

Julia Wrobel

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EDUCATION

Columbia University Mailman School of Public Health, New York, NY, USA

Doctor of Philosophy (Ph.D.) in Biostatistics Sep 2015 – Present
• Coursework and exploratory research in progress

Master of Science (M.S.) in Biostatistics Sep 2013 – May 2015
• Practicum: Associations and Patterns in Ambulatory Blood Pressure
• Advisor: Professor Jeff Goldsmith

Swarthmore College, Swarthmore, Pennsylvania, USA

Bachelor of Arts (B.A.) in Chemistry Sep 2006 – May 2010

HONORS & AWARDS

Gertrude M. Cox Scholarship for Women in Statistics Jul 2017

Summer Institute in Statistics for Big Data Travel Scholarship, University of Washington Jul 2017

Certificate of Distinction, Columbia Department of Biostatistics May 2015
For outstanding research by a Master's student.

Sigma Xi Scientific Research Society May 2010

RESEARCH EXPERIENCE

Department of Biostatistics, Columbia University

Research Assistant Jun 2014 – Present
• Supervisor: Assistant Professor Jeff Goldsmith
• Research areas: Functional data analysis, interactive data visualization, ambulatory blood pressure.

Department of Biostatistics, Columbia University

Research Assistant Feb 2016 – Present
• Supervisor: Assistant Professor Sara Lopez-Pintado
• Research areas: Multivariate band depth for functional data, imaging statistics, nonparametric hypothesis tests

WORK EXPERIENCE

Statistical Analysis Center for Clinical Trials, Columbia University

Data Analyst & SAS Programmer May 2014 – Aug 2015
• Supervisor: Professor Seamus Thompson
• Statistical analysis of Phase III clinical trial data for Novartis Pharmaceuticals
• Characterized incidence of hypotension and built models to predict its association with health outcomes
• Developed SAS programming expertise, including nested macros, proc report, and model building

Department of Immunology and Rheumatology, Children's Hospital of Philadelphia

Immunology Research Scientist Apr 2011 – Jul 2013
• Principal Investigator: Dr. Edward Behrens
• Research areas: Macrophage Activation Syndrome, cytokine storm, flow cytometry, adoptive T-cell transfer

PUBLICATIONS

JOURNALS

- 4) S. Lopez-Pintado and J. Wrobel, "Robust Nonparametric Tests for Imaging Data Based on a Multivariate Volume Depth", under revision for the *Journal of Computational and Graphical Statistics*.
- 3) J. Wrobel, SY. Park, AM. Staicu, J. Goldsmith, "Interactive graphics for functional data analyses", *Stat*, vol. 5, no. 1, pp. 108–118, Feb 2016 **Selected as an exemplar paper of Stat** to be showcased at the 2017 Joint Statistical Meetings.
- 2) J. Kim, J. Wrobel, et al., "State Medical marijuana laws and the prevalence of opioids detected among fatally injured drivers?", *American Journal of Public Health*, Accepted Aug 2016.
- 1) S. Canna, J. Wrobel et al., "Interferon- γ mediates anemia but is dispensable for fulminant toll-Like receptor 9-induced macrophage activation syndrome and hemophagocytosis," *Arthritis and Rheumatism*, vol. 65, no. 7, pp. 1764–1775, Jul 2013.

SOFTWARE

- 2) J. Wrobel and J. Goldsmith, “refund.shiny: interactive plotting for functional data analysis,” *R package available on CRAN* Sep 2015. **Downloaded 4442 times as of 7/29/2017.**
- 1) J. Wrobel, “mfPCA.sc(): multilevel functional principal components analysis by smoothed covariance,” *function in refund R package available on CRAN* Aug 2015.

TALKS

- 1) J. Wrobel, “Interactive graphics for functional data analyses,” *2016 Joint Statistical Meetings*, Chicago, IL, USA, Aug 2016.

POSTER PRESENTATIONS

- 2) J. Wrobel, “Can we use statistics to compare pictures? An application to brain imaging data,” *2016 Women in Science at Columbia (WISC) Symposium*, New York, NY, USA, Apr 2016.
- 1) J. Wrobel, “Associations and Patterns in Ambulatory Blood Pressure,” *Columbia University Department of Biostatistics 75th Anniversary Gala*, New York, NY, USA, Apr 2015.

LEADERSHIP & SERVICE

- Biostatistics Student Research Working Group**, Columbia University
 Founder and Organizer Dec 2015 – Present
- Created monthly student seminar series to facilitate research collaborations, promote idea-sharing, and hone presentation skills
- Columbia Biostatistics Computing Club**, Columbia University
 Founder and Co-Organizer Dec 2016 – Present
- Lead tutorials on computational methods often encountered in biostatistics research
 - Built CBCC website using GitHub pages
- Biostatistics Student Cohort**, Columbia University
 Doctoral Student Leader Aug 2015 – Present
- Girls Who Code**
 Middle school coding instructor with focus in Python Aug 2015 – Jun 2016
- Swarthmore Voter Registration Coalition**, Swarthmore College
 Leader and Co-founder Aug 2008 – May 2010
- Founded student organization to register voters and encourage civic engagement in underrepresented blocs

SKILLS

R, Rcpp, git, SAS, \LaTeX , Python, SPSS, Excel

TEACHING EXPERIENCE

- Categorical Data Analysis**, Columbia University Department of Biostatistics
 Lead Teaching Assistant Jan 2017 – Present
- Statistical Inference**, Columbia University Department of Biostatistics
 Teaching Assistant Jan 2016 – May 2016
- Randomized Clinical Trials II**, Columbia University Department of Biostatistics
 Teaching Assistant Aug 2015 – Dec 2015
- Organic Chemistry I**, Swarthmore College Department of Chemistry
 Laboratory Assistant Sep 2008 – May 2010