GREG CHISM

🎓 EDUCATION

2022 | 2017

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

University of Arizona

📍 Tucson, AZ

- 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

University of California Santa Barbara

📍 Santa Barbara, CA

- 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

Shasta Community College

📍 Redding, CA

✳️ CERTIFICATIONS

2022 | 2022

Data Carpentries Instructor

The Carpentries

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

💼 RELATED WORK EXPERIENCE

Current | 2022

Computational and Data Science Educator

University of Arizona

📍 Tucson, AZ

- 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
- 🔗 gregtchism.netlify.app
- in linkedIn

RELEVANT SKILLS

Programming/Software

R/RStudio
R Markdown/Quarto
Git/GitHub
Shiny
Python
Bash
Docker
CyVerse
OpenRefine
HTML/CSS/SCSS
Mathematica
Microsoft Office Suite
Netlogo/Agent-Based Models

Data Science

Data Visualization
Biostatistics
Open Science
Computational Thinking
Containers
Biological Modeling
Image/Video Analysis
Website Design

2022 | 2021 • CALS Data Science Ambassador
University of Arizona 📍 Tucson, AZ

· 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
University of Arizona 📍 Tucson, AZ

· Mentored nine undergraduate and graduate students towards
  developing competitive scholarship applications

2021 | 2018 • Graduate College Fellowship Application Mentor
University of Arizona 📍 Tucson, AZ

· Mentored over 70 NSF Graduate Research Program and other graduate
  fellowship applicants
· Three women in STEM applicants were awarded NSF Graduate Research
  Fellowships
· Contributed Graduate Student Spotlight article as an NSF GRF recipient

TEACHING AND MENTORSHIP

2022 • Data Science Fellows
University of Arizona 📍 Tucson, AZ

· Educated health and biomedical postdocs in open science in a program
  that developed, exchanged, and created data science expertise

2022 • Roots for Resilience (R4R)
University of Arizona 📍 Tucson, AZ

· Educated senior grad students across several disciplines to use data
  science techniques to encourage discoveries within their domains

2022 • Research Compendium Using GitHub and RStudio
University of Arizona 📍 Tucson, AZ

· Created and taught a workshop series on reproducible research
  compendium using GitHub and RStudio
· Created a companion Quarto book for asynchronous learners

2022 • Exploratory Data Analysis in R Workshop Series
University of Arizona 📍 Tucson, AZ

· Created and taught a workshop series on exploratory data analysis using
  the dlookr R package
· Created a companion Quarto book for asynchronous learners

2022 ● KEYS Program Educator

University of Arizona ◉ Tucson, AZ

· Created and implemented an interactive Open Science and Machine Learning Curriculum for Title I high school seniors
· Taught introduction to R/RStudio utilyzing RStudio Cloud

2020
|
2018 ● Undergraduate Research Mentor

University of Arizona ◉ Tucson, AZ

· Nine students mentored in producing publication quality data
· Two students are coauthors on publications

2019
|
2018 ● Insect Discovery Teaching Assistant

University of Arizona ◉ Tucson, AZ

· 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 ● KEYS High School Student Mentor

University of Arizona ◉ Tucson, AZ

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

2018 ● SARSEF High School Student Mentor

University of Arizona ◉ Tucson, AZ

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

👔 PROFESSIONAL DEVELOPMENT

2022 ● Foundational Open Science Skills (FOSS)

University of Arizona ◉ Tucson, AZ

· CyVerse's workshop series on collaborative open science using cutting-edge, open source cyberinfrastructure, in a collaborative, hands-on setting

2022 ● Developing the Data Science Classroom

RStudio::conf(2022)

· Workshop that equipped educators with a pedagogical approach to utiluzing R and RStudio for teaching in a data science classroom setting.

2022 ● Basic & Advanced Container Camp

University of Arizona ◉ Tucson, AZ

· CyVerse's Basics and Advanced workshops on container technologies which emphasized sharing, scaling, and reusing tools and workflows for all types of computational analyses

2018 ● **Data-driven Ecological Synthesis 2018**
Université de Montréal   📍 Montreal, Canada

· Week-long course towards applying the R programming language to answer a diversity of biological questions

2017 ● **Intro to Modeling in Biology (ECOL 519)**
University of Arizona   📍 Tucson, AZ

· Exploring the role of biological modeling with hands-on examples in Mathematica

📖 PUBLISHED TEACHING CURRICULUM

2022 ● **Data7 EDA in R Workshop Series**
Zenodo

· Companion materials and Quarto Book for my Exploratory Data Analysis in R workshop series

2022 ● **Data7 Reproducible Research with GitHub and RStudio Workshop Series**
Zenodo

· Companion materials and Quarto Book for my Reproducible Research with GitHub and RStudio Workshop Series

2022 ● **Data7 KEYS Internship Open Science Materials**
Zenodo

· Compantion Quarto presentations and R Markdown for my KEYS internship open science curriculum

🛡 PUBLISHED RESEARCH COMPENDIUM

2022 ● **AntColonyPerformance**
Zenodo

· GitHub repository for a research compendium to reproduce in preparation research

2022 ● **NestArchOrg**
Zenodo

· GitHub repository for a research compendium to reproduce results from DOI: https://doi.org/10.1101/2022.06.30.498314

2022 ● **HumidityProject**
Zenodo

· GitHub repository for a research compendium to reproduce results from DOI: https://doi.org/10.1101/2022.06.30.497551

PUBLISHED RESEARCH

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

bioRxiv Preprint

· Coauthored with Faron W., and Dornhaus A.

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 — 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 — 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 — Data repository for DOI: https://doi.org/10.1101/2022.06.30.498314

Zenodo

· 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 — Data repository for DOI: https://doi.org/10.1101/2022.06.30.498314

Zenodo

· 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 **Industry Careers in Data Science Speaker Series**

University of Arizona

· Developed and hosted a speaker series that focused on academics that transitioned to industry careers in data science

2022 **RStudio Connect Landing Page**

University of Arizona

· Built a launch page with interactive user metrics and monthly project highlights
· Expected completion: October, 2022

2022 **ResBaz Arizona 2022**

University of Arizona

· Co-chair of ResBaz AZ 2022 organizational committee

2022 **Insect Discovery Website**

University of Arizona

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

INVITED TALKS

2021 **How nest shapes can influence colony level organization**

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

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

2019 **The influence of nest architecture on colony level organization in ants**

UArizona SIAM Seminar series

SELECTED AWARDS

2021 **Carruth Award for Graduate Student Excellence**

$500

2020 **GIDP – EIS Program Education Award**

$250

2019 **NSF Graduate Research Fellowship, Award Accepted**

$300,000

REFERENCES

- **Anna Dornhaus (Ph.D.)**
  dornhaus@arizona.edu

  · Professor
  · Ecology and Evolutionary Biology
  · The University of Arizona

- **Jeffrey Oliver (Ph.D.)**
  joliver@arizona.edu

  · Data Science Specialist
  · University Libraries
  · The University of Arizona

- **Maliaca Oxnam (M.A.)**
  maliaca@arizona.edu

  · Deputy Director
  · Data Science Institute
  · The University of Arizona

- **Nirav Merchant (Ph.D.)**
  nirav@arizona.edu

  · Director/Co-PI
  · Data Science Institute/CyVerse
  · The University of Arizona