Hannah Correia

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EDUCATION

AUBURN UNIVERSITY

PhD in Biology
Expected July 2019 | Auburn, Alabama, USA

MS in Statistics
August 2016 | Auburn, Alabama, USA

HUNTINGDON COLLEGE

BA in Mathematics and Biology
May 2011 | Montgomery, Alabama, USA

GRANTS, AWARDS, & HONORS

- NSF GRFP Fellowship | 2015-19
- DoD SMART Scholarship | 2015 (declined)
- NSF GROW Additional Funding | 2017-18
- AU COSAM Travel Grant | Fall 2018

COURSEWORK

GRADUATE

Quantitative Methods for Biological Data
Longitudinal Data Analysis
Applied Multivariate Statistical Analysis
Statistical Theory & Methods
Experimental Statistics

SKILLS

PROGRAMMING

Over 5000 lines:
R • LaTeX
Over 1000 lines:
CSS • Python • Fortran • C++
Familiar:
Sage • SAS • Shell

CONFERENCES & WORKSHOPS

2018

- 2018 Joint Statistical Meetings
- 2018 ESA Annual Meeting

2017

- 2017 SAMSA Annual Conference
- 2017 Joint Statistical Meetings

2016

- Workshop on Infusing Data-Enabled Active Learning in Mathematics and Statistics Courses
- 2016 Ecological Society of America Annual Meeting
- 2016 Joint Statistical Meetings

2015

- Workshop on Infusing Data-Enabled Active Learning in Mathematics and Statistics Courses

RESEARCH

AUBURN UNIVERSITY DEPT. OF BIOLOGICAL SCIENCES

| NSF Graduate Research Fellow
May 2015 – Present | Auburn, Alabama, USA
Working with **Prof F. Stephen Dobson** to develop statistical methods for ecological data. Improving and applying complex statistical techniques to fisheries data to explain interactions and quantify trends in fish population dynamics.

NORWEGIAN INSTITUTE FOR NATURE RESEARCH

| Visiting Graduate Research Fellow
August 2017 – February 2018 | Tromsø, Norway
Conducting original research on the effects of climate change on semi-domesticated reindeer in Norway.

MASAMU ADVANCED STUDY INSTITUTE (MASI) AND WORKSHOPS IN MATHEMATICAL SCIENCES

| Graduate Researcher
November 17 – 26, 2017 | Arusha, Tanzania
November 21 – 29, 2015 | Windhoek, Namibia
November 22 – 30, 2014 | Victoria Falls, Zimbabwe
Worked with four members of the Auburn University Department of Mathematics and Statistics to further the development of statistics in southern Africa.

EXPERIENCE

AUBURN UNIVERSITY | Graduate Teaching Assistant

August 2013 – May 2015 | May 2018 – present | Auburn, Alabama, USA
Lead and support two Ecology labs each semester, teaching students the application of scientific method, experimental design, and statistical methods to answer ecological questions.
Graded for three mathematics courses, each over 90 students.

PUBLICATIONS

Sun, W., Bindele, H. F., Abebe, A., **Correia, H.**. (2019) General local rank estimation for single-index varying coefficient models. *Journal of Statistical Planning and Inference*. Forthcoming.

Correia H. E. (2018) Spatiotemporally explicit model averaging for forecasting of Alaskan groundfish catch. *Ecology & Evolution*. 8(24):12308–12321.

Dobson, F. S., Abebe, A., **Correia, H.**, Kasumo, C., Zinner, B. (2018) Multiple paternity and number of offspring in mammals. *Proc. R. Soc. Lon. B*. 285(1891).

Submitted:
Abebe, A., **Correia, H.**, Dobson, F. S. (2019) Estimating a key parameter of mammalian mating systems: The chance of siring success for a mated male. *BioEssays*.

Correia, H., Abebe, A., Avise, J., , Dobson, F. S. (2019) Multiple paternity and number of offspring in viviparous vertebrates. *Molecular Ecology*.

Correia, H., Abebe, A. (2019) Regularized Rank Quasi-likelihood Estimation for Generalized Additive Models.

PRESENTATIONS

SAMSA 2018

November 21, 2018 | Palapye, Botswana
"Rank-based estimation for generalized additive models."

ESA 2018 Contributed Talk

August 8, 2018 | New Orleans, Louisiana, USA
"Decomposed spatial and temporal effects of plant productivity and herd condition on juvenile body mass of a sub-Arctic herbivore."

JSM 2018 Contributed Paper

July 31, 2018 | Vancouver, British Columbia, Canada
"Spatio-temporally explicit model averaging for forecasting of Alaskan groundfish catch."

SAMSA 2017

November 21, 2017 | Arusha, Tanzania
"Spatio-temporally explicit model averaging for forecasting."