

Department of Mathematics and Statistics
 South Dakota State University
 Brookings, SD 57007

Office Number: 605-688-5847
 Cami.Fuglsby@sdstate.edu

Education

Ph.D. Student Computational Science and Statistics South Dakota State University <i>Expected Graduation Summer 2022</i> Advisor and Chair: Christopher Saunders	M.S. Mathematics with emphasis in Statistics South Dakota State University <i>Thesis: U-Statistics for Characterizing Forensic Sufficiency Studies</i> August 2017 Advisor and Chair: Christopher Saunders
B.S. Mathematics and Statistics South Dakota State University May 2015	

Employment

Graduate Research Assistant to Christopher Saunders	South Dakota State University May 2017-August 2017 May 2018-August 2020
Graduate Teaching Assistant Remedial Undergraduate Undergraduate Undergraduate Undergraduate Graduate Graduate	South Dakota State University August 2015 - May 2021 College Algebra College Algebra Pre-Calculus Calculus I Introduction to Statistics Modern Applied Statistics I Modern Applied Statistics II Proctoring and Teaching Assistant Proctoring, Grading, and Teaching Assistant Proctoring Proctoring, Grading, and Teaching Assistant Proctoring, Grading, and Teaching Assistant Directing the Online Section Directing the Online Section

Funded Research and Support

National Science Foundation National Research Trainee Fellow	The Center for Security Printing and Anti-Counterfeiting Technology	May 2021-present
---	--	------------------

Publications

Fuglsby, C., Saunders, C., Ommen, D., Caligiuri, M. (2020) Use of an Automated System to Evaluate Feature Dissimilarities in Handwriting Under a Two-Stage Evaluative Process, *Journal of Forensic Sciences*. DOI 10.1111/1556-4029.14547

Fuglsby, C., Saunders, C., Buscaglia, J. (2020) U-statistics for estimating performance metrics in forensic handwriting analysis, *Journal of Statistical Computation and Simulation*, 90:6, 1082-1117. DOI 10.1080/00949655.2020.1715406

Ommen, D., **Fuglsby, C.**, Caligiuri, M. (2021) Advances toward validating examiner writership opinion based on handwriting kinematics, *Forensic Science International*, 318. DOI 10.1016/j.forsciint.2020.110644

Fuglsby, C. Saunders, C. Ommen, DM. Buscaglia, J. Caligiuri, MP. Elucidating the relationships between two automated handwriting feature quantification systems for multiple pairwise comparisons. *J Forensic Sci.* 2022; 67: 642-650. DOI 10.1111/1556-4029.14914

Presentations

Danica Ommen (presenter), Larry Tang, **Cami Fuglsby**. To differentiate or not to differentiate: An unholy love-affair between the Two-Stage and Bayesian approaches. CSAFE sponsored Symposium on Error Rates for Evidence Interpretation, Arlington, VA. Invited Presentation. *Travel support provided by CSAFE*. January 2018.

Cami Fuglsby (presenter), Linton Mohammed (presenting), JoAnn Buscaglia, Christopher Saunders. Sufficiency and Complexity Factors in Handwriting Examination. Impression, Pattern, and Trace Evidence Symposium, Arlington, VA. Accepted Oral Presentation. *Travel support provided by NIJ and RTI*. January 2018.

Cami Fuglsby. An Introduction to the Forensic Identification of Source Problem and Related Problems in Statistical Model Selection. Computational Science and Statistics Seminar, Brookings, SD. Oral Presentation.

Cami Fuglsby (presenter), Christopher P. Saunders, JoAnn Buscaglia, Danica Ommen. A Modified Two-Stage Approach to the Interpretation of Forensic Evidence. Joint Statistical Meetings, Vancouver, BC. Oral Presentation. August 2018.

Linton Mohammed (presenter), **Cami Fuglsby** (presenter), Christopher P. Saunders, Danica Ommen, Michael Caligiuri, JoAnn Buscaglia. FDE Conclusion Scales: Rev. Bayes or Prof. Kirk? (Part I). The 76th Annual General Meeting of the American Society of Questioned Document Examiners, Park City, UT. Conference Attendance by Invitation Only. August 2018.

Cami Fuglsby (presenter), Linton Mohammed (presenter), Christopher P. Saunders, Danica Ommen, Michael Caligiuri, JoAnn Buscaglia. FDE Conclusion Scales: Rev. Bayes or Prof. Kirk? (Part II). The 76th Annual General Meeting of the American Society of Questioned Document Examiners, Park City, UT. Conference Attendance by Invitation Only. August 2018.

Danica Ommen (presenter), **Cami Fuglsby**, Christopher P. Saunders, Michael Caligiuri, Linton Mohammed, JoAnn Buscaglia. Pairwise Comparison Scores for Handwritten Questioned Documents. American Academy of Forensic Sciences 71st Annual Scientific Meeting. Baltimore, MD. February 2019.

Danica Ommen (presenter), JenaMarie Baldaino, **Cami Fuglsby**, Christopher P. Saunders (presenting), Jack Hietpas, JoAnn Buscaglia. On the Development of Score Rules for the Pairwise Sample Comparison of Particle Micromorphometry of Aluminum (Al) Powders. American Academy of Forensic Sciences 71st Annual Scientific Meeting. Baltimore, MD. February 2019.

Cami Fuglsby (presenter), Christopher P. Saunders, Danica Ommen, JenaMarie Baldaino, JoAnn Buscaglia, Jack Hietpas. New Developments in the Interpretation of Pairwise Comparison Procedures for a Class of Forensic Applications Related to Improvised Explosive Devices. University of Kentucky Department of Statistics Seminar. Lexington, KY. February 2019. *Invited presentation*.

Cami Fuglsby, Christopher P. Saunders (presenter), Danica Ommen, JoAnn Buscaglia. Bayesian Characterizations Of U-processes Used In Pattern Recognition With Application To Forensic Source Identification. 10th International Workshop on Simulation and Statistics. Salzburg, Austria. Septem-

ber 2019. *Invited Talk*.

Cami Fuglsby, Danica Ommen, JoAnn Buscaglia, Christopher P. Saunders (presenter). Bayesian Characterizations of U-processes Used In Pattern Recognition with Application To Forensic Source Identification. University of Nebraska Medical Center. December 2019. *Invited Talk*.

Cami Fuglsby (presenter), Michael Caligiuri, Danica Ommen, Christopher P. Saunders, JoAnn Buscaglia. The Interaction of Writing Profiles and Automated Scoring Rules. American Academy of Forensic Sciences 72nd Annual Scientific Meeting. Anaheim, CA. February 2020.

Posters

Cami Fuglsby (presenter), JoAnn Buscaglia, Christopher Saunders. Incomplete U-Processes for Forensic Sufficiency Studies in Questioned Document Examination. Joint Statistical Meetings, Baltimore, ML. Contributed Poster Presenter. August 2017.

Cami Fuglsby (presenter), Christopher P. Saunders, JoAnn Buscaglia. Incomplete U-Processes for Forensic Sufficiency Studies in Questioned Document Examination. International Conference on Forensic Inference and Statistics, Minneapolis, MN. Contributed Poster Presenter. *Travel Support provided by Stephen E. Fienberg CSAFE Young Investigator Award*. September 2017.

JenaMarie Baldaino (presenter), **Cami Fuglsby**, Danica M. Ommen, Christopher P. Saunders, Jack Hietpas, and JoAnn Buscaglia. Characterization of Aluminum Powders in Explosives Utilizing Particle Micromorphometry. International Conference on Forensic Inference and Statistics, Minneapolis, MN. September 2017.

JenaMarie Baldaino (presenter), Danica M. Ommen, **Cami Fuglsby**, Christopher P. Saunders, Jack Hietpas, and JoAnn Buscaglia. Statistical Characterization of Commercial and Home-made Aluminum Powders in Explosives Using Automated Particle Micromorphometry. Impression, Pattern, and Trace Evidence Symposium, Arlington, VA. January 2018.

JenaMarie Baldaino (presenter), Danica M. Ommen, **Cami Fuglsby**, Christopher P. Saunders, Jack Hietpas, and JoAnn Buscaglia. Statistical Characterization of Aluminum (Al) Powders in Explosives Using Automated Particle Micromorphometry. American Academy of Forensic Sciences 70th Annual Scientific Meeting, Seattle, WA. February 2018.

Cami Fuglsby (presenter), Christopher P. Saunders, Danica M. Ommen, JoAnn Buscaglia. On the Use of Bayesian P-Values for Forensic Identification of Source Problems. 2018 International Society for Bayesian Analysis World Meeting, Edinburgh, UK. Travel Support provided by ISBA 2018 World Meeting Travel Awards. June 2018.

JenaMarie Baldaino (presenter), Danica M. Ommen, **Cami Fuglsby**, Christopher P. Saunders, Jack Hietpas, and JoAnn Buscaglia (presenter). Characterization of commercial and home-made aluminum powders via micromorphometric analysis. 8th European Academy of Forensic Science Conference, Lyon, France. August 2018.

Danica Ommen (presenter), **Cami Fuglsby**, Christopher Saunders, Michael Caligiuri, Linton Mohammed, JoAnn Buscaglia. Pairwise Scores for Designing Handwritten Document Comparisons.

Forensics @NIST, Gaithersburg, MD. November 2018.

Danica Ommen (presenter), Larry Tang, **Cami Fuglsby**, Christopher P. Saunders, Susan Vanderplas. Statistical Infrastructure for the Use of Error Rate Studies in the Interpretation of Forensic Evidence. CSAFE All-Hands Meeting. Ames, IA. May 2019

Danica Ommen (presenter), Michael Caligiuri, **Cami Fuglsby**, Christopher P. Saunders, Linton Mohammed. Kinematic Validation of FDE Determinations about Writership for Questioned Handprinting and Handwriting. CSAFE All-Hands Meeting. Ames, IA. May 2019.

Cami Fuglsby (presenter), Christopher P. Saunders, Danica Ommen, Michael Caligiuri. A Class of Score Functions for the Analysis of Kinematic Handwriting Data. (Won the 1st American Statistical Association Poster Prize) 10th International Workshop on Simulation and Statistics. Salzburg, Austria. September 2019.

Kayla Moquin (presenter), **Cami Fuglsby** (presenter), JenaMarie Baldaino, Danica Ommen, Christopher P. Saunders, Jack Hietpas, JoAnn Buscaglia. Further Development of Scoring Rules for Sample Comparisons Using Automated Particle Micromorphometry of Aluminum (Al) Powders. American Academy of Forensic Sciences 72nd Annual Scientific Meeting. Anaheim CA. February 2020.

Cami Fuglsby (presenter), Christopher Saunders, Danica M Ommen, JoAnn Buscaglia, Michael Caligiuri. Increasing the Transparency of Black-Box Systems. 2021 Joint Statistical Meetings, virtual conference. Contributed Poster Presenter. August 2021.

Cami Fuglsby (presenter), Kayla M. Moquin, Christopher P. Saunders, Danica Ommen, Michael Caligiuri, JoAnn Buscaglia. Assessing the Dependency Structure Between Shape Codes for Forensic Handwriting Data. American Academy of Forensic Sciences 74th Annual Scientific Meeting. Seattle, WA. February 2022.

Kayla Moquin (presenter), **Cami Fuglsby**, JenaMarie Baldaino, Danica Ommen (presenter), Christopher Saunders, Jack Hietpas, JoAnn Buscaglia. Automated Particle Micromorphometry and Statistical Scoring for Improved Characterization of Aluminum (Al) Powders in Improvised Explosive Devices (IEDs). American Academy of Forensic Sciences 74th Annual Scientific Meeting. Seattle, WA. February 2022.

Leadership and Service

National Service	Served as a member on the Forensic Document Examination Consensus Body of the American Academy of Forensic Sciences Standards Board, 2022- <i>present</i> .
	Served as a member on the Forensic Document Examination subcommittee for the Organization of Scientific Area Committees for Forensic Science, 2020-2022.
	Served as the Executive Secretary for the Forensic Document Examination subcommittee for the Organization of Scientific Area Committees for Forensic Science, 2018, 2019
	Participated in the spring meeting for the Forensic Document Examination subcommittee for the Organization of Scientific Area Committees for Forensic Science as a note taker, 2017.
	Supported the Expert Working Group on Human Factors in Handwriting Examinations Interpretation and Technology subgroup for the National Institute of Standards and Technology, from 2017 to the conclusion of the working group in 2018.
Refereeing	Journal of Forensic Sciences (2017, 2018)
	Journal of Statistical Computation and Simulation (2021, 2022)
Departmental Organization	Served as the president of the SDSU Math Club (2014-2015)
Volunteering	Northeastern SD Chapter of Math Counts (2014, 2016, 2018)
	Ready-SET-Go! Camp at South Dakota State University (2016-2020)
	GEMS Workshop at South Dakota State University (2019)
Professional Service	Session Chair, International Conference on Forensic Inference and Statistics 2017, Joint Statistical Meetings 2018
	International Conference on Forensic Inference and Statistics 2017 (Conference volunteer, chaired two sessions)
	Invited participant on the CSAFE sponsored Symposium on Error Rates for Evidence Interpretation, 2018
	Joint Statistical Meetings (chair of SPEED session <i>August 2018</i>)
	International Workshop on Simulation and Statistics (Organize Student Poster Session <i>September 2019</i>)

Awards and Honors

Stephen E. Fienberg CSAFE Young Investigator Travel Award [\$1500] 2017
 ISBA 2018 World Meeting Travel Awards [\$500] 2018
 NSF support to attend Preparing to Teach Workshop at JSM [\$800] 2018

1st American Statistical Association Poster Prize 10th International Workshop on Simulation and Statistics. [\$440] 2019.

Memberships

American Academy of Forensic Science - Questioned Documents

American Statistical Association

Institute of Mathematical Statistics

International Society for Bayesian Analysis