Curriculum Vitae

CONTACT INFORMATION

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EDUCATION

- Ph.D. in Mechanical Engineering, Stanford University, June 2013.
- M.S. in Mechanical Engineering, Stanford University, April 2009.
- B.S. with honors in Mechanical Engineering, Northwestern University, June 2004.

PhD DISSERTATION

D. M. Aukes, "Design and Analysis of Selectively Compliant Underactuated Robotic Hands," Stanford University, 2013.

PROFESSIONAL EXPERIENCE

Assistant Professor, Ira A. Fulton Schools of Engineering, January 2016-Present

- Director IDEAlab (Integrating Design, Engineering, and Analysis)
- Graduate Faculty Member: SEMTE(chair), Human Systems Engineering(co-chair)
- Affiliate: CHART Center, Biomimicry Center
- Honors Faculty, Barrett Honors College

Wyss Institute Fellow, Harvard University, 2015-2016

Post-Doctoral Researcher, Harvard Microrobotics Laboratory, Harvard University, 2013-2015

Graduate Researcher, Stanford Biomimetics and Dexterous Manipulation Laboratory, Stanford University, 2007-2013

Systems Engineer, DMC, Inc., Chicago, IL, 2004-2007

Student Intern, General Motors, North America Product Development, Warren, MI, Summer 2003

Student Intern, Los Alamos National Laboratory, DARHT Project, Los Alamos, NM, Summer 2002

AWARDS, HONORS, FELLOWSHIPS

Keen Professorship, Fall 2017; Wyss Institute Postdoctoral Fellowship in Technology Development, 2014-2015; Stanford Graduate Fellow, Stanford University, 2007-2010; Magna Cum Laude, Northwestern University, 2004; Department Honors, Northwestern University, 2004; Tau Beta Pi, 2004;

PUBLICATIONS, INTELLECTUAL PROPERTY, AND PRESENTATIONS

JOURNAL PUBLICATIONS

1. Aukes, Daniel M, Benjamin Goldberg, Mark R Cutkosky, and Robert J Wood. 2014. "An Analytic Framework for Developing Inherently-Manufacturable Pop-up Laminate Devices." Smart Materials and Structures 23 (9): 094013.
2. Felton, S M, K P Becker, D M Aukes, and R J Wood. 2015. "Self-Folding with Shape Memory Composites at the Millimeter Scale." Journal of Micromechanics and Microengineering 25 (8): 085004.
3. Tolley, Michael T, Samuel M Felton, Shuhei Miyashita, Daniel Aukes, Daniela Rus, and Robert J Wood. 2014. "Self-Folding Origami: Shape Memory Composites Activated by Uniform Heating." Smart Materials and Structures 23 (9): 094006.
4. Aukes, Daniel McConnell, Barrett Heyneman, John Ulmen, Hannah Stuart, Mark R. Cutkosky, Susan Kim, Pablo Garcia, and Aaron Edsinger. 2014. "Design and Testing of a Selectively Compliant Underactuated Hand." The International Journal of Robotics Research 33 (5): 721–35.
5. Sharifzadeh, Mohammad, and Daniel M. Aukes. 2019. "Curvature-Induced Buckling for Flapping-Wing Vehicles." (Submitted).
6. Sharifzadeh, Mohammad, Yuhao Jiang, Amir Salimi Lafmejani, Kevin Nichols, Daniel M. Aukes, Yuhao Jiang, Amir Salimi Lafmejani, Kevin Nichols, and Daniel M. Aukes. 2019. "Maneuverable Swimming in Extreme Environments with a Fish-Inspired Robot." (In Preparation).
7. Bagheri, Hosain, Sheldon Cummings, Cayla Roy, Rachel Casleton, Ashley Wan, Nicole Erjavic, Anna Hu, et al. 2019. "Control and Function of Octopus Suckers." (Submitted), 1–16.
8. Sharifzadeh, Mohammad, Yuhao Jiang, and Daniel Aukes. 2018. "Spherical Parallel Manipulators Fabricated via Laminate Processes." (In Preparation), September.
9. Khodambashi, Roozbeh, Matthew Peet, Spring Berman, Rebecca Fisher, Hamid Marvi, Ximin He, and Daniel M. Aukes. 2019. "Design of Soft, Thermo-Responsive Hydrogel Actuators with Integrated Heaters." (In Prep).
10. Khodambashi, Roozbeh, Azadeh Doroudchi, Mohammad Sharifzadeh, Dongting Li, Rebecca E Fisher, Hamid Marvi, Matthew M Peet, Ximin He, Spring Berman, and Daniel Aukes. 2019. "Control of Soft Polymeric Actuators: A Paradigm Shift in Designing Hydrogel-Based Soft Machines." (Submitted), 1–35.
11. Shuch, Benjamin D, Eric Rogers, Taha Shafa, and Daniel M Aukes. 2019. "A TWO DOF LAMINATE LEG WALKING ROBOT PLATFORMS FOR USE IN RESEARCH AND THE CLASSROOM." Journal of Mechanisms and Robotics (in Preparation).
12. Xu, Y., M. Sun, R. Khodambashi, A. Wu, S. Berman, M.M. Peet, R.E. Fisher, H. Marvi, D. Aukes, and X. He. 2019. "Temperature and Strain Dual Responsive Tactile Hydrogel as

Soft Robotic Materials." (In Prep).

13. Roy, C, S Cummings, B Cota Valenzuela, B Cherry, P Kang, S Berman, M Peet, et al. 2019. "Analysis of the Neuromuscular Structure of Octopus Arms via Contrast Enhanced MRI." (In Prep).

Refereed Conference Papers

1. Brauer, Cole, and Daniel M Aukes. 2019. "VOXEL-BASED CAD FRAMEWORK FOR PLAN-NING FUNCTIONALLY GRADED." In ASME 2019 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference.

2. Knaup, Jacob W, and Daniel M Aukes. 2019. "DESIGN, MODELING, AND OPTIMIZATION OF A HOPPING ROBOT PLATFORM." In ASME 2019 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference.

3. Huerta, Mark, Jennifer Bekki, Adam Carberry, Samantha Brunhaver, Gary Lichtenstein, Daniel Aukes, Julianne Holloway, Doug Melton, and Ann McKenna. 2019. "The Process of Conceptualizing and Creating the Engineering Faculty Impact Collaborative to Support Faculty Development and Mentorship." In 2019 ASEE Annual Conference and Exposition.

4. Shuch, Benjamin D, Eric Rogers, Taha Shafa, and Daniel M Aukes. 2019. "DESIGN OF A TWO DOF LAMINATE LEG TRANSMISSION FOR CREATING WALKING ROBOT PLATFORMS." In ASME 2019 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Anaheim, CA, USA.

5. Mesa, Olga, Saurabh Mhatre, Malika Singh, and Dan Aukes. 2019. "CREASE: Synchronized Gait Through Folded Geometry." In ECAADI(Accepted), 1–10.

6. Yang, Dangli, Shatadal Mishra, Daniel M Aukes, and Wenlong Zhang. 2019. "Design , Planning , and Control of an Origami-Inspired Foldable Quad-Rotor." In 2019 American Control Conference.

7. Doroudchi, Azadeh, Sachin Shivakumar, Rebecca E. Fisher, Hamid Marvi, Daniel Aukes, Ximin He, Spring Berman, and Matthew M. Peet. 2018. "Decentralized Control of Distributed Actuation in a Segmented Soft Robot Arm." In IEEE Conference on Decision and Control (CDC). Miami Beach, FL.

8. Sharifzadeh, Mohammad, Roozbeh Khodambashi, and Daniel M. Aukes. 2018. "ON LOCOMOTION OF A LAMINATED FISH-INSPIRED ROBOT IN A SMALL-TO-SIZE ENVIRON-MENT." In Proceedings of the ASME 2018 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC/CIE 2018).

9. Khodambashi, Roozbeh, Mohammad Sharifzadeh, and Daniel M. Aukes. 2018. "An Integrated Design and Simulation Environment for Rapid Prototyping of Laminate Robotic Mechanisms." In Volume 5B: 42nd Mechanisms and Robotics Conference, V05BT07A068. American Society of Mechanical Engineers.

10. H. Bagheri, A. Gendt, S. Subramanian, S. Berman, M. Peet, D. Aukes, X. He, R.E. Fisher, H. Marvi. 2018. "Switchable Fibrillar Adhesives Under Different Degrees of Saturation." In Materials Research Society Spring Meeting. Phoenix, AZ.

11. Y. Xu, M. Sun, R. Y. Zhao, X. Qian, S. Berman, M. Peet, R.E. Fisher, H. Marvi, D. Aukes, X. He. 2018. "Multi-Responsive Tactile Hydrogels as Soft Robotic Materials." In Materials Research Society Spring Meeting. Phoenix, AZ.

12. M. Qin, M. Sun, X. Qian, Y. Xu, S. Berman, M. Peet, R.E. Fisher, H. Marvi, D. Aukes, X. He. 2018. "Ultra-Sensitive, Highly-Selective, Real-Time Chemical Wearable Sensors and Soft Artificial Muscle." In 9th Annual Bay Area Biomedical Device Conference. San Jose, CA.

13. H. Bagheri, A. Gendt, S. Cummings, S. Subramanian, S. Berman, M. Peet, D. Aukes, X. He, R.E. Fisher, H. Marvi. 2018. "Octopus Sucker Adhesion and Suction Performance Under

Various Environmental Conditions." In Society for Integrative and Comparative Biology.

14. M. Qin, X. Qian, M. Sun, S. Berman, M. Peet, R.E. Fisher, H. Marvi, D. Aukes, X. He. 2017. "Bioinspired Adaptive Materials for Optical Molecular Sensing and Artificial Phototropism." In Canadian Society for Chemistry Conference and Exhibition. Toronto, Canada.

15. Luck, Kevin Sebastian, Joseph Campbell, Michael Jansen, Daniel McConnell Aukes, and Heni Ben Amor. 2017. "From the Lab to the Desert: Fast Prototyping and Learning of Robot Locomotion." In Proceedings of Robotics: Science and Systems. Cambridge, Massachusetts.

16. Jansen, Andrew, Kevin Sebastian Luck, Joseph Campbell, Heni Ben Amor, and Daniel M Aukes. 2017. "Bio-Inspired Robot Design Considering Load-Bearing and Kinematic Ontogeny of Chelonioidea Sea Turtles." In Conference on Biomimetic and Biohybrid Systems, 216–29. Stanford, CA.

17. Koh, Je-sung, Daniel M Aukes, Brandon Araki, Sarah Pohorecky, Yash Mulgaonkar, Michael T Tolley, Vijay Kumar, Daniela Rus, and Robert J Wood. 2017. "A Modular Folded Laminate Robot Capable of Multi Modal Locomotion." In 2016 International Symposium on Experimental Robotics(ISER), edited by Dana Kulić, Yoshihiko Nakamura, Oussama Khatib, and Gentiane Venture, 1:59–70. Springer Proceedings in Advanced Robotics. Springer International Publishing.

18. Mulgaonkar, Yash, Brandon Araki, Je-sung Koh, Luis Guerrero-Bonilla, Daniel M Aukes, Anurag Makineni, Michael T Tolley, Daniela Rus, Robert J Wood, and Vijay Kumar. 2016. "The Flying Monkey: A Mesoscale Robot That Can Run, Fly, and Grasp." In 2016 IEEE International Conference on Robotics and Automation (ICRA), 2016–June:4672–79. IEEE.

19. Doshi, Neel, Benjamin Goldberg, Ranjana Sahai, Noah Jafferis, Daniel Aukes, and Robert J Wood. 2015. "Model Driven Design for Flexure-Based Microrobots." In 2015 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 4119–26. IEEE.

20. Aukes, Daniel M., and Robert J. Wood. 2015. "PopupCAD: A Tool for Automated Design, Fabrication, and Analysis of Laminate Devices." Edited by Thomas George, Achyut K. Dutta, and M. Saif Islam. SPIE.DSS, no. May 2015 (May): 94671B.

21. Aukes, Daniel M., Onur Ozcan, and Robert J. Wood. 2014. "Monolithic Design and Fabrication of a 2-DOF Bio-Inspired Leg Transmission." In Conference on Biomimetic and Biohybrid Systems, 1–10. Milan: Springer International Publishing.

22. Aukes, Daniel M., and Robert J. Wood. 2014. "PopupCAD: A New Design Tool for Developing Self-Folding Devices." In MRS Spring Meeting. San Francisco.

23. An, Byoungkwon, Shuhei Miyashita, Michael T. Tolley, Daniel M. Aukes, Laura Meeker, Erik D. Demaine, Martin L. Demaine, Robert J. Wood, and Daniela Rus. 2014. "An End-to-End Approach to Making Self-Folded 3D Surface Shapes by Uniform Heating." In 2014 IEEE International Conference on Robotics and Automation (ICRA), 1466–73. Hong Kong: IEEE.

24. Stuart, Hannah S, Shiquan Wang, Bayard Gardineer, David L Christensen, Daniel M Aukes, and Mark Cutkosky. 2014. "A Compliant Underactuated Hand with Suction Flow for Underwater Mobile Manipulation." In 2014 IEEE International Conference on Robotics and Automation (ICRA), 6691–97. Hong Kong: IEEE.

25. Aukes, Daniel M., and Robert J. Wood. 2014. "Algorithms for Rapid Development of Inherently-Manufacturable Laminate Devices." In Volume 1: Development and Characterization of Multifunctional Materials; Modeling, Simulation and Control of Adaptive Systems; Structural Health Monitoring; Keynote Presentation, 1:V001T01A005. Newport, RI, USA: ASME.

26. Aukes, Daniel McConnell, and Mark R Cutkosky. 2013. "Simulation-Based Tools for Evaluating Underactuated Hand Designs." In 2013 IEEE International Conference on Robotics and Automation, 2067–73. IEEE.

27. Aukes, Daniel, Susan Kim, Pablo Garcia, Aaron Edsinger, and Mark R Cutkosky. 2012. "Selectively Compliant Underactuated Hand for Mobile Manipulation." In 2012 IEEE International Conference on Robotics and Automation, 2824–29. IEEE.

28. Aukes, Daniel, Barrett Heyneman, Vincent Duchaine, and Mark R. Cutkosky. 2011. "Varying Spring Preloads to Select Grasp Strategies in an Adaptive Hand." In 2011 IEEE/RSJ International Conference on Intelligent Robots and Systems, 1373–79. IEEE.

29. CASLETON, R, M MORGENTHALER, S SHAIKH, M SORGE, B TUCKER, I ESSENDRUP, S BERMAN, et al. n.d. "Chemoreception in Octopus Bimaculoides." In SICB 2019 (Submitted).

30. Lafmejani, Amir Salimi, Azadeh Doroudchi, Hamed Farivarnejad, Ximin He, Daniel Aukes, Matthew M Peet, Hamid Marvi, Rebecca E Fisher, and Spring Berman. 2020. "Kinematic Modeling and Trajectory Tracking Control of an Octopus-Inspired Continuum Robot." In 2020 IEEE International Conference on Robotics and Automation (Submitted), 1–9.

Invited Book Chapters Submitted / In Preparation

1. Bagheri, Hosain, Spring Berman, Matthew M. Peet, Daniel M. Aukes, Ximin He, Rebecca E. Fisher, and Hamidreza Marvi. 2020. "Octopus Sucker Control and Functionality." In Bioinspired Sensing, Actuation, and Control in Underwater Soft Robotic Systems (in Preparation), edited by Derek Paley and Norm Wereley. Springer.

2. Lo, Chiao-Yueh, Yusen Zhao, Yousif Alsaid, Matthew M. Peet, Rebecca E. Fisher, Hamidreza Marvi, Spring Berman, Daniel M. Aukes, and Ximin He. 2020. "Bioinspired Sensing, Actuation, and Control in Underwater Soft Robotic Systems." In Bioinspired Sensing, Actuation, and Control in Underwater Soft Robotic Systems (in Preparation), edited by Derek Paley and Norm Wereley. Springer.

PATENTS, PATENT APPLICATIONS, & PROVISIONAL PATENTS

1. Senanayake, R, Grit Denker, P Lincoln, Roy D. Kornbluh, S. Lincoln, R. Heydt, Harsha Prahlad, et al. 2017. "Adaptable Input/Output Device." US Patent 9,563,274 B2 2 (12).

2. Garcia, Pablo E., Thomas P. Low, Harsha Prahlad, Daniel Aukes, Susan Kim, and Roy D. Kornbluh. 2016. "Twisted String Actuator Systems." US Patent 9.272,425 B2.

3. Garcia, Pablo E., Thomas P. Low, Harsha Prahlad, Daniel Aukes, Susan Kim, and Roy D. Kornbluh. 2016. "Multilayer Electrolaminate Braking System." US Patent 9,272,427 B2.

4. Garcia, PE, TP Low, H Prahlad, Daniel Aukes, Susan Kim, and D Kornbluh. 2014. "Mobile Robotic Manipulator System." US Patent 8,833,826 B2.

5. Aukes, Daniel M., Hani Ben Amor, Kevin Luck, Michael Jansen, and Joseph Campbell. n.d. "SYSTEMS AND METHODS FOR RAPID-PROTOTYPED ROBOTIC DEVICES." US Patent Application 62/597,276.

6. Zhang, Wenlong, Dangli Yang, and Daniel Aukes. 2019. "SYSTEMS AND METHODS FOR A FOLDABLE UNMANNED AERIAL VEHICLE HAVING A LAMINATE STRUCTURE." US Patent Application.

7. Zhang, Wenlong, Daniel Aukes, and Dangli Yang. 2018. "System and Method for a Foldable Unmanned Aerial Vehicle Having on Laminate Structure." US Provisional Patent.

8. Aukes, Daniel M., Hani Ben Amor, Kevin Luck, Michael Jansen, and Joseph Campbell. 2017. "Systems and Methods for Rapid-Prototyped Robotic Devices." US Provisional

       Patent 584205: 1–28.

9. Aukes, Daniel M., Mohammad Sharifzadeh, and Kevin Nichols. 2018. "Mechanisms For Steering Robotic Fish." US Provisional Patent.

10. Aukes, Daniel M., Roozbeh Khodambashi, Ximin He, and Yousif Alsaid. 2019. "Shape Morphing Soft Material." US Provisional Patent.

Invited Presentations

Toyota Research Institute, Palo Alto CA, Dec 2016; Foldable Robotics Workshop, IROS, Oct 2016; D. M. Aukes, "Automating the Design Process for Folding Laminate Devices," in Minimality & Design Automation, RSS Workshop, 2016.; D. M. Aukes, "Informal robotics: closing the loop between teaching and research," in Robot makers II: The future of digital rapid design and fabrication of robots, RSS Workshop, 2016.; University of California San Diego, March 2015; Cornell University, March 2015; University of Colorado Boulder, ATLAS Institute, March 2015; Arizona State University, March 2015; Massachussetts Institute of Technology, Mechanical Engineering Seminar Series, February 2015; SRI International, Menlo Park, CA, June 2014; D. M.Aukes, "DIY robots with popupCAD", Wyss Retreat 2014; D. M. Aukes, "PopupCAD: a New Design Tool for Developing Inherently-Manufacturable Laminate Devices," in Robot makers: The future of digital rapid design and fabrication of robots, RSS Workshop, 2014; Aukes, D.M. (2012) Simulation-Based Tools For Evaluating Underactuated Hand Designs. Guest Lecture at George Washington University; SBHSE Seminar Series; Aukes, Daniel M., and Robert J. Wood. 2014. "PopupCAD: A New Design Tool for Developing Self-Folding Devices." In MRS Spring Meeting. San Francisco; Aukes, Daniel M., and Robert J. Wood. 2015. "PopupCAD: A Tool for Automated Design, Fabrication, and Analysis of Laminate Devices." Edited by Thomas George, Achyut K. Dutta, and M. Saif Islam. SPIE.DSS, no. May 2015 (May): 94671B;

Professional Activities and Service

International & National Conference Committees

Sponsor Chair for 2019 Southwest Robotics Symposium, Tempe, AZ, Jan 2019. Responsible for $46,000 in sponsorship coordination, $18,000 personally. Robosoft 2019 Program Committee Organizer for 2018 Southwest Robotics Symposium, Tempe, AZ, Jan 2018. Responsible for $13,000 in sponsorhips. Technical Program Chair for the Symposium On Computational Fabrication, June 2018 RSS 2018 Program Committee RSS 2017 Program Committee RSS 2016 Program Committee

International & National Conference Sessions Chaired

Session Chair, MR-8-3: Motion Control, ASME IDETC/CIE 2018 Session Chair, MR-4-3: Structural Design of Origami, ASME IDETC/CIE 2018

Peer Reviewer for Journals

Science; International Journal of Robotics Research (IJRR); IEEE Robotics and Automation Letters (IEEE-RAL); Journal of Soft Robotics (SoRo); IEEE Tranctions on Robotics (IEEE-TRO); Au-

tonomous Robots(AURO); Sensors and Actuators A (SNA); Journal of Intelligent and Robotic Systems(JINT); ASME Journal of Mechanisms and Robotics (JMR); IEEE Robotics and Automation Magazine (IEEE-RAM);

Peer Reviewer for Conferences:

Robotics: Science and Systems (RSS); International Conference on Robotics and Automation (ICRA); International Conference on Intelligent Robots (IROS); Symposium on Computational Fabrication (SCF); ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference(IDETC/CIE); RoboSoft;

Other External Service

Peer Reviewer on NSF Funding Panels (in-person and ad-hoc); Serving as Junior Chair for the RSS Technical Committee on Mechanisms and Design. Responsible for website development and outreach. 2016-Present.; Workshop Organizer, "Folding in Robotics" at IROS 2017, Oct 2017; Workshop Organizer, "Folding in Robotics" at IROS 2016, Oct 2016;

Internal Service

ASU New Faculty Advisory Council, Fall 2016-Present; Serve as Barrett Faculty Honors Advisor, Fall 2019-present; Undergraduate Curriculum Committee, Fall 2017-present; RED Poly Faculty Fellow, "Project Spine" Team, 2016-2018; Polytechnic School robotics faculty search committee, 2016-2017; Serve as Technical Faculty Mentor for the ASU Global Resolve Club Fall 2019-Present; Develop and maintain the robotics website for ASU robotics faculty, April 2016-present; Developed and maintain `http://idealab.asu.edu`, a website dedicated to topics related to folding mechanism design. 2015-present;

Outreach

Developed and maintain `http://www.popupcad.org`, a website dedicated to topics related to folding mechanism design. 2015-present; Host lab tours on request (~4 per year); ASU Global Resolve Chaperone, Peru, March 2017; Organized Activities for National Robotics Week at Polytechnic 2018 (Fulton Fieldtrip); Organized Activities for National Robotics Week at Polytechnic 2017 (Fulton Fieldtrip); Organized Activities for National Robotics Week at Polytechnic 2016 (DiscoverE Day); Hosted events at Night of the Open Door, Feb 2017; Hosted events at Night of the Open Door, Feb 2016; Participated in the Polytechnic School's Innovation Showcase;

TEACHING EXPERIENCE

EGR 494/598: Foldable Robotics. ASU Polytechnic Campus. This course introduces students to the fundamentals of designing origami-inspired robots in a project-based format. I developed this course in Spring 2016. Responsibilities in the course include development and delivery of course material, project mentoring, etc. (This course is numbered differently for undergraduate and graduate students)

EGR 304: Embedded Systems I. ASU Polytechnic Campus. This is a project-based course that teaches the fundamentals of designing and fabricating PCB-based embedded systems. The course is delivered in a project-based format where teams. Responsibilities in the course include development, preparation, and delivery of course material, project mentoring, etc.

EGR 314: Embedded Systems II. ASU Polytechnic Campus. This project-based class focuses on extending concepts taught in EGR 304 through more advanced project specifications and topics. Responsibilities in the course include development, preparation, and delivery of course material, project mentoring, etc.

EGR202: Use-Inspired Design Project II. ASU Polytechnic Campus. This course introduces students to a user-centered design process as it relates to developing products with engineering skillsets. Responsibilities in the course include preparation and delivery of course material, project mentoring, etc. I overhauled the course material in Spring 2016 and 2017 to include new modules related to modeling and experimentation in a mini-project format focused on electric motors.

Informal Robotics, Harvard Graduate School of Design. This course taught the design of informal robotic systems including soft and origami-inspired robotics, from a design, aesthetic, and research perspective. Responsibilities included development, co-teaching, and mentoring of teams.

Dynamics of Mechanical, Aerospace, and Biomechanical Systems, Stanford University. Teaching Assistant with Prof. Paul Mitiguy. Responsibilities included weekly study sections, research presentation in class, and office hours.

Other Teaching Experience

- Course Coordinator for *EGR202: Use-Inspired Design Project II*, Spring 2018
- Further course development of *EGR598: Foldable Robotics* around KEEN "Entrepreneurial Mindset" principles, Spring 2018
- Attended 2018 KEEN National Conference, Dallas, TX
- Developed class titled *EGR598: Foldable Robotics* at ASU Polytechnic School, Fall 2016
- Developed class titled *Informal Robotics* with lecturer Chuck Hoberman and PhD student Jonathan Grinham. Taught classes and mentored project teams. 2014
- Attended one-day teaching conference organized by the Harvard Initiative for Learning and Teaching , September, 2014.

Funded Proposals

Proposal Names

1. Octopus-Inspired Autonomous Arms for Soft Robotics with Adaptive Motions
2. Improving Research and Entrepreneurial Capacity in Foldable Robotics
3. CREC:SRP Laminate Robot Platform to Facilitate Autonomous Canal Maintenance
4. Phase II: Navigation and Control of an Autonomous Fish-Inspired Robot for Canal Cleaning and Maintenance
5. Mentoring Engineering Faculty to Professional Impact

6. EAGER SitS: Active Self-Boring Robots that Enable Next Generation Dynamic Underground Wireless Sensing Networks: Fusion of Fast Prototyping, Modeling and Learning
7. EFRI C3 SoRo: Soft Curved Reconfigurable Anisotropic Mechanisms (SCRAM)
8. Tasking and Control of Heterogeneous Robot Teams for Contaminant Detection and Localization in Waterways

Proposal Details

Proposal #	Role	Year	Agency	$	% Credit	Status
1	coPI	2017	ONR	$2M	25%	**funded**
2[1]	PI	2017	KEEN	$12k	100%	**funded**
3	PI	2017	SRP	$61k	100%	**funded**
4	PI	2018	SRP	$62k	100%	**funded**
5	coPI	2018	Kern Family Foundation	$3,207k	5%	**funded**
6	coPI	2018	NSF	$300K	33%	**funded**
7	coPI	2019	NSF	$2M	25%	**funded**
8[2]	PI	2019	ASU	$15k	100%	**funded**

Press Coverage

Local: Arizona PBS, KJZZ, ABC15, East Valley Tribune, The State Press, 12 News, CBS5
National: Nova, New York Post, New York Times, Boston Globe
International: IEEE Spectrum, BBC News
Web: Inverse, BGR, New Scientist

[1]Internal ASU Funding
[2]Internal ASU Funding