

Curriculum Vitae
Feitian Zhang

Associate Professor & Director of Robotics and Control Laboratory (RCL)
School of Advanced Manufacturing and Robotics, Peking University
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Homepage: <http://www2.coe.pku.edu.cn/faculty/zhangfeitian/>

(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, S 2025)
08611310, Adaptive Control for Robots, PKU (F 2024, F 2025)
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

Superscript # indicates Zhang's advisee, superscript * indicates corresponding author.

Books

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

Journal Articles

1. Y. Zhang[#], X. Zhou, and F. Zhang^{*}, Design, Dynamic Modeling and Control of a 2-DOF Robotic Wrist Actuated by Twisted and Coiled Actuators," *IEEE/ASME Transactions on Mechatronics*, doi: 10.1109/TMECH.2025.3616174, 2025
2. M. Yang[#], Z. Sha[#], and F. Zhang^{*}, "Learning-Based Leader Localization for Underwater Vehicles With Optical-Acoustic-Pressure Sensor Fusion," *IEEE/ASME Transactions on Mechatronics*, doi: 10.1109/TMECH.2025.3603065, 2025
3. H. Cheng[#] and F. Zhang^{*}, "RGBlimp-Q: Robotic Gliding Blimp With Moving Mass Control Based on a Bird-Inspired Continuum Arm," *IEEE Transactions on Robotics*, doi:10.1109/TRO.2025.3600135, 2025
4. J. Tao[#], Y. Zhang[#], S. K. Rajendran, and F. Zhang^{*}, "An Efficient Learning Control Framework with Sim-to-Real for String-Type Artificial Muscle-Driven Robotic Systems," *IEEE/ASME Transactions on Mechatronics*, doi: 10.1109/TMECH.2025.3592717, 2025
5. J. Wang[#], T. Shen, D. Zhao^{*}, and F. Zhang^{*}, "Bioinspired Sensing of Undulatory Flow Fields Generated by Leg Kicks in Swimming," *IEEE Transactions on Automation Science and Engineering*, vol. 22, pp. 13895-13906, 2025 (selected for presentation at IROS'25)
6. Z. Sha[#], X. Wang[#], M. Yang[#], H. Lei and F. Zhang^{*}, "A Portable Autonomous Underwater Vehicle With Multi-Thruster Propulsion: Design, Development, and Vision-Based Tracking Control," *IEEE Robotics and Automation Letters*, vol. 10, no. 4, pp. 3046-3053, 2025
7. X. Wang[#], Z. Sha[#], F. Zhang^{*}, "Adaptive Integral Sliding Mode Control for Attitude Tracking of Underwater Robots With Large Range Pitch Variations in Confined Spaces," *IEEE Robotics and Automation Letters*, vol. 10, no. 2, pp. 979-986, 2025 (selected for presentation at ICRA'25)
8. 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*, vol. 30, no. 3, pp. 1787-1796, 2025
9. Y. Zhu[#], H. Cheng[#], F. Zhang^{*}, "Data-Driven Dynamics Modeling of Miniature Robotic Blimps Using Neural ODEs With Parameter Auto-Tuning," *IEEE Robotics and Automation Letters*, vol. 9, no. 12, pp. 10986-10993, 2024 (selected for presentation at ICRA'25)
10. M. Yang[#], Z. Sha[#] and F. Zhang^{*}, "A Multimodal Approach Based on Large Vision Model for Close-Range Underwater Target Localization," *IEEE/ASME Transactions on Mechatronics*, doi: 10.1109/TMECH.2024.3449090, 2024 (selected for presentation at AIM'25)
11. S. Lian[#] and F. Zhang^{*}, "TDANet: Target-Directed Attention Network For Object-Goal Visual Navigation With Zero-Shot Ability," *IEEE Robotics and Automation Letters*, vol. 9, no. 9, pp. 8075-8082, 2024
12. 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
13. L. Yue[#], D. Zhou, L. Xie, F. Zhang^{*}, Y. Yan and E. Yin^{*}, "Safe-VLN: Collision Avoidance for Vision-and-Language Navigation of Autonomous Robots Operating in Continuous Environments," *IEEE*

- Robotics and Automation Letters*, vol. 9, no. 6, pp. 4918-4925, 2024 (selected for presentation at IROS'24)
14. S. Lian[#] and F. Zhang*, "A Transferability Metric Using Scene Similarity and Local Map Observation for DRL Navigation," *IEEE/ASME Transactions on Mechatronics*, vol. 29, no. 6, pp. 4423-4433, 2024
 15. 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 (selected for presentation at IROS'24)
 16. 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
 17. 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
 18. 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
 19. 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
 20. 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
 21. 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
 22. 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
 23. 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
 24. 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 Bio-inspired Soft Robotics, 10(6): 065001, 2015
 25. 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
 26. 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
 27. 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. F. Dang* and F. Zhang, "Flow-Aided Dead Reckoning for Long-Distance AUV Localization," *2025 13th International Conference on Robot Intelligence Technology and Applications (RITA) (RITA 2025)*, Kings College London, United Kingdom, accepted

2. L. Wang[#], M. Yang[#], S. Lian[#], and F. Zhang*, “Real-Time Object Detection and Motion Estimation on UAVs with Onboard Edge Computing,” *IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)*, Hangzhou, China, pp. 1-7, 2025, doi: 10.1109/AIM64088.2025.11175707
3. H. Wang[#], H. Cheng[#], Y. Fan[#], and F. Zhang*, “Wind Disturbance Compensation for Path-Following Control of Robotic Blimps Via Deep Reinforcement Learning,” *IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)*, Hangzhou, China, pp. 1-6, 2025, doi: 10.1109/AIM64088.2025.11175743
4. Y. Fan[#], H. Cheng[#], H. Wang[#], and F. Zhang*, “Multi-Waypoint Navigation Control for Robotic Blimps Using Deep Reinforcement Learning,” *IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)*, Hangzhou, China, pp. 1-6, 2025, doi: 10.1109/AIM64088.2025.11175853
5. G. Qi[#], S. Lian[#], and F. Zhang*, “Difference-Oriented Network for Enhanced Zero-Shot Object Goal Visual Navigation,” *IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)*, Hangzhou, China, pp. 1-7, 2025, doi: 10.1109/AIM64088.2025.11175894
6. Y. Zhang[#] and F. Zhang*, “Dynamic Modeling and Motion Control of a TCA-Actuated Robotic Arm with Elbow and Wrist Joints,” *2025 American Control Conference (ACC)*, Denver, CO, USA, pp. 4615-4620, 2025
7. J. Tao[#], S. K. Rajendran, Y. Zhang[#], and F. Zhang*, “Efficient Learning and Control of String-Type Artificial Muscle Driven Robotic Systems”, *2024 American Control Conference (ACC)*, Toronto, ON, Canada, pp. 981-987, 2024
8. 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
9. 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)*, Cancun, Mexico, pp.2681-2687, 2022
10. 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
11. 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
12. 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
13. F. Dang[#], S. Nasreen[#], and F. Zhang*, “Background Flow Sensing for Autonomous Underwater Vehicles Using Model Reduction with Dynamic Mode Decomposition,” *IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)*, Boston, MA (virtual), pp.125–131, 2020
14. F. Dang[#] and F. Zhang*, “Distributed Flow Estimation for Autonomous Underwater Robots Using POD-based Model Reduction,” *the 57rd IEEE Conference on Decision and Control (CDC)*, Miami Beach, FL, pp. 4453–4458, 2018
15. 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
16. 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

17. 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
18. 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
19. 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
20. 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
21. 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
22. 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
23. 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
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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

1. F. Zhang, H. Cheng, “Robotic gliding blimp (RGBlimp) and its adjustment method,” Chinese Patent Application, Publication No. CN 118907380 A, published November 8, 2024
2. 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 Robotics and Automation Letters
4. IEEE Transactions on Control of Network Systems
5. IEEE Transactions on Systems, Man, and Cybernetics: Systems
6. IEEE Transactions on Industrial Electronics
7. Bioinspiration and Biomimetics
8. Journal of Mechanisms and Robotics
9. Journal of Guidance, Control, and Dynamics
10. IEEE Journal of Oceanic Engineering
11. IEEE Robotics and Automation Magazine
12. Ocean Engineering
13. IEEE Transactions on Multimedia
14. IEEE/CAA Journal of Automatica Sinica
15. ISA Transactions
16. Marine Technology Society Journal
17. Asian Journal of Control
18. International Journal of Intelligent Robotics and Applications
19. Robotics and Autonomous Systems
20. Engineering Applications of Computational Fluid Mechanics
21. Neural Computing and Applications
22. Journal of Marine Science and Application
23. Robotics and Biomimetics
24. Mathematical Problems in Engineering
25. Mathematics
26. Journal of Hydrodynamics
27. Defense Technology
28. Advanced Robotics Research
29. Frontiers of Information Technology & Electronic Engineering
30. Robotics: Science and Systems (RSS)
31. IEEE International Conference on Robotics and Automation (ICRA)
32. American Control Conference (ACC)
33. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
34. IEEE Conference on Decision and Control (CDC)
35. IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)
36. ACM Multimedia (ACMMM)
37. IEEE International Conference on Automation Science and Engineering (CASE)
38. IEEE Multi-conference on Systems and Control (MSC)
39. ASME Dynamic Systems and Control Conference (DSCC)

40. IEEE International Conference on Soft Robotics (RoboSoft)
41. Distributed Autonomous Robotic Systems (DARS)
42. IEEE-RAS International Conference on Humanoid Robotics (Humanoids)
43. World Congress on Intelligent Control and Automation (WCICA)
44. 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. Shunheng Xin, Peking University, 2025–Present (co-advised)
2. Xiaorui Wang, Peking University, 2025–Present
3. Yunsong Zhang, Peking University, 2024–Present
4. Yongjian Zhu, Peking University, 2023–Present
5. Jiyue Tao, Peking University, 2023–Present (co-advised)
6. Yingxi Li, Peking University, 2023–Present (co-advised)
7. Mingyang Yang, Peking University, 2022–Present
8. Lu Yue, Robotics, Peking University, 2022–Present (co-advised)
9. Liuyang Wang, Robotics, Peking University, 2022–Present
10. Hao Cheng, Robotics, Peking University, 2021–Present
11. Jun Wang, Robotics, Peking University, 2021–Present (co-advised)
12. Sunil Rajendran, Electrical Engineering, George Mason University, 2018–2022
Dissertation: Super Coiled Polymer-Driven Bio-Inspired Robots: Design, Modeling, and Learning-Based Control
Currently at BSS Technologies Inc., Takoma Park, MD, US
13. Fengying Dang, Electrical Engineering, George Mason University, 2017–2021
Dissertation: Flow Sensing Based Environmental Perception of Autonomous Underwater Robots
Currently faculty at Michigan Technological University, Houghton, MI, US
14. Joseph Prince Mathew, Electrical Engineering, George Mason University, 2018–2021 (co-advised)
Currently at Databuoy Corporation, McLean, VA, US
15. Dinesh Kumar Karri, Electrical Engineering, George Mason University, 2018–2021 (co-advised)
Currently at Databuoy Corporation, McLean, VA, US

M.S. Students

1. Yachun Shan, Mechanical Engineering, Peking University, 2025–Present
2. Hongwu Wang, Mechanical Engineering, Peking University, 2024–Present
3. Yue Fan, Mechanical Engineering, Peking University, 2023–Present
4. Shiwei Lian, Mechanical Engineering, Peking University, 2022–2025
Thesis: Deep Reinforcement Learning-Based Mapless Navigation and Its Transferability
Currently at BYD Company
5. Zeyu Sha, Mechanical Engineering, Peking University, 2022–2025
Thesis: Development of a Portable Multi-Propeller Autonomous Underwater Vehicle and Research on Its Visual Target Tracking Methods
Currently Research Associate at Peking University
6. Yuchi Ma, Mechanical Engineering, Peking University, 2021 (co-advised)

7. Huaitong Song, Mechanical Engineering, Peking University, 2021 (co-advised)
8. Guohua Sun, Electrical Engineering, George Mason University, 2020
9. Nicholas Zempolish, Computer Science, George Mason University, 2019–2021
10. Snehashis Paul, Electrical Engineering, George Mason University, 2019
11. Qingyang Dai, Electrical Engineering, George Mason University, 2018–2021
12. Joseph Prince Mathew, Electrical Engineering, George Mason University, 2018–2019
13. Dinesh Kumar Karri, Electrical Engineering, George Mason University, 2018–2019
14. Fengying Dang, Electrical Engineering, George Mason University, 2017–2018
15. Sunil Rajendran, Electrical Engineering, George Mason University, 2016–2018
16. Vishakha Goyal, Robotics, University of Maryland, 2015–2016

MEM Students

1. Shuai Zhen, Peking University, 2025–Present
2. Baoxin Liu, Peking University, 2025–Present
3. Yi Li, Peking University, 2025–Present
4. Yirui Wang, Peking University, 2024–2025
5. Wenxue Xie, Peking University, 2024–2025
6. Zibo Wang, Peking University, 2024–2025
7. Weiqian Luo, Peking University, 2024–2025
8. Xiaoxi Li, Peking University, 2024–2025
9. Xiang Du, Peking University, 2023–2025
10. Hongwei Guan, Peking University, 2023–2024
11. Mingtao Liu, Peking University, 2023–2024
12. Lichao Pan, Peking University, 2023–2024
13. Xinxu Qian, Peking University, 2023–2024
14. Zhibo Liu, Peking University, 2022–2023

Undergraduate Students

1. Jiawei Wang, Robotics Engineering, Peking University, 2025–Present
2. Tianlin Li, Robotics Engineering, Peking University, 2025–Present
3. Yusen Tao, Robotics Engineering, Peking University, 2025–Present
4. Guolei Qi, Robotics Engineering, Peking University, 2024–Present
5. Xiaorui Wang, Robotics Engineering, Peking University, 2023–2025
6. Yachun Shan, Robotics Engineering, Peking University, 2023–2025
7. Yunsong Zhang, Robotics Engineering, Peking University, 2022–2024
8. Jiyue Tao, Robotics Engineering, Peking University, 2022–2023
9. Yongjian Zhu, Robotics Engineering, Peking University, 2022–2023
10. Xinyu Zhou, Robotics Engineering, Peking University, 2021–2023
11. Yifei Tian, Robotics Engineering, Peking University, 2022
12. Arash Touhidi, Electrical Engineering, George Mason University, 2019–2021
13. Pablo B. Lamarca, Exchange Student, Universidad Carlos III De Madrid (UC3M), Spain, 2019–2020
14. Barak Widawsky, Computer Engineering, George Mason University, 2019–2020
15. Avery C. Austin, Mechanical Engineering, George Mason University, 2019–2020
16. Yizhe Wang, Electrical Engineering, George Mason University, 2019
17. Vu Luu, Computer Engineering, George Mason University, 2019
18. Abdullah Mohammad, Computer Engineering, George Mason University, 2019
19. Francis Ahenkora, Computer Engineering, George Mason University, 2019

20. Alberto Herranz, Exchange Student, Universidad Carlos III De Madrid (UC3M), Spain, 2018–2019
21. Simran Chawla, Computer Science, University of Maryland, 2015–2016
22. Patrick Washington, Aerospace Engineering, University of Maryland, 2014–2016
23. Cody Thon, Mechanical Engineering, Michigan State University, 2009–2014
24. 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, Tirsaa 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 Tamba, 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”
12. 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)