

## CONTACT INFORMATION

RAND Corporation  
4570 Fifth Ave.  
Pittsburgh, PA 15213

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## EDUCATION

**Pennsylvania State University**, University Park, PA  
*Ph.D.*, Statistics, August 2018  
Graduate Minor: Social Data Analytics  
Dissertation: *Statistical Data Privacy Methods for Increasing Research Opportunities*  
Advisor: Aleksandra B. Slavković

**Wheaton College**, Wheaton, IL  
*B.S.*, Mathematics and Economics, May 2013  
Honors: Magna Cum Laude

## PROFESSIONAL APPOINTMENTS

**RAND Corporation**, Pittsburgh, PA & Santa Monica, CA  
Associate Statistician August 2018 -  
Research Adjunct September 2016 - August 2017  
Summer Associate June 2016 - August 2016

**Pennsylvania State University**, University Park, PA  
Graduate Research Assistant  
*Department of Statistics* January 2018 - June 2018  
May 2017 - August 2017  
January 2014 - August 2014

Graduate Research Trainee  
*Big Data Social Science IGERT* September 2015 - May 2016  
September 2014 - May 2015

Graduate Teaching Assistant  
*Categorical Data Analysis* August 2017 - December 2017  
*Applied Data Mining and Statistical Learning* August 2017 - December 2017  
*Elementary Statistics* August 2013 - December 2013

**Administrative Data Research Centre - Scotland**, Edinburgh, UK  
Visiting Research Fellow May 2015 - August 2015

## PROFESSIONAL ACTIVITIES

**Committee Member**  
*American Statistical Association (ASA)* October 2018 -  
Committee on Privacy and Confidentiality in Statistics

**Journal Referee**  
*Journal of Survey Statistics and Methodology, IEEE Transactions on Information Forensics & Security, Statistical Science*

## PEER-REVIEWED PUBLICATIONS

**Snoke, J.**, Raab, G.M., Nowok, B., Dibben, C. and Slavković, A., (2018). General and specific utility measures for synthetic data. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 181(3), pp.663-688. doi:10.1111/rssa.12358

**Snoke, J.**, Brick, T.R., Slavković, A. and Hunter, M.D., (2018). Providing accurate models across private partitioned data: Secure maximum likelihood estimation. *The Annals of Applied Statistics*, 12(2), pp.877-914. doi:10.1214/18-AOAS1171.

**Snoke, J.** and Slavković, A., (2018). *pMSE* Mechanism: Differentially Private Synthetic Data with Maximal Distributional Similarity. In *Privacy in Statistical Databases*. pp.138-159. Springer. doi:10.1007/978-3-319-99771-1

**Snoke, J.**, Brick, T. and Slavković, A., (2016). Accurate Estimation of Structural Equation Models with Remote Partitioned Data. In *Privacy in Statistical Databases*. pp.190-209. Springer. doi:10.1007/978-3-319-45381-1

## PAPERS IN PREP

Ororbia II, A.G., Linder, F. and **Snoke, J.**, Using Neural Generative Models to Release Synthetic Twitter Corpora with Reduced Stylometric Identifiability of Users. Preprint available at <https://arxiv.org/abs/1606.01151>.

## FELLOWSHIPS & AWARDS

### Fellowships

Dissertation Fellowship, U.S. Census Bureau August 2016 - July 2017

NSF Big Data Social Science IGERT Traineeship, Pennsylvania State University September 2014 - August 2016

President's Award, Wheaton College August 2009 - May 2013

### Research Awards

Joint Statistical Meetings ASA Student Paper Award July 2016  
*General and Specific Utility Measures for Synthetic Data*  
Social Statistics, Government Statistics, and Survey Research Methods Section

Rao Prize Conference Student Poster Award May 2015  
*Estimation of Structural Equation Models for Vertically Partitioned Data*

## PRESENTED WORK

### Invited Talks

International Conference on Privacy in Statistical Databases September 2018  
*pMSE Mechanism: Differentially Private Synthetic Data with Maximal Distributional Similarity*

U.S. Census Bureau June 2018  
*Statistical Data Privacy Methods for Increasing Research Opportunities*

Joint Statistical Meetings July 2017  
*Discussant. Differential Privacy in Statistical Agencies: Present and Future*

International Statistical Institute World Statistics Congress July 2017  
*Perspective on Utility for Synthetic Data Sets*

International Conference on Privacy in Statistical Databases September 2016  
*Accurate Estimation of Structural Equation Models with Remote Partitioned Data*

Joint Statistical Meetings August 2016  
*General and Specific Utility Measures for Synthetic Data*

### Guest Lectures

Data Privacy Methods, Pennsylvania State University October 2014  
*Statistical Disclosure Control Methods*

### Contributed Talks

Joint Statistical Meetings August 2018  
*Using Neural Generative Models to Release Synthetic Twitter Corpora with Reduced Stylometric Identifiability of Users*

Joint Statistical Meetings July 2017  
*Secure Multiparty Maximum Likelihood Estimation with Partitioned Databases*

RAND Corporation August 2016  
*Social Media and Events Marketing for Army Recruiting*

FARR Institute International Conference August 2015  
*Utility of Synthetic Microdata for Health Research*

### Workshop Talks

Stochastic Modeling and Computational Statistics Seminar April 2017  
*Secure Multiparty Maximum Likelihood Estimation with Partitioned Databases*

Isaac Newton Institute Synthetic Data Workshop November 2016  
*Beyond Microdata: Approaches for Generating Synthetic Tweets*

### Poster Presentations

Department of Statistics 50th Anniversary Conference May 2018  
*Differentially Private Synthetic Data with Maximal Distributional Similarity*

Big Data Social Science IGERT Poster Session April 2016  
*Statistical Disclosure Control for High Dimensional Data*

Rao Prize Conference May 2015

Big Data Social Science IGERT Poster Session April 2015  
*Estimation of Structural Equation Models for Vertically Partitioned Data*

## COMPUTING SKILLS

### Statistical Software

Proficient in R, SAS, STATA, Minitab

### Other Tools

Proficient in Git, Python, Excel

Experience in Java, SQL

## Development

Contributor to R package *synthpop*

## ADDITIONAL PROFESSIONAL DEVELOPMENT

**Neighborhood Learning Alliance**, Pittsburgh, PA

Summer Tutor

June 2013 - August 2013

**Boston University**, Boston, MA

Summer Institute for Training in Biostatistics

June 2012 - July 2012

**Via Science**, Boston, MA

Data Science Intern

August 2012 - November 2012

**Wheaton College**, Wheaton, IL

Teaching Assistant

*Intermediate Macroeconomics*

*Calculus II*

August 2011 - May 2012

January - May 2011

## LAST UPDATED

November 1, 2018