

Nicholas Aaron Syring

Contact Information

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Professional Experience

Iowa State University, Department of Statistics, *Assistant Professor*, 2020 – **Current Position**

Allstate Insurance, *Data Scientist*, 12/2017 – 08/2018

Allstate Insurance, *Data Scientist Intern*, Summer 2017

Google Summer of Code, Summer 2016

NASA Langley Area Research Center, *Visiting Research Scientist*, Summer 2014

Capital One, *Statistician Intern*, Summer 2013

State Farm Life Insurance Company, *Actuarial Analyst*, 2009–2011

Education

Ph.D. Mathematics, University of Illinois at Chicago, Advisor: Dr. Ryan Martin, 12/2017

M.S. Statistics, Northern Illinois University, 2013

B.S. Actuarial Science, Illinois State University, 2009

Journal Articles

Published or Accepted

N. Syring. Robust posterior inference for Youden's index cutoff. (2021). **Communications in Statistics - Theory and Methods**, 1-16. <https://doi.org/10.1080/03610926.2021.1969409>.

N. Syring and R. Martin. Stochastic optimization for numerical evaluation of imprecise probabilities. (2021). Proceedings of the Twelveth International Symposium on Imprecise Probability: Theories and Applications, in **Proceedings of Machine Learning Research**. 147. <https://proceedings.mlr.press/v147/syring21a.html>.

N. Syring and R. Martin. Robust and Rate-Optimal Gibbs Posterior Inference on the Boundary of a Noisy Image. (2020). **Annals of Statistics**. 48(3):1498-1513. <https://doi.org/10.1214/19-AOS1856>

R. Martin and N. Syring. Validity-preservation properties of rules for combining inferential models. (2019) Proceedings of the Eleventh International Symposium on Imprecise Probabilities: Theories and Applications, in **Proceedings of Machine Learning Research**. 103:286-294. <http://proceedings.mlr.press/v103/martin19a/martin19a.pdf>.

- N. Syring, L. Hong, and R. Martin. Gibbs Posterior Inference on Value-at-Risk. **Scandinavian Actuarial Journal**. (2019). <https://doi.org/10.1080/03461238.2019.1573754>.
- N. Syring and R. Martin. Calibrating General Posterior Credible Regions. **Biometrika**. (2018). <https://doi.org/10.1093/biomet/asy054>.
- N. Syring and R. Martin. Gibbs Posterior Inference on the Minimum Clinically Important Difference. **Journal of Statistical Planning and Inference**. 187 (2017): 67-77. <http://dx.doi.org/10.1016/j.jspi.2017.03.001>.
- C. Liu, R. Martin, and N. Syring. Efficient Simulation from a Gamma Distribution with Small Shape Parameter. **Computational Statistics** 32, 4 (2017): 1767-1775. <https://doi.org/10.1007/s00180-016-0692-0>.
- N. Syring and M. Li. BayesBD: An R Package for Bayesian Inference on Image Boundaries. **R Journal**. 9, 2 (2017): 149-162. <https://journal.r-project.org/archive/2017/RJ-2017-052/index.html>.

In Preparation or Submitted

- N. Syring and R. Martin. Gibbs posterior concentration rates under sub-exponential type losses. (2021) Revision in review for **Bernoulli**. <https://arxiv.org/pdf/2012.04505.pdf>
- N. Syring. Adaptive concentration of Gibbs posterior distributions. In preparation.
- N. Syring, F. Miguez, and J. Niemi. Valid predictions in one-way random effects ANOVA. In preparation.

Teaching

@ Iowa State University

- STAT 500: Statistical Methods I
- STAT 342: Introduction to the Theory of Probability and Statistics II
- STAT 588: Statistical Theory for Research Workers, Instructor

@ Washington University St. Louis

- MATH3200: Elementary to Intermediate Statistics, Instructor (5 sections)
- MATH475: Statistical Computation, Instructor

@ North Carolina State University

- ST311: Introduction to Statistics, Instructor

@ University of Illinois at Chicago

- STAT381: Applied Statistical Methods I, Instructor

Advising

@ Iowa State University

CyBound Summer Program - supported by C-CHANGE: Jarad Niemi and I co-advised Roger Castillo Ramos on his Summer project to visualize agricultural data (e.g., yield, nitrogen emissions) using R Shiny.

@ Washington University St. Louis

MATH500: Independent Work, Summer 2019

Conferences and Seminar Talks

CMStatistics 2021, Invited Talk

Asymptotic concentration of Gibbs posterior distributions

December 2021, London/remote

SIAM CSE21 Invited Talk

Frequentist calibration of posterior distributions

March 2021

Bayesian, Fiducial, Frequentist Workshops, Invited Talk

Advances by Next-Generation BFFs: Gibbs Posterior Distributions

February 2021

WHOA-PSI 4 Poster Presentation

Treatment Selection Problems

WUSTL-08/2019

ISIPTA 2019 Contributed Talk

Validity-preservation properties of rules for combining inferential models

Uni Ghent-07/2019

Bayesian, Fiducial, and Frequentists (BFF 6) Poster Presentation

Gibbs Posterior Inference on Youden's Index cutoff

Duke-05/2019

Statistics Seminar

Inferential models in errors-in-variables models

WUSTL-11/2018

Joint Statistical Meetings Invited Poster Presentation

Inferential Models for Instrumental Variables

Baltimore-07/2017

Summer Research Conference

Image Boundary Detection via a Gibbs Model

IIT-05/2016

Undergraduate Mathematics Seminar

Misspecified Statistical Models: What happens when the model is wrong?

Wheaton College-11/2015

Statistics Seminar
Scaling the Gibbs posterior
University of Illinois at Chicago–09/2015

Statistics Seminar
On Bayesian inference without a model
University of Illinois at Chicago–11/2014

Professional Service

Reviewer for: *Journal of the Royal Statistical Society*, *Statistica Sinica*, *Journal of the American Statistical Association*, *Sankhya*, *Bayesian Analysis*, *Journal of Statistical Planning and Inference*, *SIAM Journal of Uncertainty Quantification*, *Technometrics*.