

ALYSSA M. ADAMS

✉ alyssa.gp.adams@gmail.com

| 🏠 alyssa-m-adams.com

| [in](#) [alyssa-adams](#)

| [🎓 Google Scholar](#)

Experience

Cross Compass, Ltd.

June 2026 - Present

R&D Senior Scientific Research Advisor

Kyoto, Japan

- Advises the CEO on research and R&D direction, with a focus on emerging advancements in AI.
- Supports client-facing engagements and sales as a scientific and technical advisor.
- Helps manage and coordinate engineering project delivery across teams.
- Helps lead and manage the research division at Cross Compass.

Cross Labs, Cross Compass Ltd.

July 2024 - June 2026

Deputy Director & Senior Research Scientist

Kyoto, Japan

- Provides strategic vision and operational leadership across Cross Labs research and outreach initiatives.
- Aligns research initiatives with Cross Compass business strategy, driving value through the coordination of strategic research partnerships with external industry collaborators.
- Served as Vice Chair and lead organizer of ALIFE 2025: Ciphers of Life, a global conference on artificial life.
- Oversees hiring, project alignment, and international partnerships with academia and industry.
- Supports interdisciplinary teams working at the intersection of AI, biology, cognition, and information theory.
- Develops theoretical frameworks for constraint-function loops, embedded agency, and open-ended evolution.

Research Scientist

Oct 2022 - July 2024

- Led theoretical research on emergent computation, astrobiology, artificial life, and multi-agent systems.
- Developed models linking constraint dynamics to functional emergence in biological and computational systems.
- Designed and led a lab-wide internship program hosting over 15 interns (2023-2024), fostering cross-disciplinary mentorship and research experience.
- Coordinated and hosted the Cross Roads speaker series and the On My Mind podcast, showcasing leading thinkers in fields related to intelligence.
- Led planning and program development for the Cross Labs Spring Workshops in both 2023 and 2024, integrating art, science, and industry collaborations.

Independent Consultant

Sep 2022 - May 2025

Science Fiction Writing

Remote

- Collaborated with published science fiction authors to provide scientific consulting and creative support.
- Designed speculative technologies, worldbuilding architectures, and consistent physics-based systems.
- Offered expertise across fields including biology, computation, astrobiology, and complex systems.

ProPhound

January 2021 - Dec 2025

Co-founder & CTO

Virtual

- Led technological strategy for low-barrier community-driven support for PhDs exploring career options.
- Participated in global startup incubators and development programs focused on entrepreneurship and scientific innovation.
- Shaped business strategy and guided technical development from prototype to pilot deployment.
- Built and sustained collaborations with academic partners, clinicians, and international technology teams.

EvidaSolve: moSAYcity

December 2021 - December 2022

Technology Lead

Virtual

- Led the development of a scalable cloud-based app to connect individuals within large organizations.
- With EvidaSolve founder Shalini Nag, pitched moSAYcity at the Reverse Pitch Competition MKE and won first prize. Selected for an additional prize in the community showcase.

Morgridge Institute for Research / University of Wisconsin - Madison

October 2019 - October 2022

Postdoctoral Fellow

Madison, WI

- Co-Advisor: [Karthik Anantharaman](#), Department of Bacteriology
- Co-Advisor: [Anthony Gitter](#), Morgridge Institute for Research
- Applied complexity measurements and analysis to protein-protein interactions between Influenza-A and humans.

CIBM Postdoctoral Trainee

October 2019 - October 2021

- Advisor: [Karthik Anantharaman](#), Department of Bacteriology, Co-Advisor: Federico Rey, Department of Bacteriology
- Funding: Computation and Informatics in Biology and Medicine Training Program (NLM 5T15LM007359)
- Used -omics data, complexity theory, and computation theory to understand how different microbial communities interact with one another.
- Investigated protein-protein interactions between phages and bacteria in microbial communities.
- Developed high-speed software solutions for measuring complexity, entropy, and information within -omics data.

VEDA Data Solutions

August 2017 - September 2019

Director

Madison, WI

- Oversaw and managed Labs research projects, communicated across departments to coordinate and allocate project resources.
- Mentored and guided research fellows on projects resulting in scientific discoveries, products, or enhancements.
- Fostered connections with academic institutions and managed external collaborations.

Data Scientist

August 2017 - September 2019

- End-to-end data pipeline development, from data collection and engineering, to data analysis and visualization using Python and SQL.
- Developed and scaled backend software products customized to client-specific needs.
- Built and maintained data processing systems that processed over 100 million rows of data every 24 hours.
- Performed regular data Q&A monitoring to ensure data health and accuracy, and identify improvement areas.

Santa Fe Institute: Complexity Explorer

May 2018 - September 2018

Co-Developer and Teaching Assistant

Remote

- Course name: [Algorithmic Information Dynamics: A Computational Approach to Causality and Living Systems From Networks to Cells](#)
- Co-developed course content, assisted with student learning, and led research projects with students.

Microsoft Research

Summer 2017

Intern

Cambridge, UK

- Supervisor: Katja Hofmann
- Project Malmö team: Developed a sophisticated AI experimentation platform as an extension of Minecraft
- Implemented new machine learning techniques: Reinforcement learning, one-shot imitation learning, deep-Q architecture, LSTMs.
- Built a two-player game between a human player and a one-shot imitation learning agent, demonstrating open-ended imitation learning in a system coupled with an open-ended human player.

Beyond Center, Emergence Lab

August 2014 - May 2017

Research Assistant

Arizona State University

- Funding: John Templeton World Charity Foundation
- Used cellular automata to study mechanisms that lead to open-ended dynamics.
- Developed a new metric to quantify open-endedness in discrete, bounded, and synchronously-updating dynamical systems.
- Studied philosophy of complexity, emergence, and intelligence to re-define the question "What is life?"
- Used data produced in online video games to explore questions related to complexity and emergence.

Department of Physics

August 2013 - May 2014

Teaching Assistant

Arizona State University

- Course name: Physics 101
- Assisted with student learning by holding weekly study sessions, giving quizzes and homework, grading, and holding additional study sessions before exams.

East Tennessee State University

January 2011 - May 2012

Research Assistant

Johnson City, TN

- Supervisor: Frank B. Hagelberg
- Explored the use of potassium ferrocyanide nanoparticles as an energy-efficient component in solar cells.
- Learned computational modeling techniques for nanoscale materials research.

Education

Arizona State University

August 2013 - December 2017

Doctor of Philosophy in Physics

Tempe, AZ

- Dissertation: The Physics of Open Ended Evolution
- Adviser: Sara I Walker, School of Earth and Space Exploration
- Committee: Paul C W Davies, Ralph V Chamberlin, Theodore P Pavlic
- Dean's Fellow (2013-2014)

East Tennessee State University

August 2010 - May 2013

B.S. in Physics

Johnson City, TN

- Honors Thesis: Polarization of Light Emitted From Mira-Type Stars
- Adviser: Richard Ignace, Department of Physics & Astronomy
- Physics Honors-in-Discipline Scholar
- Midway Honors Scholar
- Magna Cum Laude

Community Building

Democrats Abroad Japan, Kansai Chapter

June 2025 - Present

Vice Chair

Japan

- Organize and grow the local Kansai chapter of Democrats Abroad, supporting community engagement among Americans living overseas.
- Promote voter registration, outreach, and civic participation for U.S. citizens living in Japan.
- Collaborate with chapter leadership to plan events, coordinate volunteers, and build an inclusive, active network.

ALIFE 2025: The 2025 Conference on Artificial Life

August 2024 - October 2025

Vice Chair

Kyoto, Japan

- Spearheaded the end-to-end execution of the conference, governing all organizational committees to ensure 100% milestone completion within strict deadlines.
- Orchestrated the strategic alignment of research, art-science, and keynote programs with the General Chair's overall vision.
- Directed large-scale outreach and logistics for nearly 600 in-person and online attendees- including researchers, artists, technologists, and members of the general public.
- Managed the integration of transdisciplinary research tracks (software, hardware, and wetware), supervising the quality and cohesion of all technical and exhibition deliverables.

International Society for Artificial Life (ISAL)

Feb 2026 - Present

Vice President

Remote

- Serves as Vice President of ISAL, contributing to strategic leadership and governance of the international artificial life community.
- Supports the coordination of society initiatives, conferences, and community engagement across research, art, and industry.

Board Member, Development Chair

Nov 2023 - Feb 2026

- Developed relationships with industry and external organizations to support the artificial life community.
- Created career development opportunities for early-career researchers through strategic partnerships.
- Led the creation of a comprehensive planning handbook for future ALIFE conferences, including reusable digital infrastructure and template resources.

ALIFE Japan

Mar 2024 - Mar 2025

Future Talent Program Mentor

Kyoto, Japan

- Mentored students in the Future Talent Program, providing regular project feedback and career guidance.
- Review and evaluate student applications for program participation.

University of Wisconsin-Madison Postdoctoral Association

May 2020 - Oct 2022

Vice President

Madison, WI

- Helped organize and plan UWPA executive council meetings
- Oversaw establishment of new UWPA committees
- Served as interim chair of committees as needed
- Served as a second UWPA representative to the Big10+ PDA

Engagement Committee Co-Chair

Spring 2021 - June 2022

- Set up, maintain, and promote the use of a university-wide Slack workspace for postdocs
- Address and brainstorm strategies to promote and foster a strong postdoc community where postdocs feel welcome and supported

Annual Research Symposium: Planning Committee Co-Chair

May 2020 - September 2020

- Helped organize, plan, and host the annual UWPA Postdoctoral Research Symposium as a 2-day virtual event
- Had over 100 postdocs register, 55 in attendance

I³: Ideas, Insights, Impact

Fall 2020 - Spring 2022

Founding Member

Madison, WI

- 5-week workshop designed to help postdocs learn and apply new skills to sharpen their research focus and maximize impact in their fields
- Provided technical support for planning group and workshop participants
- Designed material that involved postdocs conducting customer interviews to understand the impact of their product

University of Wisconsin-Madison Department of Bacteriology

Dec 2020 - May 2021

Committee Member

Madison, WI

- Diversity, Equity, and Inclusion committee
- Addressed survey results from College of Letters and Sciences regarding workplace climate
- Designed actionable items to address the concerns of the community

PyData Madison

January 2019 - June 2020

Meetup Co-Organizer

Madison, WI

- Help organize, plan, and host monthly talks, tutorials, and discussions on Python and data-science-related topics
- Specific aim of providing an inclusive and diverse environment, where historically underrepresented minorities can be actively and safely participate in the community

Wisconsin Office of the State Treasurer

February 2019 - November 2020

Fellow

Madison, WI

- Created and developed readable infographics to inform Wisconsin voters about the state budget approval process
- Encouraged voters to become involved in state processes by providing clear information about access points and places/times for public involvement
- Visualized data on state budget allocations to highlight popular topics

The Access Network

March 2020 - May 2020

Task Force Committee Member

Madison, WI (Remote)

- The purpose of the task force is to design a process for soliciting, selecting, and onboarding new Access Network Core Organizers
- Helped design and organize the onboarding process for the Access Network to refer to when selecting new Core Organizers in the future

The Sundial Project

August 2016 - December 2016

Fall Mentoring Facilitator

Arizona State University

- Fall Mentoring Class
- Class goal: To make science a welcoming environment for everyone by cultivating positive mindsets and addressing metacognition skills for problem-solving and teamwork
- Worked with physics department faculty to create and implement a syllabus that meets these goals in a relaxed environment
- Helped facilitate mentoring activities within groups of students

The Access Network

Summer 2016

Web Design Fellow

Rochester Institute of Technology

- Built a [public website](#) for Access Network members to upload and share content within the network and with the public
- Collected and implemented user feedback from Access Network members to ensure ease-of-use, desired features, and intuitive design

The Sundial Project

Summers 2014, 2015, & 2016

Lead Physics Facilitator, Physics Facilitator

Arizona State University

- Developed and implemented engaging and hands-on curriculum for Sundial's summer bridge program for incoming freshmen in the physical sciences
- Helped lead a team of facilitators to design curriculum and read about STEM education research to gain insights throughout the summer
- Interacted with 25 students over a 2-week period

Upward Bound, Federal TRiO Program

Summer 2013

Physics Facilitator

Johnson City, TN

- Developed and implemented engaging hands-on curriculum for Upward Bound's summer bridge program for high school students
- Helped rising seniors create and complete FASFA applications
- Assisted students with preparing and planning college applications

East Tennessee State University Library

2010 - 2013

Science Tutor

Johnson City, TN

- Tutored one-on-one and in groups for all 100/200-level STEM classes

Our Lady of the Lake Catholic Church

January 2008 - July 2010

Organist/Pianist

Lake Arrowhead, CA

- Played for weekly Mass, in addition to weddings and funerals

Publications

What it takes to solve the origin of life: An integrated review. Part 1-Experimental methods and data repositories

2026

S. Asche, et al.

- Cell Reports Physical Science

What it takes to solve the origins of life: An integrated review. Part 2: Theoretical methods and emerging trends

2026

S. Asche, et al.

- Cell Reports Physical Science

ALIFE 2025: Ciphers of Life

2025

O. Witkowski, A. M. Adams, L. Sinapayen, M. Baltieri, M. Khosravv

Editor

- Artificial Life Conference Proceedings 37 (1)

The Constraint-Function Loop	2025
A. M. Adams, E. Jacopin, N. Guttenberg	
· Artificial Life Conference Proceedings 37 (1), 44	
Minimal Algorithmic Information Loss Methods for Dimension Reduction, Feature Selection and Network Sparsification	2025
H. Zenil, N. A. Kiani, F. S. Abrahão, A. Rueda-Toicen, A. A. Zea, J. Tegnér, A. M. Adams	
· Information Sciences	
Evolutionary Mastery Forges the Blades of Cyber Attack and Defense	2025
M. Eakin, M. Khosravy, A. M. Adams, O. Witkowski	
· Optimizing Solutions for Real-Life Problems, 29-50	
The Sinister Ghost in the Wooden Horse: From Ancient Myths to Industrial Fraud by Trojan Attack	2024
M. Eakin, M. Khosravy, A. M. Adams, O. Witkowski	
· International Conference on Data Analytics and Insights, 589-608	
On creativity and open-endedness	2024
L. B. Soros, A. M. Adams, S. Kalonaris, O. Witkowski, C. Guckelsberger	
· ALIFE 2024: Proceedings of the 2024 Artificial Life Conference, Vol. 3	
An Open-Ended Approach to Understanding Local, Emergent Conservation Laws in Biological Evolution	2024
A. M. Adams, E. Jacopin, P. Gagrani, O. Witkowski	
· 2024 IEEE Congress on Evolutionary Computation (CEC), pp. 1-8	
Chapter 1: the astrobiology primer 3.0	2024
M. J. Schaible, et al.	
· Astrobiology 24 (S1), S-4-S-39	
Chapter 2: What Is Life?	2024
S. Colón-Santos, et al.	
· Astrobiology 24 (S1), S-40-S-56	
Evolutionary Computation: Perspectives on Past and Future	2024
H. Yoshida, A. M. Adams, O. Witkowski	
· Frontiers in Genetics, Algorithm Theory and Applications, pp. 3-13	
Interacting LLMs: A Dive into Collaborative AI	2024
G. Cheng, O. Wang, A. M. Adams, M. Biehl, L. Caspar, O. Witkowski	
· 2024 IEEE 18th International Conference on Semantic Computing (ICSC), pp. 152-155	

- Sulfur cycling connects microbiomes and biogeochemistry in deep-sea hydrothermal plumes** 2023
Z. Zhou, et al.
• The ISME Journal 17 (8), pp. 1194–1207
- Ghosts in a Shell: An Immersive Art Experience for ALIFE23** 2023
A. M. Adams, O. Rico, N. Guttenberg, O. Witkowski
• Artificial Life Conference Proceedings 35 (1), p. 28
- An optimal, universal and agnostic decoding method for message reconstruction, bio and technosignature detection** 2023
H. Zenil, A. M. Adams, F. S. Abrahão
• arXiv preprint arXiv:2303.16045
- Optimal spatial deconvolution and message reconstruction from a large generative model of models** 2023
H. Zenil, A. M. Adams, F. S. Abrahão
• arXiv preprint arXiv:1802.05843
- vRhyme enables binning of viral genomes from metagenomes** 2022
K. Kieft, A. M. Adams, R. Salamzade, L. Kalan, K. Anantharaman
• Nucleic Acids Research, Vol 50, Issue 14, Oxford University Press
- Algorithmic Information Dynamics of Cellular Automata** 2022
H. Zenil, A. M. Adams
• The Mathematical Artist: A Tribute To John Horton Conway, pages 171-190, Springer International Publishing
- Time to SHINE: UW, Morgridge spinoff has great hopes for fusion's future** 2022
A. M. Adams
• New article for the Morgridge Institute SPARK Newsletter
- The Effects of Complex Interaction Rules Between Two Interacting Cellular Automata** 2022
A. M. Adams
• Complex Systems, Vol 31, Issue 2
- A graph-theoretic approach to understanding emergent behavior in physical systems** 2021
A. M. Adams
• ALIFE 2021: Proceedings of the 2021 Conference on Artificial Life, MIT Press
- Physical Universality, State-Dependent Dynamical Laws and Open-Ended Evolution** 2017
A. M. Adams, A. Berner, S. I. Walker, P. C. W. Davies
• Special Issue "Entropy, Time and Evolution": Entropy 2017, 19(7)

- Understanding Real-world Open-ended Systems: A League of Legends Adventure** 2017
A. M. Adams, S. I. Walker
• International Journal of Design & Nature and Ecodynamics, Vol. 12 No. 4, pp. 458 - 469
- Formal Definitions of Unbounded Evolution and Innovation Reveal Universal Mechanisms for Open-Ended Evolution in Dynamical Systems** 2017
A. M. Adams, H. Zenil, P. C. W. Davies, and S.I. Walker
• Scientific Reports, Vol. 7, Article number: 997
- Effects of a Global Rule on Interacting Cellular Automata** 2015
A. M. Adams, H. Zenil, E. Reyes, J. Joosten
• In 21st International Workshop on Cellular Automata and Discrete Complex Systems AUTOMATA 2015, TUCS Lecture Notes
- Self-referencing cellular automata: A model of the evolution of information control in biological systems** 2014
T. P. Pavlic, A. M. Adams, P. C. W. Davies, S. I. Walker
• ALIFE 14, pp 522-529
- Evidence of a Mira-Like Tail and Bow Shock about the Semi-Regular Variable V CVn from Four Decades of Polarization Measurements** 2014
H. Neilson, R. Ignace, B. Smith, G. Henson, A. M. Adams
• Astronomy and Astrophysics, 568, 88
- Polarization of Light Emitted From Mira-Type Stars** 2014
A. M. Adams, R. Ignace
• JSARA, 7, 60-80

Conference Presentations ---

- The Constraint-Function Loop** 2025
A. M. Adams, E. Jacopin, N. Guttenberg Kyoto, Japan
• Artificial Life Conference 2025 Proceedings 37
- An Open-Ended Approach to Understanding Local, Emergent Conservation Laws in Biological Evolution** 2024
A. M. Adams, E. Jacopin, P. Gagrani, O. Witkowski Yokohama, Japan
• IEEE Congress on Evolutionary Computation (CEC 2024)
- Ghosts in a Shell: An Immersive Art Experience for ALIFE23** 2023
A. M. Adams, O. Rico, N. Guttenberg, O. Witkowski Sapporo, Japan
• Artificial Life Conference 2023 (ALIFE 23)

What Cellular Automata Tell Us About Life	2023
A. M. Adams	Remote
• ASCAT23 – Asian Symposium on Cellular Automata Technology • Invited Keynote Speaker	
State space dynamics: An analytical model of physical computation among interacting components	2022
A. Adams	Atlanta, GA
• AbSciCon 2022	
Two Ways of Understanding Social Dynamics: Analyzing the Predictability of Emergent of Objects in Reddit r/place Dependent on Locality in Space and Time	2021
A. Adams, J. Fernandez, O. Witkowski	Virtual Workshop
• ABMHuB 2022 Workshop ALIFE 2022	
Poster: Interpretability of Network Measures in Host-Virus Protein Interactions	2021
A. Adams, A. Gitter, K. Anantharaman	Remote
• ISCB 2022	
A graph-theoretic approach to understanding emergent behavior in physical systems	2021
A. Adams	Remote
• ALIFE 2021	
The Role of Emergence in Open-ended Systems	2020
A. Adams	Remote
• Automata 2020	
Individual-Community Interactions and Emergent Strategies in League of Legends	2018
A. Adams	Thessaloniki, Greece
• Conference on Complex Systems 2018	
League of Legends: Possible Open-Ended Strategy Selection	2018
A. Adams	Tokyo, Japan
• Third Workshop on Open-Ended Evolution, 16th International Conference on the Synthesis and Simulation of Living Systems (ALIFE)	
Understanding Real-world Open-ended Systems: A League of Legends Adventure	2017
A. Adams, S. I. Walker	Mesa, AZ & New Forest, UK
• Astrobiology Science Conference 2017 & The New Forest Complex Systems Conference 2017	

Quantifying Non-trivial Open-Ended Evolution Reveals Necessary and Sufficient Conditions

2016

A. Adams, S. I. Walker, H. Zenil, and P. C. W. Davies

Cancún, Mexico

- Second Workshop on Open-Ended Evolution, 15th International Conference on the Synthesis and Simulation of Living Systems (ALIFE)

The Sundial Project: Building a Sustainable Science Community

2015

A. Adams

Tempe, AZ

- American Physical Society 4 Corners Conference

Open-Ended Evolution in a Deterministic Cellular Automata Universe

2015

A. Adams, S. I. Walker, H. Zenil

Tempe, AZ

- Conference on Complex Systems and American Physical Society 4 Corners Conference

Implications of Open-Ended Evolution in a Deterministic Universe

2015

A. Adams, S. I. Walker

Tempe, AZ

- Conference on Complex Systems

New Pathways to Complexity, Poster

2015

A. Adams

Washington DC

- Re-conceptualizing the Origin of Life: Experimental, Interdisciplinary, and Computational Windows on the Core Concepts

Self-referencing cellular automata: A model of the evolution of information control in biological systems

2014

T. P. Pavlic, A. Adams, P. C. W. Davies, S. I. Walker

New York, NY

- International Conference on the Synthesis and Simulation of Living Systems

Ferrocyanide Ion-Ligand Candidates for Solar Energy Storage, Poster

2011

A. Adams, F. Hagelberg

Nashville, TN

- TN-Score EPSCoR Annual Conference

Public Talks and Outreach

Origin of Life Early-career Network (OoLEN)

2023

Invited Speaker

Remote

- How to Use Your PhD for a Career That You Love

Al Akhawayn University

2025

Guest Speaker

Remote

- Alien Intelligences, Hybrid Futures

Life As We Don't Know It Science Advisor	2022 Madison, WI
• A collaboration between artists and scientists to explore life as we don't know it. Exhibition was featured in the Overture Center in downtown Madison.	
Sundial No-Jargon Science Conference Invited Speaker	2021 Tempe, AZ (Remote)
• Industry Careers! A 20-minute how-to	
SEDS Celestia BITS Invited Speaker	2021 Remote
• Birla Institute of Science and Technology, Goa • League of Legends: The Famous Open-Ended Strategy Generator	
Free the PhD Panelist	2020 Remote
• Guided Informational Interviews - Data Science	
PyJamas Pillow Talk Guest	2020 Remote
• Emergence, artificial intelligence and what it means to be human	
Data Driven MKE Speaker	2020 Milwaukee, WI
• The Biological Complexity of Covid-19, Brought to You by Turing Machines	
WisCon Panelist	2019 Madison, WI
• Twitter: Our Lives 280 Characters at a Time • Video Games And Escapism	
University of Wisconsin-Madison, LUCID HAMLET Discussion Guest Lecture	2019 Madison, WI
• Human, Animal, and Machine Learning: Experiment and Theory discussion	
University of Wisconsin-Madison, LUCID Guest Lecture	2019 Madison, WI
• Understanding the bridge between academia and industry	
Women in Data Science Workshop Guest Lecture, Data Modeling	2018 Madison, WI
• Public workshop centered around techniques used in data science followed by a panel discussion	
Public Lecture, Big Data Madison League of Legends: A Factory of Successful Strategies using Game Theory	2018 Madison, WI
• Big Data Madison public lecture series	

Exquisite Gentlemen's Guild
Guest Lecture, Pinnacle High School

2017
Phoenix, AZ

- Careers in Astrobiology and Artificial Intelligence

Guest Lecture, Chandler-Gilbert Community College
Artificial Intelligence: Expectations vs. Reality

2016, 2017, 2018, 2019
Gilbert, AZ

- Science Fiction Creative Writing Class

Phoenix ComiCon
Panelist

2016
Phoenix, AZ

- Why so Siri-us? The Science of Artificial Intelligence
- Finding ET
- Ultron and Ava plus BB8: The science of robots

Public Lecture, Pebble Creek
Will Robots Be the End of the Human Race?

2015
Goodyear, AZ

- LifeLong Learning Lecture Series

Phoenix ComiCon
Panelist

2016
Phoenix, AZ

- Started with a bang?

The Sundial Project
Student Leadership

2014 - 2016
Arizona State University

- Mentoring Co-Chair
- Co-Chair
- Media Chair

Thanksgiving Food Drive
Volunteer

2012 & 2014
Phoenix, AZ & Johnson City, TN

- St. Mary's Food Bank
- Second Harvest Food Bank

Home Restoration
Volunteer

2013
Unicoi County, TN

- Habitat For Humanity

Workshops

**ALICE Workshop (Artificial Life, Intelligence, Complexity
& Evolution)**

Feb. 2026

Invited Speaker

Copenhagen, Denmark

- Leading discussion groups and facilitating a collaborative project track focused on "Constraints and Functions" in complex systems.

Workshop on Integrative Science for Evolution (WISE)	October 2024
Participant & Mini-WISE Grant Recipient	Washington, DC
• Selected for an interdisciplinary workshop at the Carnegie Institution for Science, fostering integration across evolutionary biology fields. • Awarded a "Mini-WISE" grant to establish and lead a new working group focused on evolutionary constraints. • Currently coordinating the working group to finalize a Letter of Intent (LOI) for extended project funding.	
Open Science Grid Summer School	Summer 2022
Attendee	Madison, WI
• Learned to use the Open Science Grid computational cluster effectively.	
<u>Igniter</u>	Fall 2021
ProPhound Team Representative	Madison, WI
• Learned to implement the Business Model Canvas tool for early startup development. • Entrepreneur startup development program aimed at launching an MVP for developing startups. • Conducted and reviewed customer discovery interviews to develop ProPhound's MVP.	
<u>Morgridge Entrepreneurial Bootcamp</u>	Summer 2021
Attendee	Madison, WI
• Week-long intensive summer course on how to turn an idea into a startup.	
<u>I2M: Innovation 2 Market</u>	Spring 2021
ProPhound Team Representative	Madison, WI
• Entrepreneur startup development program aimed at launching an MVP for developing startups. • Conducted and reviewed customer discovery interviews to develop ProPhound's MVP.	
<u>gener8tor CS NEST & gAPLHA: Social Impact</u>	Fall 2020 - Spring 2021
Nunus Team Founder	Madison, WI
• Entrepreneur startup development programs aimed at launching an MVP for developing startups. • Founded Nunus as a company dedicated to changing the way users interact with social media. • Developed a roadmap and business model to launch an MVP to customers.	
Access Network Assembly	Summer 2016, 2019
Attendee	Tempe, AZ
• Annual assembly of Access Network Sites from across the nation, including Sundial. Workshop included presentations about diversity and fostering a positive community in the sciences.	
<u>Josep Comas i Solà International Summer School in Astrobiology</u>	Summer 2015
Scholar	Santander, Spain
• Topic: The Origin of Life, From Monomers to Cells • Attended lectures on a variety of perspectives about the origin of life in the universe and participated in a think-tank on how to proceed with important questions in the future.	
<u>Wolfram Science Summer School</u>	Summer 2014
Scholar	Waltham, MA
• Developed models using cellular automata that explored selection on genomes. Also developed an interacting cellular automata model that is capable of generating open-ended evolution.	

Social Justice Summit

2010

Participant

Fullerton, CA

- Participated in workshops on gender and language, what it means to be a minority, animal rights/factory farm issues, homelessness, hate crimes and bias, human trafficking, economic injustice and civil disobedience.

Honors & Awards

Runner Up , ALICE Workshop (Artificial Life, Intelligence, Complexity & Evolution)	2026
Reverse Pitch MKE Winner , With EvidaSolve founder Shalini Nag, we pitched moSAYcity and won first prize. We were also selected for an additional prize in the community showcase.	2022
ALIFE 21 Best Talk Award , <u>Submission 32: A graph-theoretic approach to understanding emergent behavior in physical systems</u>	2021
Winner , <u>Young Scientist Seminars Competition</u>	2020
Sundial Facilitator Award , Sundial Summer Program	2016
2nd Place , Sundial Science Conference Demonstration Competition	2016
Dean's Fellowship , College of Liberal Arts and Sciences, Arizona State University	2013
Magna Cum Laude , College of Arts and Sciences, East Tennessee State University	2013
Honors-In-Discipline Scholarship , College of Arts and Sciences, East Tennessee State University	2012
1st Place , Student Honor Art Show, East Tennessee State University	2012
Learning Experiences in Astronomy and Physics Scholarship , College of Arts and Sciences, East Tennessee State University	2011
Midway Honors Scholarship , College of Arts and Sciences, East Tennessee State University	2010
Certificate of Merit, Senior Award from Music Teachers Association , San Bernardino Division	2009