

# Julia Wrobel

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EDUCATION	<b>Columbia University Mailman School of Public Health</b> , New York, NY, USA	
	Ph.D.Candidate in Biostatistics	Sep 2015 – Present
	• Dissertation 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	
	<b>Swarthmore College</b> , Swarthmore, Pennsylvania, USA	
	Bachelor of Arts (B.A.) in Chemistry	Sep 2006 – May 2010
HONORS & AWARDS	ASA Biometrics Section JSM Travel Award	Jul 2018
	ENAR Distinguished Student Paper Award	Mar 2018
	WSDS 2017 Conference Travel Award	Oct 2017
	Women in Statistics and Data Science conference in La Jolla, California	
	Gertrude M. Cox Scholarship for Women in Statistics	Jul 2017
	Summer Institute in Statistics for Big Data Travel Scholarship, University of Washington Department of Biostatistics	Jul 2017
	Certificate of Distinction, Columbia Department of Biostatistics For outstanding research by a Master's student.	May 2015
	Sigma Xi Scientific Research Society	May 2010
RESEARCH EXPERIENCE	<b>Department of Biostatistics</b> , Columbia University	
	Research Assistant	Jun 2014 – Present
	• Supervisor: Assistant Professor Jeff Goldsmith	
	• Research areas: Functional data analysis, interactive graphics, variational inference, accelerometers	
	<b>Department of Biostatistics</b> , 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	<b>Statistical Analysis Center for Clinical Trials</b> , 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	
	<b>Department of Immunology and Rheumatology</b> , 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	<b>JOURNALS</b>	
	• <u>J Wrobel</u> , V Zipunnikov, J Schrack, J Goldsmith, "Registration for exponential family functional data", under review at <i>Biometrics</i> , submitted Dec 2017.	
	• S Lopez-Pintado and <u>J Wrobel</u> , "Robust non-parametric tests for imaging data based on data depth", <i>Stat</i> , vol. 6, no. 1, pp. 405–419, Oct 2017.	
	• <u>J Wrobel</u> , SY Park, AM Staicu, J Goldsmith, "Interactive graphics for functional data analyses", <i>Stat</i> , vol. 5, no. 1, pp. 108–118, Feb 2016 <b>Selected as an exemplar paper of Stat</b> , showcased at the 2017 Joint Statistical Meetings.	
	• JH Kim, J Santaella-Tenorio, C. Mauro, <u>J Wrobel</u> , M Cerdá, KM Keyes, D Hasin, SS Martins, and G Li. "State Medical marijuana laws and the prevalence of opioids detected among fatally injured drivers?", <i>American Journal of Public Health</i> , Accepted Aug 2016.	

- S Canna, [J Wrobel](#), N Chu, PA Kreiger, M Paessler, EM Behrens, “Interferon- $\gamma$  mediates anemia but is dispensable for fulminant toll-like receptor 9–induced macrophage activation syndrome and hemophagocytosis,” *Arthritis and Rheumatism*, vol. 65 (7), pp. 1764–1775, Jul 2013.

#### SOFTWARE

- [J Wrobel](#) and J Goldsmith, “registr: Registration for exponential family functional data,” *R package available on GitHub* Nov 2017.
- [J Wrobel](#) and J Goldsmith, “refund.shiny: interactive plotting for functional data analysis,” *R package available on CRAN* Sep 2015. Downloaded 5242 times as of 1/15/2018.
- [J Wrobel](#) and S Lopez–Pintado, “depthTests: Nonparametric hypothesis tests based on multivariate band depth,” *R package available on GitHub* Sep 2017.
- [J Wrobel](#), “mfPCA.sc(): multilevel functional principal components analysis by smoothed covariance,” *function in refund R package available on CRAN* Aug 2015.

#### PRESENTATIONS INVITED TALKS

- [J Wrobel](#), “Registration for exponential family functional data,” *2017 ERCIM*, London, UK, Dec 2017.
- [J Wrobel](#), “Identifying patterns in physical activity,” *2017 AT&T Labs Graduate Student Symposium*, New York, NY, USA, Dec 2017.
- [J Wrobel](#), “Registration for binary functional data,” *2017 ICSA Applied Statistics Symposium*, Chicago, IL, USA, Jun 2017.

#### CONTRIBUTED TALKS

- [J Wrobel](#), “Registration for exponential family functional data,” *2017 Joint Statistical Meetings*, Baltimore, MD, USA, Jul 2017.
- [J Wrobel](#), “Interactive graphics for functional data analyses,” *2016 Joint Statistical Meetings*, Chicago, IL, USA, Aug 2016.

#### POSTERS AND E-POSTERS

- [J Wrobel](#), “Communicating results of functional data analyses with interactive graphics,” *2017 Women in Statistics and Data Science (WSDS) Conference*, La Jolla, California, USA, Oct 2017.
- [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.
- [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

<b>Biostatistics Student Research Working Group</b> , Columbia University	
Founder and Organizer	Dec 2015 – Present
<ul style="list-style-type: none"> <li>• Monthly student seminar series to facilitate research collaborations and hone presentation skills</li> </ul>	
<b>Columbia Biostatistics Computing Club</b> , Columbia University	
Founder and Co-Organizer	Dec 2016 – Present
<ul style="list-style-type: none"> <li>• Lead tutorials on computational methods often encountered in biostatistics research</li> <li>• Built CBCC website using GitHub pages</li> </ul>	
<b>Biostatistics Student Cohort</b> , Columbia University	
Doctoral Student Leader	Aug 2015 – Present

#### TEACHING

<b>Statistical Inference</b> , Columbia University Department of Biostatistics	
Lead Teaching Assistant	Jan 2018 – May 2018
Teaching Assistant	Jan 2016 – May 2016
<b>Data Science I</b> , Columbia University Department of Biostatistics	
Lead Teaching Assistant	Sep 2017 – Dec 2017
<b>Categorical Data Analysis</b> , Columbia University Department of Biostatistics	
Lead Teaching Assistant	Jan 2017 – May 2017

**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

**SKILLS**

R, Rcpp, git, SAS, L<sup>A</sup>T<sub>E</sub>X, SPSS, Excel