Shawn S. Jordan, Ph.D.

Associate Professor, The Polytechnic School
Ira A. Fulton Schools of Engineering, Arizona State University
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1. Education

Purdue University, West Lafayette, IN

Doctor of Philosophy in Engineering Education Dissertation: *Success in Virtual Cross-Disciplinary Engineering Design Teams in Industry*	2010
Master of Science in Electrical and Computer Engineering Emphases: Software and Hardware Engineering	2003
Bachelor of Science in Computer Engineering Emphasis: Hardware Engineering	2001

2. Academic Experience

Associate Professor, The Polytechnic School, Ira A. Fulton Schools of Engineering, Arizona State University (ASU), Mesa, Arizona, USA	5/2017 – present
Visiting Senior Lecturer, Department of Engineering, King's College London, United Kingdom	1/2019 – 6/2019
Visiting Academic, Central Saint Martins, University of the Arts London, United Kingdom	1/2019 – 6/2019
Adjunct Faculty, Storytelling Institute, South Mountain Community College, Phoenix, Arizona, USA.	8/2018 – 12/2018
Assistant Professor, The Polytechnic School, Ira A. Fulton Schools of Engineering, Arizona State University (ASU), Mesa, Arizona, USA	1/2011 – 5/2017

3. Honors and Awards

1. ASU Charter Professor (*finalist*)	2023
2. ASU President's Medal for Social Embeddedness	2022
3. ASU Peer Leadership Academy (peerLA) Participant	2020 - 2021
4. Electrical and Computer Engineering Department Heads Association (ECEDHA) Technology Integration Award	2019
5. Named a Kern Entrepreneurial Engineering Network (KEEN) Professor at ASU, an honor given to faculty who integrate entrepreneurship into their courses	2018
6. Presidential Early Career Award for Scientists and Engineers	2017

3. Honors and Awards

7.	Named Ira A. Fulton Exemplar Faculty at ASU, an honor given to the top 5% of faculty who demonstrate high research productivity, instructional load, student evaluations, and doctoral student mentoring	2014 – 2016
8.	Named top "20 Under 40" faculty by the American Society for Engineering Education (ASEE) *PRISM Magazine*	9/2014
9.	Excellence in Scholarly and Creative Activities Award from the ASU College of Technology and Innovation (CTI), an honor given to faculty with a specific contribution that meets the highest standards of their discipline.	2014
10.	Nominated for the Ben Dasher Award for best paper and presentation at the IEEE Frontiers in Education Conference	2013
11.	Finalist for the best paper in the Design in Engineering Education Division at the ASEE Annual Conference and Exposition	2012
12.	Outstanding Faculty Mentor Award from ASU CTI	2011 – 2012
13.	Woodside Sustained Community Service Award	2012
14.	Outstanding Graduate Student Award from the Purdue Student Engineering Foundation (PSEF)	2010
15.	Apprentice Faculty Grant from the ASEE Educational Research and Methods (ERM) Division	2009
16.	Hugh W. and Edna M. Donnan Dissertation Fellowship	2009
17.	Outstanding Service Scholarship Award from the Purdue College of Engineering	2009
18.	Eta Kappa Nu Centennial Student Award for Contributions to Technical and Education Excellence	2006
19.	Guinness World Record for "Largest Rube Goldberg"	2005 – 2008
20.	Magoon Award for Excellence in Teaching	2003
21.	Graduate Student Award for Outstanding Teaching	2003

4. Publications and Presentations

4.1 Publications

Refereed Journal Publications

Key: **bold** = graduate student underlined = undergraduate student

1. Paretti, M., Case, J., Benson, L., Delaine, D., Jordan, S., Kajfez, R., Lord, S., Matusovich, H., **Young, E.**, & Zastavker, Y. (2023). Building capacity in engineering education research through collaborative secondary data analysis. *Australasian Journal of Engineering Education (in press)*
2. **Weiner, S.**, Lande, M., & Jordan, S. S. (2020). Designing (and) Making Teachers: Using Design to Investigate the Impact of Maker-Based Education Training on Pre-service STEM Teachers. *International Journal of Engineering Education*, *36*(2), 702–711.

Refereed Journal Publications

Key: **bold** = graduate student underlined = undergraduate student

3. **Weiner, S.**, Jordan, S. S., & Lande, M. (2020). What to "make" of school: Revealing the conflicting institutional logics of grassroots making and formal education. *Journal of Research on Technology in Education*. https://doi.org/10.1080/15391523.2020.1767526
4. **Larson, J.**, **Weiner, S.**, Jordan, S., & Lande, M. (2020). Supporting self-directed learning in a project-based embedded systems course. *IEEE Transactions on Education*, *63*(2), 88–97. https://doi.org/10.1109/TE.2020.2975358
5. Orr, M. K., & Jordan, S. S. (2019). A Rube Goldberg approach to teaching dynamics of machine elements. *Advances in Engineering Education, 7*(3). https://advances.asee.org/a-rube-goldberg-approach-to-teaching-dynamics-of-machine-elements/
6. Jordan, S. S., **Foster, C. H.**, **Anderson, I. K.**, Betoney, C. A., & Pangan, T. J. D. (2019). Learning from the experiences of Navajo engineers: Looking towards the development of a cross-cultural engineering curriculum. *Journal of Engineering Education, 108*(3), 355-376. https://doi.org/10.1002/jee.20287
7. **Foster, C.**, **Wigner, A.**, Lande, M., & Jordan, S. S. (2018). Learning from the parallel pathways of Makers to broaden pathways to engineering. *International Journal of STEM Education*, *5*(6). https://doi.org/10.1186/s40594-017-0098-8
8. **Weiner, S.**, Lande, M., & Jordan, S. (2018). The Engineer of 2020, in the Making: Understanding how young adults develop Maker identities and the implications for education reform. *International Journal of Engineering Education, 34*(2B).
9. Wilczynski, V., **Wigner, A.**, Lande, M., & Jordan, S. (2017). The value of higher education academic makerspaces for accreditation and beyond. *Planning for Higher Education Journal*, *46*(1), 32–40.
10. Jordan, S., & Adams, R. (2016). Perceptions of success in virtual cross-disciplinary design teams in large multi-national corporations. *CoDesign, 12*(3). https://doi.org/10.1080/15710882.2016.1146303
11. Jordan, S., & Lande, M. (2016). Additive innovation in design thinking and making. *International Journal of Engineering Education, 32*(3). http://www.ijee.ie/latestissues/Vol32-3B/14_ijee3229ns.pdf
12. Jordan, S. S., Pereira, N., & Dalrymple, O. (2016). The impact of design swapping on student design sketch quality. *International Journal of Engineering Education, 32*(5).
13. **Oplinger, J.**, Lande, M., Jordan, S., & **Camarena, L.** (2016). Making leaders: Leadership characteristics of makers and engineers in the maker community. *American Journal of Engineering Education, 7*(2). https://doi.org/10.19030/ajee.v7i2.9833

Refereed Journal Publications – In Review and Revision

Key: **bold** = graduate student underlined = undergraduate student

1. Dickens, M., Lande, M., & Jordan, S.. PARENTAL ADVISORY: The Roles that Parents Take in their Young Maker's Lives and the Implications for the Museum Community. *Journal of Pre-College Engineering Education. (in revision)*
2. Golka, M., & Jordan, S. Closing the gap: An investigation into the barriers and enablers to cooperative education at the New American University. *Advances in Engineering Education. (in revision)*

Refereed Journal Publications – In Preparation

Key: **bold** = graduate student underlined = undergraduate student

1. Jordan, S., & **Foster, C.** Looking towards the development of a cross-cultural engineering curriculum: Learning from the experiences of Navajo middle school and high school students. *Journal of American Indian Education. (in final preparation)*
2. Pangan, T., **Anderson, I.**, & Jordan, S. Understanding the impact of a culturally-relevant engineering design curriculum module through a lens of tribal critical race theory. *Journal of American Indian Education. (in final preparation)*
3. **La Place, C.**, **Clay, C.**, **Abhyankar, R.**, Jordan, S., & Bekki, J. Outcomes and future directions for an additive innovation-based pedagogical innovation incubator and community of practice. *International Journal of Engineering Education. (in final preparation)*
4. Jordan, S. Engineering a better component: A case study of success in a virtual engineering design team. *Journal of Engineering Design. (in preparation)*
5. Jordan, S. New product introduction process: A case study of success in a virtual engineering design team. *Qualitative Research in Organizations and Management. (in preparation)*
6. Jordan, S. Redesigning a component: A case study of success in a virtual engineering design team. *Engineering Studies. (in preparation)*
7. Jordan, S., Lande, M., **Foster, C.**, & **Camarena, L.** Tenants of additive innovation: An ethos of sharing in the Maker community. *CoDesign*. *(in preparation)*

Refereed Conference Proceedings

Key: **bold** = graduate student underlined = undergraduate student

1. **Aboutajedyne, I.**, Jordan, S. S., & Aboutajeddine, A. (2022, August 23). *Work in progress: Using community-based participatory design and a context canvas to design engineering design courses.* 2022 ASEE Annual Conference & Exposition, Minneapolis, MN. https://peer.asee.org/41556 *(Design in Engineering Education Division)*
2. **La Place, C.**, & Jordan, S. (2022, August 23). *Adapting hackathon-honed skills toward software engineering capstone.* 2022 ASEE Annual Conference & Exposition, Minneapolis, MN. https://peer.asee.org/41732 *Software Engineering Division)*
3. **Sundaram, B.**, Kellam, N., & Jordan, S. S. (2021, July 26). *Understanding the perspectives of empathy among engineering faculty members.* 2021 ASEE Virtual Annual Conference. https://peer.asee.org/37971 *(Student Division)*
4. **Ali, H.**, **Abhyankar, R.**, Brunhaver, S. R., Bekki, J. M., Jordan, S. S., & Lande, M. (2020, June 22). *An Additive Innovation-Based Faculty Development Program: Methods for Case Study Research*. 2020 ASEE Virtual Annual Conference. https://peer.asee.org/34102 *(NSF Grantees Poster Session)*
5. **La Place, C.**, & Jordan, S. S. (2020, June 22). *WIP: Building a Bridge Between Hackathons and Software Engineering Capstones Through Adaptive Expertise*. 2020 ASEE Virtual Annual Conference. https://peer.asee.org/35524 *(Software Engineering Division)*
6. **Ali, H.**, Bekki, J. M., Brunhaver, S. R., Jordan, S. S., & Lande, M. (2019, June 15). *Pedagogical Ninjas: Using an Additive Innovation Cycle for Faculty Development of Teaching-focused Faculty*. 2019 ASEE Annual Conference & Exposition. https://peer.asee.org/33164 *(Faculty Development Division)*
7. **Anderson, I.**, & Jordan, S. S. (2019, June 15). *Work in Progress: Seeking Wa:k Community Perspectives on Engineering*. 2019 ASEE Annual Conference & Exposition. https://peer.asee.org/33646 *(Minorities in Engineering Division)*
8. Sohoni, S. A., Jordan, S. S., **Kittur, J.**, & Pereira, N. L. (2019, June 15). *Work in Progress: Integrating Differentiated Instruction and Project-Based Learning to Teach Embedded Systems*. 2019 ASEE Annual Conference & Exposition. https://peer.asee.org/32401 *(ECE Division)*
9. **Anderson, I.**, & Jordan, S. S. (2018). Engineering connections in a Native American community and culture. In *Proceedings of the American Society for Engineering Education Annual Conference and Exposition*. Salt Lake City, UT. https://peer.asee.org/30405 *(Minorities in Engineering Division)*
10. Horton, P., Jordan, S., **Weiner, S.**, & Lande, M. (2018). Project-based learning among engineering students during short-form hackathon events. In *Proceedings of the American Society for Engineering Education Annual Conference and Exposition*. Salt Lake City, UT. https://peer.asee.org/30901 *(Design in Engineering Education Division)*

Refereed Conference Proceedings

Key: **bold** = graduate student underlined = undergraduate student

11. Jordan, S. S., Betoney, C. A., Pangan, T. J. D., **Anderson, I.**, & **Fernandez, J. A.** (2018). Results from the Implementation of Culturally-relevant Engineering Design Curriculum for the Navajo Nation and Future Directions. In *Proceedings of the American Society for Engineering Education Annual Conference and Exposition*. Salt Lake City, UT. https://peer.asee.org/30081 *(Diversity and NSF Grantees Poster Session)*
12. McKenna, A. F., Bekki, J. M., Brunhaver, S. R., Carberry, A. R., Kellam, N. N., Lande, M., London, J. S., & Jordan, S. S. (2018). Progress on the Pathway to Instigating a Revolution of Additive Innovation. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition.* Salt Lake City, UT. https://peer.asee.org/29856 *(NSF Grantees Poster Session)*
13. **Sheppard Jr., M. S.**, Jordan, S. S., Lande, M., & McKenna, A. F. (2018). Exploring Making-based Pedagogy in Undergraduate Mezzanine-level Engineering Courses. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition*. Salt Lake City, UT. https://peer.asee.org/30492 *(Educational Research and Methods Division)*
14. **Weiner, S.**, Lande, M., & Jordan, S. (2018). What have we "learned" from Maker Education research? A Learning Sciences-Based Review of ASEE Literature on the Maker Movement. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition*. Salt Lake City. UT. https://peer.asee.org/31235 *(Educational Research and Methods Division)*
15. Jordan, S., White, K., **Anderson, A.**, Betoney, C., Pangan, T., & Foster, C. (2017). Culturally-relevant engineering design curriculum for the Navajo Nation. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* Columbus, OH. https://peer.asee.org/27902 *(NSF Grantees Poster Session)*
16. Lande, M., & Jordan, S. (2017). Young Makers becoming the engineers of the future and implications. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* Columbus, OH. https://peer.asee.org/27935 *(NSF Grantees Poster Session)*
17. La Place, C., Jordan, S., Lande, M., & **Weiner, S.** (2017). Engineering students rapidly learning at hackathon events. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* Columbus, OH. https://peer.asee.org/28260 *(Design in Engineering Education Division)*
18. Larson, J., Lande, M., Jordan, S., & **Weiner, S.** (2017). Makers as adaptive experts-in-training: How Maker design practices could lead to the engineers of the future. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* Columbus, OH. https://peer.asee.org/28640 *(Educational Research and Methods Division)*

Refereed Conference Proceedings

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19. Mabey, M., Jordan, S., Lande, M., & **Weiner, S.** (2017). A comparison of Maker and Entrepreneurial Characteristics. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* Columbus, OH. https://peer.asee.org/27454 *(Entrepreneurship & Engineering Innovation Division)*
20. **Weiner, S.**, Lande, M., & Jordan, S. (2017). Making identities: Understanding the factors that lead young adults to identify with the Maker Movement. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* Columbus, OH. https://peer.asee.org/28642 *(Educational Research and Methods Division)*
21. Larson, J., Jordan, S., & Lande, M. (2017). The Engineer of the Future as a Lifelong Learner: Making Engineers of 2020 through a framework of adaptive design expertise. In *Proceedings of the Mudd Design Workshop X: Design and the Future of the Engineer of 2020*, Harvey Mudd College, Claremont, CA.
22. **Weiner, S.**, Lande, M., & Jordan, S. (2017). The Engineer of 2020, in the Making: Understanding how young adults develop Maker identities and the implications for education reform. In *Proceedings of the Mudd Design Workshop X: Design and the Future of the Engineer of 2020*, Harvey Mudd College, Claremont, CA.
23. Lande, M., Jordan, S., & Weiner, S. (2017). Making people and projects: Implications for designing Making-based learning experiences. In *Proceedings of the American Society for Engineering Education Pacific Southwest (ASEE PSW) Section Meeting*, Tempe, AZ. https://peer.asee.org/29225
24. McKenna, A., Kellam, N., Lande, M., Brunhaver, S., Jordan, S., Bekki, J., Carberry, A., & London, J. (2016). Instigating a revolution of additive innovation: An educational ecosystem of Making and risk taking. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* New Orleans, LA. https://peer.asee.org/27315 *(NSF Grantees Poster Session)*
25. **Wigner, A.**, Lande, M., & Jordan, S. (2016). How can Maker skills fit in with accreditation demands for undergraduate engineering programs? In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* New Orleans, LA. https://peer.asee.org/25468 *(Educational Research and Methods Division)*
26. Mabey, M., Jordan, S., & Lande, M. (2016). Young Makers compare science fairs and Maker Faires. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* New Orleans, LA. https://peer.asee.org/27066 *(Pre-College Engineering Division)*
27. Lande, M., & Jordan, S. (2016). What do Young Makers learn? In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* New Orleans, LA. https://peer.asee.org/27191 *(NSF Grantees' Poster Session)*

Refereed Conference Proceedings

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28. Larson, J., Lande, M., & Jordan, S. (2016). Supporting K-12 student self-direction with a Maker family ecosystem. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition*, New Orleans, LA. https://peer.asee.org/25972 *(Pre-College Engineering Division)*
29. Dickens, M., Jordan, S., & Lande, M. (2016). Parents and roles in informal Making education: Informing and implications for Making in museums. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition*, New Orleans, LA. https://peer.asee.org/25854 *(Pre-College Engineering Division)*
30. McKenna, A., Kellam, N., Lande, M., Brunhaver, S., Jordan, S., Carberry, A., Bekki, J., & London, J. (2016). Capturing the ecosystem and culture to support risk-taking and additive innovation: Laying the groundwork. Paper presented at the *American Association for the Advancement of Science Envisioning the Future of Undergraduate STEM Education: Research and Practice Symposium*, Washington, D.C.
31. Jordan, S., & Lande, M. (2015). Is the engineer of 2035 a maker? In *Proceedings of the IEEE Frontiers in Education (FIE) Conference* (pp. 1053-1054), El Paso, TX. *(Special Session)*
32. Jordan, S. (2015). CAREER: Engineering design across Navajo culture, community, and society. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Seattle, WA. https://peer.asee.org/23668 *(NSF Grantees Poster Session)*
33. Douglas, E., Jordan, S., Lande, M., & **Bumbaco, A.** (2015). Artifact elicitation as a method of qualitative inquiry in engineering education. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Seattle, WA. https://peer.asee.org/23574 *(Educational Research and Methods Division)*
34. **Foster, C.**, **Wigner, A.**, Lande, M., & Jordan, S. (2015). Welcome to the maker movement: Parallel education pathways of adult makers. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Seattle, WA. https://peer.asee.org/25052 *(Educational Research and Methods Division)*
35. **Foster, C.**, Dickens, M., Jordan, S., & Lande, M. (2015). Learning from toy makers in the field to inform teaching engineering design in the classroom. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Seattle, WA. https://peer.asee.org/24407 *(Design in Engineering Education Division)*
36. Heiman, A., Lande, M., & Jordan, S. (2015). What is making? What is engineering? In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Seattle, WA. https://peer.asee.org/25062 *(NSF Grantees Poster Session)*

Refereed Conference Proceedings

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37. Meadows, L., Sekaquaptewa, D., Paretti, M., Pawley, A., Jordan, S., Chachra, D., & Minerick, A. (2015). Interactive panel: Improving the experiences of marginalized students on engineering design teams. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Seattle, WA. https://peer.asee.org/24344 *(Minorities in Engineering Division)*
38. Oplinger, J., Lande, M., & Jordan, S. (2015). Leadership characteristics within the Making community. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Seattle, WA. https://peer.asee.org/24394 *(Engineering Leadership Development Division)*
39. Jordan, S., & Lande, M. (2015). Additive innovation in design thinking and making. In *Proceedings of the Mudd Design Workshop IX: Design Thinking in Design Education* (pp. 132-140), Harvey Mudd College, Claremont, CA.
40. Pereira, N., Jordan, S., & Dalrymple, O. (2015). Lessons from teaching engineering design in a summer camp for high-ability students: A chain re-action research study. Paper presented at the *Annual Meeting of the American Educational Research Association*, Chicago, IL (Session #70.065-8).
41. Jordan, S., & Lande, M. (2014). Might Young Makers be the engineers of the future? In *Proceedings of the IEEE Frontiers in Education (FIE) Conference* (pp. 1408-1411), Madrid, Spain.
42. Lande, M., & Jordan, S. (2014). Making it together, locally: A Making community learning ecology in the Southwest. In *Proceedings of the IEEE Frontiers in Education (FIE) Conference* (pp. 2448-2454), Madrid, Spain.
43. Chavela Guerra, R., Smith, K., McKenna, A., Swan, C., Korte, R., Jordan, S., Lande, M., & MacNeal, R. (2014). Innovation corps for learning: Evidence-based Entrepreneurship™ to improve (STEM) education. In *Proceedings of the IEEE Frontiers in Education (FIE) Conference* (pp. 2997-3001), Madrid, Spain.
44. **Foster, C.**, & Jordan, S. (2014). A philosophy of learning engineering and a Native American philosophy of learning; An analysis for congruency. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Indianapolis, IN. https://peer.asee.org/19976 *(Minorities in Engineering Division)*
45. **Foster, C.**, Lande, M., & Jordan, S. (2014). An ethos of sharing in the Maker community. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Indianapolis, IN. https://peer.asee.org/19892 *(Design in Engineering Education Division)*
46. Lande, M., & Jordan, S. (2014). Methods for examining the educational pathways of adult Makers. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Indianapolis, IN. https://peer.asee.org/22836 *(Educational Research and Methods Division)*

Refereed Conference Proceedings

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47. **McCall, S.**, Dalrymple, O., & Jordan, S. (2014). Curriculum exchange: Teaching energy concepts using chain reaction machines. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Indianapolis, IN. https://peer.asee.org/20240 *(K-12 & Pre-College Engineering Division)*

48. **McCall, S.**, Taylor, R., Dalrymple, O., & Jordan, S. (2014). Teaching energy concepts using chain reaction machines. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Indianapolis, IN. https://peer.asee.org/23094 *(K-12 & Pre-College Engineering Division)*

49. Oplinger, J., Heiman, A., Dickens, M., **Foster, C.**, Jordan, S., & Lande, M. (2014). Making and engineering: Understanding similarities and differences. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Indianapolis, IN. https://peer.asee.org/22814 *(NSF Grantees Poster Session)*

50. Pawley, A., Carberry, A., Cardella, M., Carnasciali, M., Daly, S., Gorlewicz, J., Herman, G., Hynes, M., Jordan, S., Kellam, N., Lande, M., Verleger, M., & Yang, D. (2014). The PEER Collaborative: Supporting engineering education research faculty with near-peer mentoring unconference workshops. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Indianapolis, IN. https://peer.asee.org/23170 *(Continuing Professional Development Division)*

51. Jordan, S., Cardella, M., Lande, M., & **Ali, H.** (2013). Out of their world: Using alien-centered design for teaching empathy in undergraduate design courses. In *Proceedings of the IEEE Frontiers in Education (FIE) Conference* (pp. 907-913), Oklahoma City, OK.
*(**Nominated for the Ben Dasher Award** for best paper and presentation)*

52. Jordan, S., & Lande, M. (2013) Should Makers be the engineers of the future? In *Proceedings of the IEEE Frontiers in Education (FIE) Conference* (pp. 815-817), Oklahoma City, OK.

53. Lande, M., Jordan, S., & Nelson, J. (2013). Defining Makers making: Emergent practice and emergent meaning. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, Atlanta, GA. https://peer.asee.org/19382 *(NSF Grantees' Poster Session)*

54. Jordan, S., & Lande, M. (2012). Practicing needs-based, user-centered design for electrical engineering project course innovation. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition*, San Antonio, TX. https://peer.asee.org/21808 *(Electrical and Computer Division)*

55. Jordan, S., Dalrymple, O., Pereira, N., Astatke, Y., & Fletcher, J. D. (2012). Design swapping as a method to improve design documentation. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* San Antonio, TX. https://peer.asee.org/21160
*(**Finalist for the best paper** in the Design in Engineering Education Division)*

Refereed Conference Proceedings

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56. Morley, K., Pawley, A., Jordan, S. S., & Adams, R. (2011). Gender and engineering: photo elicitation as a method of inquiry. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* Vancouver, British Columbia. https://peer.asee.org/18019 *(Educational Research and Methods Division)*
57. Adams, R.S., Mann, L., Forin, T., and Jordan, S. (2009). Cross-disciplinary practice in engineering contexts. In N. Bergendahl, M. Grimheden, L. Leifer, P. Skogstad, and U. Lindemann (Eds.), *Proceedings of the 17th International Conference on Engineering Design (ICED'09), Stanford University, Vol. 9: Human Behavior in Design* (pp. 343-355). Glasgow: The Design Society.
58. Jordan, S., Adams, R., Pawley, A., & Radcliffe, D. (2009). Work in progress: The affordances of photo elicitation as a research and pedagogical method. *Proceedings of the IEEE Frontiers in Education (FIE) Conference*, San Antonio, TX.
59. Jordan, S., & Pereira, N. (2009). Rube Goldbergineering: Lessons in teaching engineering design to future engineers. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition,* Austin, TX. https://peer.asee.org/5687 *(Design in Engineering Education Division)*
60. Jordan, S., & Adams, R. (2008). …A good imagination and a pile of junk. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference & Exposition*, Pittsburgh, PA. https://peer.asee.org/4151 *(Entrepreneurship & Engineering Innovation Division)*

Refereed Conferences Without Proceedings

1. Adams, R., Mann, L., Forin, T., Daly, S., & Jordan, S. (2008). Ways of experiencing cross-disciplinary practice in engineering contexts. Paper presented at the *Research in Engineering Education Symposium (REES)*, Davos, Switzerland.
2. Jordan, S., & Pereira, N. (2008). Design twice, build once: teaching engineering design in the classroom. Paper presented at the *National Center for Engineering and Technology Education (NCETE) Conference on Research in Engineering and Technology Education,* St. Paul, MN.
3. Jordan, S. (2008). Different teams, different needs: an examination of virtual engineering design teams. Paper presented at the *ACM Conference on Computer Supported Collaborative Work (CSCW),* San Diego, CA.
4. Adams, R., Mann, L., Jordan, S., & Daly, S. (2007). Exploring the boundaries: Language, roles, and structures in cross-disciplinary design teams. Paper presented at the *7th Annual Design Thinking Research Symposium (DTRS7)*, London.

Invited Book Chapters

1. Jordan, S. (2013). Virtual teams. In K. Smith (Ed.), *Teamwork and project management* (4th ed., pp. 12-13). Boston: McGraw-Hill.
2. Adams, R., Mann, L., Jordan, S., & Daly, S. (2009). Exploring the boundaries: Language, roles, and structures in cross-disciplinary design teams. In J. McDonnell, & P. Lloyd (Eds.), *About: designing. Analysing design meetings* (Chapter 19). London: Taylor and Francis Group.

4.2 Invited Presentations

Invited Keynotes

1. Jordan, S. (2018, December 1). *Inspiring students to invent the future in the creative classroom*. Invited keynote at the Mesa Public Schools Professional Development Day, Mesa, AZ.
2. Jordan, S. (2018, February 10). *Problem solving in a digital age: Tackling real-world problems*. Invited keynote at the STEM AZ Collaborative Annual Unconference, Phoenix, AZ.
3. Jordan, S. (2016, December 9). *Navajo engineering professionals' experience of design in the context of their culture.* Invited keynote at the Arizona Educational Research Organization (AERO) Annual Meeting, Tempe, AZ.
4. Anderson, I., Fernandez, J., & Jordan, S. (2016, September 16). *Engineering design across Navajo culture, community, and society*. Invited keynote at the Diné BiOlta School Board Association, Inc. Fall Conference: "Thinking Accountability", Albuquerque, NM.
5. Jordan, S. (2016, April 21). *Inspiring students to invent the future with Rube Goldberg machines.* Invited keynote at the IgniteSTEM Conference sponsored by Princeton University and Columbia University, New York, NY. http://ignitestem.org https://www.youtube.com/watch?v=4Lm1tAnfTZs
6. Jordan, S., Pereira, N., White, K., & Phillips, J. (2015, November 12). *The art of invention: Developing engineering talent among Navajo youth with chain-reaction machines.* Invited keynote at the Identifying and serving gifted and talented Native American students: Future directions for research, partnerships, and practices pre-convention for the 62nd Annual Convention & Exhibition of the National Association for Gifted Children, Phoenix, AZ.
7. Jordan, S. (2015, August 4). *Engineering communities of sharing: Insights from the Maker movement.* Invited keynote at the 2015 Freshman Year Engineering Education Conference, Virginia Tech, Blacksburg, VA.

Invited Keynotes

8. Jordan, S. (2015, April 11). *Rube Goldberg and Making: Engineering cultures of innovation*. Invited keynote at the Innovention 2015 weekend, Gonzaga University, Spokane, WA.

Invited Talks

1. Brayboy, B., & Jordan, S., et al. (2022, October 28). *Meaningful research: Effectively engaging with tribal communities and working on tribal lands.* Invited panelist at conference sponsored by Arizona State University Office of American Indian Initiatives, Tempe, AZ.
2. Jordan, S. S. (2022, May 23). *Culturally-relevant engineering education with the Diné engineering design process*. Invited virtual talk for the Playful Engineering-Based Learning Team on the Navajo Nation.
3. Lerman, L., Stoesz, P., Jordan, S., et al. (2022, April 27). *Critique is creative: Feedback dialogue in teaching and learning.* Invited panelist for the ASU FRANKx Lecture Series.
4. Jordan, S. S. (2022, April 1). *Reflections on design-based research, community-based participatory design, and our roles as researchers engaging with systemically marginalized communities.* Invited virtual talk as part of the Department of Engineering Education at The Ohio State Seminar Series.
5. Jordan, S. S. (2022, March 11). *Making, makerspaces, and the future of ECE education* [Webinar]. Invited talk for the ASA-SEMI Proposal Planning Workshop Session #2.
6. Jordan, S. S. (2022, February 9). *Why STEAM should be the future of STEM education.* Invited talk at the International Test and Evaluation Association (ITEA) Lunch and Learn Series.
7. Jordan, S., Artiles Fonesca, M., Coley, B., & Joseph, C. (2022, January 13). *Graduate experience of (in)equity in engineering: What administrators should do.* Invited talk to university Presidents and Provosts at the Association of Independent Technological Universities Annual Virtual Meeting.
8. Jordan, S. S. (2021, November 18). *Engineering design across Diné (Navajo) culture, community, and soviety*. Invited virtual talk as part of the University of San Diego ExSJ Seminar Series.
9. Jordan, S. (2021, February 16). Invited "Camelback Chats" virtual talk to high school students interested in STEM, Camelback High School, Phoenix, AZ.
10. Deliwala, S., Asare, P., Jordan, S., & Smith, C. (2020, December 1). *Lessons learned & plans for the spring* [Webinar]. Presented at the Electrical and Computer Engineering Department Heads Association (ECEDHA) Lab Pros Network Summit. https://www.ecedha.org/Meetings/ECEDHA-Summit-Series/ECEDHA-Lab-Pros-Network-Summit-December-2020

Invited Talks

11. Jordan, S., Smith, C., Kane, P., Pham, K., Liu, M., Brumley, T., Lamparter, M., Khoshabeh, R., Deliwala, S., & Easley, M. (2020, June 25). *Making it educational, real, and fun: Crowdsourcing solutions for hands-on ECE education* [Webinar]. Electrical and Computer Engineering Department Heads Association (ECEDHA). https://www.ecedha.org/Working-Groups/ECEDHA-Lab-Pros-Network/ECE-Lab-Pros-Network-Zoom-Calls
12. Jordan, S. (2020, October 20). Presented my personal STEM/STEAM pathways story for the Mesa Public Schools Chief Science Officers Fall Cabinet Meeting [Webinar].
13. Jordan, S., Le Doux, J., Turns, J., Adams, R., & Cheville, A. (2020, April 9). *What's your story? Using storytelling to propel research and teaching*. Invited webinar for 250 members of the American Society for Engineering Education.
14. Jordan, S. (2020, February 7). *Future Chapter Presidents: Development of a culturally-relevant engineering design curriculum for Navajo students.* Invited talk at the University of Illinois ISE Research Seminar, Urbana-Champaign, IL.
15. Jordan, S., White, K., Cook-Davis, A., Eustice, K., Betoney, C. A., Pangan, T. J. D., **Anderson, I.**, & Fernandez, J. (2019, November 8). Engineering Design Across Navajo Culture, Community, and Society. Invited talk at the Navajo Nation Board of Education monthly meeting, Window Rock, AZ.
16. Brayboy, B., & Jordan, S. (2019, September 27). *Meaningful research: Effectively engaging with tribal communities and working on tribal lands.* Invited talk at conference sponsored by Arizona State University Office of American Indian Initiatives, Tempe, AZ.
17. Jordan, S. (2019, February 12). *Future Chapter Presidents: Development of a culturally-relevant engineering design curriculum for Indigenous students on the Navajo Nation.* Invited talk as part of the "What We Do" series at Central Saint Martins, London, UK.
18. Jordan, S., & Anderson, I. (2018, November 16). *Inventing the future with Navajo culture and engineering design*. Invited talk at the American Indian Science and Engineering Society (AISES) – Arizona State University chapter event for Native American Heritage Month, Tempe, AZ.
19. White, K., & Jordan, S. (2018, November 14). *The Navajo Nation CAREER design engineering curriculum project*. Invited talk at the AdvancED® Navajo Nation Fall Conference, Flagstaff, AZ.
20. Jordan, S., & Betoney, C. (2018, October 26). *Inventing the future with Navajo culture and engineering design*. Invited talk at the American Indian Science and Engineering Society (AISES) – Four Corners chapter meeting, Farmington, NM.
21. Jordan, S., & Anderson, I. (2018, August 29). *Inventing the future with Navajo culture and engineering design*. Invited talk at the American Indian Science and Engineering Society (AISES) - Phoenix chapter meeting, Phoenix, AZ.

Invited Talks

22. Jordan, S. (2018, May 3). Storytelling across cultures: *Inventing the future with Navajo culture and engineering design*. Invited talk at the Tufts Center for Engineering Education and Outreach, Medford, MA.
23. London, J., Gleghorn, V., Ireland, D., Jordan, S., Lee, W., & Villanueva, I. (2018, May 1). *Culturally responsive education – Why bother?* Invited panelist at the American Society for Engineering Education (ASEE) Collaborative Network for Engineering and Computing Diversity (CoNECD) Annual Conference, Crystal City, VA.
24. Jordan, S. (2018, April 11). *Storytelling across cultures: Inventing the future with Navajo culture and engineering design.* Invited Tempe Historical Society Lunch Talk, Tempe History Museum, Tempe, AZ.
25. Bornman, B., Jordan, S., Reichman, A., Ruiz, D., Tan, L., Woodson, S., & Wright, K. (2018, April 6). *Balancing community impact with student learning outcomes in community-based teaching and learning experiences.* Invited panelist at the Arizona State University Social Embeddedness Network Conference, Glendale, AZ.
26. Jordan, S. (2017, October 9). *Art of the machine: Rube Goldberg and the maker movement.* Invited "Feed Your Head" talk at Embry-Riddle Aeronautical University, Daytona Beach, FL.
27. Jordan, S. (2017, September 19). *Empowering students to invent the future with STEAM*. Invited talk at Gateway Polytechnic Academy, Mesa, AZ.
28. Jordan, S. (2017, April 4). *Storytelling across cultures: Inventing the future with Navajo culture and engineering design.* Invited talk at the Trustees of Arizona State University Meeting, Mesa, AZ.
29. Brayboy, B., & Jordan, S. (2016, October 20). *Meaningful research: Effectively engaging with tribal communities and working on tribal lands* Invited talk at conference sponsored by Arizona State University Office of American Indian Initiatives, Tempe, AZ.
30. Lande, M., Jordan, S., & Weiner, S. (2016, October 2). *Making research to educational practice.* Invited talk at the 2016 World Maker Faire New York, Corona, NY.
31. Jordan, S. (2016, September 9). *Putting the Maker in ChangeMaker: Lessons from the Maker Movement*. Invited talk at Next Generation STEM High School: A Forum Supported by the NSF, Washington, D.C.
32. Jordan, S. (2016, February 26). *Arts and the Creative Campus II: STEAM Curriculum for College*. Invited talk at Gateway Community College and the Maricopa Center for Learning and Instruction, Phoenix, AZ.

Invited Talks

33. Jordan, S., White, K., & Phillips, J. (2015, November 12). *Engineering design across Navajo culture, community, and society.* Invited talk at the Identifying and serving gifted and talented Native American students: Future directions for research, partnerships, and practices pre-convention for the 62nd Annual Convention & Exhibition of the National Association for Gifted Children, Phoenix, AZ.
34. Schlemper, B., Oberhauser, K., Svetlana, D., Popovic, Z., Jordan, S., & Vallieres, K. (2015, November 9). *Engaging students in authentic STEM discovery and innovation.* Invited talk at Next Generation STEM Learning for All: A Forum Supported by the NSF, Washington, D.C.
35. Jordan, S. (2015, October 16). *Navajo engineering professionals' experiences of design in the context of their culture.* Invited talk at Clemson University, Clemson, SC.
36. Jones, B., Jordan, S., Jennings, A., Moore, O., Major, J., & Slow, H. (2015, October 1). *Reaching new communities with STEM.* Invited talk at the 2015 Innovation Arizona Summit, Scottsdale Center for the Performing Arts, Scottsdale, AZ.
37. Jones-Davis, D., Hurst, A., Jordan, S., Bradford, K., & Valadez, J. (2015, September 27). *Building a nation of Makers: Celebrating the creativity, ingenuity, and diversity of the Maker community.* Invited talk at the 2015 World Maker Faire New York, Corona, NY.
38. Jordan, S. (2015, April 14). *Engineering storytelling across cultures.* Invited talk at the Science, Technology, and Society in Museums Conference, Arizona State University, Tempe, AZ.
39. Jordan, S. (2015, April 11). *The art of invention: Design thinking 101*. Invited talk at the Innovention 2015 weekend, Gonzaga University, Spokane, WA.
40. Jordan, S., & Lande, M. (2015, April 10). *Engineering and the Maker movement: Communities of sharing.* Invited talk at the Microchip Technology Inc. headquarters, Chandler, AZ.
41. Jordan, S. (2015, March 27). *Art of the machine: Rube Goldberg and the STEAM movement.* Invited talk as part of the STEM to STE[A]M Lecture Series, Gateway Community College, Phoenix, AZ.
42. Lande, M., & Jordan, S. (2014, October 23). Pathways of Makers. Invited talk at the *Higher Education Maker Summit*, Chandler, AZ.
43. Jordan, S. (2014, October 1). Art of the machine: Rube Goldberg and the Maker movement. Invited talk at Bucknell University, Lewisburg, PA.
44. Jordan, S. (2014, October 1). Rube Goldberg and Making: Engineering communities of sharing. Invited talk for the Bucknell University Culture and Technology Intersections Lecture Series, Lewisburg, PA.
45. Lande, M., & Jordan, S. (2014, September 17). Should Makers be the engineers of the future? Invited talk at MakerCon 2014, Corona, NY. Watch at https://www.youtube.com/live/nzFpeX0NosI?feature=share

Invited Talks

46. Jordan, S., & Lande, M. (2014, July 24). Pathways of Makers. Invited talk at the National Science Foundation Workshop: *Engineering and the Maker movement*, Washington, D.C.
47. Jordan, S. (2014, July 15). *Context-Centered Embedded Systems Education*. Invited talk at the International Test & Evaluation Association (ITEA) Phoenix Chapter Monthly Meeting, Tempe, AZ.
48. Jordan, S. (2014, May 21). *Inspiring future engineers in the Navajo Nation*. Invited talk at the American Indian Science and Engineering Society (AISES) chapter meeting, Phoenix, AZ.
49. Jordan, S. (2013, November 13). *My experience as a Maker*. Invited moderator at the Arizona State University College of Technology and Innovation Maker Summit, Chandler, AZ.
50. Jordan, S. (2013, October 18). *STEAM Machines™ + Dance*. Invited talk at the AIGA Phoenix Design Week PechaKucha, Phoenix, AZ.
51. Jordan, S. (2013, September 17). *The STEAM Machines™ K-12 enrichment program*. Invited talk at the International Test & Evaluation Association (ITEA) Phoenix Chapter Monthly Meeting, Tempe, AZ.
52. Ornstein, C., Beschloss, S., Dolin, P. A., Eschrich, J., Jordan, S., Mendoza, C., & Rorke-Davis, S. (2013, September 4). *How do interdisciplinary arts foster creative thinking and discovery?* Invited panelist at the Arizona SciTech Kickoff Conference, Scottsdale, AZ. Quoted in the Arizona Republic: http://www.azcentral.com/community/scottsdale/articles/20130903festival-helps-kids-mentally-plug-science.html
53. Jordan, S., & Lande, M. (2012, July 29 – 30). Invited guest lecture: *Design thinking*. ENGG1100 Engineering Design, Dr. Carl Reidsema, The University of Queensland, St. Lucia, Australia.
54. Carberry, A., Abulencia, J., Cardella, M., Jordan, S., Kellam, N., & Steinhauer, H. (2011, June 29). *Student Constituent Committee/New Engineering Educators Roundtable panel*. Invited panelist at the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Vancouver, British Columbia.
55. Jordan, S. (2011, May 11). *How to design a winning Rube Goldberg machine.* Invited talk at The Gateway School, New York, NY.
56. Jordan, S. (2008, October 2). *Design Squad: A journey into reality (TV)*. Invited talk for the Purdue University School of Engineering Education Seminar Series, West Lafayette, IN.
57. Jordan, S. (2006, December 11). *...A good imagination and a pile of junk.* Invited talk at The Orchard School 7th grade Rube Goldberg project kickoff, Indianapolis, IN.

Invited Talks

58. Jordan, S. (2006, September 22). *…A good imagination and a pile of junk*. Invited talk at the Purdue University Eta Kappa Nu Beta Chapter Centennial Celebration dinner, West Lafayette, IN.
59. Jordan, S. (2005, October 7). Lead presenter of *Batteries included. Rube Goldberg 101: From mind to masterpiece.* Invited talk at the Purdue University President's Council Back to Class session, West Lafayette, IN.
60. Jordan, S., & Hollingsworth, K. (2005, September 19). *Rube Goldberg 101: From mind to masterpiece*. Invited talk at the Contemporary Arts Center, Cincinnati, OH.

Invited Poster Presentations

Key: **bold** = graduate student underlined = undergraduate student

1. Jordan, S. (2016, January 28). *Engineering design across Navajo culture, community, and society.* Invited poster presentation at the Arizona State University Learning Innovation Showcase, Tempe, AZ.
2. Betoney, C., **Foster, C.**, & Jordan, S. (2014, December 11). *CAREER: Engineering design across Navajo culture, community, and society.* Invited poster presentation at the Secretary of the Department of Energy Poster Session and Reception, Arizona State University, Tempe, AZ.
3. **Foster, C.**, Jordan, S., Baker, D., Fixico, D., Lande, M., McKenna, A., & Semken, S. (2014, December 11). *Stories of additive innovation: Approaches to technical innovation within Native American communities.* Invited poster presentation at the Secretary of the Department of Energy Poster Session and Reception, Arizona State University, Tempe, AZ.

Invited Workshops

Key: **bold** = graduate student underlined = undergraduate student

1. Pan, R., Stabenfeldt, S., Chan, C., Jordan, S., & Neithalath, N. (2020, April 30). *Planning your sabbatical*. Invited panelist for an Ira A. Fulton Schools of Engineering Master Mentor virtual workshop.
2. Jordan, S. (2020, February 7). *What's your story? Using storytelling to propel research and teaching.* Invited workshop for the University of Illinois ISE and SCD programs, Urbana-Champaign, IL.
3. Betoney, C., **Foster, C.**, & Jordan, S. (2014, December 11). *CAREER: Engineering design across Navajo culture, community, and society.* Invited poster presentation at the Secretary of the Department of Energy Poster Session and Reception, Arizona State University, Tempe, AZ.

Invited Summit / Symposia / Task Force Participation

1. **National Academy of Engineering / ASEE Engineering the Inclusive Mindset for the Future: A Blueprint for Systemic Change in Engineering Education Task Force member.** 12/2022 – present
2. **National Science Board Listening Session**, Arizona State University, Tempe, AZ. 8/14/2019
3. **Engineering Education AfterNext**, Purdue University, West Lafayette, IN. 7/2018
4. **Active Learning in STEM Education: A Symposium Supported by the NSF**, Washington, D.C. 9/8/2016
5. **White House Summit on Next Generation High Schools**, Washington, D.C. 11/10/2015
6. **National Science Foundation Maker Summit,** Washington, D.C. 11/2-3/2015
7. **7th Annual National Academy of Engineering Frontiers of Engineering Education (FOEE) Symposium**, Irvine, CA. 10/25-28/2015
8. **Engineering Faculty Engagement in Learning Through Service Workshop**, Boulder, CO. 9/2012

4.3 Research Support – External Awards

Grant Title	Investigators	Years Active	Funding Agency & Program	Amount (% Credit)
DTI: Culturally situated immersive virtual learning and engineering design to build STEM capacity in Diné communities *(pending)*	*PI:* Jordan, S.	2023 – 2027*	NSF ITEST	$1,300,000 (100%, *pending*)
This study will develop and test two hybrid culturally-situated immersive learning environments for Diné (Navajo) students centered around energy and water futures. This study will advance knowledge of blending (1) virtual 3-D immersive learning environments with (2) hands-on project-based learning, in (3) culturally-situated contexts to support students to design energy and water futures.				

Grant Title	Investigators	Years Active	Funding Agency & Program	Amount (% Credit)
1. Promoting Aspirations in Science, Technology, Engineering, and Mathematics through Youth and Family Engagement	*PI:* Judson, E. *Co-PI:* Chhetri, N., Jordan, S., Hailu, M., & Klucsarits, P.	2021 – 2024	NSF ITEST (DRL-2045306)	$1,275,097 (8%)
The focus of this project is to broaden participation of refugee communities in STEM and information and communication technology. The objectives of the project are to (a) develop strong levels of college social and STEM capital; (b) improve self-efficacy as it relates to participating in STEM career path activities; (c) improve STEM identity, interest, and aspirations; and (d) improve value and expectations for success associated with STEM careers.				
2. STEAM Lab/Kits Projects	*PI:* Jordan, S.	2022 – 2024*	DEFENSEWERX	$50,000 (*2022*) + $50,000 (*pending*) (100%)
The purpose of this project is to engage families and schools in competitions and events to promote STEAM interest and career pathways.				
3. Advancing the Future of Native American K-12 STEM Education	*PI:* Jordan, S.	2021 – 2023	Rogers Family Foundation	$100,000 (100%)
The purpose of this project is to develop culturally-sustaining curriculum theory and lessons for Indigenous tribes in the Southwest.				
4. Investigating the approaches for improving computer science pathways at Native American tribal schools	*PI:* Amresh, A. *Senior Personnel:* Jordan, S.	2021 – 2023	NSF BCSER (EES-2246200)	$349,651 (15%)
The purpose of this project is to broaden pathways in computer science for Native American students via the co-development of culturally relevant computer science curriculum.				
5. Additive Innovation: An Educational Ecosystem of Making and Risk Taking	*PI:* McKenna, A. *Co-PI:* Bekki, J., Brunhaver, S., Jordan, S., Kellam, N. & Lande, M.	2015 – 2021	NSF IUSE/PFE: RED (EEC-1519339, funding rate 6%)	$1,993,593 (14%)
This study sought to (1) characterize the ecosystem within the Polytechnic School at ASU; (2) Realize a mindset of additive innovation; (3) Establish an understanding of the engineering program culture and dynamics; and (4) identify and implement administrative structures to support cultural change.				

Grant Title	Investigators	Years Active	Funding Agency & Program	Amount (% Credit)
6. Workshop: Making and Makerspaces in Electrical and Computer Engineering Education	*PI:* Jordan, S. *Co-PI:* Cheville, A., Smith, C., & Maciejewski, A.	2019 – 2022	NSF (EEC-1853158)	$99,855 (100%)
This workshop was part of the ECE Department Heads Association Conference in 2022 and sought to (1) Collect, understand, and document best practices among ECE-themed makerspaces, (2) Discuss how ECE could be re-branded with making, and (3) Create a robust network of ECE Making and Makerspace supporters, managers, staff, and students.				
7. QESST ERC Supplement: Navajo Nation	*Senior Personnel:* Jordan, S.	2020 – 2021	NSF ERC (EEC-1041895)	$50,000 (0%)
The purpose of this supplement was to extend my CAREER work to add additional Diné culturally-relevant curriculum modules relating to solar energy, and offer multiple teacher PD workshops.				
8. CAREER: Engineering Design Across Navajo Culture, Community, and Society	*PI:* Jordan, S.	2014 – 2020	NSF CAREER (EEC-1351728)	$534,328 (100%)
This study seeks to (1) explore the ways in which Navajo students and Navajo professionals experience and understand engineering design in the context of their culture, community, and society; (2) conduct a design-based research study on the development of culturally-contextualized theory of learning and curriculum modules that will be piloted in several schools in the Navajo Nation; and (3) create and pilot tools to evaluate Navajo students' experience of engineering design.				
9. Workshop: Culturally Relevant Enterprise Development (CRED) for Tribal Colleges Listen and Learn	*PI:* Jordan, S.	2019 – 2020	NSF i-Corps (TI-1931001)	$48,570 (100%)
This workshop brought together Native American and Alaska Native leaders who are part of the entrepreneurial ecosystem, with the goal of launching an i-Corps cohort for NA/AN entrepreneurs.				
10. Arizona Junior Science and Humanities Symposium	*PI:* Jordan, S.	2019 – 2020	DOD-ARMY-ARL: Army Research Office	$17,100 (100%)
This grant was to host the AZ JSHS at the ASU Polytechnic Campus.				
11. Broadening the Reach of Engineering through Community Engagement (BRECE)	*PI:* Jordan, S. *Co-PI:* Henderson, M., Dalrymple, O.	2013 – 2019	NSF S-STEM (DUE-1259356)	$621,428 40% (2013) 60% (2014 – 2019)
The BRECE Scholars Program provided 4 years of mentoring, academic and financial support to cohorts of financially challenged, and academically talented students to pursue and earn engineering baccalaureate degrees at ASU.				

Grant Title	Investigators	Years Active	Funding Agency & Program	Amount (% Credit)
12. Might Young Makers Be the Engineers of the Future?	*PI:* Jordan, S. *Co-PI:* Lande, M.	2013 – 2017	NSF REE (EEC-1329321)	$300,000 (50%)
The goal of this study was to understand Young Makers in K-12 and how their knowledge, skills, and attitudes might prepare them to pursue advanced STEM education and careers.				
13. Collaborative Research: Foundations of Social and Ethical Responsibility Among Undergraduate Engineering Students: Comparing Across Time, Institutions, and Interventions	*PI*: Jordan, S. *Co-PI:* Wetmore, J.	2015 – 2016	NSF CCE-STEM (SES-1449490)	$160,000 (50%)
This multi-institution study (with lead Purdue University, Colorado School of Mines, and Brigham Young University), sought to (1) understand what engineering students perceive as responsible (and irresponsible) professional conduct, and socially just (and unjust) technical practices; and (2) measure how foundational measures and understandings of social and ethical responsibility change during a four-year engineering degree program.				
14. I-Corps-L: Leveraging Maker Pathways Research Projects to Scale Steam + Making Outreach Programs	*PI:* Jordan, S. *Co-PI:* Lande, M.	2015 – 2016	NSF i-Corps-L (IIP-1514515)	$50,000 (50%)
This study sought to sustain and scale STEAM Labs™ and Making + Tinkering camp educational innovations.				
15. I-Corps for Learning (I-Corps-L): A Pilot Initiative to Scale Educational Innovations	*PI:* Smith, K. *Co-PI:* McKenna, A. *Senior Personnel*: Jordan, S. & Lande, M.	2013 – 2016	NSF TUES CRP Workshop (DUE-1355431)	$219,165 (25%)
This project built on the NSF I-Corps program, which uses an entrepreneurial approach to broaden the impact of engineering research, and extends it to help NSF PIs scale their funded educational innovations.				
16. Should Makers be the engineers of the future?	*PI:* Lande, M. *Co-PI:* Jordan, S.	2012 – 2015	NSF REE (EEC-1232772)	$249,385 (50%)
The goal of this study was to develop theory illuminating the knowledge, skills, and attitudes of Makers and describing their pathways in formal engineering education.				
17. STEAM Machines™ Club: An integrative after-school engineering design experience	*PI:* Dalrymple, O. *Co-PI:* Jordan, S.	2013 – 2014	ASU Women & Philanthropy	$98,077 (50%)
The goal of this project was to establish 35 after-school STEAM Machines Clubs™ in middle schools in the greater Phoenix area.				

4.4 Presentations

Presentations

Key: **bold** = graduate student underlined = undergraduate student

1. Case, J., Benson, L., Brown, S., Burt, B., Jordan, S., & Pitterson, N. (2022, September 22). *Re-envisioning research with secondary data analysis: Broadening the conversation*. Presented at the National Science Foundation Engineering Education and Centers Grantees Conference.
2. Jordan, S., Cheville, A., & Smith, C. (2022, March 27). *Makers Roundtable: Recap of the Makers Workshop*. Electrical and Computer Engineering Department Heads Association (ECEDHA) Annual Conference and ECExpo, New Orleans, LA.
3. Jordan, S. [moderator], Begay, C., Cheville, A., Jones-Davis, D., Wang, Y., & Zaidi, T. (2022, March 25). *State of Change(Making) in ECE*. Panel presented at the Electrical and Computer Engineering Department Heads Association (ECEDHA) Making and Makerspaces in Electrical and Computer Engineering Workshop, New Orleans, LA.
4. Jordan, S. et al. (2022, February 21). Early Career Programs Opportunity Kick-Off virtual panel participant. ASU Knowledge Enterprise Development, Tempe, AZ.
5. Jordan, S. S., & **Anderson, I.** (2021, October 20). *Culturally-relevant engineering design curriculum for Diné middle grade students*. Presented at the virtual Bi-Annual Navajo Research Conference.
6. **Anderson, I.**, & Jordan, S. S. (2021, April 17). *Inventing the future with Navajo culture and engineering design*. Presented at the American Indian Science and Engineering Society (AISES) Region 3 Conference.
7. Jordan, S. [moderator], Lewis, C., Conley, Z., Hamada, H., & Raymundo, O. (2021, April 13). *What your students really think* 🦕🧯🔥🎉. Panel presented at the Electrical and Computer Engineering Department Heads Association (ECEDHA) ECE Lab Pros & ECE Makers Virtual Summit. https://www.ecedha.org/Meetings/ECE-Lab-Pros-and-ECE-Makers-Summit
8. Jordan, S., Cheville, A., Turns, J., & Adams, R. (2019, October 22). *What's your story? Using storytelling to propel engineering education research.* Presented at the National Science Foundation Engineering Education and Centers Grantees Conference, Arlington, VA.
9. Jordan, S., & White, K. (2019, October 11). *A culturally-relevant engineering design curriculum for Navajo Nation middle schools*. Presented at the American Indian Science and Engineering Society (AISES) National Conference, Milwaukee, WI.
10. Jordan, S., & White, K. (2019, October 09). *A culturally-relevant engineering design curriculum for Navajo Nation middle schools*. Presented at the National Indian Education Association (NIEA) Convention and Trade Show, Minneapolis, MN.

Presentations

Key: **bold** = graduate student underlined = undergraduate student

11. **Fernandez, J.**, White, K., & Jordan, S. (2019, February 8). *The Navajo Nation CAREER Design Engineering Curriculum Project.* Presented at the Office of Diné School Improvement Teacher Institute, Window Rock, AZ.
12. Whitehair, L., **Fernandez, J.**, White, K., & Jordan, S. (2018, December 13 - 18). *The Navajo Nation CAREER Design Engineering Curriculum Project*. Presented at the National School Board Conference, Las Vegas, NV.
13. Jordan, S. S., & **Anderson, I.** (2018, November 16). *Inventing the future with Navajo culture and engineering design*. Presented at the Arizona State University (ASU) American Indian Science and Engineering Society (AISES) Student Chapter Native American Heritage Month Celebration, Tempe, AZ.
14. White, K., & Jordan, S. (2018, November 14). *The Navajo Nation CAREER design engineering curriculum project*. Presented at the AdvancED® Navajo Nation Fall Conference, Flagstaff, AZ.
15. Bienusa, D., Bobadilla Lopez, M., Brauer, C., Ewell, C., Goodin, J., Goss, D., Hansing, K., Knaup, J., Ledo, V., Nua, S., Pace, J., Reed, S., Thompson, A., Jordan, S., & Sohoni, S. (2018, May 20). *Imagining the future of games.* Presented on the Make: Electronics stage at the Bay Area Maker Faire, San Mateo, CA.
16. **Weiner, S.**, Bienusa, D., Hansing, K., **Laplace, C.**, Pangan, T., Reed, S., Lande, M., & Jordan, S. (2018, May 20). *Majoring in making in college.* Presented on the Make: Education stage at the Bay Area Maker Faire, San Mateo, CA.
17. Jordan, S., Foster, C., **Anderson, A.**, Betoney, C., & Pangan, T. (2018, April 14). *Exploring Navajo cultural intersections with engineering*. Presented at the American Indian Science and Engineering Society (AISES) Region 3 Conference, Tucson, AZ.
18. Jordan, S., White, K., Torres, M., **Anderson, I.**, Betoney, C., & **Fernandez, J.** (2018, April 14). *Developing engineering talent among Navajo youth with chain-reaction machines.* Presented at the American Indian Science and Engineering Society (AISES) Region 3 Conference, Tucson, AZ.
19. Jordan, S., Cheville, A., Deliwala, S., Golbazi, A., & Smith, C. (2018). *Connecting ECE Curricula with Makerspaces.* Presented at the Electrical and Computer Engineering Department Heads Association (ECEDHA) Annual Conference & ECExpo, Monterey, CA.
20. Jordan, S., Blacksheep, A., Harvey, C., Litson, D., **Anderson, I.**, Betoney, C., & Pangan, T. (2017, October 20). *Culturally-relevant engineering design curriculum for the Navajo Nation.* Presented at the 2017 Navajo Nation Human Research Review Board Conference, Navajo Nation Museum, Window Rock, AZ.

Presentations

Key: **bold** = graduate student underlined = undergraduate student

21. Jordan, S., & White, K. (2017). *Towards the development of culturally-relevant engineering design curriculum for Navajo Nation middle schools*. Presented at the National Indian Education Association (NIEA) Convention and Trade Show, Orlando, FL.
22. Jordan, S., White, K., Foster, C., **Anderson, I.**, Betoney, C., & Pangan, T. (2017). *Towards the development of culturally-relevant engineering design curriculum for Navajo Nation middle schools.* Presented at the American Indian Science and Engineering Society (AISES) National Conference, Denver, CO.
23. Jordan, S., Foster, C., **Anderson, I.**, Betoney, C., & Pangan, T. (2017). *Exploring Navajo cultural intersections with engineering*. Presented at the American Indian Science and Engineering Society (AISES) National Conference, Denver, CO.
24. Jordan, S., **Anderson, I.**, Betoney, C., & Pangan, T. (2016, August 5). *Engineering design across Navajo culture, community, and society*. Presented at the Navajo Nation Board of Education Department of Diné Education Regular Meeting, Window Rock, AZ.
25. Jordan, S., Pereira, N. (2016, November 5). *STEAM Labs: Connecting creativity, STEM, and arts.* Presented at the 63rd Annual Convention & Exhibition of the National Association for Gifted Children (NAGC), Orlando, FL.
26. Jordan, S., Pereira, N., & White, K. (2016, November 5). *Developing engineering talent among Navajo youth with chain-reaction machines.* Presented at the 63rd Annual Convention & Exhibition of the National Association for Gifted Children (NAGC), Orlando, FL.
27. Jordan, S., & White, K. (2016, November 4). *Engineering design across Navajo culture, community, and society.* Presented at the 63rd Annual Convention & Exhibition of the National Association for Gifted Children (NAGC), Orlando, FL.
28. Jordan, S. (2016, September 7). *Navajo engineering professionals' experiences of design in the context of their culture*. Fall Engineering Education Seminar presentation, Arizona State University, Mesa, AZ.
29. Jordan, S., & Lande, M. (2016, May 21). *Making it in college.* Presented at the Bay Area Maker Faire 2016, San Mateo, CA.
30. Jordan, S. (2015, November 20). *Engineering design across Navajo culture, community, and society.* Presented at the 2015 American Indian Science and Engineering Society (AISES) National Conference, Phoenix, AZ.
31. Pereira, N., & Jordan, S. (2015, November 15). *STEAM Machines club: An integrative after-school engineering experience.* Presented at the 62nd Annual Convention & Exhibition of the National Association for Gifted Children, Phoenix, AZ.

Presentations

Key: **bold** = graduate student underlined = undergraduate student

32. Jordan, S., & Lande, M. (2015, November 14). *The Maker movement: Empowering kids through creative engineering.* Presented at the 62nd Annual Convention & Exhibition of the National Association for Gifted Children, Phoenix, AZ.
33. **Wigner, A.**, Lande, M., Jordan, S., & **Foster, C.** (2015, October 28). *Maker educational pathways.* Presented at the Case Western Reserve University Innovation Summit, Cleveland, OH.
34. Jordan, S., & Betoney, C. (2015, October 21). *Engineering design across Navajo culture, community, and society: A student perspective.* Presented at the 2015 Navajo Nation Human Research Review Board Conference, Navajo Nation Museum, Window Rock, AZ.
35. Lande, M., & Jordan, S. (2015, September 26). *Majoring in Making in college.* Presented at the 2015 World Maker Faire New York, Corona, NY.
36. Pereira, N., Jordan, S., & Dalrymple, O. (2015, July). *Inspiring Inventive Genius in Middle and High School Students with Chain-Reaction STEAM Machines™.* Presented as part of the Transition to Teaching/STEM Goes Rural seminar series, Purdue University, West Lafayette, IN.
37. Jordan, S., & Lande, M. (2015, May 16). *Making it in college.* Presented at the Bay Area Maker Faire 2015, San Mateo, CA.
38. Pereira, N., Jordan, S., & Dalrymple, O. (2014, November 13). *Utilizing engineering activities in K-12 grades to promote interdisciplinary understanding of science, technology, and mathematics.* Session presented at the 61st Annual Convention of the National Association for Gifted Children, Baltimore, MD.
39. Jordan, S. (2014, September 29). *CAREER: Engineering design across Navajo culture, community, and society.* Poster presented at the National Science Foundation Engineering Education Awardees' Meeting, Arlington, VA.
40. Jordan, S., Lande, M., Vigeant, M., & Cheville, A. (2014, September 20). *Major in making.* Presented at the 2014 World Maker Faire New York, Corona, NY.
41. Pereira, N., Jordan, S., & Dalrymple, O. (2014, February 24). *Inspiring inventive genius in middle and high school students with chain-reaction STEAM Machines™.* Session presented at the 34th Kentucky Association for Gifted Education Annual Conference, Lexington, KY.
42. Pereira, N. & Jordan, S. S. (2013, November 10). *Inspiring inventive genius in middle and high school students with chain-reaction STEAM Machines™.* Session presented at the 60th Annual Convention of the National Association for Gifted Children, Indianapolis, IN.

Presentations

Key: **bold** = graduate student underlined = undergraduate student

43. Pereira, N., Jordan, S. S., & Dalrymple, O. (2013, November 7). *Inspiring inventive genius in middle and high school students with chain-reaction STEAM Machines™.* Session presented at the 60th Annual Convention of the National Association for Gifted Children, Indianapolis, IN.
44. Pereira, N., Jordan, S. S., & Dalrymple, O. (2013, August 12). *STEAM Labs™: Using chain reaction machines to teach gifted students engineering design.* Session presented at the 20th World Conference on Gifted and Talented Children, Louisville, KY.
45. Pereira, N., Jordan, S. S., & Dalrymple, O. (2013, July 18). *Inspiring inventive genius in middle and high school students with chain-reaction STEAM Machines™.* Session presented at the Center for STEM Education for Girls Think Tank & Conference, Nashville, TN.
46. Pereira, N., Jordan, S., & Dalrymple, O. (2013, June). *STEAM Machines™ and engineering design*. Session presented at the School of Teacher Education Annual Summer Conference, Western Kentucky University, Bowling Green, KY.
47. Pereira, N., Jordan, S., & Dalrymple, O. (2013, February). *Teaching engineering design using STEAM Machines™.* Session presented at the 33rd Kentucky Association for Gifted Education Annual Conference, Lexington, KY.
48. Lande, M., & Jordan, S. (2012, September 29). *Major in making in college*. Presented at the Maker Education Stage, 2012 World Maker Faire New York, Corona, NY.
49. Pereira, N., Jordan, S., & Dalrymple, O. (2012, July). *STEAM Labs™: Inovacao tecnologica no ensino de ciencias [STEAM Labs: Technological innovation in science teaching]*. Session presented at the 5th Annual Meeting of the Brazilian Council for Giftedness, Rio de Janeiro, Brazil.
50. Dalrymple, O., Fernandez, J., Diaz, M., & Jordan, S. (2012, April 20). *Student perceptions of innovative technology in a team-based design environment.* Presented at the *American Society for Engineering Education Pacific Southwest (ASEE PSW) Conference*, San Luis Obispo, CA.
51. Pereira, N., Jordan, S., & Dalrymple, O. (2011, November 3). *Invest in America's future: Maximize the challenge for middle and secondary STEM students.* Presented at the National Association for Gifted Children 58th Annual Convention & Exhibition, New Orleans, LA.
52. Jordan, S. (2011, March 26). Announced the First International Online Rube Goldberg Machine Contest for Ages 11 – 14 at the National Collegiate Rube Goldberg Machine Contest, West Lafayette, IN.
53. Jordan, S. (2011, February 19; 2010, February 13; 2009, February 7). *Social computing technologies in the classroom.* Presented at the Indiana Purdue Fort Wayne (IPFW) Graduate Technology Workshop for Teachers, Fort Wayne, IN.

Presentations

Key: **bold** = graduate student underlined = undergraduate student

54. Jordan, S. (2010, October 4). *Batteries included: A 125-step journey on Planet Rube.* Brownsburg East Middle School, Brownsburg, IN.
55. Jordan, S. (2010, July 20). *Social computing technologies in the classroom.* Presented at the Indiana Purdue Fort Wayne (IPFW) Graduate Computer Camp for Teachers, Fort Wayne, IN.
56. Jordan, S. (2010, July 15). *Batteries included: A 125-step journey on Planet Rube.* ENGINEERING FYI: For Your Imagination Summer Camp, Purdue University, West Lafayette, IN.
57. Purzer, S., Jordan, S., & McNeill, N. (2010, April 8). *Obtaining a faculty position: Interviewing and campus visits*. Presented as part of the Purdue University School of Engineering Education Seminar Series, West Lafayette, IN.
58. Jordan, S. (2010, March 24). *Design Squad: A behind-the-scenes journey into reality (TV).* Presented during "tea time" at IDEO, Boston, MA.
59. Jordan, S. (2010, February 18). *Inspiring design scholarship: Integrating research, teaching, and practice*. Presented as part of the Purdue University School of Engineering Education Seminar Series, West Lafayette, IN.
60. Bagiati, K., Jordan, S., Mena, I., & Pollock, M. (2010, February 4). *How to succeed in ENE*. Presented as part of the Purdue University School of Engineering Education Seminar Series, West Lafayette, IN.
61. Pereira, N., & Jordan, S. (2009, November 6). *The simplicity of complexity: Rube Goldbergineering in the classroom.* Presented at the National Association for Gifted Children 56th Annual Convention & Exhibition, St. Louis, MO.
62. Jordan, S. (2009, September 15). *Rethinking success in virtual cross-functional teams*. Presented at the Collaboration and Innovation 2009 conference, West Lafayette, IN.
63. Pereira, N., & Jordan, S. (2009, August 4). *Design twice, build once: Teaching engineering design with Rube Goldberg.* Presented at the 18th World Conference on Gifted and Talented Children, Vancouver, Canada.
64. Jordan, S., & Pereira, N. (2009, March 31). *Design twice, build once: Teaching engineering design in a Saturday enrichment program.* Poster presented at the Purdue University Annual Graduate Student Educational Research Symposium (AGSERS), West Lafayette, IN.
65. Pereira, N., & Jordan, S. (2008, October 1). *Design twice, build once: Teaching engineering design in a Saturday enrichment program.* Presented at the 2nd Annual Purdue University Latino Scholars Forum, West Lafayette, IN.

Poster Presentations

Key: **bold** = graduate student underlined = undergraduate student

1. **Aboutajedyne, I.**, & Jordan, S. (2023, January 25). *A canvas model for designing learning experiences (2023 KNC Workshop).* Engineering Unleashed. https://engineeringunleashed.com/card/3400
2. Jordan, S. S., **Anderson, I.**, Betoney, C., Fernandez, J., & Pangan, T. (2019, October 21 – 23). *Culturally relevant engineering design curriculum for the Navajo Nation.* Poster presented at the National Science Foundation Engineering Education and Centers Grantees Conference, Arlington, VA.
3. Jordan, S., & Sohoni, S. (2019, January 22). *Introducing entrepreneurship to an embedded systems course in electrical engineering.* Engineering Unleashed. https://engineeringunleashed.com/card/634
4. Jordan, S. S., White, K., **Anderson, I.**, Betoney, C., Pangan, T., & Foster, C. (2017, October 29 – 31). *Creating impact with culturally-relevant engineering design curriculum for the Navajo Nation.* Poster presented at the National Science Foundation Engineering Education and Centers Grantees Conference, Arlington, VA.
5. Pangan, T. & Jordan, S. S. (2017, November 17). *Towards the development of culturally-relevant engineering design curriculum for Navajo Nation*. Poster presented at the Fulton Undergraduate Research Initiative Poster Session, Tempe, AZ.
6. **Weiner, S.**, Lande, M., & Jordan, S. (2016, November 13 – 16). *CREATE-ing a welcoming space for Maker culture*. Poster presented at the International Symposium on Academic Makerspaces (ISAM), Massachusetts Institute of Technology, Cambridge, MA.
7. **Anderson, I.**, Betoney, C., Foster, C., & Jordan, S. (2016, June 23). *CAREER: Engineering design across Navajo culture, community, and society.* Poster presented at the Day @ Intel STEM Field Trip, Chandler, AZ.
8. Dickens, M., Jordan, S., & Lande, M. (2016, April 22). *Parents and roles in informal Making education: Informing and implications for Making in museums.* Poster presented at the Fulton Undergraduate Research Initiative Poster Session, Tempe, AZ.
9. Pangan, T. J., & Jordan, S. (2015, November 20). *Engineering design across Navajo culture, community, and society*. Poster presented at the Fulton Undergraduate Research Initiative Fall Symposium, Tempe, AZ.
10. Oplinger, J., Lande, M., & Jordan, S. (2015, May). *Leadership in the Maker community.* Poster presented at the Fulton Undergraduate Research Initiative Poster Session, Tempe, AZ.
11. Heiman, A., Jordan, S., & Lande, M. (2015, May). *Understanding Making and engineering.* Poster presented at the Fulton Undergraduate Research Initiative Poster Session, Tempe, AZ.

Poster Presentations

Key: **bold** = graduate student underlined = undergraduate student

12. Heiman, A., Jordan, S., & Lande, M. (2014, December). *Understanding Making and Making communities.* Poster presented at the Fulton Undergraduate Research Initiative Poster Session, Tempe, AZ.

13. Jordan, S. S., **Foster, C.**, Anderson, I., Betoney, C., & Pangan, T. (2014, September 29). *CAREER: Engineering design across Navajo culture, community, and society.* Poster presented at the National Science Foundation Engineering Education and Centers Grantees Conference, Arlington, VA.

Government Presentations

1. Jordan, S. (2018, May 31). Presentation supporting the i.d.e.a. Museum bond proposal at the Mesa City Council Study Session, Mesa, AZ. Retrieved from https://youtu.be/GPv0iTSf488?t=1784

Workshops

Note: The Navajo Nation Teacher Training workshops were each covering different material depending on the stage of the project and needs of the teachers present at each event.

1. Jordan, S., & Jordan, M. (2022, July 1). *Diné engineering design curriculum training [Part 2],* Window Rock, AZ.
2. Jordan, S., Cheville, A., & Smith, C. (2022, March 25). *Making and Makerspaces in Electrical and Computer Engineering* [Workshop]. Electrical and Computer Engineering Department Heads Association (ECEDHA) Annual Conference and ECExpo, New Orleans, LA. https://www.ecedha.org/Meetings/Past-Programs/2022-ECEDHA-Annual-Conference-and-ECExpo
3. Jordan, S., & Jordan, M. (2022, March 11 – 12). *Diné engineering design curriculum training [Part 1]*. Presented to 27 STEM teachers from the Navajo Nation, ASU Polytechnic Campus, Mesa, AZ.
4. Jordan, S. (2020, October 24). *Crafting your own personal hero's journey.* Presented at the Arizona State University Engineering Education and Systems Design Seminar, Mesa, AZ.
5. Jordan, S., Martin, J., Foster, C., & Stefl, S. (2019, October 18). *Special Session: Yes, and… Re-imagining a future of an inclusive engineering education system with improv.* Presented at the IEEE Frontiers in Education (FIE) Conference, Cincinnati, OH.
6. Jordan, S., & White, K. (2019, October 12). *Fostering STEM career pathways with integrated chain-reaction STEAM summer camps for Navajo youth*. Presented at the National Indian Education Association (NIEA) Convention and Trade Show, Minneapolis, MN.

Workshops

Note: The Navajo Nation Teacher Training workshops were each covering different material depending on the stage of the project and needs of the teachers present at each event.

7. Warren, L, & Jordan, S. (2019, September 17). *Using storytelling to propel STEM education*. Workshop presented at the Arizona STEM and Innovation Summit, Scottsdale Center for the Performing Arts, Scottsdale, AZ.
8. Jordan, S., Fernandez, J., Pangan, T., & **Anderson, I.** (2018, October 27). *Navajo Engineering Design Curriculum Pilot Teacher Professional Development Workshop*, ASU Polytechnic Campus, Mesa, AZ.
9. Jordan, S., Fernandez, J., Pangan, T., & **Anderson, I.** (2018, October 20). *Navajo Engineering Design Curriculum Pilot Teacher Professional Development Workshop*, ASU Polytechnic Campus, Mesa, AZ.
10. Jordan, S., Fernandez, J., Pangan, T., & **Anderson, I.** (2018, October 12). *Navajo Engineering Design Curriculum Pilot Teacher Professional Development Workshop*, ASU Polytechnic Campus, Mesa, AZ.
11. Jordan, S., Fernandez, J., Pangan, T., & **Anderson, I.** (2018, July 28). *Navajo Engineering Design Curriculum Pilot Teacher Professional Development Workshop*, ASU Polytechnic Campus, Mesa, AZ.
12. Jordan, S., Fernandez, J., Pangan, T., & **Anderson, I.** (2018, July 24). *Navajo Engineering Design Curriculum Pilot Teacher Professional Development Workshop*, ASU Polytechnic Campus, Mesa, AZ.
13. Jordan, S., Fernandez, J., Pangan, T., & **Anderson, I.** (2018, October 14). *Navajo Engineering Design Curriculum Pilot Teacher Professional Development Workshop*, ASU Polytechnic Campus, Mesa, AZ.
14. Jordan, S., & Fernandez, J. (2018, February 28). *Navajo Engineering Design Curriculum Pilot Teacher Professional Development Workshop*, Red Rock Park, Gallup, NM.
15. Jordan, S., Pangan, T., **Anderson, I.**, Betoney, C., Fernandez, J., Cook-Davis, A., & Cosgrove, J. (2018, January 25 – 26). *Navajo Engineering Design Curriculum Pilot Teacher Professional Development Workshop*, ASU Polytechnic Campus, Mesa, AZ.
16. Artemiadis, P., Chester, M., Holman, Z., Jordan, S., & LaBelle, A. (2018, January 19). *Project Management/Lab Safety Workshop*. Workshop sponsored by the Arizona State University Ira A. Fulton Schools of Engineering New Faculty Advisory Council, Tempe, AZ.
17. Jordan, S., Pangan, T., & Betoney, C. (2017, November 17). *Navajo Engineering Design Curriculum Pilot Teacher Professional Development Workshop*, Navajo Nation Museum, Window Rock, AZ.
18. Benally, T., Jordan, S., **Anderson, I.**, & Betoney, C. (2017, January 27). *Navajo Engineering Design Curriculum Pilot Teacher Professional Development Workshop*, Flagstaff, AZ.

Workshops

Note: The Navajo Nation Teacher Training workshops were each covering different material depending on the stage of the project and needs of the teachers present at each event.

19. Jordan, S., & **Anderson, I.** (2016, November 18). *Navajo Engineering Design Curriculum Pilot Teacher Professional Development Workshop*, Window Rock, AZ.
20. Brayboy, B., McKenna, A., Jordan, S., McBride, M., Stuempfle, D., & Begaye, M. (2016, February 4 – 6). *Department of Diné Education Office of Diné School Improvement Teacher Winter Institute*, ASU Polytechnic Campus, Mesa, AZ.
21. Jordan, S., White, K., & Phillips, J. (2017). *Developing engineering talent among Navajo youth with chain-reaction machines*. Workshop presented at the National Indian Education Association (NIEA) Convention and Trade Show, Orlando, FL.
22. Jordan, S., White, K., & Phillips, J. (2017). *Developing engineering talent among Navajo youth with chain-reaction machines*. Workshop presented at the American Indian Science and Engineering Society (AISES) National Conference, Denver, CO.
23. Jordan, S. (2016, August 15). *STEAM Machines™*. Workshop presented at the Arizona State University (ASU) Polytechnic School faculty retreat, Gilbert, AZ.
24. Pereira, N., Jordan, S., & Dalrymple, O. (2015, July). *Inspiring Inventive Genius in Middle and High School Students with Chain-Reaction STEAM Machines™*. Workshop presented at Purdue University, West Lafayette, IN.
25. Jordan, S., & George, J. (2015, March 14). *The Rube Goldberg Machine Contest: Invention in the classroom*. Workshop presented at the National Science Teachers Association (NSTA) National Conference, Chicago, IL.
26. Jordan, S., Wischer, D., & George, J. (2015, February 22). *Rube Goldberg: The art of complicated contraptions*. Two workshops presented at the Intrepid Museum Kids Week, New York, NY.
27. Jordan, S. (2014, November 7). STEAM Machines™. Workshop presented at the Arizona State University (ASU) President's Weekend, Tempe, AZ.
28. Jordan, S., & George, J. (2014, April 5). *The Rube Goldberg Machine Contest: Invention in the classroom*. Workshop presented at the National Science Teachers Association (NSTA) National Conference, Boston, MA.
29. Jordan, S., & Dalrymple, O., & Pereira, N. (2014, April 4). *Blending the arts with chain-reaction STEAM Machines™*. Workshop presented at the National Science Teachers Association (NSTA) National Conference, Boston, MA.
30. Jordan, S., Dalrymple, O., & Pereira, N. (2013, October 23). *Inspiring Inventive Genius in Middle and High School Students with Chain-Reaction STEAM Machines™*. Workshop presented at the IEEE Frontiers in Education (FIE) Conference, Oklahoma City, OK.

Workshops

Note: The Navajo Nation Teacher Training workshops were each covering different material depending on the stage of the project and needs of the teachers present at each event.

31. Jordan, S., Dalrymple, O., & Pereira, N. (2013, June 22). *Inspiring Inventive Genius in Middle and High School Students with Chain-Reaction STEAM Machines*. Workshop presented at the American Society for Engineering Education (ASEE) 10th Annual K-12 Workshop on Engineering Education, Atlanta, GA.
32. Jordan, S., Dalrymple, O., & Pereira, N. (2013, June 21). *Teaching Engineering Design to Middle and High School Students using STEAM Machines™.* Workshop presented at the Indiana Purdue Fort Wayne (IPFW) Graduate Science Workshop for Teachers, Fort Wayne, IN.
33. Jordan, S., & George, J. (2013, April 12). *The Rube Goldberg® Machine Contest: Invention in the classroom*. Workshop presented at the National Science Teachers Association (NSTA) National Conference, San Antonio, TX.
34. Pereira, N., Jordan, S., & Dalrymple, O. (2013, January 22). *STEAM Labs™: Teaching engineering design using STEAM Machines™.* Workshop presented at the Western Kentucky University Center for Gifted Studies, Bowling Green, KY.
35. Jordan, S., & Dalrymple, O. (2012, December 7). *Teaching engineering design to middle and high school students using chain reaction STEAM Machines™.* Workshop presented at the National Science Teachers Association (NSTA) Phoenix Area Conference, Phoenix, AZ.
36. Pereira, N., & Jordan, S. (2012, November 16). *Rube Goldberg: Developing engineering talents.* Workshop presented at the National Association for Gifted Children 59th Annual Convention & Exhibition, Denver, CO.
37. Pereira, N., Jordan, S., & Dalrymple, O. (2012, October). *STEAM Labs™: Teaching engineering design using STEAM Machines™.* Workshop presented at the Western Kentucky University Center for Gifted Studies, Bowling Green, KY.
38. Jordan, S., Dalrymple, O., & Pereira, N. (2012, October 3). *Teaching engineering design to middle and high school students using STEAM Machines™.* Workshop presented at the IEEE Frontiers in Education (FIE) Conference, Seattle, WA.
39. Jordan, S., Dalrymple, O., & Pereira, N. (2012, June 18). *Teaching STEAM concepts to middle and high school students using engineering design to create STEAM Machines™.* Workshop presented at the Indiana Purdue Fort Wayne (IPFW) Graduate Science Workshop for Teachers, Fort Wayne, IN.
40. Dalrymple, O., Jordan, S., Astatke, Y., Pereira, N., & Fletcher, J. D. (2012, June 10). *Teaching engineering design to middle and high school students using Rube Goldbergineering.* Workshop presented at the *American Society for Engineering Education (ASEE) Annual Conference & Exposition,* San Antonio, TX.

Workshops

Note: The Navajo Nation Teacher Training workshops were each covering different material depending on the stage of the project and needs of the teachers present at each event.

41. Jordan, S., Dalrymple, O., & Pereira, N. (2012, June 9). *Teaching engineering design to middle and high school students using Rube Goldbergineering.* Workshop presented at the *2012 American Society for Engineering Education (ASEE) Workshop on K-12 Engineering Education,* San Antonio, TX.
42. Dalrymple, O., & Jordan, S. (2012, April 19). *Teaching engineering design to middle and high school students using Rube Goldbergineering.* Workshop presented at the *American Society for Engineering Education Pacific Southwest (ASEE PSW) Conference*, San Luis Obispo, CA.
43. Jordan, S. (2010, June 25). *Rube Goldbergineering 101.* Hands-on workshop presented at the Indiana Purdue Fort Wayne (IPFW) graduate Science Workshop for K-6 Teachers, Fort Wayne, IN.
44. Jordan, S., & Pereira, N. (2010, February 5). *Introduction to Rube Goldbergineering.* Hands-on workshop presented at the Hoosier Association of Science Teachers Inc. (HASTI) Annual Conference, Indianapolis, IN.
45. Jordan, S. (2009, June 29). *Rube Goldbergineering 101.* Hands-on workshop presented at the Indiana Purdue Fort Wayne (IPFW) graduate Science Workshop for K-6 Teachers, Fort Wayne, IN.
46. Jordan, S., & Pereira, N. (2009, February 6). *Rube Goldbergineering 101.* Hands-on workshop presented at the Hoosier Association of Science Teachers Inc. (HASTI) Annual Conference, Indianapolis, IN.
47. Jordan, S., & Rinzel, B. (2008, October 25). Rube Goldberg demonstration at the Indiana Purdue Fort Wayne (IPFW) Fall into Learning Festival, Fort Wayne, IN.

Mass Media (On-Camera Roles – see http://www.imdb.com/name/nm1236174/)

1. Martin, J., Pontelli, E., Magana, A., Ross, M., Jordan, S. (2021, March 9). Actor in ASEE Virtual Mock Grant Review Panel video series to increase participation and competitiveness of minority-serving institutions in National Science Foundation Computer and Information Science and Engineering (CISE) programs. https://youtube.com/playlist?list=PL84VcUp5xaBujWmYkrkT6baEncj7Pcqfk
2. Jordan, S. (2014, June 22). Rube Goldberg expert in "Amazing Gadgets Countdown" episode, *Modern Marvels*, The History Channel.
3. Jordan, S. (2011, November 28). Rube Goldberg expert in "Weird Machines" episode, *Modern Marvels*, The History Channel.

Mass Media (On-Camera Roles – see http://www.imdb.com/name/nm1236174/)

4. Jordan, S. (2009). *Mousetrap to Mars: The True Story of Building the World's Most Complex Machine*.
   Mousetrap to Mars is a professional 82-minute docu-comedy movie on the Rube Goldberg Machine Contest, where teams build overly complex machines to complete simple tasks. Had starring role as "the Michael Jordan of Rube Goldberg;" provided expert commentary and insight into the inner workings of the Rube Goldberg team that I founded at Purdue University
5. Jordan, S., Foglesong, J., Hollingsworth, K, Mehl, A., & Rinzel, B. (2006, July 13). Presentation of giant "Mission to Mars" machine that made ice cream sundaes and poured water, *Master of Champions*, ABC, Los Angeles, CA.
6. Jordan, S., Mann, R., & Wischer, D. (2006, April 14). Presentation of national champion "The Rube Machine Ate My Homework" machine that shredded 5 sheets of paper in 215 steps, *Jimmy Kimmel LIVE*, ABC, Los Angeles, CA.
7. Jordan, S., & Hollingsworth, K. (2005, April 15). Presentation of national champion "Blackout on Planet Rube" machine that replaced the batteries in a flashlight and turned it on in 125 steps, *Jimmy Kimmel LIVE*, ABC, Los Angeles, CA.
8. Jordan, S. (2005). Key interviewee in Rube Goldberg Machine Contest segment, *Attack of the Show*, G4TV.
9. Jordan, S. (2005). Key interviewee in Rube Goldberg Machine Contest segment, *ESPN*.
10. Jordan, S. (2005). Key interviewee in Rube Goldberg Machine Contest segment, *Games Across America*, GSN.
11. Jordan, S. (2005, April 18). Lead presenter in Rube Goldberg Machine Contest segment, *The Daily Planet*, Discovery Channel Canada.

Interviews and News Articles

1. Srinarayana, S. (2023, March 23). Future engineers full STEAM ahead! [Key Interviewee]. Arizona State University Ira. A Fulton Schools of Engineering *Full Circle*. Retrieved from https://fullcircle.asu.edu/outreach/future-engineers-full-steam-ahead/
2. Wozny, N. (2023, March 9). Feedback that inspires. [Key Interviewee]. ASU Thrive, *26*(2), 30-35. Retrieved from https://issuu.com/arizonastateuniversity/docs/230415_asu_thrive_magazine_interactive_final/32
3. Weisman, H. (2023, March 6). The chain reaction between engineering and storytelling. [Key Interviewee]. ASU Ira. A Fulton Schools of Engineering *Full Circle*. Retrieved from https://fullcircle.asu.edu/outreach/the-chain-reaction-between-engineering-and-storytelling/

Interviews and News Articles

4. Streveler, R., & Jordan, S. (2023, February 6). What does culturally sustaining pedagogy look like? Engineering Education Research Briefs Podcast. [Key Interviewee]. Retrieved from https://researchbriefs.podbean.com/e/what-does-culturally-sustaining-pedagogy-look-like-with-dr-shawn-jordan-arizona-state-university/
5. Srinarayana, S. (2022, September 6). Preparing Navajo engineers of the future. [Key Interviewee]. ASU Ira. A Fulton Schools of Engineering *Full Circle*. Retrieved from https://fullcircle.asu.edu/outreach/preparing-navajo-engineers-of-the-future/
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Storytelling and Improv Performances

1. Jordan, S. et al. (2021, July 15). *Stand here for dance party*. Improv performance with Improv Everywhere, New York, NY.
2. Avent, M., Cole, H., Eastman, K., Freed, C., Jordan, S., Rutherford, L., & Warren, L. (2019, September 17). *STEMtales: A storytelling celebration*. Storytelling performance hosted at the Arizona STEM and Innovation Summit, Scottsdale Center for the Performing Arts, Scottsdale, AZ.
3. Jordan, S. (2019, July 25). *Sir Gawain and the loathly lady.* Featured teller at A Slice: Stories & Cake, Space 55, Phoenix, AZ.
4. Jordan, S. (2018, December 1). *The gift of experience(s).* Story performed at the KJZZ Holiday StoryFest and Authors Showcase: Giving and Receiving at the Glendale Civic Center, Glendale, AZ.
5. Jordan, S. (2018, September 13). *Mannequin hunt.* Story performed at the Arizona Storytellers Project: Searching event at the Desert Botanical Garden, Phoenix, AZ. Retrieved from https://omny.fm/shows/thestorytellersproject/searching-shawn-jordan-2018
6. Jordan, S. (2018, August 23). *When the right path is wrong.* Story performed at the A Slice: Stories & Cake: New Beginnings event at Space 55, Phoenix, AZ.

Storytelling and Improv Performances

7. Jordan, S. (2017, May 26). *Ben Franklin and the kite.* Story performed at the Caped Crusaders and Everyday Heroes exhibit at the i.d.e.a. Museum, Mesa, AZ.

Exhibitions

1. Jordan, S., & Mihaleva, G., (2022, November 30). Presented wearable tech art piece at Wearable Technology Showcase, ASU Downtown Campus.
2. Jordan, S., & Mihaleva, G., (2022, November 10). Presented wearable tech art piece at Canal Convergence, Scottsdale, AZ.
3. Bienusa, D., Bobadilla Lopez, M., Brauer, C., Ewell, C., Goodin, J., Goss, D., Hansing, K., Knaup, J., Ledo, V., Nua, S., Pace, J., Reed, S., Thompson, A., Jordan, S., & Sohoni, S. (2018, May 18-20). *The future of games* booth. Exhibited in the Mixed Reality building at the Bay Area Maker Faire, San Mateo, CA.
4. Bienusa, D., Bobadilla Lopez, M., Brauer, C., Ewell, C., Goodin, J., Goss, D., Hansing, K., Knaup, J., Ledo, V., Nua, S., Pace, J., Reed, S., Thompson, A., Jordan, S., & Sohoni, S. (2018, May 19). *The future of games* booth. Exhibited at the Digikey booth in the Expo Hall at the Bay Area Maker Faire, San Mateo, CA.
5. Brauer, C., Hansing, K., Ledo, V., Pace, J., Jordan, S., & Sohoni, S. (2018, May 18). Arizona State University booth. Exhibited at the Industry, Career, & College Day at the Bay Area Maker Faire, San Mateo, CA.
6. Jordan, S., Cheville, A., Deliwala, S., Golbazi, A., Roysam, B., & Smith, C. (2018, March 18 – 19). *MakerSpace Demo* booth. Exhibited at the 2018 Electrical and Computer Engineering Department Heads Association (ECEDHA) Annual Conference & ECExpo, Monterey, CA.
7. Jordan, S. (2016, November 13). *Rube Goldberg* and *STEAM Machines*™ booth. Exhibited at the Shasta County Mini Maker Faire, Redding, CA.
8. Jordan, S., & Lande, M. (2016, October 1 – 2). *Maker educational pathways research project.* Exhibited at the 2016 World Maker Faire New York, Corona, NY.
9. Jordan, S., & Lande, M. (2016, May 20 – 22). *Maker educational pathways research project.* Exhibited at the Bay Area Maker Faire 2016, San Mateo, CA.
10. Jordan, S. (2016, March 12). *STEAM Machines*™ booth. Exhibited at the Southwest Maker Fest, Mesa, AZ. ***Winner of Best in Festival award***
11. Lande, M., & Jordan, S. (2015, September 26 – 27). *Maker educational pathways research project.* Exhibited at the 2015 World Maker Faire New York, Corona, NY.
12. George, J., & Jordan, S. (2015, May 15 – 17). Rube Goldberg / *STEAM Labs*™ speed build booth. Exhibited at the Bay Area Maker Faire 2015, San Mateo, CA. ***Winner of Best in Class ribbon***

Exhibitions

13. Jordan, S., & Lande, M. (2015, May 15 – 17). *Maker educational pathways research project.* Exhibited at the Bay Area Maker Faire 2015, San Mateo, CA.
14. Jordan, S. (2015, March 28). *STEAM Machines*™ booth. Exhibited at the Southwest Maker Fest, Mesa, AZ.
15. Jordan, S., & Lande, M. (2014, September 20 – 21). *Maker educational pathways research project.* Exhibited at the 2014 World Maker Faire New York, Corona, NY.
16. Jordan, S., & Lande, M. (2014, May 17 – 18). *Maker educational pathways research project.* Exhibited at the Bay Area Maker Faire 2014, San Mateo, CA.
17. Ornstein, C.; Jordan, S. (core team member). (2013 – 2014). *21st Century Café Society*. Project funded by Artplace (http://www.artplaceamerica.org/loi/).
    This project with the Mesa Arts Center will build an activated and interactive environment and gathering place on the Mesa Arts Center campus. It is supported by an iProject team in the ASU Department of Human-Environment Systems, a sophomore-level ASU Polytechnic School design course, members of the arts community, and contractors.
18. Lande, M. & Jordan, S. (2013, September 21 – 22). *Maker educational pathways research project.* Exhibited at the 2013 World Maker Faire New York, Corona, NY.
19. Lande, M. & Jordan, S. (2013, May 18 – 19). *Maker educational pathways research project.* Exhibited at the Bay Area Maker Faire 2013, San Mateo, CA.
20. Jordan, S., Dolin, P., Alghamdi, S., Berry-Crenshaw, M., Ebuehi, O., Fikel, S., Hall, M., Jenkins, T., McDanell, M., Slinker, D., Williams, W., Briggs, M., Ibraham, L., Murabata, S., & Pillow, M. (2013, March 28). *The ugly cactus*. Chain-reaction machine exhibited at the Arizona Science and Engineering Fair, Phoenix, AZ.
21. Jordan, S., Dolin, P., Alghamdi, S., Berry-Crenshaw, M., Ebuehi, O., Fikel, S., Hall, M., Jenkins, T., McDanell, M., Slinker, D., Williams, W., Briggs, M., Ibraham, L., Murabata, S., & Pillow, M. (2013, March 13 – 17). *The ugly cactus*. Chain-reaction machine exhibited at spark! Mesa's Festival of Creativity, Mesa Arts Center, Mesa, AZ.
22. Lande, M. & Jordan, S. (2012, September 29 – 30). *Maker educational pathways research project.* Exhibited at the 2012 World Maker Faire New York, Corona, NY.
23. Jordan, S. (2005, August 26 – 2006, April 6). Lead Presenter and Exhibit Organizer of Rube Goldberg exhibit, Muncie Children's Museum, Muncie, IN.
24. Jordan, S. (2004, August 21; 2003, August 9; 2002, August 14). Lead presenter and organizer of Rube Goldberg machine exhibit at the governor's *Indiana 2016* booth, Indiana State Fair, Indianapolis, IN.

5. Teaching

5.1 ASU Courses Taught (# of sections)

Course Number: Name	Level	Spring 2024	Fall 2023	Spring 2023	Fall 2022	Spring 2022	Fall 2021	Spring 2021	Fall 2020	Spring 2020	Fall 2019	Spring 2019	Fall 2018	Spring 2018	Fall 2017	Spring 2017	Fall 2016	Spring 2016	Fall 2015	Spring 2015	Fall 2014	Spring 2014	Fall 2013	Spring 2013	Fall 2012	Spring 2012	Fall 2011	Spring 2011
EGR 535 / 598: Innovation and Design in Engineering Academic Settings (IDEAS)	Ph.D.	1		*Paternity Leave*		1		1				*Sabbatical*																
EGR 565: Qualitative Methods in Engineering Education	Ph.D.																1											
EGR 671: Applications of Qualitative Methods for Engineering Education	Ph.D.									1																		
EGR 598: Embedded Systems Design Project I / II	M.S.																		1	1	1							
Undergraduate Courses – Current Program																												
ASU 101: The ASU Experience	B.S. Fresh.			*Paternity Leave*								*Sabbatical*			1													
EGR 216: Fundamentals of Engineering Systems I (Electrical)	B.S. Soph.																						1					
EGR 304: Embedded Systems Design Project I (previously EGR 304 / 305)	B.S. Junior		1						1		2				2		2		2		2							
EGR 314: Embedded Systems Design Project II (previously EGR 314 / EGR 315)	B.S. Junior	1				1		1		2				2		2		2		2		2						
EGR / FSH 394: Special Topics: Fashion Design & Wearable Technology	B.S. / B.A. Junior				1		1																					
Undergraduate Courses – Previous Program																												
EST 160: Introduction to Electronic Systems	B.S.			*Patern. Leave*								*Sabbatical*													1			
EGR 301: Electrical Concentration Project I	B.S.																					1		1		1		
EGR 302: Electrical Concentration Project II	B.S.																						1		1		1	
EGR 332: Electrical Power and Heat	B.S.																											1
EGR 339: Fabrication of Electrical Systems	B.S.																						1					
EGR 494: Special Topics: Electrical Systems Design	B.S.																								1			

5.2 Additional Teaching Experience

Co-Instructor, NSF I-Corps for Learning (I-Corps-L) 1/2014 – 2/2014

- The purpose of the I-Corps-L initiative is to "propagate and scale educational innovations"
- http://docs.asee.org/public/I-Corps-L/ICorpsLBrochure.pdf

Instructor, Higher Engineering Education Alliance Program (HEEAP), Arizona State University 9/2011 – 9/2012

- Co-taught (with Micah Lande, ASU) project-based learning to Vietnamese university faculty
- HEEAP program received U.S. Secretary of State's 2012 Award for Corporate Excellence (ACE) from Hillary Clinton https://asunews.asu.edu/20121212_award_intelcollaboration
- Interview: http://www.youtube.com/watch?v=cQH0YVioKx8

Engineering Assistant, *Design Squad*, WGBH, Boston, Massachusetts 5/2008 – 8/2008

- *Design Squad* is a Peabody and Daytime Emmy-award winning engineering design reality TV show for kids
- Played many as-needed roles for the entire 10-episode season, including "just in time" teacher, mentor, interdisciplinary engineer, problem solver and troubleshooter, researcher, logistician, and tester
- Website: http://pbskids.org/designsquad

5.3 Community Engagement

Co-Founder and Director, *STEAM Labs™ Center for K-12 Research and Engagement*, Mesa, AZ 2010 – present

- The Center, located in Peralta Hall Rooms 231A and 231C, develops and promotes informal engineering education outreach activities to engage middle and high school students in chain-reaction *STEAM Machine*™ projects that integrate science, technology, engineering, arts, and math concepts
- Supported by $6M+ in externally-funded grants since 2013
- Impact: 75+ camps, 35+ after-school clubs, and 75+ workshops and teacher conferences impacting over 5,000 students and 2000 teachers worldwide

Education Outreach Director, Rube Goldberg Inc., Westport, CT 2011 – 2018

- Responsible for the design, implementation, study, and continuous improvement of the Rube Goldberg Machine Contests

Judge, Navajo Nation Science Fair, Gallup, NM 2012, 2013

Judge, Arizona Science & Engineering Fair, Phoenix, AZ 2011, 2014

5.3 Community Engagement

Instructor and Course Developer, Gifted Education Resource Institute (GERI), Purdue University, West Lafayette, IN — 7/2010

- Co-designed curriculum for new Rube Goldbergineering class to teach middle and high school students to use an engineering design process to create Rube Goldberg machines, with special focus on design iteration, storyboarding, and teamwork — 7/2009
- Partnered with a class at Arizona State University to expose students to geographically distributed design teams (July 2010) — 10 – 11/2008, 1 – 3/2008

5.4 Graduate and Honors Student Advising

Doctoral Students

Committee Role	*Name*	*Program*	*Current Position*
1. Chair	**Ieshya Anderson** *(Diné / Tohono O'odham)* **Started:** 2017 **Expected Graduation:** 2023 **Research Interests:** Culturally-relevant pedagogy in K-12 engineering education	ASU Engineering Education Systems and Design, The Polytechnic School	GRFP Awardee
2. Chair	**Cecilia La Place** **Started:** 2019 **Expected Graduation:** 2024 **Research Interests:** Hackathons	ASU Engineering Education Systems and Design, The Polytechnic School	Ph.D. Student
3. Co-Chair	**Imane Aboutajedyne** **Expected Graduation:** 2023 **Research Interests:** Stakeholder participation in engineering curriculum design	Sidi Mohamed Ben Abdellah University of Fez, Morocco Engineering Education	Ph.D. Student, Fulbright Scholar
4. Co-Chair	**Sanjeev Kavale** **Expected Graduation**: 2024 **Research Interests:** Research mindsets	ASU Engineering Education Systems and Design, The Polytechnic School	Ph.D. Student

Doctoral Students

Committee Role	*Name*	*Program*	*Current Position*
5. Member	**Dania Wright** **Expected Graduation:** 2024 **Research Interests:** Broader impacts of funded research	ASU School for the Future of Innovation in Society, Human and Social Dimensions of Science and Technology	Ph.D. Student
6. Member	**Rebecca Stuch** **Expected Graduation:** 2025 **Research Interests:** Storytelling in the developing world	ASU School for the Future of Innovation in Society, Innovation in Global Development	Ph.D. Student
7. Member	**Rachna Mathur** **Expected Graduation:** 2025 **Research Interests:** Storytelling in STEM	ASU Mary Lou Fulton Teachers College, Leadership and Innovation	Ed.D. Student
8. Member	**Mark Clytus** **Expected Graduation:** 2024 **Research Interests:** Culturally sustaining pedagogy in engineering higher education	University of Arizona, American Indian Studies	Ph.D. Student
9. Chair	**Steven Weiner** **Started:** 8/2016 **Graduated:** 12/2022 **Dissertation:** *Prototyping Educational Futures: A Multi-Scalar Exploration into the Making, Designing, and Reimagining of School*	ASU Human and Social Dimensions of Science and Technology, School for the Future of Innovation in Society	GRFP Awardee Senior Research Analyst, Center on Reinventing Public Education, ASU
10. Chair	**Christina Foster, Ph.D.** **Graduated:** 5/2016 **Dissertation:** *Hybrid Spaces for Traditional Culture and Engineering: A Narrative Exploration of Native American Women as Agents of Change*	ASU Mary Lou Fulton Teachers College, Engineering Education	Social Scientist, Pacific Northwest National Laboratory
11. Member	**Rohini Abhyankar** **Graduated:** 5/2022 **Dissertation:** *Using an Acculturation Lens to Assess Diversity-Related Workplace Behaviors*	ASU Engineering Education Systems and Design, The Polytechnic School	Postdoctoral Scholar, Penn State

Doctoral Students

Committee Role	*Name*	*Program*	*Current Position*
12. Member	**Daniel Frank** **Graduated:** 5/2018 **Dissertation:** *Investigating Culturally-Contextualized Making with the Navajo Nation*	University of Florida, Mechanical Engineering	Lecturer, Ira A. Fulton Schools of Engineering, ASU
13. Member	**Patrick Schwab, Ph.D.** **Graduated:** 12/2013 **Dissertation:** *Evaluation of Online Teacher and Student Materials for the Next Generation Science Framework Crosscutting Science and Engineering Concepts*	ASU Mary Lou Fulton Teachers College, Engineering Education	Assistant Professor, Department of Education, Utah Tech University
14. Chair	**Caroline Clay** **Active:** 2020 – 2021	ASU Engineering Education Systems and Design, The Polytechnic School	Americorps Member
15. Member	**Adam Masters** **Active:** 2016 - 2021 **Expected Graduation:** TBD **Research Interests:** Diversity in makerspaces	Virginia Tech Engineering Education	Ph.D. Student

Master of Science - Thesis and Non-Thesis Students

Committee Role	*Name / Graduation*	*Program*	*Current Position*
1. Chair	**Jay Fernandez** **Expected Graduation:** 2024 *(Non-Thesis)*	Electrical Engineering, Ira A. Fulton Schools of Engineering	Engineer, General Dynamics
2. Member	**Tanner Lisonbee** **Graduated:** 2021 *(Non-Thesis)*	Software Engineering, Ira A. Fulton Schools of Engineering	Software Engineer at Chroma ATE Inc.
3. Member	**Jonah Lerner** **Graduated:** 2020 *(Thesis)*	Engineering, The Polytechnic School, Ira A. Fulton Schools of Engineering	Unknown

4. Member	**Harsha Kadekar** **Graduated:** 2017 *(Thesis)*	Software Engineering, Ira A. Fulton Schools of Engineering	Software Development Engineer at Amazon
5. Chair	**James Oplinger** **Graduated:** 2016 *(Thesis)*	Engineering, The Polytechnic School, Ira A. Fulton Schools of Engineering	IP Legal Engineer, On Semiconductor

Master of Science – 4+1 Applied Project Students

Committee Role	*Name / Graduation*	*Program*	*Current Position*
1. Chair	**Kyle Johnston** **Graduated:** 2022	Engineering, Electrical, The Polytechnic School, Ira A. Fulton Schools of Engineering	Unknown

Bachelor of Science Honors Thesis Students

Committee Role	*Name / Graduation*	*Program*	*Current Position*
1. Chair	**Seth Altobelli** **Expected Graduation:** 2023	Engineering, Robotics, The Polytechnic School, Ira A. Fulton Schools of Engineering	Future graduate student
2. Chair	**Kenneth Hodson** **Expected Graduation:** 2023		Future graduate student
3. Member	**Dylan Lathrum** **Graduated: 2022**	Software Engineering, School of Computing and Augmented Intelligence, Ira A. Fulton Schools of Engineering	Front-End/UI Developer, Anva
4. Chair	**Cree Hutcherson** **Graduated:** 2021	Engineering, Robotics, The Polytechnic School, Ira A. Fulton Schools of Engineering	Distribution Engineer, Actalent
5. Chair	**Olivia Pinkowski** **Graduated:** 2021		Controls Engineer, Delta Technology
6. Chair	**Tyrine Pangan** **Graduated:** 2018	Engineering, Electrical The Polytechnic School, Ira A. Fulton Schools of Engineering	Engineering Education Ph.D. student, Tufts University

Bachelor of Science Honors Thesis Students

Committee Role	*Name / Graduation*	*Program*	*Current Position*
7. Chair	**James Larson** **Graduated:** 2018	Engineering, Electrical The Polytechnic School, Ira A. Fulton Schools of Engineering	Internal Communications Engineer, Toofon, Inc.
8. Chair	**Kylee Burgess** **Graduated:** 2018	Engineering, Electrical The Polytechnic School, Ira A. Fulton Schools of Engineering	Electrical Engineer, 219 Design
9. Second Reader	**Bryce Beagle** **Graduated:** 2018	Engineering, Electrical The Polytechnic School, Ira A. Fulton Schools of Engineering	Software Engineer, Robinhood
10. Second Reader	**Catherine Piatak** **Graduated:** 2018	Biomedical Engineering, School of Biological and Health Systems Engineering, Ira A. Fulton Schools of Engineering	Data Scientist, Bank of America
11. Second Reader	**Kelly Torrence** **Graduated:** 2018		Account Executive at Proctor & Gamble
12. Second Reader	**Marissa Seelhammer** **Graduated:** 2018		Engineer at W.L. Gore & Associates
13. Chair	**Margaret Golka** **Graduated:** 2017	Engineering, Electrical The Polytechnic School, Ira A. Fulton Schools of Engineering	Engineering Supervisor at Arizona Public Service (APS)
14. Chair	**Matthew Dickens** **Graduated:** 2016	Engineering, Robotics The Polytechnic School, Ira A. Fulton Schools of Engineering	Strategic Operations Analyst at Stoa
15. Second Reader	**James (Oplinger) Saragosa** **Graduated:** 2015	Engineering, Electrical The Polytechnic School, Ira A. Fulton Schools of Engineering	Patent Agent at Fiala & Weaver, P.L.L.C.
16. Chair	**Travis Marshall** **Graduated:** 2014	Engineering, Robotics The Polytechnic School, Ira A. Fulton Schools of Engineering	Project Engineer at Fender Musical Instruments Corporation

Bachelor of Arts Senior Project Students

Committee Role	*Name / Graduation*	*Program*	*Current Position*
1. Member	**Ulah Hasan** **Graduated:** 2022	Fashion, School of Art, Herberger Institute for Design and the Arts	Future graduate student

5.5 Selected Graduate and Undergraduate Students Funded

Student Name	**ASU Department**	**Dates of Employment**	**Student Level**
1. Cecilia La Place	Engineering Education and Systems Design (EESD), The Polytechnic School (TPS), Ira A. Fulton Schools of Engineering (FSE)	2016 – present	Ph.D.
2. Ieshya Anderson	EESD & Engineering, Electrical Systems, TPS, FSE	2015 – present	Ph.D.
3. Imane Aboutajedyne	Sidi Mohamed Ben Abdellah University of Fez, Morocco Engineering Education	2021 – 2022	Ph.D.
4. Steven Weiner	Human and Social Dimensions of Science and Technology (HSD), School for the Future of Innovation in Society (SFIS)	2016 – 2019	Ph.D.
5. Christina Foster	Engineering Education Mary Lou Fulton Teacher's College	2013 – 2016	Ph.D.
6. Aubrey Wigner	HSD SFIS	2014 – 2017	Ph.D.
7. Leonor Camarena	Public Administration School of Public Affairs	2015 – 2016	Master's / Ph.D.
8. Kayla Schwoerer	Public Administration School of Public Affairs	2015 – 2016	Master's / Ph.D.
9. Jay Fernandez	Electrical & Computer Engineering Engineering, Electrical Systems College of Technology and Innovation	2018 – 2022 2011 – 2012	M.S. B.S.
10. Kevin Shah	Engineering, Robotic Systems, TPS, FSE	2022 – present	B.S.
11. Quinn Wedemeyer	Human Systems Engineering, TPS, FSE	2022 – present	B.S.
12. Isaiah Begay	Engineering, Electrical Systems, TPS, FSE	2022	B.S.

Student Name	ASU Department	Dates of Employment	Student Level
13. Courtney Betoney	Engineering, Mechanical Systems The Polytechnic School Ira A. Fulton Schools of Engineering	2014 – 2022	B.S.
14. Justin Little-Sagg	Engineering, Electrical Systems, TPS, FSE	2022	B.S.`
15. Andrew Karnes	Software Engineering, School of Computing, Informatics, and Decision Systems Engineering Ira A. Fulton Schools of Engineering	2017 – 2018	B.S.
16. James Larson	Engineering, Electrical Systems The Polytechnic School Ira A. Fulton Schools of Engineering	2015 – 2019	B.S.
17. Tyrine Pangan	Software Engineering, School of Computing, Informatics, and Decision Systems Engineering Ira A. Fulton Schools of Engineering	2014 – 2019	B.S.
18. Matthew Dickens	Engineering, Robotics Systems The Polytechnic School Ira A. Fulton Schools of Engineering	2012 – 2016	B.S.
19. Paul Horton	Software Engineering, School of Computing, Informatics, and Decision Systems Engineering Ira A. Fulton Schools of Engineering	2015 – 2017	B.S.
20. Cecilia La Place	Software Engineering, School of Computing, Informatics, and Decision Systems Engineering Ira A. Fulton Schools of Engineering	2015 – 2017	B.S.
21. Miles Mabey	Engineering, Robotics Systems The Polytechnic School Ira A. Fulton Schools of Engineering	2015 – 2017	B.S.
22. Andrew Heiman	Engineering, Electrical Systems The Polytechnic School Ira A. Fulton Schools of Engineering	2013 – 2015	B.S.
23. James Oplinger	Engineering, Electrical Systems The Polytechnic School Ira A. Fulton Schools of Engineering	2013 – 2015	B.S.
24. Stephanie Dolinger	Manufacturing Engineering The Polytechnic School Ira A. Fulton Schools of Engineering	2014	B.S.
25. Andres Neal	Engineering, Mechanical Systems College of Technology and Innovation	2014	B.S.

Student Name	ASU Department	Dates of Employment	Student Level
26. Randi Taylor	Engineering, Mechanical Systems College of Technology and Innovation	2013 – 2014	B.S.
27. Cameron Owens	Engineering, Robotics Systems College of Technology and Innovation	2012 – 2013	B.S.
28. Andrew Carr	Applied Computer Science Arizona State University	2011 – 2012	B.S.
29. Maria Diaz	Interdisciplinary Sciences Arizona State University	2011 – 2012	B.S.
30. Ben Tieni	Visual Communication Design Arizona State University	2011 – 2012	B.S.

5.6 Undergraduate Student Mentoring

Capstone iProjects

The list below represents the year-long capstone projects that I have mentored while at ASU before the capstone mentoring model shifted to faculty in as-needed consulting roles.

- M.D. Properties Corporation (2017 – 2018)
- Red Devil Automation (2017)
- i.d.e.a. Museum (2015 – 2016)
- Lockheed Martin (2014 – 2015)
- Mesa Arts Center (2012 – 2013)
- Vyykn (2011 – 2012)
- ON Semiconductor (2011)

Independent Studies

I regularly mentor students in independent study courses and with their external internships. The list below represents the students that I have mentored while at ASU.

Independent Study Student Name	ASU Department	Dates of Mentorship	Student Level
1. Matthew Dickens	Engineering, Robotic Systems The Polytechnic School (TPS) Ira A. Fulton Schools of Engineering (FSE)	2015	B.S.
2. Joe Burggraff	Engineering, Electrical Systems TPS, FSE	2014 – 2015	B.S.
3. Levi Morton	Engineering, Electrical Systems TPS, FSE	2014	B.S.
4. Courtney Betoney	Engineering, Mechanical Systems TPS, FSE	2014	B.S.

Independent Study Student Name	ASU Department	Dates of Mentorship	Student Level
5. Aaron Cooper	Engineering, Electrical Systems TPS, FSE	2014	B.S.
6. Jared Morton	Engineering, Electrical Systems Department of Engineering College of Technology and Innovation (CTI)	2013	B.S.
7. Monica Reynoso	Engineering, Electrical Systems Department of Engineering, CTI	2012	B.S.

Broadening the Reach of Engineering through Community Engagement (BRECE) Scholars

The NSF-funded BRECE Scholars Program provided 4 years of mentoring, academic and financial support to a cohort of financially challenged, and academically talented B.S. students to pursue and earn engineering baccalaureate degrees at ASU. As a mentor, I met with all of the students on a weekly basis and mentoedr them on outreach opportunities and academic choices.

BRECE Scholar Name	ASU Department Ira A. Fulton Schools of Engineering	Dates of Mentorship
1. Rebecca Bell	Engineering, Electrical Systems The Polytechnic School (TPS)	2014 – 2017
2. Courtney Betoney	Engineering, Mechanical Systems, TPS	2014 – 2017
3. Brittany Blevins	Engineering, Mechanical Systems, TPS	2018 – 2019
4. Jorge Calderon	Applied Computer Science	2014
5. Calvin Caldwell	Engineering, Mechanical Systems, TPS	2018
6. Michael Chatham	Engineering, TPS	2015 – 2018
7. Dallin Cluff	Engineering, TPS	2015 – 2018
8. Brandon Dunn	Engineering, TPS	2016 – 2019
9. Grady Gaugler	Engineering, TPS	2016 – 2020
10. Grady Henkel	Engineering, TPS	2015 – 2017
11. Paul Horton	Software Engineering, School of Computing, Informatics, and Decision Systems Engineering (CIDSE)	2014 – 2018
12. Tanner Landis	Engineering, Mechanical Systems, TPS	2014 – 2015
13. Cecilia La Place	Software Engineering, CIDSE	2016 – 2018
14. James Larson	Engineering, Electrical Systems, TPS	2014 – 2018
15. Leah Lindberry	Engineering, TPS	2013 – 2014
16. Angelica Lugo	Engineering, TPS	2018 – 2019
17. Miles Mabey	Engineering, Robotics Systems, TPS	2014 – 2020
18. Noah Major	Engineering, Mechanical Systems, TPS	2014 – 2017
19. Alejandra Mayoral	Engineering, Electrical Systems, TPS	2014 – 2017
20. Marcus Miller	Engineering, TPS	2019 – 2020
21. Miles Miller	Engineering, Automotive Systems, TPS	2014 – 2018
22. Juan Paez	Engineering, TPS	2013 – 2014

BRECE Scholar Name	ASU Department Ira A. Fulton Schools of Engineering	Dates of Mentorship
23. Tyrine Pangan	Software Engineering, CIDSE	2014 – 2019
24. Leah Stahlinski	Software Engineering, CIDSE	2014
25. Christopher Vaughn	Engineering, TPS	2017 – 2020
26. Jesse Welch	Engineering, TPS	2013 – 2014
27. Jesse Zubeck	Engineering, Automotive Systems, TPS	2018 – 2020

5.7 Faculty Collaborators

The list below shows my formal collaborators (e.g., on publications, grants or exhibitions) in the last 48 months. The list is sorted alphabetically.

Faculty Collaborator Name	Current Position	University / Department
1. Rohini Abhyankar	Postdoctoral Researcher	Penn State University
2. Robin Adams	Professor	Purdue University, College of Engineering, School of Engineering Education
3. Hadi Ali	Assistant Professor	Embry-Riddle Aeronautical University
4. Ashish Amresh	Associate Professor	Northern Arizona University
5. Mayra Artiles	Assistant Professor	Arizona State University (ASU), Ira A. Fulton Schools of Engineering (FSE), The Polytechnic School (TPS)
6. Jennifer Bekki	Associate Professor	ASU FSE TPS
7. Lisa Benson	Professor	Clemson University
8. Samantha Brunhaver	Assistant Professor	ASU FSE TPS
9. Adam Carberry	Associate Professor	ASU FSE TPS
10. Jenni Case	Department Head and Professor	Virginia Tech, Engineering Education
11. Nalini Chhetri	Clinical Professor	ASU School for the Future of Innovation in Society (SFIS)
12. Alan Cheville	Professor and Chair	Bucknell University, Electrical Engineering
13. Brooke Coley	Assistant Professor	ASU FSE TPS
14. David Delaine	Assistant Professor	The Ohio State University, Department of Engineering Education
15. Meseret Hailu	Assistant Professor	ASU Mary Lou Fulton Teacher's College (MLFTC)
16. Mark Henderson	President's Professor	ASU FSE TPS
17. Michelle Jordan	Associate Professor	ASU MLFTC
18. Eugene Judson	Professor	ASU MLFTC
19. Rachel Kajfez	Associate Professor	The Ohio State University, Department of Engineering Education
20. Nadia Kellam	Associate Professor	ASU FSE TPS

Faculty Collaborator Name	Current Position	University / Department
21. Micah Lande	Assistant Professor	South Dakota School of Mines & Technology, Department of Mechanical Engineering
22. Susan Lord	Professor	University of San Diego
23. Anthony Maciejewski	Professor	Colorado State University, Electrical and Computer Engineering
24. Julie Martin	Associate Professor	The Ohio State University, Department of Engineering Education
25. Holly Matusovich	Professor	Virginia Tech, Department of Engineering Education
26. Ann McKenna	Professor & Vice Dean of Strategic Advancement	ASU FSE
27. Shari Metcalf	Senior Researcher	Harvard University Graduate School of Education
28. Galina Mihaleva	Associate Professor	ASU School of Art, Fashion
29. Marie Paretti	Professor	Virginia Tech, Department of Engineering Education
30. Nielsen Pereira	Associate Professor	Purdue University, College of Education, Department of Educational Studies
31. Casey Smith	Associate Director for Instructional Support	University of Illinois at Urbana-Champaign
32. Shannon Stefl	Assistant Director	Clemson University, Office of Teaching Effectiveness and Innovation
33. Jennifer Turns	Professor	University of Washington, Human Centered Design & Engineering
34. Dina Verdín	Assistant Professor	ASU FSE TPS
35. Steven Weiner	Senior Research Analyst	ASU Center on Reinventing Public Education
36. Kalvin White	Retired	Navajo Nation Department of Diné Education, Office of Diné School Improvement
37. Yevgeniya Zastavker	Professor of Physics and Education	Olin College of Engineering

5.8 Selected Summer Camps for Indigenous Students

The list below shows the summer STEAM camps I have offered (designing curriculum and either directly teaching or hiring and training teachers for) primarily for Diné middle and high school students from the Navajo Nation. Some of these camps are taught in collaboration with storytelling faculty from the South Mountain Community College Storytelling Institute. Since starting at ASU, I have worked with nearly 600 Indigenous middle and high school students.

Camp Name	Year	Location
1. Advanced STEAM Machines™ Camp	2023	ASU Polytechnic Campus, Mesa, AZ
2. Advanced STEAM Machines™ Camp	2022	ASU Polytechnic Campus, Mesa, AZ
3. STEAM Machines™ Camp	2022	Dilcon Community School, Winslow, AZ.
4. STEAM Machines™ + Storytelling Camp	2022	Greasewood Springs Community School, Greasewood, AZ
5. STEAM Machines™ + Storytelling Camp	2022	Dennehotso Boarding School, Dennehotso, AZ
6. STEAM Machines™ + Storytelling Camp	2022	Rock Point Community School, Rock Point, AZ
7. Advanced STEAM Machines™ Camp	2019	ASU Polytechnic Campus, Mesa, AZ
8. STEAM Machines™ + Storytelling Camp	2019	Ch'ooshgai Community School, Tohatchi, NM
9. STEAM Machines™ + Storytelling Camp	2019	Dennehotso Boarding School, Dennehotso, AZ.
10. STEAM Machines™ + Storytelling Camp	2018	Greasewood Springs Community School, Greasewood, AZ
11. Advanced STEAM Machines™ Camp	2018	ASU Polytechnic Campus, Mesa, AZ
12. STEAM Machines™ + Storytelling Camp	2017	Greasewood Springs Community School, Greasewood, AZ
13. STEAM Machines™ Workshop	2016	INSPIRE Camp, Mesa, AZ.
14. STEAM Machines™ Camp	2016	Navajo Nation Transportation Center, Window Rock, NM
15. STEAM Machines™ Camp	2016	Ch'ooshgai Community School, Tohatchi, NM
16. STEAM Machines™ Camp	2015	Ch'ooshgai Community School, Tohatchi, NM
17. STEAM Machines™ Camp	2015	Diné College, Tsaile, NM
18. STEAM Machines™ Camp	2014	To'hajiilee Community School, To'hajiilee, NM
19. STEAM Machines™ Camp	2014	Shonto Preparatory School, Shonto, AZ
20. STEAM Machines™ Camp	2013	Wingate High School, Fort Wingate, NM
21. STEAM Machines™ Camp	2012	Wingate High School, Fort Wingate, NM
22. STEAM Machines™ Camp	2012	Flagstaff High School / Kinlani Dormitory, Flagstaff, AZ.

6. Service

6.1 Professional Service

Studies in Engineering Education Journal Associate Editor	**2019 – present**
Advances in Engineering Education (AEE) Journal Reviewer	2011, 2013
American Educational Research Association (AERA) Reviewer	2015 – 2017
American Society for Engineering Education (ASEE) Annual Conference Reviewer	2008 – 2022
American Society for Engineering Education (ASEE) Design in Engineering Education (DEED) Division Director	2017 – 2018
CoDesign: International Journal of CoCreation in Design and the Arts Reviewer	2019 - 2020
Electrical and Computer Engineering Department Heads Association (ECEDHA) Program Committee Member, ECE Lab Pros & ECE Makers Summit Co-Chair, and Makerspace Working Group Chair	2017 – 2022
IEEE Frontiers in Education (FIE) Conference Reviewer	2009 – 2015, 2019
IEEE Frontiers in Education (FIE) Technical Program Committee Reviewer	2015
IEEE Transactions on Education Journal Reviewer	2019
International Journal of Engineering Education (IJEE) Reviewer	2015
International Journal of Engineering, Social Justice, and Peace (IJESP) Reviewer	2015
Journal of American Indian Education Reviewer	2019
Journal of Engineering Education Reviewer	2011 – 2012, 2014 – 2016, 2019
Journal of Online Engineering Education Reviewer	2011
LEARNing Landscapes Journal Reviewer	2017
National Science Foundation Grant Proposal Reviewer	2011 – 2022
National Science Foundation Maker Summit Planning Committee Member	2015 – 2016
PEER Collaborative National Workshop Planning Committee Member and Facilitator	2014 – 2015
Peer mentoring for early-career faculty in engineering education research External Teaching-Track Promotion & Tenure Evaluator	2021

6.2 Professional Affiliations

American Educational Research Association (AERA)	2012 – 2013
American Indian Science and Engineering Society (AISES)	2015 – present
American Society for Engineering Education (ASEE)	2006 – present
Eta Kappa Nu (HKN)	2000 – present
National Association for Gifted Children (NAGC)	2010 – 2017
National Indian Education Association (NIEA)	2017 – present

6.2 Professional Affiliations

National Science Teachers Association (NSTA)	2011 – 2017
Tau Beta Pi	2009 – present
The Design Society	2009 – 2010

6.3 Arizona State University (ASU) Service

Member	**The Polytechnic School (TPS) Personnel Committee**	1/2021 – present
Member	**TPS Engineering Education and Systems Design Ph.D. Executive Committee**	7/2019 – present
Member	**Ira A. Fulton Schools of Engineering (FSE) Dean's Sabbatical Advisory Council**	5/2019 – present
Ambassador	**Julie Ann Wrigley Global Futures Laboratory & FSE**	10/2022 – present
Member	**Provost's Native American Advisory Council (P-NAAC)**	2017 – present
Member	**ASU University Senate Research and Creative Activities Committee**	2020 – 2021
Member	**TPS Engineering Education and Systems Design Faculty Search Committee**	2019 – 2020
Member	**ASU University Senate Committee for Academic Freedom and Tenure**	2019 – 2021
Member	**TPS Undergraduate Curriculum Committee**	2017 – 2018
Member	**TPS Engineering Education Faculty Search Committee**	2016 – 2017
Member	**TPS Awards Committee**	2016 – 2017
Member	**School for the Future of Innovation in Society Public Science and Maker Summit Planning Committee**	1/2016 – 4/2016
Member	**FSE Executive Committee** *Provides advice and recommendations to the Dean; led the Dean's Distinguished Lecture subcommittee*	2014 – 2016
Member	**TPS Director Faculty Search Committee** *Successfully hired candidate*	3/2014 – 4/2014
Member	**College of Technology & Innovation Collaboratory Council** *Committee was responsible for the iProject program*	8/2013 – 4/2014
Faculty Advisor	**Engineering Education Enhancement (EEE) Club** *This club engaged in extracurricular design projects*	7/2012 – 7/2014
Member	**Department of Engineering Energy Systems Faculty Search Committee** *Successfully hired candidate*	9/2012 – 5/2013
Co-Chair	**Engineering and Engineering Technology Merger – Electrical Program Subcommittee** *This committee was responsible for determining curricular changes necessary to merge the Engineering and Electrical Engineering Technology programs.*	1/2012 – 8/2012

6.3 Arizona State University (ASU) Service

Chair	**College of Technology and Innovation K-12 Task Force** *This committee was responsible for recommending K-12 initiatives for the college*	8/2011 – 5/2012

6.4 Board of Directors Memberships

Member	**Inclusive Engineering Foundation** (https://iecfd.org)	8/2022 – present
Member	**South Mountain Community College Engineering Program**, Phoenix, AZ.	8/2019 – present
Member	**i.d.e.a. Museum**, Mesa, AZ. (https://www.ideamuseum.org)	5/2014 – 6/2021

6.5 Arizona State University (ASU) Affiliations

Barrett, the Honors College	Honors faculty	
Aerospace Engineering	Graduate faculty	
Curriculum & Instruction (Engineering Education)	Graduate faculty (chair)	
Electrical Engineering PhD	Graduate faculty (chair)	
Engineering Education Systems and Design PhD	Graduate faculty (chair)	
Human and Social Dimensions of Science and Technology PhD	Graduate faculty (chair)	
Learning, Literacies and Technologies PhD	Graduate faculty (co-chair)	
Mary Lou Fulton Teachers College	Affiliate	
Mechanical Engineering	Graduate faculty	
School for the Future of Innovation in Society	Affiliate, Fellow	
GlobalResolve™ *Social entrepreneurship program*	Affiliate	2011 – 2019
Quantum Energy and Sustainable Solar Technologies (QESST) Center *NSF-DOE Engineering Research Center*	Affiliate	2012 – 2022

7. Industry Experience

Intern, Digital Systems Department, Shure Incorporated, Niles, Illinois	5/2006 – 8/2006
Intern, DSP-Embedded Controls Department, Shure Incorporated Niles, Illinois	5/2004 – 8/2004
Technical Intern 4, Optical Networking Group, Tellabs Burlington, Massachusetts	5/2001 – 8/2001
Technical Intern 3, TITAN 5500 Product Development, Tellabs Lisle, Illinois	5/2000 – 8/2000
Summer Technical Intern, Raytheon Systems Company Fort Wayne, Indiana	5/1999 – 8/1999 5/1998 – 8/1998