Serge Aleshin-Guendel **Updated: November 22, 2022**

Contact

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Research Interests

Bayesian Statistics, Record Linkage, Multiple-Systems Estimation, Spatio-Temporal Statistics, Small Area Estimation, Human Rights, Child Mortality Estimation

Professional Positions

Duke University, Durham, NC **09/2022 - Present**
Postdoctoral Associate
Advisor: Beka Steorts, Ph.D.

Education

University of Washington, Seattle, WA **08/2022**
Ph.D. in Biostatistics
Dissertation Title: "Statistical Methods for Human Rights and Child Mortality Estimation"
Committee: Mauricio Sadinle (co-chair), Jon Wakefield (co-chair), and Abel Rodriguez

Boston College, Chestnut Hill, MA **05/2017**
B.S. in Mathematics, Departmental Honors
B.A. in Computer Science, Departmental Honors
Summa Cum Laude

Publications

1. Msemburi M, Karlinsky A, Knutson V, **Aleshin-Guendel S**, Chatterji S, and Wakefield J. "The WHO estimates of excess mortality associated with the COVID-19 pandemic." To Appear, *Nature*.

2. Knutson V, **Aleshin-Guendel S**, Karlinsky A, Msemburi W, and Wakefield J. "Estimating Global and Country-Specific Excess Mortality During the COVID-19 Pandemic." To Appear, *Annals of Applied Statistics*.

   ▷ Available on arXiv: *arXiv:2205.09081*

3. **Aleshin-Guendel S**, Sadinle M, and Wakefield J. "The Central Role of the Identifying Assumption in Population Size Estimation." To appear with discussion, *Biometrics*.

   ▷ Available on arXiv: *arXiv preprint arXiv:2101.09304*

   ▷ The material presented in Appendix A previously appeared in the following preprint: **Aleshin-Guendel S**. "On the Identifiability of Latent Class Models for Multiple-Systems Estimation." *arXiv preprint arXiv:2008.09865*.

4. **Aleshin-Guendel S** and Sadinle M. "Multifile Partitioning for Record Linkage and Duplicate Detection." *Journal of the American Statistical Association*. 2022, 1–10.

   ▷ 2020 ASA Social Statistics, Government Statistics, and Survey Research Methods Sections Student Paper Competition First Place

   ▷ Available on arXiv: *arXiv preprint arXiv:2110.03839*

5. **Aleshin-Guendel S**, Lange J, Goodman P, Weiss N, and Etzioni R. "A Latent Disease Model to Reduce Detection Bias in Cancer Risk Prediction Studies." *Evaluation & the Health Professions*. 2021; 44 (1), 42-49.

6. **Aleshin-Guendel S**, Sadinle M, and Wakefield J. Discussion of "Multiple-systems analysis for the quantification of modern slavery: classical and Bayesian approaches" by Bernard Silverman. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*. 2020; 183 (3), 724.

7. Ivancic M, Megna B, **Aleshin-Guendel S**, Sverchkov Y, Craven M, Reichelderfer M, Pickhardt P, Sussman M, and Kennedy G. "Noninvasive detection of colorectal carcinomas using serum protein biomarkers." *Journal of Surgical Research*. 2020; 246, 160–169.

8. Lim D, Gulati R, **Aleshin-Guendel S**, Gawne A, Wingate J, Cheng H, Etzioni R, Yu E. "Undetectable prostate-specific antigen after short- course androgen deprivation therapy for biochemically recurrent patients correlates with metastasis-free survival and prostate cancer-specific survival." *The Prostate*. 2018; 78 (14), 1077–1083.

Submitted/In Preparation

1. **Aleshin-Guendel S** and Wakefield J. "Adaptive Gaussian Markov Random Fields for Child Mortality Estimation." In preparation.

2. **Aleshin-Guendel S**. "Latent Class Modeling in Space and Time." In preparation.

Invited Presentations

1. "Multifile Record Linkage and Duplicate Detection Via a Structured Prior for Partitions"
   SDSS, Virtual **2020**

2. "Interval-Censored Survival Analysis to Reduce Detection Bias in a Study of Family History, Race, and Cancer Risk"
   WNAR, Portland, OR **2019**

Contributed Presentations

1. "Multifile Record Linkage and Duplicate Detection Via a Structured Prior for Partitions"
   JSM, Virtual **2020**

2. "Revisiting Log-Linear Models for Multiple-Systems Estimation"
   WNAR, Virtual **2020**

3. "Multifile Record Linkage and Duplicate Detection Via a Structured Prior for Partitions"
   JSM, Denver, CO **2019**

Honors and Awards

University of Washington

School of Public Health Outstanding Biostatistics PhD Student Award **2022**

American Statistical Association (ASA)

Social Statistics, Government Statistics, and Survey Research Methods Sections, Student Paper Competition First Place **2020**

Boston College

Phi Beta Kappa Honor Society **2017**
Pi Mu Epsilon Mathematics Honor Society **2016**
McGillycuddy-Logue Travel Grant **2014**

Service

Manuscript Reviewer

Vaccine **2021**
Journal of Survey Statistics and Methodology **2021**
Annals of Applied Statistics **2019, 2020**

University of Washington

Biostatistics Activities and Events Squad (BAES) **Fall 2018 - Summer 2022**
Department of Biostatistics Admissions Committee **Fall 2020 - Winter 2021**
Department of Biostatistics Student-Faculty Relations Committee **Fall 2018 - Summer 2020**

Research Experience

Research Assistant
University of Washington, Department of Biostatistics
Supervisor: Mauricio Sadinle — **Fall 2019 - Summer 2022**
Supervisor: Susanne May — **Winter 2020 - Summer 2020**
Supervisor: Jon Wakefield — **Summer 2019**

Fred Hutchinson Cancer Research Center
Supervisor: Ruth Etzioni — **Fall 2017 - Summer 2018**

Computational Biology and Biostatistics Summer Research Program
University of Wisconsin-Madison, Department of Biostatistics & Medical Informatics
Supervisors: Mark Craven and Yuriy Sverchkov — **Summer 2016**

Columbia Summer Institute for Training in Biostatistics
Columbia University, Department of Biostatistics
Supervisor: Christine Mauro — **Summer 2015**

Teaching Experience

Teaching Assistant
University of Washington

BIOST537 - Survival Data Analysis In Epidemiology — **Winter 2021, Winter 2022**
BIOST570 - Advanced Regression Methods for Independent Data — **Fall 2020**
BIOST509 - Introduction to R for Data Analysis in the Health Sciences — **Fall 2018, Fall 2019**
BIOST310 - Biostatistics for the Health Sciences — **Spring 2019**
STAT554 - Statistical Methods for Spatial Data — **Winter 2019**

Boston College

CSCI2244 - Randomness & Computation — **Spring 2016, Spring 2017**
CSCI3345 - Machine Learning — **Fall 2016**
CSCI2243 - Logic & Computation — **Fall 2015**
CSCI1101 - Computer Science I — **Fall 2014 - Spring 2015**

Grader
Boston College

MATH4427 - Mathematical Statistics — **Fall 2015, Spring 2017**
MATH3320 - Introduction to Analysis — **Fall 2016**
MATH1180 - Principles of Statistics for the Health Sciences — **Spring 2016**
MATH1004 - Finite Probability & Applications — **Fall 2014 - Spring 2015**

Activities

University of Washington

Space-Time Reading Group — **Fall 2017 - Spring 2019**

Skills

Languages: R, C++, Stan, Python, Java
Other: LaTeX