus Mortality.”** Digestive Disease Week (DDW) (2021). Accepted for lecture presentation. This abstract won AASLD Foundation Abstract Award in Healthcare Disparities Research.
3. Rahul Sharma, **Jihui Lee**, Rachel Liou, Catherine McManus, James A. Lee, and Jennifer H. Kuo, MD. **“Optimal Surgeon-Volume Threshold for Neck Dissections in the Setting of Primary Thyroid Malignancies.”** American Association of Endocrine Surgeons (AAES) 41st Annual Meeting (2021). Accepted for oral podium presentation.
4. Simon Sung, **Jihui Lee**, Jun Lu<sup>◊</sup>, Anjali Saqi, and Jennifer H. Kuo. **“Deep Learning Algorithms for the Identification of Papillary Thyroid Carcinoma on Cytology ThinPrep Images.”** United States and Canadian Academy of Pathology (USCAP) 109th Annual Meeting (2020). Accepted for platform presentation.

## Under Review

1. Cecilia Yoon, **Jihui Lee**, Ericka Fong, and Jennifer I. Lee. **“The Virtual Team Member : Remote Engagement of Medical Students in COVID-19 Care.”** Submitted to Medical Science Educator (2020).
2. Leonard Chiu, Ronald Chow, Nicholas Chiu, Chun-Han Lo, Rahul Aggarwal, **Jihui Lee**, Young-Geun Choi, Henry Lam, and Hyun Joon Shin. **“Colchicine use in patients with COVID-19: a systematic review and meta-analysis.”** Submitted to JAMA Internal Medicine (2021). Preprint available at Medrxiv.
3. Tracey A. Martin, Sunena Tewani, Lindsay Clarke, Aiya Aboubakr, Srikanth Palanisamy, **Jihui Lee**, Carl V. Crawford, and David W. Wan. **“Predictors of Emergency Department Discharge, Outcomes and Follow-Up Rates of Stable Patients with Lower Gastrointestinal Bleeding.”** Submitted to Digestive Diseases and Sciences (2020).
4. Simon Sung, Jun Lu<sup>◊</sup>, **Jihui Lee**, Anjali Saqi, and Jennifer H. Kuo. **“Deep Learning Algorithms for the Identification of Papillary Thyroid Carcinoma on Cytology ThinPrep Images.”** Submitted to Diagnostic Cytopathology (2021).

## In Preparation

1. **Jihui Lee**<sup>†</sup>, Jeff Goldsmith, and Gen Li. **“Multilevel Stochastic Blockmodel for Dynamic Networks.”** (Ready for submission)
2. Hongzhe Zhang, **Jihui Lee**<sup>†</sup>, and Samprit Banerjee. **“An Unsupervised Filtering Algorithm for Passive Sensing Mobile Health Data.”**
3. **Jihui Lee** and Samprit Banerjee. **“Functional Data Analysis for Mobile Health Data.”**
4. **Jihui Lee**<sup>†</sup>, Jesse Hammond, Yoonjung Lee, and James D. Wilson. **“Detecting Changes in Congressional Twitter Networks over Time.”**
5. **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 Brain Abnormalities among 16p11.2 Deletion/Duplication Carriers.”**

<sup>†</sup> Corresponding author; \* Equal contribution; <sup>◊</sup> Student mentoring

## Research Experiences

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06/2017 - 07/2018	<b>International Center for AIDS Care and Treatment Program (ICAP)</b> Research Assistant <ul style="list-style-type: none"> <li>Conducted statistical analysis and produce tables for Population-based HIV Impact Assessment (PHIA) project</li> </ul> <span>SAS</span> <span>Survey method</span>	New York, NY
12/2014 - 11/2015	<b>Simons Foundation Autism Research Initiative (SFARI)</b> Research Assistant <ul style="list-style-type: none"> <li>Conducted latent class analysis (LCA) to identify the patterns of abnormality in cognitive, behavioral, and neurological phenotypes among 16p11.2 deletion/duplication children</li> <li>Simons Variation in Individuals Project (SVIP) quantitative analysis (mixed effects model)</li> </ul> <span>SAS</span> <span>R</span> <span>Missing Data</span> <span>LCA</span> <span>Mixed effects model</span>	New York, NY
09/2012 - 05/2013	<b>International Vaccine Institute (IVI)</b> Research Assistant <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> <span>R</span> <span>SAS</span> <span>Stata</span> <span>Simulation</span> <span>Efficacy</span> <span>Cost-effectiveness analysis</span>	Seoul, Korea
09/2010 - 02/2011	<b>Office of Admissions, University of Seoul</b> Data Analyst <ul style="list-style-type: none"> <li>Conducted statistical analysis for publishing annual report</li> </ul> <span>R</span> <span>SAS</span> <span>SPSS</span>	Seoul, Korea

## Teaching Experiences

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

<b>Weill Cornell Medicine</b>	New York, NY
<ul style="list-style-type: none"> <li>Biostatistics II – Regression Analysis (Master Level)</li> </ul>	Spring 2019 - 2021
<b>Columbia University</b>	New York, NY
<ul style="list-style-type: none"> <li>Statistical Computing with SAS (P6110 : Master Level)</li> </ul>	Spring 2016 - 2019 Fall 2016 - 2017 Summer 2018
<ul style="list-style-type: none"> <li>Introduction to Biostatistics (P6103 : Master Level) <ul style="list-style-type: none"> <li>Biostatistics Enrichment Summer Training Diversity Program (BEST)</li> <li>Columbia Summer Institute for Training in Biostatistics (CSIBS)</li> </ul> </li> </ul>	Summer 2014 - 2018

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

<b>Columbia University</b>	New York, NY
<ul style="list-style-type: none"> <li>Theory of Statistical Inference 2 (P9110 : Ph.D. Level)</li> <li>Theory of Statistical Inference 1 (P9109 : Ph.D. Level)</li> <li>Linear Regression Models (P8111 : Master Level)</li> <li>Introduction to Biostatistical Methods (P6104 : Master Level)</li> </ul>	Spring 2016 - 2017 Fall 2014 - 2016 Spring 2015 Summer 2014, 2017
<b>Seoul National University</b>	Seoul, Korea
<ul style="list-style-type: none"> <li>Statistical Seminar (Undergraduate Level)</li> </ul>	Spring & Fall 2012

<b>University of Seoul</b>	Seoul, Korea
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## Mentoring Experiences

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### Graduate Students

- > Hongzhe Zhang (MS in Biostatistics & Data Science)  
Department of Healthcare Policy & Research, Weill Cornell Medicine

09/2019 - Present
- > Rachel Lee (Practicum : MPH in Biostatistics)  
Department of Biostatistics, Columbia University

08/2019 - 09/2020
- > Jun Lu (Practicum : MS in Biostatistics)  
Department of Biostatistics, Columbia University

06/2019 - Present
- > Shu Wang (Capstone : MS in Biostatistics & Data Science)  
Department of Healthcare Policy & Research, Weill Cornell Medicine

06/2019 - 08/2019
- > Jiangyan Chen (Capstone : MS in Biostatistics & Data Science)  
Department of Healthcare Policy & Research, Weill Cornell Medicine

06/2019 - 08/2019
- > Yijing Lu (Capstone : MS in Biostatistics & Data Science)  
Department of Healthcare Policy & Research, Weill Cornell Medicine

06/2019 - 08/2019

### Undergraduate Students

- > Shraman Sen (Supervised Independent Study : BS in Economics)  
Department of Economics, New York University

\* Shraman was awarded a Dean's Undergraduate Research Fund Grant for Fall 2019 at NYU under my supervision.

12/2017 - 03/2020

## Presentations

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### Invited

- 08/11/2021 **2021 Joint Statistical Meetings (JSM)**  
*PCAN : Principal Component Analysis for Networks*  
*JSM 2021 : Speed Session*

Virtual,
- 08/04/2020 **2020 Joint Statistical Meetings (JSM)**  
*A Pre-Processing Pipeline of mHealth Data*  
*JSM 2020 : Invited Session*

Philadelphia, PA
- 11/22/2019 **University of San Francisco Data Science Seminar Series**  
*Mobile Health Technologies : What Your Smartphone Can Tell About You*  
*University of San Francisco Seminar Series in Data Science*

San Francisco, CA
- 05/31/2019 **BEST Research Seminar**  
*Mobile Health Technologies : What Your Smartphone Can Tell About You*  
*Biostatistics Enrichment Summer Training Diversity Program (BEST) Research Seminar*

New York, NY
- 04/17/2019 **Columbia Biostatistics, Epidemiology, and Research Design (BERD)**  
*Mobile Health Technologies : What Your Smartphone Can Tell About You*  
*Biostatistics in Action : Tips for Clinical Researchers*

New York, NY
- 11/26/2018 **Institute of Geriatric Psychiatry Research Seminar**  
*Functional Data Analysis for Digital Phenotyping*  
*Weill Cornell Institute of Geriatric Psychiatry*

White Plains, NY

### Contributed

- 07/31/2019 **2019 Joint Statistical Meetings (JSM)** Denver, CO  
*Functional Data Analysis Approaches for Analyzing Mobile Health Data*  
*JSM 2019 : Topic contributed papers*
- 01/17/2019 **WCM Biostatistics Computing Club** New York, NY  
*How to Build a Package in R*  
*Weill Cornell Medicine Biostatistics Computing Club*
- 06/08/2018 **Political Networks (PolNet) Workshops and Conference** Arlington, VA  
*Detecting Changes in Congressional Twitter Networks*  
*The 11th Annual Political Networks Workshops and Conference*
- 04/02/2018 **Columbia University** New York, NY  
*Functional Data Approaches to Temporally Heterogeneous Data*  
*Doctoral Research Symposium*
- 03/21/2018 **Columbia University** New York, NY  
*Functional Data Analyses of Gait Data*  
*Graduate Student Research Seminars (GSRS)*
- 02/06/2018 **Columbia University** New York, NY  
*Functional Data Analyses of Gait Data*  
*Functional Data Analysis Working Group (FDAWG)*
- 07/28/2017 **North American Social Networks (NASN) Conference** Washington, DC  
*Varying-coefficient models for dynamic networks*  
*The 1st NASN of the International Networks for Social Network Analysis (INSNA)*
- 06/16/2017 **Political Networks (PolNet) Workshops and Conference** Columbus, OH  
*Varying-coefficient models for dynamic networks*  
*The 10th Annual Political Networks Workshops and Conference*
- 03/14/2017 **Eastern North American Region (ENAR)** Washington, DC  
*Varying-coefficient models for dynamic networks*  
*ENAR 2017 : Contributed paper presentation*
- 02/23/2017 **Columbia University** New York, NY  
*The beauty of `ggplot2`*  
*Columbia Biostatistics Computing Club (CBCC)*
- 10/13/2016 **Columbia University** New York, NY  
*Incorporating the Function-on-Scalar Regression with Curve Registration via Variational Bayes*  
*Graduate Student Research Seminars (GSRS)*
- 10/11/2016 **Columbia University** New York, NY  
*A Family of Functional Exponential Random Graph Models for Dynamic Networks with Temporal Heterogeneity*  
*Functional Data Analysis Working Group (FDAWG)*
- 03/29/2016 **Columbia University** New York, NY  
*Functional Exponential Random Graph Models for Smoothly Transitioning Networks*  
*Functional Data Analysis Working Group (FDAWG)*
- 03/24/2016 **Columbia University** New York, NY  
*Functional Exponential Random Graph Models for Smoothly Transitioning Networks*  
*Graduate Student Research Seminars (GSRS)*

03/03/2015 **Columbia University** New York, NY  
*Weighted and Generalized Least Squares*  
*P8111 Linear Regression Models (Guest Lecturer)*

02/24/2015 **Columbia University** New York, NY  
*Data Visualization with `ggplot2`*  
*Functional Data Analysis Working Group (FDAWG)*

## Poster

05/31/2019 **Eight Annual Thomas Ten Have Symposium** New Haven, CT  
*Functional Data Analyses for mHealth Data*  
*Symposium on Statistics in Mental Health : Poster presentation*

03/25/2019 **Eastern North American Region (ENAR)** Philadelphia, PA  
*Multilevel Stochastic Blockmodel for Dynamic Networks*  
*ENAR 2019 : Speed Poster presentation*

03/25/2018 **Eastern North American Region (ENAR)** Atlanta, GA  
*Functional Data Analyses of Gait Data*  
*ENAR 2018 : Poster presentation*

07/31/2017 **2017 Joint Statistical Meetings (JSM)** Baltimore, MD  
*Varying-coefficient models for dynamic networks*  
*JSM 2017 : Speed oral and poster presentations*

04/05/2017 **Data Science Institute (DSI), Columbia University** New York, NY  
*Varying-coefficient models for dynamic networks*  
*Data Science Day : Poster presentation*

09/29/2016 **Data Science Institute (DSI), Columbia University** New York, NY  
*Functional Exponential Random Graph Models for Time-Varying Networks*  
*DSI Poster Social and Competition (First runner-up)*

## Software Development

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### R Package 'VCERGM'

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

### R Package 'DigiPheno'

- > Preprocess, visualize, and analyze smartphone or wearable device data
- > R package is available at <https://github.com/jihuilee/DigiPheno>.

## Skills

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- > R, SAS, SPSS, C++, Python
- >  $\LaTeX$ , Microsoft Office
- > English, Korean

## Membership

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

## Professional Service

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### **Journal Reviewer**

#### **CHEST Journal - American College of Chest Physicians**

Editorial Board for CHEST

01/2020 - Present

### **Conference Session Chair**

#### **2021 Joint Statistical Meetings (JSM)**

Session Chair : Digital Phenotyping

Virtual

08/10/2021

#### **Eastern North American Region (ENAR) 2018 Spring Meeting**

Session Chair : Electronic Health Records

Atlanta, GA

03/28/2018

#### **KSS Spring Conference of Probability and Statistics**

Conference Coordination : Hosting international participants as a translator

Seoul, Korea

07/01/2017 - 07/02/2017

### **Paper & Poster Judge**

#### **2021 Joint Statistical Meetings (JSM)**

Judge : ASA Mental Health Statistics Section Student Paper Award

Seattle, WA

01/11/2021

#### **The 39th Annual Vincent du Vigneaud Memorial Research Symposium, Weill Cornell Medicine**

Poster Judge

New York, NY

04/18/2019

#### **ENAR 2017 Spring Meeting**

Poster Judging Coordination

Washington, DC

03/12/2017

## Academic Activities

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### **Statistics Without Borders**

Volunteer

2019 - Present

### **High School Science Immersion Program, Weill Cornell Medicine & Memorial Sloan Kettering**

Memorial Sloan Kettering Postdoctoral Association (MSK-PDA)

HYPOTHEkids Big Sib Program – Volunteer Big Sib

New York, NY

Summer 2019

### **Summer Research Institute**

2019 Research Career Institute in the Mental Health of Aging (CIMA)

Trainee

New York, NY

07/14/2019 - 07/18/2019

### **Weill Cornell Medicine Biostatistics Computing Club**

Department of Healthcare Policy & Research, Weill Cornell Medicine

Founder & Meeting Organizer

New York, NY

2018 - Present

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

Career Panel

New York, NY

04/25/2018

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

Student Representative

New York, NY

2016 - 2018

### **Graduate Student Research Seminar**

Department of Biostatistics, Columbia University

Group Organizer

New York, NY

2016 - 2017

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

Ph.D. Representative

New York, NY

2014 - 2018



**Functional Data Analysis Working Group (FDAWG)**

Department of Biostatistics, Columbia University

Active Member

New York, NY

2013 - 2018

**Stony Brook University**

Exchange Program in Applied Mathematics and Statistics (AMS)

Stony Brook, NY

Spring 2010

**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