#### CURRICULUM VITAE ASHLEY I. TEUFEL, Ph.D.

e-mail: ateufel@tamusa.edu

#### **EDUCATION** Ph.D., Molecular Biology, University of Wyoming 2015Advisor: David Liberles **B.S.**, Mathematics, Minor: Bioinformatics, New Mexico State University 2007 **B.S.**, Computer Science, Minor: Mathematics, New Mexico State University 2006 ACADEMIC POSITIONS Assistant Professor of Bioinformatics Dept. of Natural Sciences, Texas A&M University 2021-present - San Antonio **Omidyar Fellow**, Santa Fe Institute 2019-2021 **Postdoctoral Fellow**, Dept. of Integrative Biology, The University of Texas at Austin 2015 - 2018Advisor: Claus Wilke **Research Fellow**, Dept. of Biology, Temple University 2015TEACHING Biostatistics II, Instructor, Texas A&M University - San Antonio 2024 Graduate Seminar, Instructor, Texas A&M University - San Antonio 2023 - 2024 Graduate Statistics I (Biostatistics I / Statistical Methods in Research), Instruc-2023 - present tor, Texas A&M University - San Antonio Bioinformatics, Instructor, Texas A&M University - San Antonio 2023 - present Undergrad Research in Biology, Instructor, Texas A&M University - San Antonio 2022 - present Gen Biology I - Attributes of Living Systems, Instructor, Texas A&M University -2022 San Antonio Seminar - Cell/Molecular Biology, Instructor, Texas A&M University - San Antonio 2022 Seminar - Integrative Biology, Instructor, Texas A&M University - San Antonio 2021, 2022, 2023 Statistics in Biology and Medicine, Instructor, Texas A&M University - San Antonio 2021-2024 Science Sprint: Building models to detect, project, and combat COVID-19, 2020 Mentor, The University of Texas at Austin (virtual event) **Biostatistics**, Instructor, The University of Texas at Austin 2018 Computational Biology & Bioinformatics, Guest Lecturer, The University of Texas at 2017Austin Gene Family Analysis Workshop, Teaching Assistant, New Mexico State University 2014 **Bioinformatics**, Guest Lecturer & Teaching Assistant, University of Wyoming 2012, 2014 **Computers in Biology**, Teaching Assistant, University of Wyoming 2011, 2013 Mathematics in Biology, Developer & Teaching Assistant, New Mexico State University 2009 Computer Science, Laboratory Proctor & Tutor, New Mexico State University 2005 - 2010

## EXTERNAL FUNDING

**\$9,995** College Grant "Enhancing Urban Ecosystem Studies in South San Antonio through 2024 AI" funded by Texas A&M University - San Antonio College of Arts & Sciences. Awarded to: Teufel, A., Barillas, J., and Borda, E.

**\$3,550** Working group "Capturing the Evolutionary Capacity to Innovate via Novel Inter- 2019 actions in Protein Interaction Networks" funded by Santa Fe Institute Education

**\$6,383** Working group "The Point of No Return" funded by Santa Fe Institute 2019

**\$53,505** Grant "Master Key vs. Extra Key: Testing competing lock-and-key hypothesis for 2018 constrained protein-protein evolution" funded by BEACON an NSF center

**\$2,898** "Seeing the Tree and the Forest: Understanding Individual and Population Variation 2017 in Biology, Medicine, and Society" fellowship funded by The University of Texas at Austin

### PUBLICATIONS

- 24. Liberles, D. A., Meyer, M. M., Rest, J. S., and **Teufel**, A. I. (2021). 2021 zuckerkandl prize. *Journal of Molecular Evolution*, 90(1):1
- Klein, B., Holmér, L., Smith, K. M., Johnson, M. M., Swain, A., Stolp, L., **Teufel**, A. I., and Kleppe, A. S. (2021). A computational exploration of resilience and evolvability of protein-protein interaction networks. *Communications Biology*, 4(1):1352
- 22. **Teufel**, A. I., Liu, W., Draghi, J. A., Cameron, C. E., and Wilke, C. O. (2021). Modeling poliovirus replication dynamics from live time-lapse single-cell imaging data. *Scientific reports*, 11(1):1–15
- Ahrens, J. B., **Teufel**, A. I., and Siltberg-Liberles, J. (2020). A phylogenetic rate parameter indicates different sequence divergence patterns in orthologs and paralogs. *Journal of Molecular Evolution*, pages 1–11
- 20. Shoemaker, L. G., Barner, A. K., Bittleston, L. S., and **Teufel**, A. I. (2020). Quantifying the relative importance of variation in predation and the environment for species coexistence. *Ecology Letters*, 23(6):939–950
- Laurent, J. M., Garge, R. K., **Teufel**, A. I., Wilke, C. O., Kachroo, A. H., and Marcotte, E. M. (2020). Humanization of yeast genes with multiple human orthologs reveals functional divergence between paralogs. *PLoS Biology*, 18(5):e3000627
- 18. **Teufel**, A. I. (2019). Spire: R package for single-cell population infection replication estimation. Zenodo, page 10.5281/zenodo.3366146
- 17. Liberles, D. A. and **Teufel**, A. I. (2018). Evolution and structure of proteins and proteomes. *Genes*, 9(12):583
- Teufel, A. I., Johnson, M. M., Laurent, J. M., Kachroo, A. H., Marcotte, E. M., and Wilke, C. O. (2018). The many nuanced evolutionary consequences of duplicated genes. *Molecular Biology and Evolution*, 36(2):304–314
- 15. **Teufel**, A. I., Ritchie, A. M., Wilke, C. O., and Liberles, D. A. (2018). Using the mutation-selection framework to characterize selection on protein sequences. *Genes*, 9(8):409
- 14. Jiang<sup>\*</sup>, Q., **Teufel<sup>\*</sup>**, A. I., Jackson, E. L., and Wilke, C. O. (2018). Beyond thermodynamic constraints: evolutionary sampling generates realistic protein sequence variation. *Genetics*, 208(4):1387–1395
- 13. Caglar, M. U., **Teufel**, A. I., and Wilke, C. O. (2018). Sicegar: R package for sigmoidal and double-sigmoidal curve fitting. *PeerJ*, 6:e4251

- 12. **Teufel**, A. I. and Wilke, C. O. (2017). Accelerated simulation of evolutionary trajectories in originfixation models. *Journal of The Royal Society Interface*, 14(127):20160906
- 11. Orlenko<sup>\*</sup>, A., **Teufel<sup>\*</sup>**, A. I., Chi, P. B., and Liberles, D. A. (2016). Selection on metabolic pathway function in the presence of mutation-selection-drift balance leads to rate-limiting steps that are not evolutionarily stable. *Biology Direct*, 11(1):31
- Teufel, A. I., Liu, L., and Liberles, D. A. (2016). Models for gene duplication when dosage balance works as a transition state to subsequent neo-or sub-functionalization. *BMC Evolutionary Biology*, 16(1):45
- 9. Zhao, J., **Teufel**, A. I., Liberles, D. A., and Liu, L. (2015). A generalized birth and death process for modeling the fates of gene duplication. *BMC Evolutionary Biology*, 15(1):275
- 8. **Teufel**, A. I., Masel, J., and Liberles, D. A. (2015). What fraction of duplicates observed in recently sequenced genomes is segregating and destined to fail to fix? *Genome Biology and Evolution*, 7(8):2258–2264
- 7. **Teufel**, A. I. (2015). *Mechanistic Models of the Evolutionary Dynamics of Duplicated Genes*. (Dissertation) University of Wyoming
- Teufel, A. I., Zhao, J., O'Reilly, M., Liu, L., and Liberles, D. A. (2014). On mechanistic modeling of gene content evolution: birth-death models and mechanisms of gene birth and gene retention. *Computation*, 2(3):112–130
- Jones, M. R., Forester, B. R., Teufel, A. I., Adams, R. V., Anstett, D. N., Goodrich, B. A., Landguth, E. L., Joost, S., and Manel, S. (2013). Integrating landscape genomics and spatially explicit approaches to detect loci under selection in clinal populations. *Evolution*, 67(12):3455–3468
- 4. Liberles, D. A., **Teufel**, A. I., Liu, L., and Stadler, T. (2013). On the need for mechanistic models in computational genomics and metagenomics. *Genome Biology and Evolution*, 5(10):2008–2018
- 3. **Teufel**, A. I., Grahnen, J. A., and Liberles, D. A. (2012). Modeling proteins at the interface of structure, evolution, and population genetics. In *Computational Modeling of Biological Systems*, pages 347–361. Springer
- Liberles, D. A., Teichmann, S. A., Bahar, I., Bastolla, U., Bloom, J., Bornberg-Bauer, E., Colwell, L. J., de Koning, A. P. J., Dokholyan, N. V., Echave, J., Elofsson, A., Gerloff, D. L., Goldstein, R. A., Grahnen, J. A., Holder, M. T., Lakner, C., Lartillot, N., Lovell, S. C., Naylor, G., Perica, T., Pollock, D. D., Pupko, T., Regan, L., Roger, A., Rubinstein, N., Shakhnovich, E., Sjölander, K., Sunyaev, S., **Teufel**, A. I., Thorne, J. L., Thornton, J. W., Weinreich, D. M., and Whelan, S. (2012). The interface of protein structure, protein biophysics, and molecular evolution. *Protein Science*, 21(6):769–785
- 1. Konrad<sup>\*</sup>, A., **Teufel<sup>\*</sup>**, A. I., Grahnen, J. A., and Liberles, D. A. (2011). Toward a general model for the evolutionary dynamics of gene duplicates. *Genome Biology and Evolution*, 3:1197–1209

#### PRESENTATIONS

- 26. "Uncovering Viral Replication Dynamics from High-throughput Single-cell Experiments" Trinity University, San Antonio, TX (March, 2022)
- 25. "Modeling Covid-19 Spread in Long Term Care Facilities in the Greater Austin, TX Region" University of Texas at Austin Covid Modeling Consortium, virtual (August, 2020)
- 24. "Uncovering Viral Replication Dynamics from High-throughput Single-cell Experiments" Center for Computation and Technology, Louisiana State University, Baton Rouge, LA (February, 2020)

- 23. "The Many Nuanced Evolutionary Consequences of Protein Functional Divergence" Department of Biological Sciences, Louisiana State University, Baton Rouge, LA (February, 2020)
- 22. "Translational Efficiency and The Evolution of Position-Dependent Codon Usage" Society for Molecular Biology and Evolution (SMBE) Annual Meeting, Manchester, England (July, 2019)
- 21. "The Point of No Return: Entrenchment in Molecular, Technological, and Social Systems" JSMF- SFI Postdocs in Complexity V, Santa Fe, NM (March, 2019)
- 20. "Is Evolution Irreversible?" JSMF- SFI Postdocs in Complexity IV, Santa Fe, NM (September, 2018)
- 19. "The Many Nuanced Consequences of Gene Duplication" BEACON Center for the Study of Evolution in Action, Lansing, MI (August, 2018)
- "The Many Nuanced Consequences of Gene Duplication" Society for Molecular Biology and Evolution (SMBE) Annual Meeting, Yokohama, Japan (July, 2018)
- "How Does Complex Life Functionally Diversify?" The University of Arizona, Tucson, AZ (February, 2018)
- "How Does Complex Life Functionally Diversify?" The Santa Fe Institute, Santa Fe, NM (January, 2018)
- "A Protein's Guide to Losing Friends and Alienating Partners" University of Central Florida, Orlando, FL (November, 2017)
- 14. "Functional Shifts in Duplicated Genes via Specialization of Interacting Partners" BEACON Center for the Study of Evolution in Action, Lansing, MI (August, 2017)
- "Uncovering Replication Principles from Single-cell Virology Experiments" Society for Molecular Biology and Evolution (SMBE) Annual Meeting, Austin, TX (July, 2017)
- 12. "Protein Flexibility and the Irreversibility of Evolution" Texas Protein Folders Meeting, Cleveland, TX (April, 2017)
- 11. "Functional Retention of Protein-Protein Interactions Despite Substantial Sequence Divergence" BEA-CON Center for the Study of Evolution in Action, Lansing, MI (August, 2016)
- 10. "Functional Retention of Protein-Protein Interactions Despite Substantial Sequence Divergence" Society for Molecular Biology and Evolution (SMBE) Annual Meeting, Gold Coast, Australia (July, 2016)
- "What Fraction of Gene Duplicates Observed in Recently Sequenced Genomes is Segregating and Destined to Fail to Fix?" Lehigh Valley Ecology and Evolution Symposium, Allentown, PA (April, 2015)
- 8. "Selective Pressures on Amino Acid Substitutions During Human-Chimpanzee Divergence" Society for Molecular Biology and Evolution (SMBE) Annual Meeting, Chicago, IL (July, 2013)
- 7. "Selective Pressures on Amino Acid Substitutions During Human-Chimpanzee Divergence" Quantitative Laws of Genome Evolution, Lake Como, Italy (July, 2013)
- 6. "Towards a General Model for the Evolutionary Dynamics of Gene Duplicates" Stockholm Bioinformatics Center, Stockholm University, Stockholm, Sweden (August, 2012)
- 5. "The Interface of Evolutionary Dynamics of Gene Duplicates and Landscape Genetics" Symposium on Landscape Genetics, University of Toronto, Toronto, Canada (May, 2012)

- 4. "Towards a General Model for the Evolutionary Dynamics of Gene Duplicates" Mechanisms of Protein Evolution, University of Colorado Health Sciences Center, Denver, CO (December, 2011)
- 3. "Lineage-Specific Substitution Patterns at the Interface of Effective Population Size, Linkage, and Biochemistry" Synthesis Meeting on Modeling Protein Structural and Energetic Constraints on Sequence Evolution, NIMBioS, Durham, NC (October, 2011)
- 2. "Unifying Models for Estimating Population Size and Demography" New Mexico State University Bio-Symposium, Las Cruces, NM (April, 2010)
- 1. "Spatial-Temporal Models of Primate Behavior" New Mexico State University, Las Cruces, NM (May, 2009)

## POSTERS

- 4. "Translational Efficiency and The Evolution of Position-Dependent Codon Usage" Molecular Mechanisms in Evolution Gordon Research Conference, Easton, MA (June, 2019)
- 3. "Accelerated Simulation of Evolutionary Trajectories in Origin–Fixation Models" Institute for Cellular and Molecular Biology at The University of Texas at Austin Retreat, Horseshoe Bay, TX (September, 2016)
- 2. "Selective Pressures on Amino Acid Substitutions During Human-Chimpanzee Divergence" NSF Bioinformatics Workshop, Little Rock, AR (March, 2013) (3<sup>rd</sup> place poster award)
- 1. "Simulation of Evolutionary Dynamics of Gene Duplicates" New Mexico Bioinformatics Science and Technology Symposium, Santa Fe, NM (October, 2012)

# POSTERS & PRESENTATIONS - STUDENTS & COLLABORATORS

- 19. "Ecological Use of AI for Invertebrate Zoology" Texas A & M University San Antonio Student Research Symposium Spring, San Antonio, TX (2024) (poster) - Flores, A., **Mejia, A.**, Teufel, A. and Rodolfo Valdez Barillas, J.
- 18. "Agent-Based Modeling to Assess Optimal Conditions for Reducing Air Transmission" Texas A & M University - San Antonio Student Research Symposium Spring, San Antonio, TX (2024) (presentation)
  - Stacy, L., Smyth, D., and Teufel, A.
- 17. "A Computational Systems Biology Approach for the Identification of Antimicrobial Resistance Genes in Staphylococcus aureus" Texas A & M University - San Antonio Student Research Symposium Spring, San Antonio, TX (2024) (presentation) -**Hasan**, **I**, and Teufel, A.
- 16. "Understanding Amphibian Life Cycle Ecology and Evolution via Agent-Based Modeling" Texas A & M University - San Antonio Student Research Symposium Spring, San Antonio, TX (2024) (presentation) -Lopez, J., and Teufel, A.
- "Agent-Based Modeling to Establish a Protocol for Sampling DNA from the Air." Society for Integrative and Comparative Biology (SICB), Seattle, WA (2024) (presentation) - Stacy, L., Smyth, D., and Teufel, A.
- 14. "Understanding Amphibian Life Cycle Ecology and Evolution via Agent-Based Modeling" Society for Integrative and Comparative Biology (SICB), Seattle, WA (2024) (poster) - Lopez, J., Teufel, A., and Page, R.
- "Remipedia: A story of cenotes, pseudogenes, and the species that never existed." Texas Groundwater Invertebrate Forum. San Marcos, TX (2023) (virtual presentaiton) - Calderón-Gutiérrez F., Sahi M., Teufel A., and Borda E.

- 12. "Remipedia: A story of cenotes, pseudogenes, and the species that never existed." CIMA-LSAMP. San Antonio, TX (2023) (poster) Sahi M., Calderón-Gutiérrez F., Teufel A., and Borda E.
- "Genome skimming and pseudogenes in poorly studied Remipedia of the Yucatan Peninsula, Mexico." Southwestern Association of Naturalists, San Antonio, TX (2023) (presentation) - Calderón-Gutiérrez F., Sahi M., Teufel A., and Borda E.
- 10. "Agent-Based Modeling to Establish a Protocol for Sampling DNA from the Air." The American Society for Microbiology, Texas Branch Meeting, Abilene, TX (2023) (presentation) Stacy, L., Smyth, D., and Teufel, A.
- 9. "Agent-Based Modeling to Establish a Protocol for Sampling DNA from the Air." Texas A & M University San Antonio Student Research Symposium Spring, San Antonio, TX (2023) (presentation)
   Stacy, L., Smyth, D., and Teufel, A. (2nd place Graduate Oral Presentation)
- "The effects of island attributes and hurricanes on Anolis species richness across the Caribbean Islands." Texas A & M University - San Antonio Student Research Symposium Spring, San Antonio, TX (2023) (poster) - Leak\*, D., John\*, A., Teufel, A., and Watson, C.
- 7. "Understanding Anuran Life Cycle Ecology and Evolution Through Agent-Based Modeling." Society for Integrative and Comparative Biology (SICB), Austin, TX (2023) (poster) Lopez, J., Teufel, A., and Page, R.
- 6. "Agent-Based Modeling to Establish a Protocol for Sampling DNA from the Air." Society for Integrative and Comparative Biology (SICB), Austin, TX (2023) (poster) **Stacy**, **L**., Smyth, D., and Teufel, A.
- 5. "Agent-Based Modeling to Establish a Protocol for Sampling DNA from the Air." Texas Branch of the American Society for Microbiology (ASM), Houston, TX (2022) (poster) **Stacy, L.**, Smyth, D., and Teufel, A.
- 4. "Beyond the genome: The diverse and dynamic post-translational modification landscape of betacoronaviruses as a driver of rapid evolutionary adaptation." International Virus Bioinformatics Meeting (ViBioM), Valencia, Spain, Remote (2022) (poster) - Gonzalez, J., Teufel, A., Siltberg-Liberles, J.
- 3. "The evolutionary dynamics of post-translational modifications in betacoronaviruses as a potential driver of rapid viral divergence." American Society for Microbiology (ASM) Microbe 2022 Conference, Washington, D.C. (2022) (presentation) Morales, D., Teufel, A., Siltberg-Liberles, J.
- "The evolutionary dynamics of post-translational modifications in betacoronaviruses as a potential driver of rapid viral divergence." Viruses Conference, Remote (2022) (poster) - Morales, D., Teufel, A., Siltberg-Liberles, J.
- "Translational Efficiency and The Evolution of Position-Dependent Codon Usage" Society for Molecular Biology and Evolution (SMBE) Annual Meeting, Austin, TX (2017) (poster) - Marrow, N., Teufel, A., Wilke, C.

## JOURNAL REVIEWER EXPERIENCE

Biophysical Journal, BMC Evolutionary Biology, Elife, Integrative and Comparative Biology, Journal of Molecular Evolution, Journal of Theoretical Biology, Molecular Biology and Evolution, Molecular Ecology, PeerJ, PLoS ONE, PLoS Computational Biology, Systematic Biology, Theoretical Population Biology

# AWARDS

Ecological Society of America (ESA), Theoretical Ecology Outstanding Paper Award Hon-2021ourable Mention Registration and travel awards for Society for Molecular Biology and Evolution (SMBE) 2019annual meeting, Manchester, England. Funded by SMBE Registration award for SMBE annual meeting, Yokohama, Japan. Funded by SMBE 2018 Registration award for SMBE annual meeting, Austin, TX. Funded by SMBE 2017 Registration award for SMBE annual meeting, Gold Cast, Australia. Funded by SMBE 2016Travel award for SMBE annual meeting, Chicago, IL. Funded by SMBE 2013 Travel award for "Quantitative Laws of Genome Evolution", Lake Como, Italy. Funded by 2013 Wyoming IDeA Networks for Biomedical Research Excellence (INBRE) Registration for "Quantitative Laws of Genome Evolution", Lake Como, Italy. Funded by 2013 UniverLecco, an outreach program from the city of Lecco Travel award for "NSF Bioinformatics Workshop", Little Rock, AR. Funded by Wyoming 2013 INBRE Travel award for "Symposium on Landscape Genetics" in Toronto, Canada. Funded by The 2012 University of Toronto Landscape Genetics Distributed Graduate Course TRAINEES Jordan Cruz, Undergraduate Student, Texas A&M University - San Antonio 2024-present Sean Brandin, Undergraduate Student, Texas A&M University - San Antonio 2024-present Brittany Acosta, Undergraduate Student, Texas A&M University - San Antonio 2024-present Abigayle Mejia, Undergraduate Student, Texas A&M University - San Antonio 2024-present

Daniel West, Undergraduate Student (works with Md. Imran Hasan), Texas A&M University 2023-present - San Antonio

Julianna Valencia, Undergraduate Student (works with Lyndsy Stacy), Texas A&M University 2023-2024 - San Antonio

(Last known location: Ph.D. Student of Cognition and Neuroscience at The University of Texas at Dallas)

| Fatima Tovar Ale, Undergraduate Student, Texas A&M University - San Antonio              | 2023-present |
|--|--------------|
| Vivian Salazar, Undergraduate Student, Texas A&M University - San Antonio                | 2023-present |
| Md. Imran Hasan, Graduate Student, Texas A&M University - San Antonio                    | 2023-present |
| Lyndsy Stacy, Graduate Student, Texas A&M University - San Antonio                       | 2022-2024    |
| (Last known location: Ph.D. Student of Forensic Science at Sam Houston State University) |              |
|  | 0000         |

Jesus Lopez, Undergraduate Student, Texas A&M University - San Antonio2022-presentLeina Gries, High School Student, Institute for Computing in Research2019Genevieve Mortensen, Undergraduate Student, The University of Texas at Austin2018

| Ayat Sharif, Undergraduate Student, The University of Texas at Austin   | 2017      |
|---|-----------|
| Nelson Marrow, Undergraduate Student, The University of Texas at Austin   | 2016-2019 |
| Qian Jiang, Ph.D. Student, visiting scholar at The University of Texas at Austin sponsored by the China Scholarship Council | 2016-2017 |

# PROFESSIONAL SERVICE

| Provost Faculty Fellow of Generative AI, Texas A&M University - San Antonio   | 2023–present     |
|---|------------------|
| Search Committee for Population Genetics Hire (chair), Texas A&M University - San Antor                                   | nio 2023         |
| HPC Governance Committee, Texas A&M University - San Antonio  | 2023–present     |
| Undergraduate Curriculum Committee, Texas A&M University - San Antonio  | 2023–present     |
| Program Review Committee, Texas A&M University - San Antonio  | 2022-2023        |
| Zuckerkandl Prize Committee Member for the Journal of Molecular Evolution   | 2021             |
| College of Arts and Sciences Curriculum Committee Member (co-chair, 2022, chair 202<br>Texas A&M University - San Antonio | 3), 2021–2024    |
| Review Editor of Protein Bioinformatics for the journal of Frontiers in Bioinformatics                                    | 2021–present     |
| Zuckerkandl Prize Committee Member for the Journal of Molecular Evolution   | 2020             |
| Editorial Board Member for the journal BMC Ecology and Evolution  | 2020–present     |
| Volunteer Lecturer & Mentor at the Institute for Computing in Research  | 2019             |
| Associate Editor of the Journal of Molecular Evolution  | 2019–present     |
| Symposium Chair of "Mechanisms of Protein Evolution" at SMBE annual meeting   | 2017             |
| CONTINUING EDUCATION  |                  |
| Teaching through the Issues (Summer workshop), Texas A&M University- San Antonio  | 2024             |
| Jag-AI: Institution Transformation Research and Education (3 workshops), Texas A& University- San Antonio                 | M 2024           |
| Faculty Immersion Program, Texas A&M University- San Antonio  | 2023             |
| Lumina A.I. in the Classroom: Challenges and Opportunities, virtual   | 2023             |
| Dyslexia Seminar, Texas A&M University- San Antonio   | 2023             |
| OTHER ACTIVITIES  |                  |
| Student Research Symposium moderator, Texas A&M - San Antonio   | 2024             |
| Jagwire Days Volunteer, Texas A&M University - San Antonio  | 2023             |
| Facilitator of CodeBusters event for the Science Olympiad, Texas A&M - San Antonio  | 2022, 2023, 2024 |
| Featured in Parallax article "The Point of no Return"   | 2019             |
| Guest Editor for the journal Genes special issue "Evolution and Structure of Proteins as Proteomes"                       | nd 2017          |
| Second Place in Flaming Gorge Jalapeño Eating Contest held in Laramie, WY   | 2014             |
|   |                  |

| Summer Student of Computational Biology, University of Oxford                         | 2012      |
|---|-----------|
| Advisor: Jotun Hein   |           |
| Landscape Genetics Field School, Koffler Scientific Reserve                           | 2012      |
| Advisor: Melanie Murphy   |           |
| President of the New Mexico State University Association for Computing Machinery      | 2009-2010 |
| Featured in New Mexico State University Young Women in Computing Fall newsletter      | 2009      |
| Primate Behavior and Ecology Field School, Baboon Community Sanctuary La Milpa Belize | 2009      |
| Advisor: Brenda Benefit   |           |
| Vice President of the New Mexico State University Association for Computing Machinery | 2008-2009 |
| Member of the New Mexico State University Mathematics Honor Society, Pi Mu Epsilon    | 2005-2010 |