

Javier González-Rocha

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Education

- 2013 – 2020 **Doctor of Philosophy in Aerospace Engineering**
Virginia Polytechnic Institute and State University
Blacksburg, VA
- 2010 – 2012 **Masters of Science in Mechanical Engineering**
California State University, Sacramento
Sacramento, CA
- 2004 – 2010 **Bachelor of Science in Mechanical Engineering**
California State University, Sacramento
Sacramento, CA

Appointments

- 2020 – Present Chancellor’s Postdoctoral Fellow, Department of Mechanical Engineering, University of California, Riverside, CA
- 2020 Postdoctoral Research Associate, Kevin T. Crofton Department of Aerospace & Ocean Engineering, Virginia Polytechnic Institute and State University, VA

Publications¹

Journal Publications (Peer-reviewed):

- [12] “Toward on-demand measurements of greenhouse gas emissions using small multirotor uncrewed aircraft systems (sUAS),” Z. Zhu, **J. González-Rocha***, Y. Ding, I. Frausto-Vicencio, S. Heerah, A. Venkatram, M. Dubey, D. Collins, F. Hopkins, *Atmospheric Measurement Techniques*. (In Preparation.)
- [11] “A study of the wind sensing performance of pusher and puller hexacopter unmanned aircraft,” **J. González-Rocha**, P. Sharma, E. Atkins, C. A. Woolsey, *Journal of Aircraft*. (In Review.)
- [10] “Simplifying meteorological inputs for dispersion models used to estimate methane emissions from dairy manure lagoons,” R. R. Thiruvengkatachari, Y. Ding, V. Carranza, **J. González-Rocha**, F. Hopkins, A. Venkatram, *Science of the Total Environment*. (In Review.)
- [9] “Sensing atmospheric flows in aquatic environments using multirotor small uncrewed aircraft system (sUAS),” **J. González-Rocha**, L. Bilyeu, S. D. Ross, H. Foroutan, S. Jacquemin, A. P. Ault, and D. G. Schmale III., *Environmental Science: Atmospheres* (In Review.)
- [8] “Drone-based particle monitoring above two harmful algal blooms (HABs) at Grand Lake St Marys and Lake Erie, Ohio, U.S.A.,” L. Bilyeu, B. Bloomfield, R. Hanlon, **J. González-Rocha**, S. Jacquemin, A. P. Ault, J. Birbeck, J. A. Westrick, H. Foroutan, L. Marr, S. D. Ross, C. W. Powers, and D. G. Schmale III., *Environmental Science: Atmospheres*. (In Print.)
- [7] “Characterizing Cyanotoxins, Phycocyanin, and Nutrients from Drone Water Samples in Three Freshwater Harmful Algal Blooms (HABs) in the U.S.A.,” R. Hanlon, S. J. Jacquemin, J. Birbeck, J. Westrick, C. Harb, H. Gruszewski, A. Ault, D. Scott, H. Foroutan, S. Ross, **J. González-Rocha**, C. Powers, L. Pratt, H. Looney, G. Baker, and D. G. Schmale III, *Frontiers in Remote Sensing*, 3, pp. 949052, 2022. [DOI: [10.3389/frsen.2022.949052](https://doi.org/10.3389/frsen.2022.949052)]

¹ The superscript * denotes co-lead authorship.

- [6] “Multirotor-assisted measurements of wind induced drift of objects in aquatic environments,” **J. González-Rocha**, A. Sosa, R. Hanlon, A. A. Allen, I. Rypina, D. G. Schmale III, and S. D. Ross, *Applied Ocean Research*, 10, pp. 102538, 2021. [DOI: [10.1016/j.apor.2021.102538](https://doi.org/10.1016/j.apor.2021.102538)]
- [5] “Wind profiling in the lower atmosphere using wind-induced perturbation to the motion of a quadrotor, **J. González-Rocha**, C. A. Woolsey, C. Sultan, and S. F. J. De Wekker, *Sensors*, 20 (5), pp. 1341, 2020. [DOI: [10.3390/s20051341](https://doi.org/10.3390/s20051341)]
- [4] “Small unmanned aircraft systems (sUAS) in atmospheric science: measurement intercomparison for LAPSE-RATE,” L. Barbieri, S. T. Kral, S. C. C. Bailey, A. E. Frazier, J. D. Jacob, J. Reuder, D. Brus, P. B. Chilson, C. Crick, C. Detweiler, A. Doddi, J. Elston, H. Foroutan, **J. González-Rocha**, B. R. Greene, M. I. Guzman, A. L. Houston, A. Islam, O. Kemppinen, D. Lawrence, E. A. Pillar-Little, S. D. Ross, M. Sama, D. G. Schmale III, T. J. Schuyler, A. Shankar, S. W. Smith, S. Waugh, C. Dixon, S. Borenstein, and G. de Boer, *Sensors*, 19(9), pp. 21799, 2019. [DOI: [10.3390/s19092179](https://doi.org/10.3390/s19092179)]
- [3] “Coordinated unmanned aircraft system (UAS) and ground-based weather measurements to predict lagrangian coherent structures (LCSs),” P. J. Nolan, J. Pinto, **J. González-Rocha**, A. Jensen, C. N. Vezzi, S. C. C. Bailey, G. de Boer, C. Diehl, R. Laurence III, C. W. Powers, H. Foroutan, S. D. Ross, and D. G. Schmale III, *Sensors*, 8(12), pp. 4448, 2019. [DOI: [10.3390/s18124448](https://doi.org/10.3390/s18124448)]
- [2] “Sensing wind from quadrotor motion,” **J. González-Rocha**, C. A. Woolsey, C. Sultan, and S. F. J. De Wekker. *Journal of Guidance, Control, and Dynamics*, 42(4), pp. 836-852, 2019 [DOI: [10.2514/1.G003542](https://doi.org/10.2514/1.G003542)]
- [1] “Stability Prediction of a UAV,” I. Tuzcu, K. Awni, and **J. González-Rocha**, *SAE International Journal of Aerospace* 4(2) pp. 1441-1448, 2011. [DOI: [10.4271/2011-01-2783](https://doi.org/10.4271/2011-01-2783)]

Conference Publications (accepted based on full paper review):

- [4] “Model-based wind profiling in the lower atmosphere with multirotor UAS,” **J. González-Rocha**, C. A. Woolsey, C. Sultan, and S. F. J. De Wekker, *AIAA SciTech 2019*, San Diego, CA, January 2019. [DOI: [10.2514/6.2019-1598](https://doi.org/10.2514/6.2019-1598)]
- [3] “Developing multirotor unmanned aerial systems as testbeds for CubeSat satellites,” **J. González-Rocha**, J. Angarita, K. Schroeder, and J. Black, *32nd Annual AIAA/USU Conference on Small Satellites*, Logan, UT, August 2018.
- [2] “Measuring atmospheric winds from quadrotor motion,” **J. González-Rocha**, C. A. Woolsey, C. Sultan, and S. F. J. De Wekker, *AIAA SciTech 2017*, Grapevine, TX, January 2017. [DOI: [10.2514/6.2017-1189](https://doi.org/10.2514/6.2017-1189)]
- [1] “Modeling and control of a thermoelastic beam,” I. Tuzcu, Kawhtan Awni, and **J. González-Rocha**. *ASME 2013 Dynamic Systems and Control Conference*. American Society of Mechanical Engineers, 2013. [DOI: [10.1115/DSCC2013-4025](https://doi.org/10.1115/DSCC2013-4025)]

Technical Poster Presentations:

- [11] “Drone-based wind profiling for characterizing aerosol transport in aquatic environments,” **J. González-Rocha**, R. Hanlon, and D. G. Schmale III, *AGU Fall Meeting*, New Orleans, LA, December 2021.
- [10] “Methane, carbon dioxide, and wind profiles from dairy farms using an Aircore multirotor unmanned aircraft system,” Z. Zhu, **J. González-Rocha***, Y. Ding, I. Frausto-Vicencio, S. Heerah, A. Venkatram, M. Dubey, D. Collins, and F. Hopkins, *AGU Fall Meeting*, New Orleans, LA, December 2021.
- [9] “On-demand wind profiling with multirotor UAS to monitor the atmospheric transport of harmful algal blooms,” **J. González-Rocha**, S. D. Ross, and D. G. Schmale III, *AGU Fall Meeting*, Virtual, December 2020.
- [8] “Wind determination using a rigid-body model of quadrotor motion,” B. Goldberg, **J. González-Rocha**, J. R. Naylor, and J. Fowler, *AGU Fall Meeting*, Virtual, December 2020.
- [7] “Quadrotor-assisted characterization of windage factors for search and rescue of a person in water,” **J. González-Rocha**, A. Sosa, R. Hanlon, S. D. Ross, and D. G. Schmale III, *AGU Fall Meeting*, San Francisco, CA, December 2019.

- [6] “Exploiting multirotor sUAS vehicle dynamics for profiling wind velocity in the lower atmosphere,” **J. González-Rocha**, S. F. J. De Wekker, and C. A. Woolsey, *CLOUD-Map Workshop*, Norman, OK, July 2019.
- [5] “Wind estimates in the lower atmosphere from a vehicle dynamic model applied to a multi-rotor copter,” **J. González-Rocha**, C. Sultan, C. A. Woolsey, and S. F. J. De Wekker, *AGU Fall Meeting*, Washington D.C., December 2018.
- [4] “Coordinated aerial and ground-based wind measurements to model the transport of hazardous agents in the atmosphere,” David G. Schmale III, **J. González-Rocha**, P. Nolan, S. D. Ross, and H. Foroutan, *AGU Fall Meeting*, Washington D.C., December 2018.
- [3] “Model-based wind estimation in the lower atmosphere with multirotor UAS,” **J. González-Rocha**, C. Sultan, C. Woolsey and S. F. J. De Wekker, *ISARRA Meeting*, Boulder, CO., July 2018.
- [2] “Surface layer profiling in complex terrain using an instrumented multi-rotor Copter,” S. F. J. De Wekker, C. Woolsey, **J. González-Rocha**, H. McClelland, R. Palomaki, and G.C. Lewin, *98th American Meteorological Society Annual Meeting*, Austin, TX, January 2018.
- [1] “Sensing wind from quadrotor motion,” **J. González-Rocha**, C. Sultan, C. A. Woolsey, and S. F. J. De Wekker, *AUVSI Ridge and Valley Chapter Symposium on Unmanned Systems for Air, Land, and Water*, Blacksburg, VA, October 2017.

Technical Reports:

- [1] “Measurement Report for Quantifying the Effects of Roadside Barriers on Near Road Air Pollutant Dispersion and Concentration: No-Barrier and Two-Barrier Sites,” **J. González-Rocha**, R. R. Thiruvengatchari, Y. Ding, D. Pankrats and A. Venkatram, California Department of Transportation Division of Research, Innovation and System Information, September 2022.
- [2] “Autonomous Model-Based Systems Engineering for Cyber Risk Assessment”, M. Fowler, G. Gargioni, **J. González-Rocha**, and M. Eberhard, NAVAIR Quarterly Report—2019Q4, October 2019.
- [2] “Autonomous Model-Based Systems Engineering for Cyber Risk Assessment”, M. Fowler, G. Gargioni, **J. González-Rocha**, and M. Eberhard, NAVAIR Quarterly Report—2019Q3, July 2019.
- [3] “Autonomous Model-Based Systems Engineering for Cyber Risk Assessment”, M. Fowler, G. Gargioni, and **J. González-Rocha**, NAVAIR Quarterly Report—2019Q2, April 2019.
- [4] “Autonomous Model-Based Systems Engineering for Cyber Risk Assessment”, M. Fowler, G. Gargioni, and **J. González-Rocha**, NAVAIR Quarterly Report—2019Q1, January 2019.
- [5] “Autonomous Model-Based Systems Engineering for Cyber Risk Assessment”, M. Fowler, G. Gargioni, and **J. González-Rocha**, NAVAIR Quarterly Report—2018Q4, October 2018.

Professional Presentations

Sep. 2022	University of California, Santa Cruz	Santa Cruz, CA
May 2022	University of California, Irvine	Irvine, CA
Jan. 2022	University of California, Riverside	Riverside, CA
May 2021	University of California, Santa Cruz	Santa Cruz, CA
Sep. 2020	University of California, San Diego	San Diego, CA
Oct. 2019	University of Arkansas	Fayetteville, AR
Sep. 2019	NASA Jet Propulsion Laboratory	Pasadena, CA
Sep. 2019	University of California, Merced	Merced, CA
Sep. 2019	University of California, Riverside	Riverside, CA
Jul. 2019	CLOUD-MAP Workshop	Norman, OK
Feb. 2019	National Science Foundation Center for Unmanned Aerial Systems	Bryan, TX
Jan. 2019	American Institute of Astronautics and Aeronautics SciTech Forum	San Diego, CA
Oct. 2019	Association of Unmanned Aerial Vehicle System International Conference	Blacksburg, VA
Dec. 2018	American Geophysicist Union Fall Meeting	Washington, D.C.
May 2018	Naval System Command Technical Review	Lexington Park, MD

Jul. 2018	ISARRA Conference	Boulder, CO
Jan. 2018	ASEE-GEM Doctoral Engineering Showcase	Washington, D.C.
Jan. 2017	American Institute of Astronautics and Aeronautics SciTech Forum	Grapevine, TX

Grantsmanship

- [4] **Proposal Title:** Drone-ing for Precision Meteorology in Agricultural Systems
Investigators: D. G. Schmale III (PI), S. D. Ross (Co-PI), C. Woolsey (Co-PI), H. Foroutan (Co-PI), S. F. J. De Wekker (Co-PI), and J. González-Rocha* (Co-PI).
Source of Support: Institute for Critical Technology and Applied Sciences (ICTAS)
Total Award Amount: \$60,000
Contribution: Supported program development and writing efforts.
- [3] **Proposal Title:** HDR DSC: Engaging Undergraduates in Data and Decisions Research at the Engineering/Biology Interface
Investigators: D.G. Schmale (PI), S.D. Ross (Co-PI)
Source of Support: National Science Foundation (NSF)
Performance Period: 10/1/2019 – 09/30/2022
Total Award Amount: \$1,186,084
Contribution: Helped coordinate spring break 2019 field campaign to expose students to data and decisions research at the interface of engineering and biology. Provided preliminary data for the proposal.
- [2] **Proposal Title:** FW-HTF: First Person View and Augmented Reality for Airborne Embodied Intelligent Cognitive Assistants
Principal Investigator: J. Gabbard, M. Hebdon, P. Tokekar, and C. Woolsey (Lead)
Period of Performance: 9/1/2018-8/31/2021
Sponsor: National Science Foundation
Amount: \$1,500,000
Contribution: Helped coordinate a bridge inspection campaign in Norfolk, VA. Operated a multirotor UAS to conduct a bridge inspection. Analyzed preliminary data for the proposal.
- [1] **Proposal Title:** I/UCRC: Center for UAS Phase II
Investigators: K. Kochersberger and C. Woolsey (Lead)
Period of Performance: 3/1/2017—2/1/2022
Sponsor: National Science Foundation
Total Award Amount: \$500,000
Contribution: Supported field experiments to gather preliminary data for the proposal.

Teaching

2013 – 2020	Graduate Teaching Assistant, Virginia Tech AOE 2074 Computational Methods AOE 2104 Introduction to Aerospace Engineering AOE 3054 Experimental Methods AOE 4134 Astromechanics AOE 4154 Aerospace Engineering Laboratory
2014	College Assistant Migrant Program (CAMP), CSUS Migrant Student Leadership Institute – Engineering and Technology Instructor

Informal Advising and Mentoring

2020 – Present	Graduate Student Mentoring, University of California-Riverside Isis Frausto-Vicencio (Environmental Sciences) Roxana Coréas (Environmental Toxicology) Ranga Rajan Thiruvengkatachari (Mechanical Engineering) Yifan Ding (Mechanical Engineering)
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- 2020 – Present **Undergraduate Student Mentoring, University of California-Riverside**
 Nathaniel Bernal (Mechanical Engineering)
 Adrian Nunez (Chemical & Environmental Engineering)
- 2013 – 2020 **Graduate Student Mentoring, Virginia Tech**
 Theresa Blandino (Aerospace Engineering)
 Katrina Colucci-Chang (Biomedical Engineering)
 Mathew Ferby (Civil Engineering)
- 2013 – 2020 **Undergraduate Student Mentoring, Virginia Tech**
 Alberto Post (Aerospace Engineering)
 Alejandro Sosa (Aerospace Engineering)
 Reynaldo C. Reynosa (Electrical Engineering)
 Alec Klevenhagen (Mechanical Engineering)
 Evan Warner (Aerospace Engineer)
- 2012 – 2013 **Mathematics, Engineering, Science Achievement (MESA) Program, CSU-Sacramento**
 Graduate assistant academic advisor

Remote-Piloted Aircraft Flight Campaigns

- 2022 UC Riverside – Center for Environmental Research and Technology Riverside, CA
 Led multirotor UAS flight operations to characterize the evolution of the urban planetary boundary layer during daytime and nighttime gas tracer release experiments. Vertical profiles of wind velocity, temperature, relative humidity, and air composition were collected from 10 to 120 m above ground level. UAS measurements were used to characterize roadside noise barrier effects on the transport vehicle emissions.
- 2019 Virginia Tech – Institute of Critical Technology and Applied Science Blacksburg, VA
 Conducted multirotor UAS flight operations over water to characterize the aerosolization of harmful algal blooms (HAB) in Lake Erie, Ohio. The flight operations consisted of vertical profiles to measure wind speed and wind direction from 10 to 100 m AGL. Wind measurements from this field campaign will be used to study the aerosolization of HAB in fresh-water lakes.
- 2019 Virginia Tech – Institute for Critical Technology and Applied Science Blacksburg, VA
 Directed multirotor UAS flight operation at the Virginia Tech Kentland Experimental Aerial Systems laboratory to validate UAS-based wind estimates using conventional atmospheric remote sensors. Experiments consisted of vertical flight profiles using 3DR Solo and DJI Inspire multirotor platforms. Wind data collected from these experiments compared wind estimation algorithms across multirotor UAS platforms.
- 2018 Virginia Tech – Center for Unmanned Aerial Systems (C-UAS) Blacksburg, VA
 Partook in flight testing missions at the Virginia Tech Kentland Experimental Aerial Systems laboratory as a ground station and a Part 107 certified UAS operator. Ground station responsibilities required managing way point missions and relaying over radio communication telemetry to adapt flight operations in real time. Piloting tasks included flying a multirotor as target for aircraft-to-aircraft air detection from a multirotor UAS.
- 2018 Virginia Tech – Center for Unmanned Aerial Systems (C-UAS) Blacksburg, VA
 Supported multi-UAS flight operations at the Virginia Tech Kentland Experimental Aerial Systems Laboratory as a Part 107 certified UAS operator. Piloting responsibilities involved developing flight plans and flying a multirotor UAS at 120 m AGL with the support of a visual observer for air-to-air detection from a fixed-wind UAS.
- 2018 ISARRA – LAPSRATE Alamosa, CO
 Participated in UAS flight operations as part of the LAPSRATE flight campaign to measure temperature, pressure, humidity, and wind velocity in the lower atmosphere. Responsibilities entailed developing a flight plan prior to flight operation with contingency options to manage airspace with multiple UAS flight operations. Flight operations consisted of vertical profiles extending from 10 to 220 m AGL under a FAA Certification of Authorization.

- 2017 – 2018 Virginia Tech – ALPHA Project Woods Hole, MA
 Conducted UAS flight operations at sea as part of experiments related to the NSF ALPHA Project. Responsibilities entailed developing a flight plan accounting for weather variability to launch, operate, and recover a multirotor UAS onboard a maritime research vessel. Flight missions consisted of using a multirotor UAS to measure wind velocity 10 m ASL in 10-minute intervals over a human-size manikin as part of a search and rescue scenario.
- 2017 Virginia Tech – Institute for Critical Technology and Applied Science Norfolk, VA
 Led a flight operation to inspect the structural integrity of the George Coleman Memorial bridge located in Norfolk, VA using a quadrotor UAS with an integrated vision camera. Assessed safety concerns launching, operating, and recovering a multirotor UAS in a GPS-inhibited environment. Research outcomes from this experiment supported an awarded NSF grant proposal. (NSF 1840044)

Professional Experience

- 2018 Virginia Tech – Hume Center Blacksburg, VA
 Researched a model-based analysis framework for performing a cyber risk assessment of unmanned aerial systems. Research task involved modeling the architecture of a Pixhawk autopilot configured for the operation of multirotor platform. Constructed models were perturbed for risk assessment over temporal ranges and mission concepts. Outcomes from this work will be used in the design of a toolbox for cyber risk assessment UAS.
- 2017 – 2018 Virginia Tech – Airworthiness Center Blacksburg, VA
 Performed flight test to construct from flight measurements bare-frame models of a multirotor unmanned aerial system. The aircraft model was generated from flight data using the toolbox System IDentification Programs for AirCRAFT (SIDPAC). Identified models were used to design attitude control laws.
- 2014 CSUS – Engineering and Technology Instructor Sacramento, CA
 Developed a two-week engineering and technology curriculum to motivate Migrant Education students to pursue careers in science, technology, engineering, and mathematics through a series of lectures and hands-on activities. The course provided an extensive introduction to engineering and examples of practical application considering the students cultural identity and everyday life experience.
- 2013 – 2014 Virginia Tech – Graduate Teaching Assistant Blacksburg, VA
 Led sections of the aerospace engineering and experimental methods laboratory courses in the Virginia Tech Department of Aerospace and Ocean Engineering. Was responsible for guiding students in exploring engineering theories with hands on experiments and communicating their findings through effective technical writing processes.
- 2012 – 2013 CSUS–MESA/MEP Program – Student Advisor Sacramento, CA
 Advised incoming freshman and community college transfer students to ensure their success in transition to the CSUS College of Engineering and Computer Science. Was responsible for providing students with wellbeing, academic, and professional guidance.
- 2012 NASA Armstrong – Primary Research Aerodynamics Design to Lower Drag Edwards, CA
 Integrated a 12-ft wingspan subscale aircraft model with avionics hardware to research the feasibility of a bell-shaped aerodynamic load distribution. Took part in flight experiments to measure aerodynamic parameters necessary to record the effect of adverse yaw. Analysis of flight data coupling of the yaw and roll control during flight.
- 2011 – 2012 CALPIA – Graduate Student Engineering Assistant Folsom, CA
 Supported research and development efforts to improve manufacturing of school- and office-grade furniture using wide range of wood and metal products. Maintaining effective communication with wood and metal factories located across the State of California to ensure the quality grade of product prototypes.

2010 – 2011 Caltrans – Engineering Student Assistant Sacramento, CA
Performed non-residential energy envelopes of highway maintenance and rest area facilities to be constructed counties throughout the State of California. Worked with mechanical engineers and architects to ensure the compliance of each building with California’s energy consumption standard, Title 24.

Service to Profession and Outreach

Peer Reviewing and Conference Proceedings:

2020 – Present IEEE Transactions on Control Systems Technology
2018 – Present Reviewer for ASCE Journal of Aerospace Engineering
2018 – Present MDPI Atmosphere
2018 – Present MDPI Electronics
2018 – Present MDPI Sensors
2018 – Present Reviewer for ASCE Journal of Aerospace Engineering
2019 AIAA SciTech Forum: Session Co-Chair (AMF - 08: Small Unmanned Aircraft II)
2019 AIAA SciTech Forum: Session Co-Chair (AMF-14: UAS-Based Wind Measurements)

University Service Committees:

2015 – 2016 Virginia Tech Beyond Boundaries: Global-land grant committee member

STEM Outreach and Retention:

2021 – Present University of California GradSuccess Postdoc Mentorship Program
2021 TRIO Student Support Services at California State University, Chico – STEM Career Panelist
2021 Cabrillo Community College – Autonomous Aerial Systems Guest Speaker
2018 Virginia Tech Science Festival – Multicopter UAS Showcase
2018 Flight Week: Unmanned Aircraft for Atmospheric Research Open House – Exhibit Volunteer
2017 – 2019 CTech – Computers and Technology at Virginia Tech – Showcase Volunteer
2017 – 2018 Conducted an introduction to research workshop for the Virginia Tech Multicultural Academic Opportunity Program (MAOP)
2012 – 2013 Society of Hispanic Professional Engineers (SHPE) National Graduate Committee – Region 1 Graduate Representative
2011 – 2012 SHPE Leadership Development Conference Committee Member – Graduate Track Chair
2009 – 2010 CSUS SHPE – Student Chapter President
2007 – 2008 CSUS SHPE – Student Chapter Outreach Chair
2007 – 2008 SHPE RLDC Committee Member – Pre-College Track Chair

Honors and Awards

2020 University of California, Riverside Chancellor’s Postdoctoral Fellowship
2017 CSU Luis Stoke Alliance – Outstanding Alumnus & Leadership Service
2016 Virginia Tech – Aspire Award for Self-Understanding and Integrity
2013 National GEM Consortium – GEM Fellow Associate
2013 National Space Grant College and Fellowship Program – California’s Representative

2010	California State University-Sacramento SHPE Chapter – Most Inspirational Award
2009	California State University-Sacramento SHPE Chapter – Recognition of Service
2005	NSF Louis Stokes – CSUS Alliances for Minority Participation Program: Pre-calculus/Calculus Enrichment Program
2004	California Strawberry Commission Academic Scholarship Awardee
2004	Congressional Recognition – Outstanding and Invaluable Service to the Community

Skills and Certifications

Modeling, Simulation and System I.D. Tools:

- MATLAB, SIDPAC, Simulink, Python, STK, Python, SysML/UML and LabVIEW

Hardware Integration:

- Pixhawk, Arduino, Raspberry Pi

UAS Flight Operations:

- FAA Part 107 Certification, Mid-Atlantic Aviation Partnership UAS Observer Certification, Mid-Atlantic Aviation Partnership Crew Resource Manager Certification

References

Dr. Craig A. Woolsey, Professor

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