

Stephanie Reinders

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Education

Iowa State University

Ph.D. Applied Mathematics and Computer Engineering; Statistics minor

Ames, IA

August 2020

Smith College

Post-baccalaureate Certificate Mathematics

Northampton, MA

December 2013

University of Minnesota

B.A. Journalism and Asian Languages and Literatures

Minneapolis, MN

May 2005

Globe College

A.A. Multimedia and Computer Graphics

St. Paul, MN

May 2000

Skills

Programming: MATLAB, R/RStudio, Git/GitHub, LaTeX, Python (basic), Slurm (basic),

Computer Graphics: Adobe Photoshop and Illustrator

Research Experience

Iowa State University, Center for Statistics and Applications in Forensic Evidence

Ames, IA

Graduate Research Assistant

June 2016-May 2019, May 2020-present

- Research funded by Center for Statistics and Applications in Forensic Evidence.
- Conducted experiments for score-based likelihood ratios and steganalysis in MATLAB with data visualizations created in R.
- Applied score-based likelihood ratios – a statistical tool for quantifying the weight of evidence – to camera device identification to increase the transparency of results for use in court.
- Created novel machine learning technique for steganalysis – detecting hidden data in digital images – that reduces the amount of necessary training time and image data.
- Adapted experiment code to run in parallel computing environment on servers using Slurm job scheduler.

Smith College

Undergraduate Researcher

Northampton, MA

January 2013 – December 2013

- Summer 2013 research funded by Smith Undergraduate Research Fund.
- Discovered linear algebra basis for generalized integer splines.

Leadership Experience

Iowa State University, Department of Mathematics Ames, IA
Graduate Teaching Assistant August 2014 – May 2016, May 2019 – May 2020

- Lead instructor for two semesters of College Algebra. Delivered weekly lectures on new material and wrote and graded quizzes and exams.
- Teaching assistant for Digital Image Forensics, Discrete Mathematics for Business and Social Sciences, Pre-calculus, Differential Equations. Led weekly recitations, proctored quizzes, answered questions on the material, and graded quizzes and exams.

R-Ladies Ames Ames, IA
Co-Leader, Ames chapter of R-Ladies Global August 2019 – March 2020

- Co-led weekly TidyTuesday meetings, where participants worked as a group to explore new datasets in RStudio. The meetings focused on providing a comfortable and fun environment for participants to ask questions and learn new R programming skills from each other.
- Led workshop on how to use Github with RStudio.

Iowa State University Ames, IA
Graduate Student Mentor, Research Experience for Undergraduates Summer 2017

- Led team of five undergraduate student researchers in 8-week steganalysis project.

Iowa State University, Math Graduate Student Organization Ames, IA
Graduate Committee Liaison & Communications Officer August 2015 – May 2017

- Served as the math graduate student representative to the Math Graduate Committee.
- Communicated graduate student concerns to the Math Graduate Committee.
- Surveyed current math graduate students on qualifying exam experiences. The results of the survey played an integral part in the Math Graduate Committees decision to restructure the qualifying exams.

Additional Experience

Administrative Assistant, University of Massachusetts, Amherst, MA (January 2014 – July 2014)
Office Coordinator, Bethel University, Arden Hills, MN (September 2007 – May 2012)
Administrative Assistant, Cru Regional Office, Minneapolis, MN (April 2006 – July 2007)
Intern, Cru, Tokyo, Japan, (October 2005 – March 2006)

Publications

Reinders, Stephanie, Li Lin, Yong Guan, Min Wu, and Jennifer Newman. "Algorithm Mismatch in Spatial Steganalysis." *Electronic Imaging* 2019, no. 5 (2019): 535-1.

Reinders, Stephanie, Li Lin, Wenhao Chen, Yong Guan, and Jennifer Newman. "Score-based likelihood ratios for camera device identification." *Electronic Imaging* 2020 (in print)

Reinders, Stephanie, Yong Guan, Danica Ommen and Jennifer Newman. "A comparison of score-based likelihood ratios for camera device identification." (in preparation)