

Julia Wrobel

722 W 168th St, New York, NY 10032, USA
jw3134@cumc.columbia.edu • github: julia-wrobel • website: juliawrobel.com
CV compiled on 2018-10-16

EDUCATION	Columbia University Mailman School of Public Health, New York, NY, USA	
	PhD Candidate in Biostatistics	Sep 2015 – Present
	<ul style="list-style-type: none">• Expected graduation: May 2019• Dissertation title: Statistical methods for wearable devices and neuroimaging data using functional data analysis• Advisor: Jeff Goldsmith	
	Master of Science (M.S.) in Biostatistics	Sep 2013 – May 2015
	<ul style="list-style-type: none">• Practicum: Associations and Patterns in Ambulatory Blood Pressure• Advisor: Jeff Goldsmith	
	Swarthmore College, 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
	NESS IBM Student Research Award Finalist	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	Department of Biostatistics, Columbia University	
	Research Assistant	Jun 2014 – Present
	<ul style="list-style-type: none">• Supervisor: Jeff Goldsmith• Research areas: Functional data, neuroimaging, variational inference, accelerometers, interactive graphics	
	Department of Biostatistics, Columbia University	
	Research Assistant	Feb 2016 – Oct 2017
	<ul style="list-style-type: none">• Supervisor: Sara Lopez-Pintado• Research areas: Multivariate band depth for functional data, imaging statistics, nonparametric hypothesis tests	
WORK EXPERIENCE	Data Science and AI Research, AT&T Labs	
	Summer Intern - Statistical Research Group	May 2018 – Aug 2018
	<ul style="list-style-type: none">• Supervisor: Senior Inventive Scientist Emily Dodwell• Curve clustering and predictive modeling for addressable advertising delivery data	
	Statistical Analysis Center for Clinical Trials, Columbia University	
	Data Analyst & SAS Programmer	May 2014 – Aug 2015
	<ul style="list-style-type: none">• Supervisor: Seamus Thompson• Statistical analysis of Phase III clinical trial data for Novartis Pharmaceuticals	
	Department of Immunology and Rheumatology, Children's Hospital of Philadelphia	
	Immunology Research Scientist	Apr 2011 – Jul 2013
	<ul style="list-style-type: none">• Principal Investigator: Dr. Edward Behrens• Research areas: Macrophage Activation Syndrome, cytokine storm, flow cytometry, adoptive T-cell transfer	
PROFESSIONAL ORGANIZATIONS & SERVICE	EDITORIAL EXPERIENCE	
	<ul style="list-style-type: none">• Referee: Biostatistics, JASA, Stat	
	MEMBERSHIPS	

PUBLICATIONS

PEER-REVIEWED ARTICLES

- [J Wrobel](#), V Zipunnikov, J Schrack, J Goldsmith, “Registration for exponential family functional data”, accepted at *Biometrics* August 2018.
- [J Wrobel](#), “registr: Registration for exponential family functional data”, *Journal of Open Source Software*, vol. 3, no. 22, pp. 557 Feb 2018.
- S Lopez–Pintado and [J Wrobel](#), “Robust non-parametric tests for imaging data based on data depth”, *Stat*, vol. 6, no. 1, pp. 405–419, Oct 2017.
- [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**, showcased at the 2017 Joint Statistical Meetings.
- JH Kim, J Santaella-Tenorio, C. Mauro, [J Wrobel](#), M Cerdâ, KM Keyes, D Hasin, SS Martins, and G Li. “State Medical marijuana laws and the prevalence of opioids detected among fatally injured drivers?”, *American Journal of Public Health*, vol. 106, no. 11, pp. 2032–2037, Aug 2016.
- S Canna, [J Wrobel](#), N Chu, PA Kreiger, M Paessler, EM Behrens, “Interferon- γ 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.

ARTICLES IN PREPARATION

- [J Wrobel](#), J Goldsmith, M Martin, T Shinohara, “Intensity warping for multisite MRI normalization”.
- [J Wrobel](#) and M Martin, “mica: Multi Image CDF Alignment”.

SOFTWARE

- J Goldsmith, F Scheipl, L Huang, [J Wrobel](#), J Gellar, J Harezlak, M McLean, B Swihart, L Xiao, C Crainiceanu, and P Reiss, “refund: Regression with Functional Data,” *R package available on CRAN*, version 0.1-17, May 2018.
 - author: “mfpc.sc(): multilevel FPCA by smoothed covariance”
 - contributor: version 0.1-15 to present
 - maintainer: version 0.1-16 to present
- [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 graphics for functional data analysis,” *R package available on CRAN* Sep 2015. Downloaded 6727 times as of 10/15/2018.
- [J Wrobel](#) and S Lopez–Pintado, “depthTests: Nonparametric hypothesis tests based on multivariate band depth,” *R package available on GitHub* Sep 2017.

PRESENTATIONS

INVITED TALKS

- J Wrobel, “Intensity warping for multisite MRI normalization,” *2019 ENAR*, Philadelphia, PA, USA, Dec 2018.
- J Wrobel, “Identifying circadian chronotypes using accelerometers,” *2018 ERCIM*, Pisa, Italy, Dec 2018.
- J Wrobel, “Modeling the effects of high-dimensional covariates on 3D kinematics,” *2018 PEPS Workshop on advances in functional data analysis*, Rennes, Brittany, France, Oct 2018.
- J Wrobel, “Registration for exponential family functional data,” *2018 JSM*, Vancouver, Canada, Aug 2018.
- J Wrobel, “Clustering and Modeling Addressable Advertising Impression Curves,” *AT&T Labs Intern Research Showcase*, New York, NY, USA, Jul 2018.
- J Wrobel, “Introduction to Shiny using NBA Data,” *RLadies NYC, hosted at NBA NYC*, New York, NY, USA, May 2018.
- 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

- J Wrobel, “Can early intervention save money in addressable advertising?,” *2018 AT&T Labs Intern Poster Session*, Bedminster, NJ, USA, Jul 2018.
- J Wrobel, “Removing scanner variability from structural MRIs,” *2018 Statistical Methods in Imaging (SMI) Conference*, Philadelphia, PA, USA, Jun 2018.
- 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 & MENTORING

- Biostatistics Student Research Working Group**, Columbia University
 Founder and Organizer Dec 2015 – Present
- Monthly student seminar series to facilitate research collaborations and hone presentation skills
- Columbia Biostatistics Computing Club**, Columbia University
 Founder and Co-Organizer Dec 2016 – Jun 2018
- 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

Mentees

- Goutham Swaminathan
- High school student at Bergen County Academies
 - Developing R package for statistical shape analysis

TEACHING

- Columbia University Department of Biostatistics**
- Longitudinal Data Analysis, Lead Teaching Assistant Fall 2018
- Statistical Inference, Lead Teaching Assistant Spring 2018
- Data Science I, Lead Teaching Assistant Fall 2017

Categorical Data Analysis, Lead Teaching Assistant	Spring 2017
Categorical Data Analysis, Teaching Assistant	Fall 2016
Statistical Inference, Teaching Assistant	Spring 2016
Randomized Clinical Trials II, Teaching Assistant	Fall 2015

Swarthmore College Department of Chemistry

Organic Chemistry I, Laboratory Assistant	Sep 2008 – May 2010
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SKILLS

R, Rcpp, git, SAS, L^AT_EX, SPSS