

AARON D. NIELSEN

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CONTACT INFORMATION

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EDUCATION

Ph.D. Applied Mathematics, University of Colorado – Denver (2018)
Thesis: *“Statistical Analysis of Some Problems in Evolutionary Population Dynamics”*
Concentration: Applied Probability and Statistics
Advisor: Burt Simon, Ph.D.
M.S. Statistics, Colorado State University (2014)
M.S. Applied Mathematics, University of Colorado – Denver (2012)
Concentration: Applied Probability
M.S. Electrical Engineering, University of Colorado – Boulder (2008)
Concentration: Digital Signal Processing and Digital Communications
B.S. Electrical Engineering and Mathematics, Colorado State University (2007)

PROFESSIONAL EXPERIENCE

Colorado State University, Department of Statistics 2018 –
Assistant Professor
Currently teaching and coordinating undergraduate courses in statistics and mentoring graduate teaching assistants as an assistant professor.

TEACHING EXPERIENCE

Colorado State University, Department of Statistics 2012 – 2015, 2018 –
Recent Courses Taught
Summer 2020: STAT 315
Spring 2020: STAT 315, STAT 460, STAT 472, STAA 574
Fall 2019: STAT 315 (2 sec.), STAT 472, STAT 581A4
Summer 2019: STAT 315
Spring 2019: STAT 201, STAT 315 (2 sec.), STAT 460, STAT 472
Fall 2018: STAT 201 (2 sec.), STAT 315

Full Course History

<u>Courses Taught</u>	<u>Times Taught</u>	<u>Last Taught</u>
STAT 201: General Statistics*	4	Spring 2019
STAT 204: Statistics for Business Students	3	Summer 2014
STAT 301: Introduction to Statistical Methods	4	Spring 2015
STAT 315: Statistics for Engineers and Scientists*	8	Summer 2020
STAT 460: Applied Multivariate Analysis	2	Spring 2020
STAT 472: Statistical Consulting*	3	Spring 2020
STAT 581: Applied Multivariate Analysis for Researchers	1	Fall 2019
STAA 574: Methods in Multivariate Analysis	1	Spring 2020

*also served as course coordinator

TEACHING
EXPERIENCE
(CONT.)

University of Colorado Denver , Department of Mathematics and Statistics		2015 – 2018
<u>Courses Taught</u>	<u>Times Taught</u>	<u>Last Taught</u>
MATH 1110: College Algebra	1	Fall 2017
MATH 1401: Calculus I	1	Fall 2016
MATH 2411: Calculus II	1	Spring 2017
MATH 3191: Applied Linear Algebra	1	Spring 2018
MATH 3382: Statistical Theory	1	Summer 2017
MATH 3800: Probability and Statistics for Engineers	5	Summer 2018
MATH 4810: Probability	1	Summer 2015
MATH 4820/5320: Mathematical Statistics	1	Summer 2016

ADDITIONAL
ACADEMIC
EXPERIENCE

University of Colorado Denver, Department of Mathematics and Statistics 2015 – 2018
Teaching Assistant / Instructor
 Taught undergraduate and graduate courses in mathematics and statistics for majors and non-majors while completing Ph.D. in Applied Mathematics. Received the Lynn Bateman Memorial Excellence in Teaching Award in 2016.

Colorado State University, Department of Statistics 2012 – 2015
Teaching Assistant / Instructor
 Taught undergraduate courses and recitations in statistics for non-majors while completing M.S. in Statistics. Received the James S. Williams Memorial Scholarship in 2012.

University of Colorado Boulder, Department of Electrical Engineering 2007 – 2008
Research Assistant
 Conducted research involving the applications of Algebraic Number Theory in the area of MIMO Wireless Communications while completing M.S. in Electrical Engineering. Funded by GAANN Fellowship.

INDUSTRY
EXPERIENCE

MacAulay-Brown, Inc., Aurora, Colorado 2009 – 2012
Engineer III
 Worked as a model and simulation engineer, specifically in the area of algorithm development. This algorithm development dealt with detection and estimation applications for electronic intelligence.

Institute for Telecommunication Sciences, Boulder, Colorado May – August 2007
Engineering Intern
 Developed and maintained a MATLAB graphic user interface (GUI) to process real-time wireless communication data.

UV-B Monitoring and Research Program, Fort Collins, Colorado May – August 2006
Engineering Intern
 Tested and troubleshooted Ultraviolet Multifilter Rotating Shadowband Radiometers (UV-MFRSR) for use in measuring solar irradiance.

ADVISING
EXPERIENCE

Master's Advisory Committee Member, Colorado State University				2018 –
<u>Students</u>	<u>Degree</u>	<u>Department</u>	<u>Completed</u>	
Aaron Lear	M.S.	Mathematics	<i>(in progress)</i>	
Sara Horton	M.M.	Music Therapy	<i>(in progress)</i>	

DEPARTMENTAL SERVICE	GTA Evaluation and Mentoring Committee , Department of Statistics <i>Committee Chair</i> Developed and implemented evaluation system for graduate students teaching or grading.	2019 – 2020
MENTORING EXPERIENCE	Course Coordinator , Colorado State University Coordinated graduate students teaching undergraduate courses and recitations and provided feedback on their teaching methods. Courses have included STAT 201, STAT 315, STAT 472 Graduate Teaching Assistant Peer Mentor , University of Colorado Denver Mentored first and second year graduate students on mathematics education and pedagogy. Met biweekly with students, observed their classes, and offered feedback on their methods. Undergraduate Research Mentor , University of Colorado Denver Supervised and mentored two undergraduate economics majors on an independent research project analyzing faculty/course questionnaire results. This project utilized a variety of machine learning methods and the final project was presented at the graduate student seminar series.	2018 – 2015 – 2018 Fall 2016
RESEARCH INTERESTS	Statistics and Mathematics Education, Applied Probability and Simulation, Statistical Machine Learning, Statistical Signal Processing, Sabermetrics	
PEER-REVIEWED PUBLICATIONS	Simon, Burton, and Nielsen, Aaron . “Numerical Solutions and Animations of Group Selection Dynamics.” <i>Evolutionary Ecology Research</i> , 14 (2012): 757-68. Nielsen, Aaron and Simon, Burton. “Fixation Times in Group-Structured Populations.” (In preparation) Nielsen, Aaron and Simon, Burton. “Multiple Levels of Cooperation in Evolutionary Dynamics Models.” (In preparation)	
PRESENTATIONS/ TALKS	Dissertation defense. University of Colorado Denver. 100 th Anniversary MAA Rocky Mountain Section Conference. Pueblo, Colorado. Statistics Research Seminar. University of Colorado Denver. SIAM Front Range Student Conference. Denver, Colorado. Graduate Student-Led Seminar. [†] University of Colorado Denver.	June 2018 April 2017 April 2017 March 2017 December 2016
POSTER PRESENTATIONS	“ <i>Analyzing FCQ Results Using Advanced Data Analytics</i> ” Research and Creative Activities Symposium. [†] University of Colorado Denver. “ <i>A Survey of Recent Genetic Developments in Ant Social Polymorphism</i> ” Topics in Statistical Genetics. University of Colorado Denver. “ <i>A Stochastic Model of Sediment Transport</i> ” (advised undergraduate statistics majors) Undergraduate Research Symposium. Colorado State University. “ <i>Dual Polarization Radar Signal Processing</i> ” Engineering Senior Design Project Poster Session. Colorado State University.	April 2017 December 2015 May 2014 May 2007

PROFESSIONAL DEVELOPMENT	<p>Graduate Teaching Assistant Peer Mentee, University of Colorado Denver Met biweekly with a statistics faculty member to receive advice and tips on teaching. 2015 – 2016</p> <p>Critical Issues in Math Education Seminar, University of Colorado Denver Weekly seminar series discussing pedagogy. 2015 – 2018</p>
HONORS AND AWARDS	<p>Lynn Bateman Memorial Excellence in Teaching Award 2016</p> <p>CIMS Fellowship 2013</p> <p>Williams Scholarship 2012 – 2013</p> <p>GAANN Fellowship 2007 – 2008</p> <p>Claude W. Wood Scholarship 2002 – 2006</p> <p>Colorado Distinguished Scholar 2002 – 2006</p> <p>Fort Collins High School Valedictorian 2002</p>
SECURITY CLEARANCES	<p>Top Secret / Sensitive Compartmented Information (TS-SCI) clearance 2009 – 2012</p> <p>Counterintelligence (CI) polygraph 2009</p>
CLUBS	<p>Faculty Advisor, CSU Men's Club Soccer 2018 –</p> <p>Co-founder and Vice President, UCD Machine Learning Club 2016 – 2018</p>
COMPUTER SKILLS	<p><i>Basic:</i> JMP, SAS, C, Java, Perl, BUGS, PLINK, SPICE, MathCAD, Adobe Photoshop</p> <p><i>Intermediate:</i> ggplot2, HTML, CSS, Microsoft Office, Unix/Linux, Microsoft Windows, OS X</p> <p><i>Advanced:</i> R, MATLAB, L^AT_EX</p>
PROFESSIONAL MEMBERSHIPS	<p>American Statistical Association (ASA)</p> <p>Mathematical Association of America (MAA)</p> <p>Society for Industrial and Applied Mathematics (SIAM)</p> <p>Institute of Electrical and Electronics Engineers (IEEE)</p> <p>Society for American Baseball Research (SABR)</p> <p>Tau Beta Pi</p> <p>Eta Kappa Nu</p>
REFERENCES	<p>Ben Prytherch, M.S., Senior Instructor Department of Statistics. Colorado State University. Email: prytherc@stat.colostate.edu</p> <p>Burt Simon, Ph.D., Associate Professor Department of Mathematical and Statistical Sciences. University of Colorado Denver. Email: burt.simon@ucdenver.edu</p> <p>Stephanie Santorico, Ph.D., Professor Department of Mathematical and Statistical Sciences. University of Colorado Denver. Email: stephanie.santorico@ucdenver.edu</p>