

Hangjian Ling, PhD

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EDUCATION

- 2017 Ph.D., Mechanical Engineering, Johns Hopkins University
- 2013 M.S., Mechanical Engineering, Johns Hopkins University
- 2011 B.S., Theoretical & Applied Mechanics, University of Science & Technology of China

ACADEMIC POSITIONS

- 2019–Present **University of Massachusetts Dartmouth**
Assistant Professor, Mechanical Engineering
- 2017–2019 **Stanford University**
Postdoctoral Fellow, Civil and Environmental Engineering
with Professor Nicholas Ouellette
- 2011–2017 **Johns Hopkins University**
Graduate Research Assistant, Mechanical Engineering
with Professor Joseph Katz
- 2009–2011 **University of Science and Technology of China**
Undergraduate Graduate Research Assistant, Mechanical Engineering
with Professor Jiming Yang, Yujian Zhu

HONORS AND AWARDS

- ASME Rising Star in Mechanical Engineering, 2024
- National Science Foundation CAREER award, 2023

GRANTS RECEIVED

A. Principal Investigator Grants

1. “CAREER: Diffusive and Convective Gas Dissolution over Super-Hydrophobic Surfaces”. **National Science Foundation**, \$505,075, 12/2023 to 11/2028.
2. “Long-lasting super-hydrophobic surface for reducing marine biofouling”. **UMass Office of Technology Commercialization & Ventures**, \$25,000, 06/2023 to 05/2025. (Co-PI: Pia Moisander)
3. UMassD The Grants Intensive Fellowship (TGIF), 2022/2023.
4. “*REU Supplement: Mechanism of gas depletion on super-hydrophobic surfaces in turbulent flows*”, **National Science Foundation**, \$14,012, 01/01/2023 to 12/31/2024.
5. “Developing a Field-Deployable 3D Video Tracking System for Biological Studies”, **CSCDR seed funding**, \$4000, 06/01/2022 to 08/31/2022.

6. "Sustainable Drag Reduction in Turbulent Flows over Super-Hydrophobic Surface by Gas Injection", **UMassD Internal Seed Funding**, \$25,000, 01/2022 to 08/2022. (Co-PI: Mehdi Raessi)
7. "Mechanism of gas depletion on super-hydrophobic surfaces in turbulent flows", **National Science Foundation**, \$299,778, 01/01/2021 to 12/31/2024.
8. "Anti-biofouling property and lifetime of super-hydrophobic surfaces in marine environment", **UMassD MUST Program funded by Office of Naval Research**, \$197,813, 02/01/2020 to 01/31/2025. (Co-PI: Pia Moisander, Wei-Shun Chang)

B. Co-PI Grants

1. "Transparent surface coatings in marine antifouling". **TIPD LLC**, \$54,927, 02/2024 to 10/2024. (PI: Pia Moisander, Co-PI: Hangjian Ling)
2. "Ultra-Effective Air Filtration/Purification Media Based on Anti-Microbial Coated Advanced Flocked Fibrous Structures", **UMass Office of Technology Commercialization & Ventures**, \$25,000, 06/2021 to 02/2023. (PI: Steven Zanganeh, Co-PI: Yong K Kim, Hangjian Ling)

PUBLICATIONS

Google Scholar Profile: <https://scholar.google.com/citations?user=MWq3Y7oAAAAJ&hl=zh-CN>

A. Peer-reviewed journal publications

1. S. Mohammadshahi, J. Breveleri, D. O'Coin, **H. Ling**, "Plastron stability of super-hydrophobic surface with transverse grooves in turbulent flows". *In preparation*.
2. **H. Ling**, I. Rodriguez, "Bubble pinch-off on superhydrophobic surface". *Submitted*.
3. D. O'Coin, **H. Ling**, "Effect of gas flow rate on bubble formation on superhydrophobic surface". *Accepted for publication in Droplet*.
4. D. O'Coin, **H. Ling**, "Dynamics of bubble formation on superhydrophobic surface under a constant gas flow rate at quasi-static regime". *Physics of Fluids* **36**(8), 083303 (2024).
5. M. Elius, S. Richard, K. Boyle, W.S. Chang, P. H. Moisander, **H. Ling**, "Impact of Gas Bubbles on Bacterial Adhesion on Super-Hydrophobic Aluminum Surfaces". *Results in Surfaces and Interfaces* **15**, 100211 (2024).
6. S. Mohammadshahi, D. O'Coin, **H. Ling**, "Impact of sandpaper grit size on drag reduction and plastron stability of super-hydrophobic surface in turbulent flows". *Physics of Fluids* **36**(2), 025139 (2024).
7. A. Nosrati, S. Mohammadshahi, M. Raessi, **H. Ling**, "Impact of undersaturation level on the longevity of super-hydrophobic surfaces in stationary liquids". *Langmuir* **39**(49), 18124-18131 (2023).
8. J. Breveleri, S. Mohammadshahi, T. Dunigan, **H. Ling**, "Plastron Restoration for Underwater Super-Hydrophobic Surface by Porous Material and Gas Injection". *Colloids and Surfaces A: Physicochemical and Engineering Aspects* **676**: 132319 (2023).

9. M. Elius, K. Boyle, W.S. Chang, P. H. Moisanter, **H. Ling**, "Comparison of 3D motion of bacteria with and without wall accumulation". *Physical Review E* **108**(1): 014409 (2023).
10. S. Mohammadshahi, J. Breveleri, **H. Ling**, "Fabrication and characterization of super-hydrophobic surfaces based on sandpapers and nano-particle coatings". *Colloids and Surfaces A: Physicochemical and Engineering Aspects* **666**: 131358 (2023).
11. D. O'Coin, G. E. Mclvor, A. Thornton, N. T. Ouellette, **H. Ling**, "Velocity correlations in jackdaw flocks in different ecological contexts". *Physical Biology* **20**(1): 016005 (2023).
12. M. Elius, **H. Ling**, "Effect of hologram plane location on 3D particle tracking using digital holographic microscopy". *Applied Optics*. **61**(32), 9415-9422 (2022).
13. A. Bourgoun, **H. Ling**, "A general model for the longevity of super-hydrophobic surfaces in under-saturated, stationary liquid". *ASME Journal of Heat Transfer*, **144**(4): 042101 (2022).
14. M. Shangraw, **H. Ling**, "Improving axial localization of weak phase particles in digital in-line holography". *Applied Optics* **60**(24): 7099-7106 (2021).
15. M. Shangraw, **H. Ling**, "Separating twin images in digital holographic microscopy using weak scatterers". *Applied Optics* **60**(3): 626-634 (2021).
16. **H. Ling**, K. Sridhar, S. Gollapudi, J. Kumar, R. S. Ohgami, "Measurement of cell volume using inline digital holography". *Microscopy* **70**(4): 333-339 (2021).
17. **H. Ling**, "Three-Dimensional Measurement of a Particle Field Using Phase Retrieval Digital Holography". *Applied Optics* **59**(12): 3551-3559 (2020).
18. **H. Ling**, G. E. Mclvor, J. Westley, K. van der Vaart, R. T. Vaughan, A. Thornton, N. T. Ouellette, "Behavior plasticity and the transition to order in jackdaw flocks". *Nature Communications* **10**: 5174 (2019).
19. **H. Ling**, G. E. Mclvor, J. Westley, K. van der Vaart, R. T. Vaughan, A. Thornton, N. T. Ouellette, "Collective turns in jackdaw flocks: kinematics and information transfer". *Journal of the Royal Society Interface* **16**(159): 20190450 (2019).
20. **H. Ling**, G. E. Mclvor, K. van der Vaart, R. T. Vaughan, A. Thornton, N. T. Ouellette, "Local interactions and their group-level consequences in flocking jackdaws". *Proceedings of the Royal Society B* **286**: 20190865 (2019).
21. **H. Ling**, G. E. Mclvor, K. van der Vaart, R. T. Vaughan, A. Thornton, N. T. Ouellette, "Costs and benefits of the social relationship in the collective motion of bird flocks". *Nature Ecology and Evolution* **3**(6): 943-948 (2019).
22. **H. Ling**, G. E. Mclvor, G. Nagy, S. MohaimenianPour, R. T. Vaughan, A. Thornton, N. T. Ouellette, "Simultaneous measurements of three-dimensional trajectories and wingbeat frequencies of birds in the field". *Journal of the Royal Society Interface* **15**(147): 20180653 (2018).

23. **H. Ling**, M. Fu, M. Hultmark, J. Katz, "Effect of Reynolds number and saturation level on gas diffusion in and out of a super-hydrophobic surface". *Physical Review Fluids* **2**(12): 124005 (2017).
24. **H. Ling**, S. Srinivasan, K. Golovin, G. H. McKinley, A. Tuteja, J. Katz, "High resolution velocity measurement in the inner part of turbulent boundary layers over super-hydrophobic surfaces". *Journal of Fluid Mechanics* **801**: 670-703 (2016).
25. **H. Ling**, J. Katz, "Separating twin images and locating the center of a microparticle in dense suspensions using correlations among reconstructed fields of two parallel holograms". *Applied Optics* **53**(27): G1-G11 (2014).
26. M. Xu, **H. Ling**, L. Wang, J. Yang, X. Luo, Q. Ma, T. Zhao, "The application of PIV technique for the investigation of oil-water two phase flow". *Journal of Experiments in Fluid Mechanics* **26**(1): 12-15 (2012). (in Chinese version).

B. Conference publications

27. G. Nagy, A. Thornton, **H. Ling**, G. E. McIvor, N. T. Ouellette, R. T. Vaughan, "Computational and Structural Advantages of Pairwise Flocking". *IEEE International Symposium on Multi-Robot and Multi-Agent Systems* (2019).
28. **H. Ling**, S. Srinivasan, K. Golovin, V. Pillutla, Abhijeet, G. H. McKinley, A. Tuteja, W. Choi, J. Katz, "Flow structure and turbulence in the inner part of turbulent boundary layers over super-hydrophobic surfaces". *The 31st Symposium on Naval Hydrodynamics*, Monterey, CA (2016).
29. V. Pillutla, Abhijeet, **H. Ling**, L. Rodriguez, D. B. C. Rodrigues, J. Katz, W. Choi, "Robust drag reduction superhydrophobic surfaces with large slip lengths". *The 31st Symposium on Naval Hydrodynamics*, Monterey, CA (2016).
30. **H. Ling**, Y. Zhu, R. Xiong, L. Wang, F. Xiao, M. Xu, J. Yang, "The behaviors of a drop in ambient liquid under a sudden impact". *The 28th International Symposium on Shock Waves*, Manchester, UK (2011).

PATENT APPLICATIONS

1. **H. Ling**, "A Gas-Replenishment Technology for Underwater Super-Hydrophobic Surface based on Porous Material and Gas Injection". *Under review, with the USPTO*.
2. **H. Ling**, K. Sridhar, R. S. Ohgami, "A simple in-line digital holography system for measuring 3D cell shape". US Patent App. 18/040,730.

CONFERENCE PRESENTATIONS

1. A. Gupta, A. Nosrati, **H. Ling**, "Longevity of superhydrophobic surface in undersaturated liquid", *77th APS Division of Fluid Dynamics*, Salt Lake City, UT, Nov 24-26, 2024.
2. S. Mohammadshahi, J. Breveleri, D. O'Coin, F. Fanasia, **H. Ling**, "Plastron stability of super-hydrophobic surface with transverse grooves in turbulent flows", *77th APS Division of Fluid Dynamics*, Salt Lake City, UT, Nov 24-26, 2024.

3. D. O'Coin, **H. Ling**, "Dynamics of bubble formation on superhydrophobic surface at quasi-static regime", *77th APS Division of Fluid Dynamics*, Salt Lake City, UT, Nov 24-26, 2024.
4. I. Rodriguez, D. O'Coin, **H. Ling**, "Understanding the Pinch-Off of a Bubble on Superhydrophobic Surfaces", *ASME International Mechanical Engineering Congress and Exposition*, Portland, OR, Nov 17-21, 2024.
5. D. Singh, S. Mohammadshahi, **H. Ling**, "Understanding Bubble Formation on Porous Superhydrophobic Surfaces", *ASME International Mechanical Engineering Congress and Exposition*, Portland, OR, Nov 17-21, 2024.
6. **H. Ling**, "Longevity of Superhydrophobic Surface Due to Gas Diffusion and Turbulent Flows", *ASME International Mechanical Engineering Congress and Exposition*, Portland, OR, Nov 17-21, 2024.
7. J. Breveleri, S. Mohammadshahi, H. Ling, "Active gas replenishment for superhydrophobic surface by porous material and gas injection", *30th Massachusetts Undergraduate Research Conference*, Amherst, MA, Apr 19, 2024.
8. J. Breveleri, S. Mohammadshahi, H. Ling, "Plastron restoration by gas injection through superhydrophobic surface created on porous material", *76th APS Division of Fluid Dynamics*, Washington, DC, Nov 19-21, 2023.
9. S. Mohammadshahi, D. O'Coin, H. Ling, "Drag reduction and plastrons stability of sandpaper-based superhydrophobic surfaces in turbulent flows", *76th APS Division of Fluid Dynamics*, Washington, DC, Nov 19-21, 2023.
10. J. Breveleri, S. Mohammadshahi, H. Ling, "Active gas replenishment for superhydrophobic surface by porous material and gas injection", *29th Massachusetts Undergraduate Research Conference*, virtual, Apr 28, 2023.
11. M. Elius, S. Richard, K. Boyle, W.S. Chang, P. H. Moisaner, H. Ling, "Impact of Gas Bubbles on Bacterial Adhesion on Super-Hydrophobic Surfaces". *UMass Intercampus Marine Science Research Symposium*, New Bedford, MA, March 22, 2023.
12. A. Nosrati, A. Bourgoun, S. Mohammadshahi, M. Raessi, H. Ling, "Predicting Longevity of Super-Hydrophobic Surface in Undersaturated Liquid for Marine Application". *UMass Intercampus Marine Science Research Symposium*, New Bedford, MA, March 22, 2023.
13. H. Ling, D. O'Coin, G. E. McIvor, A. Thornton, N. T. Ouellette, "Ecological context shapes collective turns and velocity correlations in jackdaw flocks". *APS March Meeting*, Las Vegas, Nevada, March 5-10, 2023.
14. S. Mohammadshahi, H. Ling, "Fabrication and characterization of a turbulent channel flow facility for studying superhydrophobic surface stability", *75th APS Division of Fluid Dynamics*, Indianapolis, Indiana., Nov 20-22, 2022.
15. J. Breveleri, S. Mohammadshahi, H. Ling, "Active gas replenishment for superhydrophobic surface by porous material and gas injection", *75th APS Division of Fluid Dynamics*, Indianapolis, Indiana., Nov 20-22, 2022.

16. M. Elius, P. Moisaner, K. Boyle, H. Ling, "Study of 3D bacterial motion and biofilm formation by digital holographic microscopy", *75th APS Division of Fluid Dynamics*, Indianapolis, Indiana., Nov 20-22, 2022.
17. A. Nosrati, A. Bourgoun, M. Raessi, H. Ling, "Study of gas diffusion for underwater super-hydrophobic surfaces", *75th APS Division of Fluid Dynamics*, Indianapolis, Indiana., Nov 20-22, 2022.
18. H. Ling, M. Shangraw, "3D Tracking of Weak Phase Objects by Digital Holographic Microscopy", *74th APS Division of Fluid Dynamics*, Phoenix, AZ, Nov 21-23, 2021.
19. A. Thornton, N. T. Ouellette, G. E. McIvor, H. Ling, "Collective behavior in the real world", *20th HFSP Awardees meetings*, July 5 to 8, 2021.
20. M. Shangraw, H. Ling, "Improving Digital Holography to Track 3D Bacterial Motion", *UMass Intercampus Marine Science Research Symposium, Virtual*, March 24-25, 2021.
21. A. Bourgoun, H. Ling, "Characterization of optimal surface geometry to enhance lifetime of underwater super-hydrophobic surfaces", *UMass Intercampus Marine Science Research Symposium, Virtual*, March 24-25, 2021.
22. H. Ling, "Improvement of particle detection accuracy in digital holographic microscopy by phase retrieval method", *APS Division of Fluid Dynamics, Virtual*, November 22 to 24, 2020.
23. N. T. Ouellette, H. Ling, G. E. McIvor, R. T. Vaughan, A. Thornton, "Heterogeneity in bird flocks", *20th HFSP Awardees meetings*, July 5 to 8, 2020.
24. N. T. Ouellette, H. Ling, G. E. McIvor, J. Westley, K. van der Vaart, R. T. Vaughan, A. Thornton, "Behavior plasticity in jackdaw flocks", *APS March Meeting*, Denver, CO, March 2 to 6, 2020.
25. "Effect of Social Relationships on the Collective Motion of Bird Flocks", *APS March Meeting*, Boston, MA, 2019.
26. "High-Precision Three-Dimensional Tracking of Birds in the Field", *Conference on Collective Behavior by ICTP*, Trieste, Italy, 2018.
27. "Gas diffusion in and out of super-hydrophobic surface in transitional and turbulent boundary layers", *APS Division of Fluid Dynamics*, Denver, CO, 2017.
28. "High-resolution velocity measurement in inner parts of turbulent boundary layers over super-hydrophobic surfaces", *ONR-MURI program review meeting*, United States Naval Academy, 2017.
29. "Effects of roughness height, pressure and streamwise distance on stress profiles in the inner part of turbulent boundary layer over super-hydrophobic surfaces", *APS Division of Fluid Dynamics*, Portland, OR, 2016.
30. "Flow structure and turbulence in the inner part of turbulent boundary layers over super-hydrophobic surfaces", *The 31st Symposium on Naval Hydrodynamics*, Monterey, CA, 2016.

31. "High-resolution velocity measurement in inner parts of turbulent boundary layers over super-hydrophobic surfaces", *ONR-MURI program review meeting*, University of Michigan, 2016.
32. "High-resolution velocity measurement in inner parts of turbulent boundary layers over super-hydrophobic surfaces", *ONR-MURI program review meeting*, Johns Hopkins University, 2016.
33. "Velocity and Reynolds Stress Profiles in The Inner Part of a Turbulent Boundary Layer over Super-Hydrophobic Surfaces", *APS Division of Fluid Dynamics*, Boston, MA, 2015.
34. "High-resolution velocity measurement in inner parts of turbulent boundary layers over super-hydrophobic surfaces", *ONR-MURI program review meeting*, Princeton University, 2015.
35. "High-resolution velocity measurement in inner parts of turbulent boundary layers over super-hydrophobic surfaces", *ONR-MURI program review meeting*, Stanford University, 2015.
36. "High-resolution velocity measurement in inner parts of turbulent boundary layers over super-hydrophobic surfaces", *APS Division of Fluid Dynamics*, San Francisco, CA, 2014.
37. "High-resolution velocity measurement in inner parts of turbulent boundary layers over super-hydrophobic surfaces", *ONR-MURI program review meeting*, Stanford University, 2014.
38. "Real and virtual image separation in digital in-line holographic microscopy by recording two parallel holograms", *APS Division of Fluid Dynamics*, Pittsburgh, PA, 2013.

TEACHING EXPERIENCES

University of Massachusetts Dartmouth

- MNE-220: Engineering Thermodynamics I (*Spring 2021, 2022, 2023, 2024*)
- MNE-280: Honors Enrichment (*Spring 2021, 2022, 2023, 2024*)
- PHY-101: Introduction to Physics I (*Fall 2020, Fall 2023*)
- MNE-500: Mechanical Engineering Seminar (*Fall/Spring 2021, 2022, 2023*)
- MNE-504: Adv. Mechanics of Fluids (*Fall 2019, 2021, 2022, 2023, 2024*)

Johns Hopkins University

- 530.622: Fluid Dynamics II (*Spring 2013*) (*Teaching Assistant*)
- 530.231: Thermodynamics (*Fall 2012*) (*Teaching Assistant*)

STUDENTS AND POSTDOC SUPERVISED

Current

- Foram S Fanasia (MS, 2024-present): Stability of super-hydrophobic surface in turbulent flows.
- Ankit Gupta (MS, 2024–present): Diffusive gas dissolution over super-hydrophobic surface.

- James D Bonnell (BS, 2024–present): Diffusive gas dissolution over super-hydrophobic surface.
- John F Ready (BS, 2024–present): Bubble generation from porous super-hydrophobic surface.

Past

- Shabnam Mohammadshahi (PhD, 2022–2024). “Experimental study of stability of super-hydrophobic surface in turbulent flows.”
- Daniel O’Coin (MS, 2022–2024). Thesis title: “An Experimental Study of Bubble Formation on Superhydrophobic Surfaces”.
- Ali Nosrati (MS, 2022–2023). Thesis title: “An Experimental Study of the Longevity of Super-Hydrophobic Surfaces in Undersaturated Liquid Due to Gas Diffusion”.
- Md Elius (MS, 2021–2023). Thesis title: “Study of Bacteria Super-hydrophobic Wall Interactions for Novel Anti-biofouling Materials”.
- Aleksey Bourgoun (MS, 2019–2021). Thesis title: “A Numerical and Experimental Study of Gas Diffusion from Super-Hydrophobic Surfaces to Under-Saturated Liquid”.
- Maxwell Shangraw (MS, 2019–2021). Thesis title: “Application and Improvement of Digital Holographic Microscopy to Study Bacterial Motion”.
- Jamie Mayson (PhD, visiting student, 2023 summer, advisor: Steve Portugal and Alex Thornton): Learn the 3D particle tracking technique.
- Dillon Singh (BS, NSF REU site, 2024 Summer). “Bubble formation on porous surface”.
- Isaac Rodriguez (BS, NSF REU site, 2024 Summer). “Bubble pinch-off on superhydrophobic surface”.
- Jordan Breveleri (BS, 2022–2024). “Fabrication and Evaluation of Porous Super-Hydrophobic Surface.”
- Elijah Jope (BS, Honor project, 2023–2024). Thesis title: “Fabrication of Super-Hydrophobic Surface by 3D Printing.”
- Shane Mercuri (BS, 2024 Spring). “Diffusive gas dissolution over super-hydrophobic surface.”
- Colin Nicoll (BS, 2023 Summer). “Drag reduction of Super-Hydrophobic surface in non-Newtonian fluids.”
- Christina Hart (BS, Honor project, 2021–2023). Thesis title: “Drag reduction of Super-Hydrophobic Spheres.”
- Nicholas Paternostro (BS, Honor project, 2020–2021). Thesis title: “Evaluation of Hierarchical Super-Hydrophobic Surfaces for Friction Reduction in Turbulent Flows”.
- Theresa Dunigan (BS; NSF REU site, 2022 Summer).
- Toluwani Adebayo (BS; NSF REU site, 2022 Summer).

OTHER PROFESSIONAL ACTIVITIES

A. Invited academic talks

1. Michigan State University, *Mechanical Engineering Seminar*, April 2, 2024.
2. The Rowland Institute at Harvard, July 12, 2023.

3. University of New Hampshire, *Department of Mechanical Engineering Seminar*, March 24, 2023.
4. Northern Arizona University, *Department of Mechanical Engineering Seminar*, Northern Arizona University, November 4, 2022 (virtual seminar).
5. Dongguan University of Technology, *DGUT-CNAM Institute*, China, November 15, 2021 (virtual seminar).
6. University of Pittsburgh, *Department of Civil and Environmental Engineering Graduate Seminar*, PA, August 28, 2020 (virtual seminar).
7. Brown University, *Fluid & Thermal Science, School of Engineering Joint seminar*, RI, March 3, 2020.
8. University of Massachusetts Dartmouth, *Estuarine and Ocean Science seminar*, MA, October 23, 2019.
9. George Mason University, *Mechanical Engineering seminar*, VA, 2017.
10. George Washington University, *Research Symposium on Environmental and Applied Fluid Dynamics*, DC, 2015.

B. Journal reviewer

- *Advanced Science*
- *Applied Optics*
- *Applied Surface Science*
- *ACS Applied Material and Interfaces*
- *Behavioural Processes*
- *Biomimetics*
- *Biotechnology and Bioengineering*
- *Experiments in Fluids*
- *Flow, Turbulence and Combustion*
- *International Journal of Heat and Fluid Flow*
- *Journal of Applied Fluid Mechanics*
- *Journal of Fluid Mechanics*
- *Journal of Theoretical Biology*
- *Micromachines*
- *OSA Continuum*
- *Optics Express*
- *Optics Letters*
- *Philosophical Transactions B*
- *PLOS Computational Biology*
- *PLOS ONE*
- *Physics of Fluids*
- *Physical Review Fluids*
- *Royal Society Open Science*
- *Scientific Reports*

C. Conference session chair

- 75th APS Division of Fluid Dynamics, 2022
- Massachusetts Undergrad Research Conference, 2022, 2023

D. Conference reviewer

- ASME Fluids Engineering Division Summer Meeting, 2022

E. Grant reviewer

- NSF reviewer 2020

F. Guest editor

- *Machines*, special issue: *Fluid Mechanics and Energy Conversion*
- *Biomimetics*, special issue: *Superhydrophobic Surfaces: Challenges, Solutions and Applications*

G. Judge

- APS Division of Fluid Dynamics Poster Competition 2023
- UMass Intercampus Marine Science Research Symposium 2021

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- American Physical Society, Member