

Ian Laga

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Website: <https://ilaga.github.io/>

RESEARCH INTERESTS

Bayesian methods, small area estimation, network scale-up, computational statistics, and spatial statistics

EDUCATION

Pennsylvania State University

Ph.D. Statistics (Expected June 2022), Pennsylvania State University

Advisors: Le Bao and Xiaoyue Niu

University of Colorado - Boulder

B.S. Applied Mathematics (minor in Statistics and in Computer Science) (2013 - 2017), Magna Cum Laude

REFEREED PUBLICATIONS

Ian Laga, Xiaoyue Niu, Katherine Rucinski, Stefan Baral, David Chen, Nikita Viswasam, Keith Sabin, Jinkou Zhao, Jeffrey Eaton, and Le Bao. “Mapping the Population Size of Female Sex Worker in Countries Across Sub-Saharan Africa.” Submitted to *Nature*

Ian Laga, Xiaoyue Niu, and Le Bao. “Modeling the Marked Presence-only Data: A Case Study of Estimating the Female Sex Worker Size in Malawi.” Submitted to *Journal of the American Statistical Association*, minor revision

Ian Laga, Le Bao, and Xiaoyue Niu. (2021) “Thirty Years of The Network Scale-up Method.” *Journal of the American Statistical Association*. Accepted author version. doi: 10.1080/01621459.2021.1935267

Ian Laga and William Kleiber. (2017) “The Modified Matérn Process.” *Stat*, 6:241-247. doi: 10.1002/sta4.152

WORKING PAPERS

Ian Laga, Le Bao, and Xiaoyue Niu. “The Correlated Network Scale-up.” In preparation

NON-REFEREED PUBLICATIONS

Ian Laga and Xiaoyue Niu (2020). “Review of *Model-Based Geostatistics for Global Public Health: Methods and Applications*”, by Peter J. Diggle and Emanuele Giorgi, *Journal of the American Statistical Association*, 115:530, 1030-1032, 10.1080/01621459.2020.1759988

Ian Laga (2019). “The POWER Structure and Why an 80% Correct Solution is Sometimes Better Than a 100% Correct Solution.” In JSM Proceedings, Section on Statistical Consulting. Denver, CO: American Statistical Association. 2345-2356

**TEACHING
EXPERIENCE****Lecturer:**

Computation Statistics, STAT 440, Spring 2020
Mathematical Statistics, STAT 415, Fall 2018

Teaching Assistant:

Mathematical Statistics, STAT 415, Fall 2017/Spring 2018
Introduction to SAS, STAT 480, Fall 2019

**RESEARCH
PRESENTATIONS**

“Modeling the Marked Presence-only Data: A Case Study of Estimating the Female Sex Worker Size in Malawi,” Invited Poster Presentation, Joint Statistical Meetings, Virtual Conference. August 2020

“The POWER Structure and Why an 80% Correct Solution is Sometimes Better Than a 100% Correct Solution,” Topic-Contributed Session, Joint Statistical Meetings, Denver. August 2019

“The Modified Matérn Process,” SIAM Front Range Applied Mathematics Student Conference, University of Colorado at Denver, Denver, Colorado. March 2016

POSTERS

“MCPMod for Negative Binomial Count Data,” ASA NJ Chapter/Bayer Statistics and Data Insights 7th Annual Workshop. November 2019

INTERNSHIPS

Statistician Intern (Summer 2019), Bayer Corporation, Whippany, NJ

**SCIENTIFIC
SOFTWARE**

MCPModGeneral: R-package to supplement the ‘DoseFinding’ package for non-normal data

**OTHER
PRESENTATIONS**

“How to make a R package,” Penn State Statistics Graduate Student Association Workshop, December 2020

“Introduction to RStan,” Penn State Statistics Graduate Student Association Workshop, November 2019, November 2020

**AWARDS/
HONORS**

2020 Teaching Award Honorable Mention: Pennsylvania State University Statistics Department

2019 NSF Graduate Research Fellowship Honorable Mention: National Science Foundation

2013 - 2017 Dean’s List: University of Colorado - Boulder

CU Esteemed Scholars - Sewall Award:

Awarded to high school students with 4.0 GPA and 33 ACT and above

Engineering Differential Scholarship:

Awarded to engineering students who also received a Sewall or Presidential Scholarship

2013 Boettcher Scholar:

Award given to top 40 high school students in Colorado. Provides full ride with room and board to any Colorado university

VOLUNTEERING Refereed papers for *Annals of Applied Statistics*, 2019, 2020

Refereed paper for *Proceedings of the National Academy of Sciences of the United States of America*, 2019

Eberly College Climate and Diversity Committee, 2018 - Present
Member

Penn State Statistics Graduate Student Association, 2017 - Present
Social Coordinator