GREG CHISM

I develop statistics and reproducible research curriculum as a Computational and Data Science Educator at the University of Arizona Data Science Institute, where my experience with image and video analysis and research ethics support my devotion to open science.

View this CV online with links at https://gregtchism.netlify.app/cv/gchism_cv.pdf/

EDUCATION

2022 | 2017

Ph.D., Entomology and Insect Science (minor EEB)

Tucson, AZ — University of Arizona

- Advisor: Dr. Anna Dornhaus
- Interdisciplinary research into how ant nest shapes affects how they behave
- Considered the implications towards animal behavior and human architecture fields

2016 | 2014

B.S. Zoology

Santa Barbara, CA — University of California Santa Barbara

- Advisors: Drs. Armand Kuris, Kevin Laugherty, Jonathan Pruitt
- Investigation into the food web of sandy beach arthropods.
- Probing animal personality of sandy beach jumping spiders and social spiders
- Graduated distinction within major (EEMB)

2014 | 2012

A.A. Biology

Redding, CA — Shasta Community College

CERTIFICATIONS

2022 | 2022

Certified Data Carpentries Instructor

Tucson, AZ — University of Arizona

- Trained to provide high quality data science workshops that are inclusive and broad reaching

RELATED WORK EXPERIENCE

Current | 2022

Computational and Data Science Educator

Tucson, AZ — University of Arizona

- Developing personalized open science and statistics curriculum in the R programming language
- Motivating students to pursue careers in data science
- Developing best open science practices in related research disciplines

CONTACT

- gchism@arizona.edu
- Gchism94
- gregchism.netlify.app
- linkedIn

RELEVANT SKILLS

Programming

- R/RStudio
- R Markdown & Quarto
- Python
- Shiny
- Bash
- HTML & CSS
- Netlogo/Agent-Based Models

Data Science

- Data Visualization
- Biostatistics
- Open Science

*Made with the R package **pagedown**.*

The source code is available on github.com/Gchism94/cv.

Last updated on 2022-08-20.

2022 | 2021

CALS Data Science Ambassador

Tucson, AZ — University of Arizona

- Provided data science consultations, resources, and referrals
- Attended and assisted in R weekly workshops led by Dr. Jeffrey Oliver

2022 | 2021

Honors College Graduate Mentor

Tucson, AZ — University of Arizona

- Mentored and assisted nine undergraduate and graduate students towards developing competitive scholarship applications

2021 | 2018

Graduate College Fellowship Application Mentor

Tucson, AZ — University of Arizona

- Edited and mentored over 70 applicants for the NSF GRFP and other graduate fellowships
- Three women in STEM applicants were awarded NSF GRFs
- Contributed Graduate Student Spotlight article as an NSF GRF recipient

TEACHING AND MENTORSHIP

2022 | 2022

Data Science Fellows

Tucson, AZ — University of Arizona

- Educated scientists at the Postdoctoral level in a dynamic environment that developed, exchanged, and created data science expertise towards solving cutting edge research problems in health and biomedical sciences.

2022 | 2022

Roots for Resilience (R4R)

Tucson, AZ — University of Arizona

- Educated senior grad students from a variety of academic domains to use data science techniques to encourage discoveries within their domains.

2022 | 2022

Research Compendium using GitHub and RStudio

Tucson, AZ — University of Arizona

- Created and taught a workshop series on reproducuble research compendium using GitHub and RStudio

2022 | 2022

Exploratory Data Analysis in R Workshop Series

Tucson, AZ — University of Arizona

- Created and taught a workshop series on exploratory data analysis using the dlookr R package.
- Created a companion Quarto book that served as workshop materials for asynchronous learners.

I am passionate about open science education. I believe that learning should be student focused, highlighting their stories, experiences, and backgrounds.

2022 | 2022

KEYS Program Educator

Tucson, AZ — University of Arizona

- Created and implemented an interactive Open Science Curriculum and taught introductory R/RStudio

2020 | 2018

Undergraduate Research Mentor

Tucson, AZ — University of Arizona

- Dornhaus lab: nine students mentored in producing publication quality data
- Two students are coauthors on publications

2019 | 2018

Insect Discovery Teaching Assistant

Tucson, AZ — University of Arizona

- Taught insect science K-8 title I students from the Southwest through four on-campus workshops
- Gave on-site interactive demonstrations on insect science at the Flandrau Planetarium

2019 | 2019

KEYS High school student Mentor

Tucson, AZ — University of Arizona

- Mentored an advanced high school student in data etiquette and hypothesis testing

2018 | 2018

SARSEF High school Student Mentor

Tucson, AZ — University of Arizona

- Mentored three high school students in data etiquette and hypothesis testing

PROFESSIONAL DEVELOPMENT

2022 | 2022

Foundational Open Science Skills (FOSS)

Tucson, AZ — University of Arizona

- Participated. CyVerse's 10 week virtual workshop that taught the principles, practices, and how-tos for doing collaborative open science using cutting-edge, open source cyberinfrastructure, in a collaborative, hands-on setting.

2022 | 2022

Developing the Data Science Classroom

Washington D.C. — RStudio::conf(conf)

- Participated. Equip educators with concrete information on content, workflows, and infrastructure for painlessly introducing modern computation with R and RStudio within a data science curriculum.

2022 | 2022

Basic & Advanced Container Camp

Tucson, AZ — University of Arizona

- Participated. CyVerse's Basics and Advanced workshops on container technologies are game-changers, enabling you to easily share, scale, and reuse tools and workflows for all types of computational analyses.

2018 | 2018

Data-driven Ecological Synthesis 2018

Montreal, Canada — Université de Montréal

- Participated. Applying the R programming language to answer a diversity of biological questions

PUBLISHED RESEARCH COMPENDIUM

2022 | 2022

AntColonyPerformance

GitHub repository

- Zenodo published pre-release for a research compendium to reproduce in preparation research

2022 | 2022

NestArchOrg

GitHub repository

- Zenodo published research compendium to reproduce results from DOI: https://doi.org/10.1101/2022.06.30.498314

2022 | 2022

HumidityProject

GitHub repository

- Zenodo published research compendium to reproduce results from DOI: https://doi.org/10.1101/2022.06.30.497551

PUBLICATIONS

2022 | 2022

Nest shape influences colony organization in ants: spatial distribution and connectedness of colony members differs from that predicted by random movement and is affected by nest space

bioRxiv Preprint

- Coauthored with Nichols, W., and Dornhaus A.

2022 | 2022

Temnothorax rugatulus ants do not change their nest walls in response to environmental humidity

bioRxiv Preprint

- Coauthored with Faron W., and Dornhaus A.

I have made meaningful contributions to my research community. Now I work to help others make a difference in their research communities and society.

2021 | 2021

A hymenopteran odorant alerts flies to bury eggs

bioRxiv Preprint

- Coauthored with Davis, S. M., Maurer, M. M., Trejo, J. E., Garcia, R. J., & Schlenke, T. A.

2020 | 2020

ABCTracker: an easy-to-use, cloud-based application for tracking multiple objects

arXiv Preprint

- Coauthored with Rice, L., Tate, S., Farynyk, D., Sun, J., Charbonneau, D., ... & Shin, M. C.

2017 | 2017

Intraindividual behavioral variability predicts foraging outcome in a beach-dwelling jumping spider

Scientific reports

- Coauthored with Lichenstein, J.L.L, Pruitt J.N.

PUBLISHED DATASETS

2022 | 2022

Zenodo data repository for DOI: https://doi.org/10.1101/2022.06.30.498314

Zenodo dataset

- Nest shape influences colony organization in ants: spatial distribution and connectedness of colony members differs from that predicted by random movement and is affected by nest space (1.0.0) [Data set]. Zenodo. https://doi.org/10.5281/zenodo.6784395

2022 | 2022

Zenodo data repository for DOI: https://doi.org/10.1101/2022.06.30.498314

Zenodo dataset

- Temnothorax rugatulus ants do not change their nest walls in response to environmental humidity (1.0.0) [Data set]. Zenodo. https://doi.org/10.5281/zenodo.6780270

OUTREACH AND SERVICE

2022 | 2022

RStudio Connect

Tucson, AZ

- Build an interactive dashboard displaying user metrics, facilitated monthly project highlights, and consulted on how to collaborate and best utilize the UArizona RStudio Connect platform.

2022 | 2022

ResBaz Arizona 2022

Tucson, AZ

- Co-chair of ResBaz AZ 2022 organizational committee.

2022 | 2022

Insect Discovery Website

Tucson, AZ

- Designed content for the Insect Discovery website, hosted by the UArizona Extension Program

INVITED TALKS

2021 | 2021

How nest shapes can influence colony level organization

Small intercontinental lab meet-up on colony organization and nest architecture in social insects

- Invited talk

2019 | 2019

Nest architecture may influence ants the same was buildings influence humans

Advances in Complex Systems: From Ecology to Economics - Lake Como School of Adv. Studies

- Invited talk

2019 | 2019

The influence of nest architecture on colony level organization in ants

UArizona SIAM Seminar series

- Invited talk

SELECTED AWARDS

2021 | 2021

Carruth Award for Graduate Student Excellence

- $500

2020 | 2020

GIDP - EIS Program Education Award

- $250

2019 | 2019

NSF Graduate Research Fellowship, Award Accepted

- $300,000