

# CAROLYN LOU

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## EDUCATION

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**University of Pennsylvania, Perelman School of Medicine** Philadelphia, PA  
PhD Candidate in Biostatistics, Graduate Group in Epidemiology and Biostatistics August 2017-Present  
Advisor: Dr. Russell T. Shinohara

**University of Pennsylvania, Perelman School of Medicine** Philadelphia, PA  
MS in Biostatistics, Graduate Group in Epidemiology and Biostatistics August 2017-June 2019  
Advisor: Drs. Nandita Mitra and David Margolis  
Thesis Title: Thymic Stromal Lymphopoietin Variation and the Persistence of Atopic Dermatitis: An Examination of Linkage Disequilibrium and Missingness in Longitudinal Studies

**Washington University in St. Louis** St. Louis, MO  
BA, Double Major in Mathematics and Finance, Minor in Psychology September 2013-May 2017

## RESEARCH

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**University of Pennsylvania, Department of Biostatistics, Epidemiology and Informatics**  
Lab Rotation with Dr. Mingyao Li September-December 2017  
Lab Rotation with Dr. Rebecca Hubbard January-April 2018  
Lab Rotation with Dr. Russell T. Shinohara June 2018-present

**Washington University School of Medicine, Cancer Proteogenomics Lab of Dr. Li Ding**  
Undergraduate Research Assistant January 2015-May 2017

**Washington University in St. Louis, Emotion and Mental Health Lab of Dr. Renee J. Thompson**  
Undergraduate Research Assistant January 2014-May 2015

## TEACHING

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**EPID803: Biostatistics in Practice** Spring 2020  
Teaching Assistant  
University of Pennsylvania, Biomedical Graduate Studies

**BIOM611: Statistical Methods for the Design and Analysis of Experiments** Spring 2019  
Teaching Assistant  
University of Pennsylvania, Biomedical Graduate Studies

**MATH3200: Elementary to Intermediate Statistics and Data Analysis** Spring 2017  
Teaching Assistant  
Washington University in St. Louis, Department of Mathematics and Statistics

**MATH310: Foundations for Higher Mathematics** Spring 2016  
Teaching Assistant  
Washington University in St. Louis, Department of Mathematics and Statistics

## SERVICE

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**Reviewer**  
Journal for the Society of Clinical Trials  
NeuroImage

**Committee Member**  
Student Representative Council

Representative of *Biomedical Graduate Student Association* to the *Graduate and Professional Student Association*

## PRESENTATIONS

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**Weill Cornell Medical College**

New York, NY

Oral Presentation

January 2020

Title: "Automated Detection of Paramagnetic Rims in Multiple Sclerosis with MRI"

**Western North American Region of the International Biometric Society (WNAR)** Portland, OR

Poster Presentation

June 2019

Title: "Pitfalls of Multi-Modal Image Segmentation in R"

**American Society of Human Genetics (ASHG)**

San Diego, CA

Poster Presentation

October 2018

Title: "Identification of Retinal Cell Types with Single-Cell RNA Sequencing"

## PUBLICATIONS

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**Lou, Carolyn**, Mohamad Habes, Nicholas A. Illenberger, Ali Ezzati, Richard B. Lipton, Hamed Akbari, Jimit Doshi, Christos Davatzikos, Russell T. Shinohara. "Augmenting clinical trials in neurologic disease by leveraging machine-learning-based predictive biomarkers." (*Under Review*)

Berna, Ronald, Nandita Mitra, **Carolyn Lou**, Joy Wan, Ole Hoffstad, Bradley Wubbenhorst, Katherine L. Nathanson, and David J. Margolis. "Thymic Stromal Lymphopoietin and IL7R Variants are Associated with Persistent Atopic Dermatitis." *The Journal of Investigative Dermatology* (2020).

**Lou, Carolyn**, Nandita Mitra, Bradley Wubbenhorst, Kurt D'Andrea, Ole Hoffstad, Brian S. Kim, Albert Yan et al. "Association between fine mapping thymic stromal lymphopoietin and atopic dermatitis onset and persistence." *Annals of Allergy, Asthma & Immunology* 123, no. 6 (2019): 595-601.

Niu, Beifang, Adam D. Scott, Sohini Sengupta, Matthew H. Bailey, Prag Batra, Jie Ning, Matthew A. Wyczalkowski, Wen-Wei Liang, Qunyuan Zhang, Michael D McLellan, Sam Q Sun, Piyush Tripathi, **Carolyn Lou** et al. "Protein-structure-guided discovery of functional mutations across 19 cancer types." *Nature genetics* 48, no. 8 (2016): 827.