Julia Wrobel

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

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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, — Jul 2017
University of Washington Department of Biostatistics

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 recepter 9–induced macrophage activation syndrome and hemophagocytosis," *Arthritis and Rheumatism*, vol. 65, no. 7, pp. 1764–1775, Jul 2013.

SOFTWARE

2) <u>J. Wrobel</u> 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) <u>J. Wrobel</u>, "mfpca.sc(): multilevel functional principal components analysis by smoothed covariance," *function in* refund *R package available on CRAN* Aug 2015.

TALKS

2) <u>J. Wrobel</u>, "Registration for binary functional data," *2017 ICSA Applied Statistics Symposium*, Chicago, IL, USA, Jun 2017.
1) <u>J. Wrobel</u>, "Interactive graphics for functional data analyses," *2016 Joint Statistical Meetings*, Chicago, IL, USA, Aug 2016.

POSTER PRESENTATIONS

2) <u>J. Wrobel</u>, "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) <u>J. Wrobel</u>, "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

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