Curriculum Vitae **Feitian Zhang**

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(i) **Professional Preparation**

Harbin Institute of Technology, Harbin, China, Automatic Control, B.S., 2007 Harbin Institute of Technology, Harbin, China, Automatic Control, M.S., 2009 Michigan State University, East Lansing, U.S., Electrical Engineering; Ph.D., 2014 University of Maryland, College Park, MD, U.S., Aerospace Engineering, Postdoc, 2014 – 2016

(ii) Appointments

2021 – Present, Associate Professor, Department of Advanced Manufacturing and Robotics,
College of Engineering, Peking University
2016 – 2021, Assistant Professor, ECE Department, George Mason University
2019, Summer Fellow, ONR Summer Faculty Research Program, NSWC Carderock Division
2014 – 2016, Postdoctoral Research Associate, Aerospace Engineering, University of Maryland

(iii) Research Interests

Bioinspired Robotics, Control Systems, Artificial Intelligence, Underwater Vehicles, and Aerial Vehicles

(iv) Honors and Awards

ONR Summer Faculty Research Fellowship, Office of Naval Research, 2019 Jeffress Trust Award in Interdisciplinary Research, Jeffress Trust, 2019 SCEEE Research Initiation Award, Southeastern Center for Electrical Engineering Education, 2018 GMU Multidisciplinary Research Award, George Mason University, 2017 Second Place, Engineering Graduate Research Symposium, Michigan State University, 2014 Graduate School Dissertation Completion Fellowship, Michigan State University, 2014 Special Scholarship of Harbin Institute of Technology (top 1), 2005 Scholarship of Chinese Academy of Sciences at Harbin Institute of Technology (top 1), 2004

(v) Teaching

08612680, Topics in Nonlinear Systems, PKU (S 2022, S 2023) 00334330, Signals and Systems, PKU (F 2021, F 2022, S 2024) ECE 421, Classical Systems and Control Theory, GMU (S & F 2019, S & F 2020) ECE 521, Linear Systems and Control, GMU (S & F 2017, S & F 2018, S 2020) ECE 422, Digital Control Systems, GMU (S 2018) ECE 627, Adaptive Control, GMU (F 2018) ECE 492/493 (Team Advisor), Senior Design, GMU (2016, 2017, 2018, 2019, 2020) BENG 492/493 (Team Advisor), Senior Design, GMU (2016, 2017, 2018, 2019)

(vi) Publications

Books

1. G. Cook and F. Zhang, *Mobile Robots: Navigation, Control and Sensing, Surface Robots and AUVs,* Wiley-IEEE Press, 2020

Journal Articles

- 1. S. Lian and F. Zhang, "TDANet: Target-Directed Attention Network For Object-Goal Visual Navigation With Zero-Shot Ability," *IEEE Robotics and Automation Letters*, accepted
- J. Wang, D. Zhao, Y. Zhao, F. Zhang and T. Shen, "Estimating the Lateral Motion States of an Underwater Robot by Propeller Wake Sensing Using an Artificial Lateral Line," *IEEE/ASME Transactions* on Mechatronics, doi: 10.1109/TMECH.2024.3402377, 2024
- **3.** Y. Li, X. Bai, L. Xie, X. Wang, and F. Lu, F. Zhang, Y. Yan, and E. Yin, "Real-time Gaze Tracking via Head-eye Cues on Head Mounted Devices," *IEEE Transactions on Mobile Computing*, doi: 10.1109/TMC.2024.3425928, 2024
- 4. L. Yue, D. Zhou, L. Xie, F. Zhang, Y. Yan and E. Yin, "Safe-VLN: Collision Avoidance for Visionand-Language Navigation of Autonomous Robots Operating in Continuous Environments," *IEEE Robotics and Automation Letters*, vol. 9, no. 6, pp. 4918-4925, 2024
- S. Lian and F. Zhang, "A Transferability Metric Using Scene Similarity and Local Map Observation for DRL Navigation," *IEEE/ASME Transactions on Mechatronics*, doi: 10.1109/TMECH.2024.3376542, 2024
- 6. H. Cheng, Z. Sha, Y. Zhu and F. Zhang, "RGBlimp: Robotic Gliding Blimp Design, Modeling, Development, and Aerodynamics Analysis," *IEEE Robotics and Automation Letters*, vol. 8, no. 11, pp. 7273-7280, 2023
- 7. S. K. Rajendran, N. Yao, Q. Wei, and F. Zhang, "Design, Implementation, and Observer-Based Output Control of a Super-Coiled Polymer-Driven Two Degree-of-Freedom Robotic Eye," *IEEE Robotics and Automation Letters*, vol. 8, no. 9, pp. 5958-5965, 2023
- **8.** S. K. Rajendran and F. Zhang, "Design, Modeling, and Visual Learning-based Control of Soft Robotic Fish Driven by Super-coiled Polymers," *Frontiers in Robotics and AI*, 8(Soft Robotics):809427, 2022
- **9.** S. K. Rajendran, Q. Wei, and F. Zhang, "Two Degree-of-freedom Robotic Eye: Design, Modeling, and Learning-based Control in Foveation and Smooth Pursuit," *Bioinspiration & Biomimetics*, 16(4):046022, 2021
- F. Dang, S. Nasreen, and F. Zhang, "DMD-Based Background Flow Sensing for AUVs in Flow Pattern Changing Environments," *IEEE Robotics and Automation Letters*, vol. 6, no. 3, pp. 5207-5214, 2021
- 11. F. Dang and F. Zhang, "Distributed Flow Estimation for Autonomous Underwater Robots Using Proper Orthogonal Decomposition-based Model Reduction," *Journal of Dynamic Systems, Measurement, and Control*, Special issue on Unmanned Mobile Systems, 141.7 (2019): 071010
- F. Zhang, O. Ennasr, and X. Tan, "Gliding Robotic Fish: An Underwater Sensing Platform and Its Spiral-Based Tracking in 3D Space," *Marine Technology Society Journal*, vol. 51, no. 5, pp. 71–78, 2017
- F. Zhang, F. Lagor, H. Lei, X. Tan and D. Paley, "Robotic Fish: Flow-relative Control Behaviors Using Distributed Flow Sensing," ASME Dynamic Systems and Control Magazine (insert of Mechanical Engineering Magazine), 138(3): S2–S5, March 2016. Special Issue on Bio-inspired Systems
- 14. F. Zhang, O. Ennasr, E. Litchman, and X. Tan, "Autonomous sampling of water columns using gliding robotic fish: Algorithms and harmful algae-sampling experiments," *IEEE Systems Journal*, Special

issue on Cyber-innovated Environmental Sensing, Monitoring and Modeling for Sustainability, vol. 10, no. 3, pp. 1271–1281, 2016

- 15. F. Zhang, F. Lagor, D. Yeo, P. Washington, and D. Paley, "Distributed Flow Sensing for Closed-loop Speed Control of a Flexible Fish Robot," *Bioinspiration & Biomimetics*, Special issue on Bioinspired Soft Robotics, 10(6): 065001, 2015
- **16.** F. Zhang and X. Tan, "Passivity-based stabilization of underwater gliders with a control surface," *Journal of Dynamic Systems, Measurement, and Control*, 137.6 (2015): 061006
- 17. F. Zhang, F. Zhang, X. Tan, "Tail-enabled spiraling maneuver for gliding robotic fish," *Journal of Dynamic Systems, Measurement, and Control*, vol. 136, no. 4, 041028 (8 pp), 2014
- **18.** F. Zhang, J. Thon, C. Thon and X. Tan, "Miniature underwater glider: Design and experimental results," *IEEE/ASME Transactions on Mechatronics*, vol. 19, no. 1, pp. 394–399, 2014

Conference Articles

- 1. J. Tao, S. K. Rajendran, Y. Zhang, F. Zhang, "Efficient Learning and Control of String-Type Artificial Muscle Driven Robotic Systems", 2024 American Control Conference (ACC), accepted
- J. Wang, T. Shen, D. Zhao, and F. Zhang, "MrDMD-Based Sensor Placement in Distributed Flow Estimation for the Design of the Artificial Lateral Line of an Underwater Robot," *the 62nd IEEE Conference on Decision and Control (CDC)*, Marina Bay Sands, Singapore, pp. 4759-4765, 2023
- **3.** J. Wang, T. Shen, D. Zhao, and F. Zhang, "Flow Sensing-Based Underwater Target Detection Using Distributed Mobile Sensors," *the 61st IEEE Conference on Decision and Control (CDC)*, Cankun, Mexico, pp.2681-2687, 2022
- 4. S. K. Rajendran, Q. Wei, N. Yao, and F. Zhang, "Observability Analysis and Reduced-Order Observer Design for a Super-Coiled Polymer-Driven Robotic Eye," *the 61st IEEE Conference on Decision and Control (CDC)*, Cancun, Mexico, pp.1385-1391, 2022
- S. K. Rajendran, Q. Wei, N. Yao, and F. Zhang, "Modeling and Learning-Based Control for Super-Coiled Polymer-Driven Robotic Eye," 2022 American Control Conference (ACC), Atlanta, GA, Poster Paper, 2022
- 6. F. Dang, S. Nasreen, and F. Zhang, "A Novel FFT-Assisted Background Flow Sensing Framework for Autonomous Underwater Vehicles In Dynamic Environment with Changing Flow Patterns," *IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, Toronto, ON, Canada (virtual), pp.336–341, 2020
- F. Dang, S. Nasreen, and F. Zhang, "Background Flow Sensing for Autonomous Underwater Vehicles Using Model Reduction with Dynamic Mode Decomposition," *IEEE/ASME International Confer*ence on Advanced Intelligent Mechatronics (AIM), Boston, MA (virtual), pp.125–131, 2020
- F. Dang and F. Zhang, "Distributed Flow Estimation for Autonomous Underwater Robots Using PODbased Model Reduction," *the 57rd IEEE Conference on Decision and Control (CDC)*, Miami Beach, FL, pp. 4453–4458, 2018
- 9. S. Rajendran, Q. Wei, and F. Zhang, "Foveation Control of a Robotic Eye Using Deep Reinforcement Learning," ASME Dynamic Systems and Control Conference (DSCC), Atlanta, GA, Paper DSCC2018-9209 (7 pp), 2018
- **10.** S. Rajendran and F. Zhang, "Learning Based Speed Control of Soft Robotic Fish," *ASME Dynamic Systems and Control Conference (DSCC)*, Atlanta, GA, Paper DSCC2018-8977 (7 pp), 2018
- F. Dang and F. Zhang, "DMD-Based Distributed Flow Sensing For Bio-Inspired Autonomous Underwater Robots," ASME Dynamic Systems and Control Conference (DSCC), Atlanta, GA, Paper DSCC2018-9113 (8 pp), 2018
- 12. S. Rajendran and F. Zhang, "Developing A Novel Robotic Fish With Antagonistic Artificial Muscle Actuators," 2017 ASME Dynamic Systems and Control Conference (DSCC), Tysons Corner, VA,

Paper DSCC2017-5380 (7 pp), 2017

- F. Dang and F. Zhang, "Identification of Hydrodynamic Coefficients of a Robotic Fish Using Improved Extended Kalman Filter," 2017 ASME Dynamic Systems and Control Conference (DSCC), Tysons Corner, VA, Paper DSCC2017-5385 (9 pp), 2017
- F. Zhang, P. Washington, and D. Paley, "A Flexible, Reaction-Wheel-Driven Fish Robot: Flow Sensing and Flow-Relative Control," *Proceedings of the 2016 American Control Conference (ACC)*, Boston, MA, pp. 1221–1226, 2016
- 15. F. Zhang, F. Lagor, D. Yeo, P. Washington, and D. Paley, "Distributed flow sensing using Bayesian estimation for a flexible fish robot," 2015 ASME Dynamic Systems and Control Conference (DSCC), Columbus, OH, Paper DSCC2015-9732 (10 pp), 2015
- 16. F. Zhang, O. Ennasr, E. Litchman, and X. Tan, "Autonomous sampling of water columns using gliding robotic fish: Control algorithms and field experiments," *Proceedings of the 2015 IEEE Conference* on Robotics and Automation (ICRA), Seattle, WA, pp. 517–522, 2015
- F. Zhang and X. Tan, "Three-dimensional spiral tracking control for gliding robotic fish," *Proceedings* of the 53rd IEEE Conference on Decision and Control (CDC), Los Angeles, CA, pp. 5340–5345, 2014
- F. Zhang, J. Wang, J. Thon, C. Thon, E. Litchman, and X. Tan, "Gliding robotic fish for mobile sampling of aquatic environments," [Invited], *Proceedings of 11th IEEE International Conference* on Networking, Sensing and Control (ICNSC), Miami, FL, pp. 167–172, 2014
- **19.** F. Zhang and X. Tan, "Nonlinear observer design for stabilization of gliding robotic fish," *Proceedings* of the 2014 American Control Conference (ACC), Portland, OR, pp. 4175–4720, 2014
- 20. F. Zhang and X. Tan, "Gliding robotic fish and its tail-enabled yaw motion stabilization using sliding mode control," *Proceedings of the 2013 ASME Dynamic Systems and Control Conference (DSCC)*, Palo Alto, CA, Paper DSCC2013-4015 (10 pp), 2013
- **21.** B. Tian, F. Zhang, and X. Tan, "Design and development of an LED-based optical communication system for underwater autonomous robots," *Proceedings of the IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)*, Wollongong, Australia, 1558–1563, 2013
- 22. F. Zhang, F. Zhang, and X. Tan, "Steady spiraling motion of gliding robotic fish," Proceedings of the 2012 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Vilamoura Algarve, Portugal, pp. 1754–1759, 2012
- 23. F. Zhang, X. Tan, and H. K. Khalil, "Passivity-based controller design for stabilization of underwater gliders," *Proceedings of the 2012 American Control Conference (ACC)*, Montreal, Canada, pp. 5408–5413, 2012
- 24. F. Zhang, J. Thon, C. Thon, and X. Tan, "Miniature underwater glider: Design, modeling, and experimental results," *Proceedings of the 2012 IEEE International Conference on Robotics and Automation (ICRA)*, St. Paul, MN, pp. 4904–4910, 2012
- 25. A. T. Abdulsadda, F. Zhang, and X. Tan, "Localization of source with unknown amplitude using IPMC sensor arrays," Y. Bar-Cohen & F. Carpi, editors, *Electroactive Polymer Actuators and Devices (EAPAD) XIII, Proc. of SPIE*, vol. 7976, pp. 797627: 1–11, 2011

(vii) Patent

 X. Tan, F. Zhang, J.Wang, J. Thon, "Gliding robotic fish navigation and propulsion," US Patent 9,718,523 B2, issued on August 1, 2017; and the divisional US Patent 10,589,829 B2, issued on March 17, 2020

(viii) Reviewer for Publications

1. IEEE Transactions on Robotics

- 2. IEEE/ASME Transactions on Mechatronics
- 3. IEEE Transactions on Control of Network Systems
- 4. IEEE Transactions on Systems, Man, and Cybernetics: Systems
- 5. IEEE Transactions on Industrial Electronics
- 6. IEEE Robotics and Automation Letters
- 7. Journal of Guidance, Control, and Dynamics
- 8. Bioinspiration and Biomimetics
- 9. IEEE Journal of Oceanic Engineering
- 10. IEEE Robotics and Automation Magazine
- 11. Ocean Engineering
- 12. Marine Technology Society Journal
- 13. Asian Journal of Control
- 14. International Journal of Intelligent Robotics and Applications
- 15. Robotics and Autonomous Systems
- 16. Neural Computing and Applications
- 17. Journal of Marine Science and Application
- 18. Robotics and Biomimetics
- 19. Mathematical Problems in Engineering
- **20.** Journal of Hydrodynamics
- 21. Defense Technology
- 22. Frontiers of Information Technology & Electronic Engineering
- 23. Robotics: Science and Systems (RSS)
- 24. IEEE International Conference on Robotics and Automation (ICRA)
- **25.** American Control Conference (ACC)
- 26. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
- 27. IEEE Conference on Decision and Control (CDC)
- 28. IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)
- **29.** IEEE International Conference on Automation Science and Engineering (CASE)
- 30. IEEE Multi-conference on Systems and Control (MSC)
- 31. ASME Dynamic Systems and Control Conference (DSCC)
- 32. IEEE International Conference on Soft Robotics (RoboSoft)
- 33. Distributed Autonomous Robotic Systems (DARS)
- 34. IEEE-RAS International Conference on Humanoid Robotics (Humanoids)
- **35.** World Congress on Intelligent Control and Automation (WCICA)
- 36. International Conference on Ubiquitous Robots (UR)

(ix) Reviewer for Proposal Programs

- 1. Panelist, National Science Foundation (2017, 2018, 2019, 2020)
- 2. Panelist, MOST National Key Research and Development Program, 2022

(x) Advising

Ph.D. Students

- 1. Yongjian Zhu, Peking University, 2023–Present
- 2. Jiyue Tao, Peking University, 2023–Present (co-advised)
- 3. Yingxi Li, Peking University, 2023–Present (co-advised)
- 4. Mingyang Yang, Peking University, 2022–Present
- 5. Lu Yue, Robotics, Peking University, 2022–Present (co-advised)

- 6. Liuyang Wang, Robotics, Peking University, 2022–Present
- 7. Hao Cheng, Robotics, Peking University, 2021–Present
- 8. Jun Wang, Robotics, Peking University, 2021–Present (co-advised)
- 9. Sunil Rajendran, Electrical Engineering, George Mason University, 2018–2022 Dissertation: Super Coiled Polymer-Driven Bio-Inspired Robots: Design, Modeling, and Learning-Based Control
- Fengying Dang, Electrical Engineering, George Mason University, 2017–2021
 Dissertation: Flow Sensing Based Environmental Perception of Autonomous Underwater Robots
- **11.** Joseph Prince Mathew, Electrical Engineering, George Mason University, 2018–2021 (co-advised)
- 12. Dinesh Kumar Karri, Electrical Engineering, George Mason University, 2018–2021 (co-advised)

M.S. Students

- 1. Yue Fan, Mechanical Engineering, Peking University, 2023–Present
- 2. Shiwei Lian, Mechanical Engineering, Peking University, 2022–Present
- 3. Zeyu Sha, Mechanical Engineering, Peking University, 2022–Present
- **4.** Yuchi Ma, Mechanical Engineering, Peking University, 2021 (co-advised)
- 5. Huaitong Song, Mechanical Engineering, Peking University, 2021 (co-advised)
- 6. Guohua Sun, Electrical Engineering, George Mason University, 2020
- 7. Nicholas Zempolish, Computer Science, George Mason University, 2019-2021
- 8. Snehashis Paul, Electrical Engineering, George Mason University, 2019
- 9. Qingyang Dai, Electrical Engineering, George Mason University, 2018–2021
- 10. Joseph Prince Mathew, Electrical Engineering, George Mason University, 2018–2019
- 11. Dinesh Kumar Karri, Electrical Engineering, George Mason University, 2018–2019
- **12.** Fengying Dang, Electrical Engineering, George Mason University, 2017–2018
- 13. Sunil Rajendran, Electrical Engineering, George Mason University, 2016–2018
- 14. Vishakha Goyal, Robotics, University of Maryland, 2015–2016

Undergraduate Students

- 1. Guolei Qi, Robotics Engineering, Peking University, 2024–Present
- 2. Xiaorui Wang, Robotics Engineering, Peking University, 2023–Present
- 3. Yachun Shan, Robotics Engineering, Peking University, 2023–Present
- 4. Yunsong Zhang, Robotics Engineering, Peking University, 2022–2024
- 5. Jiyue Tao, Robotics Engineering, Peking University, 2022–2023
- 6. Yongjian Zhu, Robotics Engineering, Peking University, 2022–2023
- 7. Xinyu Zhou, Robotics Engineering, Peking University, 2021–2023
- 8. Yifei Tian, Robotics Engineering, Peking University, 2022
- 9. Arash Touhidi, Electrical Engineering, George Mason University, 2019–2021
- 10. Pablo B. Lamarca, Exchange Student, Universidad Carlos III De Madrid (UC3M), Spain, 2019–2020
- 11. Barak Widawsky, Computer Engineering, George Mason University, 2019–2020
- 12. Avery C. Austin, Mechanical Engineering, George Mason University, 2019–2020
- 13. Yizhe Wang, Electrical Engineering, George Mason University, 2019
- 14. Vu Luu, Computer Engineering, George Mason University, 2019
- 15. Abdullah Mohammad, Computer Engineering, George Mason University, 2019
- 16. Francis Ahenkora, Computer Engineering, George Mason University, 2019
- 17. Alberto Herranz, Exchange Student, Universidad Carlos III De Madrid (UC3M), Spain, 2018–2019
- **18.** Simran Chawla, Computer Science, University of Maryland, 2015–2016
- 19. Patrick Washington, Aerospace Engineering, University of Maryland, 2014–2016

- 20. Cody Thon, Mechanical Engineering, Michigan State University, 2009–2014
- **21.** Bin Tian, Electrical Engineering, Michigan State University, 2012–2013

Visiting Scholars

1. Prof. Hao Li, Wuhan University of Technology, China, 2017–2018

Research Volunteers

1. Sanjida Nasreen, CFD simulation, 2018–2020

Senior Design Teams

- 1. Aadam Dirie, Duy Tran, Kyle Shiflett, Peter Kim, Tirsaay Ahmed, ECE, 2020, "Mapping the Mason Pond"
- **2.** Eric Phu, Jose Zurita, Yuhang Peng, Romani Fahmy, Kyle Guthrie, Will McCarty, ECE, 2020, "Aerial Soccer Game with Blimp UAVs: Actuation and Control"
- **3.** Linh Le, Artem Melkunov, Tina Nguyen, Charles Stainer, Arash Touhidi, ECE, 2020, "Simultaneous Localization And Perception (SLAP)"
- **4.** James Yang, Adam Boynton, Ryan Cathey, Nathaniel Wooley, Zachary Warner, Benson Garcia, ECE, 2020, "Developing Heterogeneous Lighter-Than-Air Aerial Vehicles"
- **5.** Barak Widawsky, Nick Rivera, Edgar Pena, Victoria N Mai, Kira Page, ECE, 2020, "Underwater Inspection Using Real-Time Sonar Imaging Data"
- 6. Mohnish Vaid, Andre Griggs, Don Nguyen, Harsh Patel, Faraseldim Ali, Goutham Kommanaboyina, ECE, 2020, "Advanced Computer Vision with Depth Perception for Lighter-Than-Air Aerial Vehicles"
- 7. Wayne Tran, Brian Aguilar, Nisit Sean Visavakul, Andrew Hayden, Jasjeet Singh, ECE, 2019, "Developing an Automated Health Monitoring System for USVs"
- **8.** Bennett Duncan, Logan Bieker, Peter Le, Anthony Matthews, Arjun Sikand, ECE, 2019, "FL.U.I.D. ROVs Flow-sensing Underwater Implementation for Dynamic Remotely Operated Vehicles"
- **9.** Sameer Ahmadieh, Jermaine Azu, Saad Tambra, Momadu, Santuraki, Ahmed Abdulrahman, Darrell Evangelista, ECE, 2019, "Amphibious Aerial Aquatic Drone"
- **10.** Andrew Ryan, Tyra Bookhart, Laura Carter, Paige Epler, BioEng, 2019, "An Automated Tubular Dilator for Minimally Invasive Brain and Spine Surgery"

Keynote Presentation at the 2019 VSE Undergraduate Research Celebration

- 11. Sergio Cruz, Blazej Horyza, Morteza Eskandari, ECE, 2018, "Bioinspired Unmanned Underwater Vehicle"
- Kaitlyn Bub, Tina Bui, Huy Dang, Vivian Le, Matthew Rheinstein, Osaze Shears, ECE, 2018, "Project L.E.N.S. – A Robotic Eye System Using Artificial Muscles"

VSE Dean's Advisory Board Award & ECE Outstanding Senior Design Award

- 13. Spencer Bauer, Jim Viar, Yufan Huang, Sean You, Bailor Hsu, ECE, 2018, "Developing an Amphibious Drone"
- **14.** Layanne Hazim, Sergio Ribeiro, Totcheme Soufiano, Sami Mabrouk, Thang Dinh, ECE, 2018, "Researching the Feasibility of an Underwater Communication and Sensing System"
- **15.** Jennifer Bleck, Monica Rios, Mariam Ahmad, Quentin O'Kelly, BioEng, 2017, "Biologically-Inspired Eye Robot with Artificial Muscles"
- 16. David Le, Dora Obodo, Antarius Daniel, Ahmad Mia, Lan-Khanh Tran, Qudsia Javid, BioEng, 2017, "Spinal Cannulation Automated Navigation (SCAN) Robotic System" VSE Dean's Advisory Board Award & BMES Student Design and Research Award

17. Ian Brierly, Wesley Chan, Md Ashraf Ansary, Trac Truong, Cong Do, Robert Nguyen, ECE, 2017, "Reaction Wheel Driven Aquatic Vessel"

High School Students

- 1. Karen Yang, Montgomery Blair High School, 2019
- 2. Angela Chen, Thomas Jefferson HS for Science and Technology, 2019
- 3. Sohan Sunku, Thomas Jefferson HS for Science and Technology, 2019
- 4. Maryum Khan, Chantilly High School, 2019
- 5. Joshua Yuan, Montgomery Blair High School, 2016
- 6. Elijah Achu, Eleanor Roosevelt High School, 2016

(xi) Professional Membership

- 1. Member, Institute of Electrical and Electronics Engineers (IEEE)
- 2. Member, American Society of Mechanical Engineers (ASME)