

John O. Dabiri

Centennial Chair Professor
Graduate Aerospace Laboratories (GALCIT) and Mechanical Engineering
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Education

Ph.D., Bioengineering with minor in Aeronautics (4/2005)

California Institute of Technology, Pasadena, CA
Thesis: Unsteady fluid mechanics of starting-flow vortex generators with time-dependent boundary conditions
Advisor: Morteza (Mory) Gharib

M.S., Aeronautics (6/2003)

California Institute of Technology, Pasadena, CA

B.S.E. *summa cum laude*, Mechanical and Aerospace Engineering (6/2001)

Princeton University, Princeton, NJ

Professional Experience

California Institute of Technology

Centennial Chair Professor (10/2019 – present)

Aeronautics and Mechanical Engineering

Professor with tenure (11/2010 – 6/2016)

Associate Professor with tenure (8/2009 – 10/2010); Assistant Professor (5/2005 – 8/2009)
Aeronautics and Bioengineering

Dean of Undergraduate Students (7/2014 – 6/2015)

Director, Center for Bioinspired Wind Energy (11/2010 – 6/2015)

Chair of the Faculty Board (1/2013 – 6/2014)

Stanford University

Full Professor with tenure (7/2015 – 9/2019)

Civil & Environmental Engineering and Mechanical Engineering

Senior Fellow, Precourt Institute for Energy (1/2018 – 9/2019)

Founding Director, Catalyst for Collaborative Solutions (11/2016 – 11/2017)

Senior Fellow, Center for Turbulence Research (8/2012 – 6/2013)

Research Fellowships and Assistantships

Bioengineering, California Institute of Technology (9/2001 – 4/2005)
Mechanical, Industrial and Manufacturing Eng., University of Toledo, OH (6/2001 – 9/2001)
Mechanical and Aerospace Engineering, Princeton University (9/1998 – 6/2001)
Aeronautics, California Institute of Technology (6/2000 – 8/2000)

Research Grants

Caltech Center for Autonomous Systems and Technologies “Developing deep sea sensor packages for biohybrid jellyfish ocean exploration,” (2025-2026, PI: Dabiri)
Office of Naval Research “Hydrodynamics and electromechanics of multifunctional biohybrid propulsors” (2024-2029, PI: Dabiri)
Gary Clinard Innovation Fund “Visual anemometry using natural vegetation” (2024-2025, PI: Dabiri)
National Science Foundation (Ocean Technology and Interdisciplinary Coordination) “Characterizing vertical swimming, payload capacity, and performance envelope of biohybrid robot jellyfish as future ocean monitoring platforms” (2023-2025, PI: Dabiri)
National Science Foundation (Fluid Dynamics) “2020 Alan T. Waterman Award” (2020-2025, PI: Dabiri)
National Science Foundation (Fluid Dynamics) “Seeing the wind: Leveraging flow-structure interactions for visual anemometry” (2020-2023, PI: Dabiri)
Gordon and Betty Moore Foundation “Wind farm in Igiugig Alaska” (2013-2026, PI: Dabiri)
Siemens Gamesa Renewable Energy “Development of adaptive online wind farm control” (2020-2023, PI: Dabiri)
Gordon and Betty Moore Foundation “Propulsive advantages of coordinating multiple jets by colonial marine organisms” (2019-2022, PI: K. Sutherland)
National Science Foundation (Fluid Dynamics) “Effect of helicity on the development of free-shear turbulence at high Reynolds number” (2018-2021, PI: Dabiri)
Woods Institute for the Environment “Bird conservation in wind energy parks by leveraging the avian optomotor response” (2017-2020, PI: Dabiri)
TomKat Center for Sustainable Energy “A commercial wind farm testbed for performance prediction and optimization tools” (2016-2018, PI: Dabiri)
Precourt Institute for Energy “Renewable Energy Systems Integration (RESI): Prototyping an Optimized Energy Infrastructure as Living Laboratory” (2016-2018, PI: Dabiri)
National Science Foundation (Particulate and Multiphase Processes) “Multiscale interactions between active particles and stratified fluids during collective vertical migration” (2015-2018, PI: Dabiri)
National Science Foundation (Fluid Dynamics) “Fluid mechanical basis of universal natural propulsor bending patterns” (2015-2018, PI: Dabiri)
National Science Foundation (Instrument Development for Biological Research) “Diver-operated imaging platform with complementary systems for quantifying aquatic organism interactions” (2015-2018, PI: Dabiri)
United States - Israel Binational Science Foundation “Drift-mediated mixing” (2012-2016, US PI: Dabiri)

Office of Naval Research “A wind energy solution for military base operations” (2012-2015, PI: Dabiri)
Gordon and Betty Moore Foundation “Feasibility study of vertical axis turbines and arrays in rural communities located in Alaska’s wild salmon systems” (2012-2013, PI: J. Peng)
National Science Foundation (Biological Oceanography) “Turbulence and suspension feeding: a new approach using the lobate ctenophore *Mnemiopsis leidyi*” (2011-2014, PI: Dabiri)
Gordon and Betty Moore Foundation “Center for Bio-inspired Engineering” (2010-2016, PI: Dabiri)
Office of Naval Research (Physical Sciences) “Beyond mimicry: bio-inspired propulsion via passive mechanisms” (2009-2014, PI: Dabiri)
National Science Foundation (Fluid Dynamics) “Flexible swimmers: reverse engineering a jellyfish” (2009-2011, PI: Dabiri)
National Science Foundation (Fluid Dynamics) “Optimizing flexible swimmers—from jellyfish to engineered propulsors” (2008-2011, PI: Dabiri)
National Science Foundation (Biological Oceanography) “Biomixing—a controversial mechanism influencing dynamics of marine ecosystems?” (2008-2010, PI: M. Dawson)
Office of Naval Research (Physical Sciences) “Optimal propulsion for hybrid screw-based, bio-inspired systems” (2008-2011, PI: Dabiri)
National Science Foundation (Physiological and Structural Systems) “In situ measurement of vertebrate swimming in natural environments” (2008-2009, PI: M. Gordon)
National Science Foundation (Energy for Sustainability) “Bio-inspired fluid dynamic energy conversion” (2007-2011, PI: Dabiri)
National Science Foundation (Ocean Technology) “Phase two development of a self-contained underwater velocimetry apparatus” (2007-2009, PI: Dabiri)
Office of Naval Research SBIR “Biomimetic sonobuoy” (2007-2010, PI: Triton Systems, Inc.)
National Science Foundation (Biological Oceanography) “Prediction of medusan predatory roles based on quantitative studies of animal-fluid interactions” (2006-2009, PI: Dabiri)

Honors and Awards

Research Achievement

Cornell Barbara McClintock Life Sciences Lecture (2026)
National Medal of Science (2025)
J. Robert Oppenheimer Memorial Lecture, Los Alamos National Laboratory (2025)
Presidential Lecture, Simons Foundation (2024)
G. Evelyn Hutchinson Award, Assoc. for the Sciences of Limnology and Oceanography (2023)
Elected Fellow, American Institute for Medical and Biological Engineering (2023)
Keynote Lecture, International Symposium on Particle Image Velocimetry (2023)
Roger Revelle Commemorative Lecture, National Academies (2022)
Invited Lecture, AAAS Annual Meeting (2022)
Plenary Lecturer, US National Congress of Theoretical and Applied Mechanics (2022)
Baetjer Colloquium, Princeton University (2022)
President’s Council of Advisors on Science and Technology (2021)
Secretary of Energy Advisory Board (2021)
Hassan Aref Memorial Lecture, Virginia Tech (2021)
Alan T. Waterman Award, National Science Foundation (2020)

Centennial Chair Professorship, California Institute of Technology (2019)
Invited Lecture, Microscale Ocean Biophysics Meeting (2019)
Sears Lecture, Woods Hole Oceanographic Institution (2018)
Invited Lecture, World Congress of Biomechanics (2018)
J.M. Burgers Lecture, The Netherlands (2018)
Plenary Lecturer, Ocean Sciences Meeting (2018)
Biomedical Engineering Distinguished Seminar, Boston University (2017)
Distinguished Mathematics Lecture, University of Oregon (2017)
Dourdeville Lecture, Brown University (2016)
Invited Speaker, Defense Science Board 60th Anniversary (2016)
Editorial Board, Journal of Fluid Mechanics (2016)
Invited Speaker, National Academy of Engineering Annual Meeting, Section 10 (2015)
Laura Randall Schweppe Endowed Lecture, University of Texas (2015)
Best Paper (Wind Energy), ASME Turbo Expo (2014)
Elected Fellow, American Physical Society (2014)
Winner, American Physical Society Gallery of Fluid Motion (2014)
Roddam Narasimha Distinguished Lecture, Indian Institute of Technology (2014)
Defense Science Study Group (2014)
Invitee, World Economic Forum Annual Meeting (2014)
Winner, American Physical Society Gallery of Fluid Motion (2013)
MIT Technology Review Magazine “TR35” Innovators Under 35 (2013)
Midwest Mechanics Lecturer (2013)
Plenary Lecturer, American Physical Society Division of Fluid Dynamics Meeting (2013)
Denis and Jean Wiesenburt Distinguished Lecturer, University of Southern Mississippi (2013)
Bloomberg Businessweek Magazine “Technology Innovator” (2012)
Senior Fellow, Stanford University Center for Turbulence Research (2012)
MacArthur Fellow (2010)
T. Francis Ogilvie Lectureship in Ocean Engineering, MIT (2010)
Presidential Early Career Award for Scientists and Engineers (2009)
Enzo Levi Lecture, National University of Mexico (2009)
Popular Science Magazine “Brilliant 10” Scientists (2008)
Office of Naval Research Young Investigator Award (2008)
Invitee, Summit of Experts in Biomechanics, U.S. National Committee for Biomechanics (2007)
Donald Coles Prize for Best Experiment, California Institute of Technology (2005)
Winner, American Physical Society Gallery of Fluid Motion (2004)
Oral Presentation Award, Southern California Biomedical Engineering Symposium (2002)
Sigma Xi National Research Honor Society Book Award, Princeton University (2001)
John Marshall II Memorial Prize for Independent Research, Princeton University (2001)
Morgan W. McKinzie Senior Thesis Prize Finalist with Distinction, Princeton University (2001)
Grade of A with Distinction (A+), B.S.E. Thesis, Princeton University (2001)
Nominee, Marcella and Joel Bonsall Prize for Technical Writing, California Institute of Technology (2000)

Teaching, Mentoring, and Service Achievement

Eugene L. Grant Award for Excellence in Teaching, Stanford University (2018)
Professor of the Month (February), California Institute of Technology (2012)
Outstanding Paper, Freshman Summer Institute, California Institute of Technology (2002)
Tau Beta Pi National Engineering Honor Society Prize (2001)
George Bienkowski Memorial Prize, Princeton University (2001)

Graduate Fellowships

Y. C. Fung Fellowship, California Institute of Technology (2001 – 2005)
Department of Defense Science and Engineering Graduate Fellowship (2001 – 2004)
Ford Foundation Graduate Fellowship (2001, declined)
Sir Frank Whittle Rolls Royce Fellowship in Propulsion, MIT (2001, declined)
Presidential Graduate Fellowship, Princeton University (2001, declined)
National Finalist, Hertz Foundation Fellowship (2001)

Academic and Leadership Achievement

Chair Line, American Physical Society Division of Fluid Dynamics (2019-2022)
Member-at-Large, American Physical Society Division of Fluid Dynamics ExComm (2014)
Member-at-Large, U.S. National Committee for Theoretical and Applied Mechanics (2013)
Harold Willis Dodds Achievement Award, Princeton University (2001)
Finalist, Pyne Prize, Princeton University (2001)
National Finalist, Rhodes Scholarship (2001)
National Finalist, British Marshall Scholarship (2001)
Outstanding Academic Achievement in the B.S.E. Program, Princeton University (1998 – 2000)
Academic Excellence in Engineering Coursework, Princeton Black Graduate Caucus (1999)
Academic Achievement in Engineering, National Association of Minority Engineers (1999)

Miscellaneous Honors and Awards

100 Black Board Members Making a Difference (2024)
Savoy Magazine Most Influential Black Corporate Directors (2021)
Stanford Fellows Program (2017-2019)
OZY Rising Stars (2015)
C-Suite Quarterly Innovation NextGen 10 (2013)
LA Weekly Magazine Best of LA (2013)
THE Magazine 50 Innovative Men of the Year (2012)
Ebony Magazine “Power 100” Most Influential Black Americans (2010)
Convocation Address, California Institute of Technology (2010)
Richard C. Biedebach Lecture, California Institute of Technology (2009)
William Randolph Hearst Scholarship, Princeton University (1997 – 2001)
Samuel Bayard Dod Scholarship, Princeton University (1997 – 2001)
The Boeing Company Undergraduate Scholarship (2000)
Class of 1907 Scholarship, Princeton University (2000)
National Achievement Scholarship (1997)
National Merit Scholarship Commendation (1997)

Publications

Students and Postdoctoral Scholars underlined.

150. Anuszczyk SR, **Dabiri JO** (2025) “Non-invasive measurement of metabolic rates of free-swimming jellyfish using volumetric laser scanning,” submitted.
149. Goldshmid RH, **Dabiri JO**, Sader JE (2025) “Visual anemometry of natural vegetation from their leaf motion,” submitted.
148. **Dabiri JO**, Leonard A (2025) “A model for Reynolds-dependent linear instability in wall-bounded shear flows,” submitted.
147. **Dabiri JO**, Mohebbi N, Fu MK (2025) “Persistent laminar flow at Reynolds numbers exceeding 100,000,” submitted.
<https://arxiv.org/pdf/2212.02488.pdf>
146. Lederer EK, O’Melia J, **Dabiri JO**, Gemmell BJ, Leftwich MC, Colin SP, Costello JH (2025) “Convergence of animal propulsor placement for optimal maneuverability in fluids,” submitted.
145. Fernandez M, Wang T, Tunncliffe G, Dortilus D, Gunnarson PJ, **Dabiri JO**, Goldman DI (2025) “AquaMILR+: Design of an untethered limbless robot for complex aquatic terrain navigation,” IEEE International Conference on Robotics and Automation (ICRA), in press.
144. Xu NW, Lenczewska O, Wieten SE, Federico CA, **Dabiri JO** (2025) “Ethics of biohybrid robotic jellyfish modification and invertebrate research,” *Bioinspiration and Biomimetics* 20: 033001.
https://dabirilab.com/s/Xu_etal_BB2025.pdf
143. Gunnarson PJ, **Dabiri JO** (2025) “Surfing vortex rings for energy-efficient propulsion,” *PNAS Nexus* 4: pgaf031.
https://dabirilab.com/s/GuDa_PNASNexus2025.pdf
142. Han H, et al. [26 authors] (2024) “Imaging-guided bioresorbable acoustic hydrogel microrobots,” *Science Robotics* 9: eadp3593.
https://dabirilab.com/s/Han_etal_SciRobot2024.pdf
141. Mohebbi N, Hwang J, Fu MK, **Dabiri JO** (2024) “Measurements and modeling of induced flow in collective vertical migrations,” *Journal of Fluid Mechanics* 1001: A50.
https://dabirilab.com/s/MoHwFuDa_JFM2024.pdf
140. Wei NJ, El Makdah A, Hu J, Kaiser F, Rival D, **Dabiri JO** (2024) “Wake dynamics of wind turbines in unsteady streamwise flow conditions,” *Journal of Fluid Mechanics* 1000: A66.
https://dabirilab.com/s/Wei_etal_JFM2024.pdf

139. **Dabiri JO**, Leonard A (2024) “Linear instability of viscous parallel shear flows: revisiting the perturbation no-slip condition,” *Journal of Fluid Mechanics* 996: A47. https://dabirilab.com/s/DaLe_JFM2024.pdf
138. Gunnarson PJ, **Dabiri JO** (2024) “Fish-inspired tracking of underwater turbulent plumes,” *Bioinspiration and Biomimetics* 19: 056024. https://dabirilab.com/s/GuDa_BB2024.pdf
137. **Dabiri JO** (2024) “Do swimming animals mix the ocean?,” *American Scientist* 112: 222-229. https://dabirilab.com/s/Da_AmSci2024.pdf
136. Anuszczyk SR, **Dabiri JO** (2024) “Electromechanical enhancement of live jellyfish for ocean exploration,” *Bioinspiration and Biomimetics* 19: 026018. https://dabirilab.com/s/AnDa_BB2024.pdf
135. Xu NW, **Dabiri JO** (2024) “The creation of an augmented jellyfish: Ethical considerations from a scientific perspective,” In *Transanimalism*, Ch. 8, pp. 127-139. https://dabirilab.com/s/XuDa_TA2024.pdf
134. Costello JH, Colin SP, Gemmell BJ, **Dabiri JO**, Kanso E (2024) “Turning kinematics of the scyphomedusa *Aurelia aurita*,” *Bioinspiration and Biomimetics* 19: 026005. https://dabirilab.com/s/CoCoGeDaKa_BB2024.pdf
133. **Dabiri JO** (2023) “Do swimming animals mix the ocean?,” *Limnology and Oceanography Bulletin* 10.1002/lob.10614. https://dabirilab.com/s/Dabiri_LOB2023.pdf
132. Gharaati M, Wei NJ, **Dabiri JO**, Martinez-Tossas LA, Yang D (2023) “Large-eddy simulations of turbulent flows in arrays of helical- and straight-bladed vertical-axis wind turbines,” *Journal of Renewable and Sustainable Energy* 15: 063309. https://dabirilab.com/s/Gh_etal_JRSE2023.pdf
131. **Dabiri JO**, Howland MF, Fu MK, Goldshmid RH (2023) “Visual anemometry for physics-informed inference of wind,” *Nature Reviews Physics* 5: 597-611. https://dabirilab.com/s/DaHoFuGo_NRP2023.pdf
130. Wei NJ, **Dabiri JO** (2023) “Power-generation enhancements and upstream flow properties of turbines in unsteady inflow conditions,” *Journal of Fluid Mechanics* 966: A30. https://dabirilab.com/s/WeDa_JFM2023.pdf
129. Costello JH, Colin SP, Gemmell BJ, **Dabiri JO**, EA Kanso (2023) “A fundamental propulsive mechanism employed by swimmers and flyers throughout the animal kingdom,” *Journal of Experimental Biology* 226: jeb245346. https://dabirilab.com/s/Co_etal_JEB2023.pdf

128. **Dabiri JO***, Sullivan KD*, Carter A, Fung I, Pacala S, Press W (2023) “Modernizing wildland firefighting to protect our firefighters: Report to the President,” *Executive Office of the President of the United States*.
*Co-leads
https://dabirilab.com/s/DaSu_etal_PCAST2023.pdf
127. Fu MK, **Dabiri JO** (2023) “Magnetic signature of vertically migrating aggregations in the ocean,” *Geophysical Research Letters* 50: e2022GL101441.
https://dabirilab.com/s/FuDa_GRL2023.pdf
126. Du Clos KT, Gemmell BJ, Colin SP, Costello JH, **Dabiri JO**, Sutherland KR (2022) Distributed propulsion enables fast and efficient swimming modes in physonect siphonophores,” *Proceedings of the National Academy of Sciences of the USA* 119 (49): e2202494119. https://dabirilab.com/s/Du_etal_PNAS2022.pdf
125. Xu NW, **Dabiri JO** (2022) “Bio-inspired ocean exploration,” *Oceanography* 35 (2): 35-48. https://dabirilab.com/s/XuDa_Oceanography2022.pdf
124. Yang J, Yin Y, Landauer AK, Buyuktozturk S, Zhang J, Summey L, McGhee A, Fu MK, **Dabiri JO**, Franck C (2022) “SerialTrack: Scale and Rotation Invariant Augmented Lagrangian Particle Tracking,” *SoftwareX* 19: 101204.
https://dabirilab.com/s/Ya_etal_SoftwareX2022.pdf
123. Gharaati M, Xiao S, Wei NJ, Martinez-Tossas LA, **Dabiri JO**, Yang D (2022) “Large eddy simulation of helical- and straight-bladed vertical axis wind turbines in atmospheric boundary layer turbulence,” *Journal of Renewable and Sustainable Energy* 14: 053301.
https://dabirilab.com/s/Gh_etal_JRSE2022.pdf
122. Howland MF, Quesada J, Martinez JP, Larranaga F, Yadav N, Chawla JS, Sivaram V, **Dabiri JO** (2022) “Collective wind farm operation based on a predictive model increases utility-scale energy production,” *Nature Energy*, DOI 10.1038/s41560-022-01085-8.
https://dabirilab.com/s/Ho_etal_NatureEnergy2022.pdf
121. Sun JJ, Ryou S, Goldshmid R, Weissbourd B, **Dabiri JO**, Anderson DJ, Kennedy A, Yue Y, Perona P (2022) “Self-supervised keypoint discovery in behavioral videos,” 2022 Conference on Computer Vision and Pattern Recognition (CVPR).
https://dabirilab.com/s/Ho_etal_WES2022.pdf
120. Howland MF, Ghate AS, Quesada J, Martinez JP, Zhong W, Larranaga F, Lele SK, **Dabiri JO** (2022) “Optimal closed-loop wake steering, Part 2: Diurnal cycle atmospheric boundary layer conditions,” *Wind Energy Science* 7: 345-365.
https://dabirilab.com/s/Ho_etal_WES2022.pdf
119. Wei NJ, **Dabiri JO** (2022) “Phase-averaged dynamics of a periodically surging wind turbine,” *Journal of Renewable and Sustainable Energy* 14: 013305.
https://dabirilab.com/s/WeDa_JRSE2022.pdf

118. Cardona JL, **Dabiri JO** (2022) “Wind speed inference from environmental flow-structure interactions. Part 2: Leveraging unsteady kinematics,” *Flow* 2: E1.
https://dabirilab.com/s/CaDa_Flow2022.pdf
117. Gunnarson P, Mandralis I, Novati G, Koumoutsakos P, **Dabiri JO** (2021) “Learning efficient navigation in vortical flow fields,” *Nature Communications* 12: 7143.
https://dabirilab.com/s/GuMaNoKoDa_NComm2021.pdf
116. Fu MK, Houghton IA, **Dabiri JO** (2021) “A single-camera, 3D scanning velocimetry system for quantifying active particle aggregations,” *Experiments in Fluids* 62: 168.
https://dabirilab.com/s/FuHoDa_EIF2021.pdf
115. Kanso E, Lopes RM, Strickler JR, **Dabiri JO**, Costello JH (2021) “Teamwork in the viscous oceanic microscale,” *Proceedings of the National Academy of Sciences of the USA* 118 (29) e2018193118.
https://dabirilab.com/s/Ka_etal_PNAS2021.pdf
114. Cardona JL, Bouman KL, **Dabiri JO** (2021) “Wind speed inference from environmental flow-structure interactions,” *Flow* 1: E4.
http://dabirilab.com/s/CaBoDa_Flow2021.pdf
113. Gemmell BJ, **Dabiri JO**, Colin SP, Costello JH, Sutherland KR, Townsend JP (2021) “Biological jet propulsion in marine invertebrates,” *Journal of Experimental Biology* 224: jeb222083.
https://dabirilab.com/s/Ge_etal_JEB2021.pdf
112. Abrams MJ, Tan FH, Basinger T, Heithe ML, Li Y, Raffiee M, Leahy P, **Dabiri JO**, Gold DA, Goentoro LA (2021) “A conserved strategy for inducing appendage regeneration,” *eLife* 10: e65092.
https://dabirilab.com/s/Ab_etal_EL2021.pdf
111. Xu NW, Townsend JP, Costello JH, Colin SP, Gemmell BJ, **Dabiri JO** (2021) “Developing biohybrid robotic jellyfish (*Aurelia aurita*) for free-swimming tests in the laboratory and in the field,” *Bio-protocol* 11 (07): e3974.
http://dabirilab.com/s/Xu_etal_Bioprotocol2021.pdf
110. Hoover AP, Xu NW, Gemmell BJ, Colin SP, Costello JH, **Dabiri JO**, Miller L (2021) “Neuromechanical wave resonance in jellyfish swimming,” *Proceedings of the National Academy of Sciences of the USA* 118 (11): e2020025118.
http://dabirilab.com/s/Ho_etal_PNAS2021.pdf
109. Wei NJ, Brownstein ID, Cardona JL, Howland MF, **Dabiri JO** (2021) “Near-wake structure of full-scale vertical-axis wind turbines,” *Journal of Fluid Mechanics* 914: A17.
http://dabirilab.com/s/We_etal_JFM2021.pdf

108. Howland MF, **Dabiri JO** (2021) “Influence of wake model superposition and secondary steering on model-based wake steering control with SCADA data assimilation,” *Energies* 14: 52.
http://dabirilab.com/s/HoDa_Energies2021.pdf.
107. Costello JH, Colin SP, **Dabiri JO**, Gemmell BJ, Lucas KN, Sutherland KR (2021) “The hydrodynamics of jellyfish swimming,” *Annual Review of Marine Science* 13: 5.1-5.22.
http://dabirilab.com/s/Co_etal_ARMS2021.pdf
106. Howland MF, Gonzalez C, Martinez JP, Quesada J, Larranaga F, Yadav N, Chawla J, **Dabiri JO** (2020) “Influence of atmospheric conditions on the power production of utility-scale wind turbines in yaw misalignment,” *Journal of Renewable and Sustainable Energy* 12: 063307.
http://dabirilab.com/s/Ho_etal_JRSE2020.pdf
105. Xu NW, Townsend JP, Costello JH, Colin SP, Gemmell BJ, **Dabiri JO** (2020) “Field testing of biohybrid robotic jellyfish to demonstrate enhanced swimming speeds,” *Biomimetics* 5 (4): 64.
http://dabirilab.com/s/Xu_etal_Biomimetics2020.pdf.
104. Howland MF, Ghate AS, Lele SK, **Dabiri JO** (2020) “Optimal closed-loop wake steering, Part 1: Conventionally neutral atmospheric boundary layer conditions,” *Wind Energy Science* 5: 1315-1338.
http://dabirilab.com/s/HoGhLeDa_WES2020.pdf
103. Colin SP, Costello JH, Sutherland KR, Gemmell BJ, **Dabiri JO**, DuClos K (2020) “The role of suction thrust in the metachronal paddles of swimming invertebrates,” *Scientific Reports* 10: 17790.
http://dabirilab.com/s/Co_etal_SR2020.pdf
102. Ouillon R, Houghton IA, **Dabiri JO**, Meiburg E (2020) “Active swimmers interacting with stratified fluids during collective vertical migration,” *Journal of Fluid Mechanics* 902: A23.
http://dabirilab.com/s/OuHoDaMe_JFM2020.pdf
101. **Dabiri JO**, Colin SP, Gemmell BJ, Lucas KN, Leftwich MC, Costello JH (2020) “Jellyfish and fish solve the challenges of turning dynamics similarly to achieve high maneuverability,” *Fluids* 5: 106.
http://dabirilab.com/s/Da_etal_Fluids2020.pdf
100. **Dabiri JO** (2020) “Theoretical framework to surpass the Betz limit using unsteady fluid mechanics,” *Physical Review Fluids* 5: 022501(R).
http://dabirilab.com/s/Da_PRF2020.pdf

99. Xu NW, **Dabiri JO** (2020) “Low-power microelectronics embedded in live jellyfish enhance propulsion,” *Science Advances* 6: eaaz3194.
http://dabirilab.com/s/XuDa_SciAdv2020c.pdf
98. Du Clos KT, **Dabiri JO**, Costello JH, Colin SP, Morgan JR, Fogerson SM, Gemmell BJ (2019) “Thrust generation during steady swimming and acceleration from rest in anguilliform swimmers,” *Journal of Experimental Biology* 222: jeb212464.
http://dabirilab.com/s/Du_etal_JEB19.pdf
97. **Dabiri JO** (2019) “Landmarks and frontiers in biological fluid dynamics,” *Physical Review Fluids* 4: 110501.
http://dabirilab.com/s/Da_PRF19.pdf
96. Cardona JL, Howland MF, **Dabiri JO** (2019) “Seeing the wind: Visual wind speed prediction with a coupled convolutional and recurrent neural network,” 33rd Conference on Neural Information Processing Systems (NeurIPS 2019), Vancouver, Canada.
http://dabirilab.com/s/CaHoDa_NeurIPS19.pdf
95. Wilhelmus MM, Nawroth JC, Rallabandi B, **Dabiri JO** (2019) “Effect of swarm configuration on fluid transport during vertical collective motion,” *Bioinspiration and Biomimetics* 15: 015002.
http://dabirilab.com/s/WiNaRaDa_BB19.pdf
94. Hui I, Cain BE, **Dabiri JO** (2019) “Environmental activism and wind turbine preferences in California,” *Wind Energy* 22: 1733-1745.
http://dabirilab.com/s/HuCaDa_WE19.pdf
93. Howland MF, Lele SK, **Dabiri JO** (2019) “Wind farm power optimization through wake steering,” *Proceedings of the National Academy of Sciences of the USA* 116 (29): 14495-14500.
http://dabirilab.com/s/HoLeDa_PNAS19c.pdf
92. Brownstein ID, Wei NJ, **Dabiri JO** (2019) “Aerodynamically interacting vertical-axis wind turbines: performance enhancement and three-dimensional flow,” *Energies* 12: 2724.
http://dabirilab.com/s/BrWeDa_En19.pdf
91. Howland MF, **Dabiri JO** (2019) “Wind farm modeling with interpretable physics-informed machine learning,” *Energies* 12: 2716.
http://dabirilab.com/s/HoDa_En19.pdf
90. Costello JH, Colin SP, Gemmell BJ, **Dabiri JO** (2019) “Hydrodynamics of vortex generation during bell contraction by the Hydromedusa Eutonina indicans (Romanes, 1876),” *Biomimetics* 4 (3): 44.
http://dabirilab.com/s/CoCoGeDa_BM19.pdf

89. Houghton IA, **Dabiri JO** (2019) “Alleviation of hypoxia by biologically generated mixing,” *Limnology and Oceanography* 64: 2161-2171.
http://dabirilab.com/s/HoDa_LO19.pdf
88. Husic BE, Schlueter-Kuck KL, **Dabiri JO** (2019) “Simultaneous coherent structure coloring facilitates interpretable clustering of scientific data by amplifying dissimilarity,” *PLoS ONE* 14 (3): e0212442.
http://dabirilab.com/s/HuScDa_PLOS19.pdf
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Invited Lectures

115. “Jellyfish-inspired Engineering,” *J. Robert Oppenheimer Memorial Lecture*, June 2, 2025, Los Alamos, NM.
114. “Bioinspired ocean exploration,” *American Physical Society March Meeting*, March 4, 2024, Minneapolis, MN.
113. “Bioinspired ocean exploration,” *Mechanical and Aerospace Engineering Seminar, University of California at Irvine*, October 20, 2023, Irvine, CA.
112. “Analysis tools for Lagrangian data extremes,” *15th International Symposium on Particle Image Velocimetry*, June 19-21, 2023, San Diego, CA.
111. G. Evelyn Hutchinson Award Lecture, *ASLO Aquatic Sciences Meeting*, June 4-9, 2023, Palma de Mallorca, Spain.
110. “Bioinspired ocean exploration,” *Samuel Ginn College of Engineering Seminar, Auburn University*, March 15, 2023, Auburn, AL.
109. “Bioinspired ocean exploration,” *Roger Revelle Commemorative Lecture, National Academies*, April 28, 2022, Washington, D.C. and virtual.
108. “Bioinspired ocean exploration,” *Baetjer Colloquium, Princeton University*, April 8, 2022, Princeton, N.J. and virtual.
107. “Bioinspired ocean exploration,” *AAAS Annual Meeting*, February 18, 2022 (virtual).
106. “Bioinspired ocean exploration,” *Geophysical Fluid Dynamics Laboratory Seminar Series, Princeton University*, April 8, 2021 (virtual).
105. “Bioinspired ocean exploration,” *Hassan Aref Memorial Lecture, Virginia Tech*, April 7, 2021 (virtual).
104. “Bioinspired ocean exploration,” *Department of Mechanical Engineering Seminar Series, Johns Hopkins University*, April 1, 2021 (virtual).
103. “Biological propulsion in (and of?) the ocean,” *Friday Evening Lecture, Marine Biological Laboratory*, August 2, 2019, Woods Hole, MA.
102. “Using ideas from fluid dynamics to analyze biological data,” *Theory Lunch, Harvard Medical School*, February 22, 2019, Boston, MA.
101. “Hydrodynamics of collective swimming at intermediate Reynolds numbers,” *Microscale Ocean Biophysics 5.0*, January 16, 2019, Whistler, Canada.

100. “Biological propulsion in (and of?) the ocean,” *GALCIT Colloquium, California Institute of Technology*, December 7, 2018, Pasadena, CA.
99. “From jellyfish and wind turbines to genomics: dealing with data extremes in complex systems,” *Math Across Campus Lecture, University of Washington*, November 9, 2018, Seattle, WA.
98. “Unsupervised clustering for coherent structure identification and Lagrangian data assimilation,” *Geophysical Fluid Dynamics Summer Program*, July 31, 2018, Woods Hole, MA.
97. “Biological propulsion in (and of?) the ocean,” *Sears Lecture, Woods Hole Oceanographic Institution*, July 30, 2018, Woods Hole, MA.
96. “Biological propulsion in (and of?) the ocean,” *World Congress of Biomechanics*, July 12, 2018, Dublin, Ireland.
95. “Biological propulsion in (and of?) the ocean,” *J. M. Burgers Lecture*, June 5, 2018, Lunteren, Netherlands.
94. “Next-generation wind energy,” *TransAlta Future Technology Workshop*, April 10, 2018, Calgary, Alberta.
93. “Biological propulsion in (and of?) the ocean,” *Ocean Sciences Meeting*, February 13, 2018, Portland, OR.
92. “Do swimming animals mix the ocean?” *Discovery Lecture Series, Cabrillo Marine Aquarium*, December 1, 2017, San Pedro, CA.
91. “Next-generation wind energy,” *Energy @ Stanford and SLAC*, September 12, 2017, Stanford, CA.
90. “The role of fluid forces in aquatic animal morphogenesis,” *Biomedical Engineering Distinguished Seminar, Boston University*, September 8, 2017, Boston, MA.
89. “Jellyfish, Wind Turbines, and Turbulence: Dealing with Data Extremes in Complex Flows,” *Distinguished Mathematics Lecture, University of Oregon*, April 4, 2017, Eugene, OR.
88. “Opportunities and challenges for next-generation wind energy,” *Dana M. Dourdeville Lecture on Engineering in Service to Society, Brown University*, November 11, 2016, Providence, RI.
87. “Opportunities and challenges for next-generation wind energy,” *Mechanical and Aerospace Engineering Seminar Series, The Ohio State University*, October 28, 2016, Columbus, OH.

86. “Leveraging biology for persistent undersea sensing,” *Defense Science Board 60th Anniversary*, September 20, 2016, Washington, D.C.
85. “Opportunities and challenges for next-generation wind energy,” *Seminar Series on Issues in Environmental Science, Technology and Sustainability*, Stanford University, June 30, 2016, Stanford, CA.
84. “Do swimming animals mix the ocean?” *Earth System Science Seminar Series*, Stanford University, May 4, 2016, Stanford, CA.
83. “Opportunities and challenges for next-generation wind energy,” *New Faculty Seminar*, Stanford University, April 26, 2016, Stanford, CA.
82. “Opportunities and challenges for next-generation wind energy,” *National Academy of Engineering Annual Meeting, Mechanical Engineering Section*, October 5, 2015, Washington, D.C.
81. “Opportunities and challenges for next-generation wind energy,” *Energy @ Stanford and SLAC*, September 10, 2015, Stanford, CA.
80. “Ocean mixing by swimming animals,” *Laura Randall Schweppe Endowed Lecture*, University of Texas, May 14, 2015, Port Aransas, TX.
79. “Jellyfish-inspired engineering,” *Math and Physics Guest Lecture*, Azusa Pacific University, April 6, 2015, Azusa, CA.
78. “Bioinspired wind energy: from fish schools and sea grass to better wind farms,” *Keck Science Department Seminar*, Claremont Colleges, November 20, 2014, Claremont, CA.
77. “Bioinspired wind energy: from fish schools and sea grass to better wind farms,” *Physics Colloquium*, University of Texas at Austin, November 5, 2014, Austin, TX.
76. “The roles of flexibility, vorticity, and pressure in efficient propulsion,” *World Congress of Biomechanics*, July 6-11, 2014, Boston, MA.
75. “Bioinspired wind energy: from fish schools and sea grass to better wind farms,” *O. M. Stewart Colloquium*, University of Missouri at Columbia, April 28, 2014, Columbia, MO.
74. “Bioinspired wind energy: from fish schools and sea grass to better wind farms,” *Roddam Narasimha Distinguished Lecture*, Indian Institute of Technology Gandhinagar, January 31, 2014, Ahmedabad, India.
73. “A new school of thought for wind energy technology,” *Mechanical Engineering Seminar*, Stanford University, December 10, 2013, Palo Alto, CA.

72. “Do swimming animals mix the ocean?,” *American Physical Society Division of Fluid Dynamics Annual Meeting*, November 24-26, 2013, Pittsburgh, PA.
71. “Bioinspired wind energy: from fish schools and sea grass to better wind farms,” *Offshore Wind IGERT Seminar Series, University of Massachusetts Amherst*, November 22, 2013, Amherst, MA.
70. “Bioinspired wind energy: from fish schools and sea grass to better wind farms,” *Midwest Mechanics Seminar Series: University of Michigan, Michigan State University, University of Notre Dame, Northwestern University and University of Wisconsin at Madison*, November 4-8, 2013.
69. “Biogenic ocean mixing,” *Workshop on Physical-Biological Interactions*, October 6-11, 2013, Eilat, Israel. Delivered by M. Martinez-Ortiz.
68. “Bioinspired wind energy: from fish schools and sea grass to better wind farms,” *Midwest Mechanics Seminar Series: Purdue University, University of Illinois at Urbana-Champaign, Illinois Institute of Technology, Iowa State University, University of Minnesota*, September 23-27, 2013.
67. “Do swimming animals mix the ocean?,” *Miller Institute Interdisciplinary Symposium, UC Berkeley*, June 7-9, 2013, Marshall, CA.
66. “Do swimming animals mix the ocean?,” *Marine Science Seminar Series, Duke University*, May 1, 2013, Durham, NC.
65. “Do swimming animals mix the ocean?,” *Denis and Jean Wiesenburg Distinguished Lecture in Ocean Science, University of Southern Mississippi*, April 23, 2013, Hattiesburg, MS.
64. “Bio-inspired propulsion,” *Mechanical Engineering Seminar Series, Vanderbilt University*, April 19, 2013, Nashville, TN.
63. “Jellyfish-inspired engineering,” *Evolutionary Morphology Seminar Series, University of Chicago*, February 7, 2013, Chicago, IL.
62. “A new approach to wind energy,” *California Energy Commission*, December 14, 2012, Sacramento, CA.
61. “Do swimming animals mix the ocean?,” *Gordon and Betty Moore Foundation*, December 11, 2012, Palo Alto, CA.
60. “Flexibility and vortex shedding in live and robotic jellyfish,” *Fluid and Elasticity Conference*, November 14-16, 2012, La Jolla, CA.

59. “Jellyfish-inspired engineering,” *CiBER-IGERT Seminar, UC Berkeley*, November 8, 2012, Berkeley, CA.
58. “Vortex-enhanced propulsion,” *Center for Turbulence Research Tea, Stanford University*, November 2, 2012, Palo Alto, CA.
57. “Bioinspired wind energy: from fish schools and eel grass to wind farm,” *Fluid Mechanics Seminar Series, Stanford University*, October 30, 2012, Palo Alto, CA.
56. “Jellyfish-inspired Engineering,” *Comparative Physiology Invited Speaker Series, University of British Columbia*, October 22, 2012, Vancouver, Canada.
55. “Nature’s propulsion methods,” *29th Symposium on Naval Hydrodynamics*, August 26-31, 2012, Gothenburg, Sweden.
54. “Jellyfish-inspired engineering,” *Department of Physics and Astronomy Colloquium, Pomona College*, February 28, 2012, Pomona, CA.
53. “A global approach to wind energy,” *Global Alliance of Technological Universities Workshop*, December 7-8, 2011, Mumbai, India.
52. “A new approach to wind energy,” *Mechanical Engineering Seminar Series, Carnegie Mellon University*, November 18, 2011, Pittsburgh, PA.
51. “Lagrangian fluid dynamic models for analysis of planktonic predator-prey systems and small-scale fluid motions,” *Workshop on Coherent Structures in Dynamical Systems*, May 16-20, 2011, Leiden, Netherlands.
50. “Jellyfish-inspired engineering,” *California State University at Dominguez Hills*, April 7, 2011, Carson, CA.
49. “Organisms causing flow: Darwinian mixing,” *2011 Journal of Experimental Biology Symposium*, March 14-18, 2011, Cambridge, United Kingdom. Delivered by K. Katija.
48. “A new approach to wind energy,” *Center for Environmental and Applied Fluid Mechanics Seminar, Johns Hopkins University*, March 5, 2011, Baltimore, MD.
47. “Vertical-axis wind turbines revisited,” *Los Alamos National Laboratory Turbine-Turbine Interaction Workshop*, March 2-3, 2011, Los Alamos, NM.
46. “Jellyfish-inspired propulsion,” *Society for Integrative and Comparative Biology Symposium: Bioinspiration: Applying Mechanical Design to Experimental Biology*, January 3-7, 2011, Salt Lake City, UT.
45. “Do swimming animals mix the ocean?,” *Center for Fluid Mechanics, Turbulence, and Computation, Brown University*, November 2, 2010, Providence, RI.

44. “Do swimming animals mix the ocean?,” *Monterey Bay Aquarium Research Institute Seminar*, October 20, 2010, Monterey Bay, CA.
43. “Do swimming animals mix the ocean?,” *Ecology and Evolutionary Biology Seminar*, *University of California at Los Angeles*, October 6, 2010, Los Angeles, CA.
42. “Order-of-magnitude enhancement of wind power density via optimized vertical-axis wind turbine arrays,” *Resnick Institute Sustainable Energy and Infrastructure Forum*, September 16-17, 2010, Pasadena, CA.
41. “Using vortices for locomotion,” *University of Minnesota Institute for Mathematics and Its Applications Workshop on Natural Locomotion in Fluids and on Surfaces: Swimming, Flying, and Sliding*, June 1-5, 2010, Minneapolis, MN.
40. “Unsteady hydrodynamics in bio-inspired propulsion,” *T. Francis Ogilvie Lecture*, *Massachusetts Institute of Technology*, May 7, 2010, Cambridge, MA.
39. “Fish schooling as a basis for vertical axis wind turbine farm design,” *First World Summit on Small Wind Turbines*, March 19, 2010, Husum, Germany. Delivered by R.W. Whittlesey.
38. “A Darwinian mechanism for biogenic ocean mixing,” *Ecology Seminar Luncheon*, *Scripps Institution of Oceanography*, March 10, 2010, La Jolla, CA.
37. “Jellyfish-inspired Engineering,” *Alabama School for Math and Science*, November 19, 2009, Mobile, AL.
36. “A Darwinian mechanism for biogenic ocean mixing,” *Colloquium Series*, *Dauphin Island Sea Lab*, November 19, 2009, Dauphin Island, AL.
35. “Jellyfish-inspired Engineering,” *Civil and Environmental Engineering Seminar*, *Stanford University*, November 13, 2009, Palo Alto, CA.
34. “A Darwinian mechanism for biogenic ocean mixing,” *Hopkins Marine Station Seminar*, *Stanford University*, November 12, 2009, Palo Alto, CA.
33. “Jellyfish-inspired Engineering,” *Virginia Air and Space Museum Sigma Lecture*, November 3, 2009, Hampton, VA.
32. “Unsteady hydrodynamics in bio-inspired propulsion,” *NASA Langley Research Center*, November 3, 2009, Hampton, VA.
31. “Jellyfish-inspired Engineering,” *Cabrillo Marine Aquarium Friends Lecture*, September 18, 2009, San Pedro, CA.

30. “Fluid dynamic constraints on morphology and propulsion of medusa at low Reynolds numbers,” *Thematic Conference on Gelatinous Plankton of the Adriatic Sea, University of Dubrovnik*, May 12-13, 2009, Dubrovnik, Croatia.
29. “A Darwinian mechanism for biogenic ocean mixing,” *Environmental Fluid Mechanics and Hydrology Seminar, Stanford University*, May 4, 2009, Palo Alto, CA.
28. “Unsteady hydrodynamics in bio-inspired propulsion,” *2009 Enzo Levi Lecture, National University of Mexico*, April 24, 2009, Mexico City, Mexico.
27. “Jellyfish-inspired Engineering,” *Earnest C. Watson Lecture, California Institute of Technology*, April 22, 2009, Pasadena, CA.
26. “Unsteady hydrodynamics in bio-inspired propulsion,” *College of Engineering Seminar, University of Michigan*, February 19, 2009, Ann Arbor, MI.
25. “Unsteady hydrodynamics in bio-inspired propulsion,” *IGERT Seminar Series, Cornell University*, January 22, 2009, Ithaca, NY.
24. “The role of fluid forces in aquatic animal morphogenesis,” *Minisymposium on Flow-Biology Interactions, International Conference of the American Society of Civil Engineers Engineering Mechanics Institute*, May 18-21, 2008, Minneapolis, MN.
23. “Lagrangian studies of animal swimming and aquatic predator-prey interactions,” *Applied Mechanics Colloquium, Harvard University*, April 23, 2008, Cambridge, MA.
22. “Lagrangian studies of animal swimming and aquatic predator-prey interactions,” *Mechanics Seminar Series, Massachusetts Institute of Technology*, April 22, 2008, Cambridge, MA.
21. “The role of fluid forces in aquatic animal morphogenesis,” *Biophysics Seminar Series, Princeton University*, April 21, 2008, Princeton, NJ.
20. “Lagrangian studies of animal swimming and aquatic predator-prey interactions,” *Biomechanics Seminar Series, University of California at San Diego*, April 9, 2008, La Jolla, CA.
19. “Lagrangian studies of animal swimming and aquatic predator-prey interactions,” *Focus Session on the Fluid Dynamics of Animal Motion, American Physical Society March Meeting*, March 10-14, 2008, New Orleans, LA.
18. “Measuring unsteady efficiency and performance of biological and bio-inspired propulsors,” *Aerospace and Mechanical Engineering, University of Southern California*, November 14, 2007, Los Angeles, CA.

17. “Measuring unsteady efficiency and performance of biological and bio-inspired propulsors,” *Aeronautics and Astronautics, University of Washington*, November 5, 2007, Seattle, WA.
16. “Measuring unsteady efficiency and performance of biological and bio-inspired propulsors,” *Mechanical Engineering, Stanford University*, October 16, 2007, Palo Alto, CA.
15. “Measuring unsteady efficiency and performance of biological and bio-inspired propulsors,” *Colloquium on Nature-Inspired Fluid Mechanics*, October 8-9, 2007, Darmstadt, Germany.
14. “Vorticity-free analyses of animal swimming measurements,” *Symposium on Dynamics and Control of Aquatic Locomotion, SIAM Dynamical Systems Meeting*, May 28-June 1, 2007, Snowbird, UT.
13. “Jellyfish-inspired diagnostics for heart failure and vehicle propulsive efficiency,” *Center for Biologically Inspired Design, Georgia Institute of Technology*, April 23, 2007, Atlanta, GA.
12. “Non-invasive studies of animal propulsion and sensing,” *Aerospace Engineering and Engineering Mechanics, San Diego State University*, April 12, 2007, San Diego, CA.
11. “Non-invasive studies of animal propulsion and sensing,” *Mechanical and Aerospace Engineering, University of California at Los Angeles*, January 19, 2007, Los Angeles, CA.
10. “The role of animal-fluid interactions in shaping medusan morphological diversity,” *Ecology and Evolutionary Biology, University of California at Irvine*, October 13, 2006, Irvine, CA.
9. “Estimating locomotive forces from wake measurements,” *World Congress of Biomechanics*, July 29-August 4, 2006, Munich, Germany.
8. “Progress toward the non-invasive determination of animal swimming and feeding dynamics,” *15th U.S. National Congress on Theoretical and Applied Mechanics*, June 25-30, 2006, Boulder, CO.
7. “Non-invasive studies of animal propulsion and sensing,” *Mechanical Engineering, Stanford University*, May 9, 2006, Palo Alto, CA.
6. “Non-invasive studies of animal swimming and feeding,” *Center for Interdisciplinary Research in Fluid Physics Seminar, University of California at Santa Barbara*, March 1, 2006, Santa Barbara, CA.

5. “Mechanics of biological propulsion,” *Global Enterprise for Micro-Mechanics and Molecular Medicine Colloquium*, October 11-13, 2005, Boston, MA.
4. “Optimal vortex ring formation in biological flows,” *Conference on Vortex Rings and Filaments in Classical and Quantum Systems*, June 6-10, 2005, Trieste, Italy.
3. “Jellyfish swimming and the dynamics of animal vortex wakes, revisited,” *International Congress of Physiological Sciences*, March 28-30, 2005, Pasadena, CA.
2. “Optimal vortex formation as a unifying principle for biological fluid transport,” *Mechanical and Aerospace Engineering, Princeton University*, December 13, 2004, Princeton, NJ.
1. “Optimal vortex formation as a unifying principle in biological propulsion,” *Mechanical and Industrial Engineering, University of Illinois at Urbana-Champaign*, November 8, 2004, Urbana, IL.

Conference Proceedings and Abstracts

Students and Postdoctoral Scholars underlined.

223. Fu MK, **Dabiri JO** (2025) “Towards quantum-enhanced flow sensing methods using nitrogen-vacancy (NV) centers in diamond,” *American Physical Society Global Physics Summit*, March 16-21, Anaheim, CA.
222. Rutledge KM, **Dabiri JO** (2025) “Assessing the capabilities of biohybrid robotic jellyfish for vertical ocean profiling,” *Society of Integrative and Comparative Biology Annual Meeting*, January 3-7, Atlanta, GA.
221. Mohebbi N, Fu MK, **Dabiri JO** (2025) “Collective behavior and emergent fluid dynamics during vertical migration,” *Society of Integrative and Comparative Biology Annual Meeting*, January 3-7, Atlanta, GA.
220. Anuszczyk SR, **Dabiri JO** (2025) “A non-invasive technique for metabolic rates of free-swimming jellyfish,” *Society of Integrative and Comparative Biology Annual Meeting*, January 3-7, Atlanta, GA.
219. Yoder N, **Dabiri JO** (2025) “Frequency impact on swimming mechanics of robotically-controlled jellyfish,” *Society of Integrative and Comparative Biology Annual Meeting*, January 3-7, Atlanta, GA.
218. Fu MK, **Dabiri JO** (2024) “Towards quantum-enhanced flow sensing methods using nitrogen-vacancy (NV) centers in diamond,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Salt Lake City, UT.
217. Goldshmid RH, **Dabiri JO**, Sader JE (2024) “Leaf motion for flow characterization: generalizing visual anemometry,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Salt Lake City, UT.
216. Rutledge KM, **Dabiri JO** (2024) “Biohybrid robot jellyfish act as buoyancy-controlled vertical profiling samplers,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Salt Lake City, UT.
215. Anuszczyk SR, **Dabiri JO** (2024) “Propulsive efficiency of robotically controlled jellyfish for ocean exploration,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Salt Lake City, UT.
214. Gunnarson PJ, **Dabiri JO** (2024) “Surfing vortex rings for energy-efficient propulsion,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Salt Lake City, UT.
213. Yoder N, **Dabiri JO** (2024) “Impact of swimming frequency on robotically-controlled jellyfish swimming dynamics,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Salt Lake City, UT.

212. Wei NJ, Fleisher AY, Kurelek JW, Rival DE, **Dabiri JO**, Hultmark M (2024) “Traveling waves in the wakes of dynamically controlled wind turbines,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Salt Lake City, UT.
211. Mohebbi N, Shendrikar SR, Fu MK, **Dabiri JO** (2024) “Simultaneous fluid flow and active particle tracking in three dimensions during collective swimming,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Salt Lake City, UT.
210. Wei NJ, El Makdah A, Hu J, Kaiser F, Rival DE, **Dabiri JO** (2024) “Wake structure of a periodically surging turbine,” *TORQUE 2024*, Florence, Italy.
209. Rutledge KM, **Dabiri JO** (2024) “Complex flow in stingray nostril geometry may passively enhance odor capture,” *Society of Integrative and Comparative Biology Annual Meeting*, January 2-6, Seattle, WA.
208. Anuszczyk SR, **Dabiri JO** (2024) “Robotically controlled jellyfish: Biomechanics of modified bell shapes,” *Society of Integrative and Comparative Biology Annual Meeting*, January 2-6, Seattle, WA.
207. Mohebbi N, Hwang J, Fu MK, **Dabiri JO** (2024) “Experiments and modelling of swarming induced fluid velocity,” *Society of Integrative and Comparative Biology Annual Meeting*, January 2-6, Seattle, WA.
206. Goldshmid RH, Liu H, Shen L, **Dabiri JO** (2023) “Towards generalization of visual anemometry using honami wave theory,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Washington, DC.
205. Rutledge KM, **Dabiri JO** (2023) “Hydrodynamics of passive environmental DNA (eDNA) detection,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Washington, DC.
204. Anuszczyk SR, **Dabiri JO** (2023) “Robotically controlled jellyfish: Modifying swimming dynamics with mechanical forebodies,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Washington, DC.
203. Gunnarson PJ, **Dabiri JO** (2023) “Fish-inspired navigation via flow sensing in an autonomous robotic swimmer,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Washington, DC.
202. Yoder N, Wei NJ, **Dabiri JO** (2023) “Unsteady flow effects on surging hydrokinetic turbines,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Washington, DC.

201. Wei NJ, El Makdah A, Hu J, Kaiser F, Rival DE, **Dabiri JO** (2023) “Unsteady flows can help turbines surge ahead in power production,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Washington, DC.
200. Mohebbi N, Hwang J, Fu MK, **Dabiri JO** (2023) “An analytical model of induced flow velocity by vertically migrating swarms informed by 3D organism tracking,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Washington, DC.
199. Mohebbi N, Fu MK, **Dabiri JO** (2023) “Experiments and models of swarming during diurnal vertical migrations,” *ASLO Aquatic Sciences Meeting*, June 4-9, Palma de Mallorca, Spain.
198. Anuszczyk SR, **Dabiri JO** (2023) “Enhanced swimming and physiological limits of robotically controlled *Aurelia aurita* jellyfish,” *ASLO Aquatic Sciences Meeting*, June 4-9, Palma de Mallorca, Spain.
197. Rutledge K, Murphy C, Gordon MS, **Dabiri JO** (2023) “Sensing chemicals in the marine environment: stingray chemoreception,” *ASLO Aquatic Sciences Meeting*, June 4-9, Palma de Mallorca, Spain.
196. Gunnarson PJ, **Dabiri JO** (2022) “Fish-inspired navigation via flow sensing in an autonomous robotic swimmer,” *ASLO Aquatic Sciences Meeting*, June 4-9, Palma de Mallorca, Spain.
195. Rutledge K, Gordon MS, **Dabiri JO** (2023) “Fluid dynamics of chemical scent detection in stingrays,” *Society for Integrative and Comparative Biology Annual Meeting*, January 3-7, Austin, TX.
194. Anuszczyk SR, **Dabiri JO** (2023) “Enhanced swimming and hydrodynamic efficiency of robotically controlled *Aurelia aurita*,” *Society for Integrative and Comparative Biology Annual Meeting*, January 3-7, Austin, TX.
193. Mohebbi N, Fu MK, **Dabiri JO** (2023) “3D aggregation dynamics of vertically migrating brine shrimp at different swarm densities,” *Society for Integrative and Comparative Biology Annual Meeting*, January 3-7, Austin, TX.
192. Costello JH, Colin SP, Gemmell BJ, **Dabiri JO**, Kanso E (2023) “Turning kinematics of the scyphomedusa *Aurelia aurita*,” *Society for Integrative and Comparative Biology Annual Meeting*, January 3-7, Austin, TX.
191. Wei NJ, El Makdah A, Hu J, Kaiser F, Rival DE, **Dabiri JO** (2022) “Realizing the potential of periodically surging turbines for increased power production,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Indianapolis, IN.

190. Fu MK, **Dabiri JO** (2022) “Magnetic signature of vertically migrating aggregations in the ocean,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Indianapolis, IN.
189. Mohebbi N, Fu MK, **Dabiri JO** (2022) “Tracking plankton configurations during vertical migration at different densities,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Indianapolis, IN.
188. Anuszczyk SR, **Dabiri JO** (2022) “Hydrodynamic efficiency of robotically controlled *Aurelia aurita* in a vertical water treadmill,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Indianapolis, IN.
187. Rutledge K, Murphy CT, Gordon MS, **Dabiri JO** (2022) “Fluid dynamics of chemical scent detection in stingrays,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Indianapolis, IN.
186. Gunnarson PJ, **Dabiri JO** (2022) “Fish-inspired navigation via flow sensing in an autonomous robotic swimmer,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Indianapolis, IN.
185. Goldshmid R, **Dabiri JO** (2022) “Physical constraints on visual anemometry from vegetation displacement statistics,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Indianapolis, IN.
184. Xu NW, Townsend J, Costello JH, Colin SP, Gemmell BJ, **Dabiri JO** (2022) “Biohybrid robotic jellyfish for potential applications in biology, soft robotics, and ocean exploration,” *Bulletin of the American Physical Society March Meeting*, March 14-18, 2022, Chicago, IL.
183. Costello JH, Colin SP, Gemmell BJ, **Dabiri JO**, Kutherland KR (2022) “Translating while rotating - swimming by the scyphomedusae *Aurelia aurita*,” *Ocean Sciences Meeting*, February 24 – March 4 (virtual).
182. Rutledge K, Murphy C, **Dabiri JO**, Gordon MS (2022) “Fluid dynamics of chemical scent detection in stingrays,” *Ocean Sciences Meeting*, February 24 – March 4 (virtual).
181. Mohebbi N, Xu NW, **Dabiri JO** (2022) “Seawater battery for microscale sensing platforms,” *Ocean Sciences Meeting*, February 24 – March 4 (virtual).
180. Goldshmid R, **Dabiri JO** (2022) “Visual AnemomeTree: using deep learning to predict wind speeds from videoclips of swaying trees in nature,” *Ocean Sciences Meeting*, February 24 – March 4 (virtual).
179. Wei NJ, **Dabiri JO** (2022) “The influence of wave-induced surge oscillations on the power production of floating offshore wind turbines,” *Ocean Sciences Meeting*, February 24 – March 4 (virtual).

178. Gunnarson PJ, Mandralis I, Novati G, Koumoutsakos P, **Dabiri JO** (2022) “Robotic implementation of online deep reinforcement learning for autonomous underwater navigation,” *Ocean Sciences Meeting*, February 24 – March 4 (virtual).
177. Fu MK, **Dabiri JO** (2022) “Towards quantum-enhanced sensors for ocean science using nitrogen-vacancy (NV) centers in diamond,” *Ocean Sciences Meeting*, February 24 – March 4 (virtual).
176. Gunnarson PJ, Mandralis I, Novati G, Koumoutsakos P, **Dabiri JO** (2021) “Robotic implementation of online deep reinforcement learning for autonomous underwater navigation,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Phoenix, AZ.
175. Fu MK, **Dabiri JO** (2021) “Towards quantum-enhanced flow sensing using nitrogen-vacancy (NV) centers in diamond,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Phoenix, AZ.
174. Howland MH, Gonzalez CM, Martinez JJP, Quesada JB, Larranaga FP, Yadav NK, Chawla JS, Sivaram V, **Dabiri JO** (2021) “Wind farm flow control: Demonstrating potential at utility-scale,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Phoenix, AZ.
173. Mohebbi N, Xu NW, **Dabiri JO** (2021) “Influence of flow on seawater battery fouling,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Phoenix, AZ.
172. Goldshmid R, **Dabiri JO** (2021) “Visual AnemomeTree: using deep learning to predict wind speeds from videoclips of swaying trees in nature,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Phoenix, AZ.
171. Wei NJ, **Dabiri JO** (2021) “Why the long phase? Disambiguating the dynamics of a periodically surging wind turbine,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Phoenix, AZ.
170. Fu MK, Houghton IA, **Dabiri JO** (2021) “Reconstructing configurations of zooplankton aggregations and their biogenic flows with 3D scanning velocimetry,” *DARS-SWARM2021*, June 1-4 (virtual).
169. Du Clos KT, Gemmell BJ, Colin SP, Costello JH, **Dabiri JO**, Sutherland KR (2021) “Synchronous swimming in siphonophores yields higher maximum speeds but lower efficiency and higher cost of transport,” *Society for Integrative and Comparative Biology Annual Meeting*, January 3-February 28 (virtual).
168. Colin SP, Costello JH, Sutherland KR, Gemmell BJ, **Dabiri JO**, DuClos K (2021) “The role of suction thrust in the metachronal paddles of swimming invertebrates,” *Society for Integrative and Comparative Biology Annual Meeting*, January 3-February 28 (virtual).

167. Howland MF, **Dabiri JO** (2020) "Influence of atmospheric boundary layer wind speed and direction shear on utility-scale yaw misaligned turbines," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Chicago, IL (virtual).
166. Cardona JL, **Dabiri JO** (2020) "Response of flexible cantilevered cylinders in wind," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Chicago, IL (virtual).
165. Xu NW, Townsend J, Costello JH, Colin SP, Gemmell BJ, **Dabiri JO** (2020) "Field testing of biohybrid robotic jellyfish to demonstrate enhanced swimming speeds," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Chicago, IL (virtual).
164. Gunnarson PJ, Mandralis I, Novati G, Koumoutsakos P, **Dabiri JO** (2020) "Deep reinforcement learning for efficient navigation in vortical flow fields," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Chicago, IL (virtual).
163. Fu MK, Houghton IA, **Dabiri JO** (2020) "Quantifying biogenic turbulence through 3D scanning particle image velocimetry," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Chicago, IL (virtual).
162. Wei NJ, **Dabiri JO** (2020) "Placing Betz on the improvement of wind turbine efficiencies through unsteady streamwise motion," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Chicago, IL (virtual).
161. Kanso E, Lopes RM, Strickler JR, **Dabiri JO**, Costello JH (2020) "Teamwork in the viscous oceanic microscale," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Chicago, IL (virtual).
160. Xu NW, **Dabiri JO** (2020) "Robotic control of live jellyfish swimming to enhance propulsion," *Bulletin of the American Physical Society March Meeting*, March 2-4, Denver, CO.
159. Houghton IA, **Dabiri JO** (2020) "Alleviation of hypoxia by biologically generated mixing from aggregations of centimeter-scale swimmers," *Ocean Sciences Meeting*, February 16-21, San Diego, CA.
158. Fu MK, Houghton IA, **Dabiri JO** (2020) "Towards quantification of biologically generated turbulence through 3D scanning particle image velocimetry," *Ocean Sciences Meeting*, February 16-21, San Diego, CA.
157. Colin SP, Costello JH, Gemmell BJ, Sutherland KR, **Dabiri JO** (2020) "Hydrodynamics of metachronal propulsors in aquatic swimmers," *Ocean Sciences Meeting*, February 16-21, San Diego, CA.

156. Costello JH, **Dabiri JO**, Colin SP, Gemmell BJ, Lucas KN, Leftwich MC, (2020) “Primitive and modern swimmers solve the challenges of turning similarly to achieve high maneuverability,” *Ocean Sciences Meeting*, February 16-21, San Diego, CA.
155. Leftwich MC, Lederer EK, **Dabiri JO**, Gemmell BJ, Colin SP, Costello JH (2020) “A proposed fluid mechanical basis for anterior propulsor placement,” *Ocean Sciences Meeting*, February 16-21, San Diego, CA.
154. Kanso E, Lopes RM, Strickler JR, **Dabiri JO**, Costello JH (2020) “Transitory planktonic attachments enhance nutrient transport to the host and symbiont cells,” *Ocean Sciences Meeting*, February 16-21, San Diego, CA.
153. Cardona JL, Howland MF, **Dabiri JO** (2019) “Anemometry from visual observations of fluid structure interactions,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-26, Seattle, WA.
152. Houghton IA, **Dabiri JO** (2019) “Alleviation of hypoxia by biologically generated mixing from aggregations of centimeter-scale swimmers,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-26, Seattle, WA.
151. Xiao S, Yao R, Araya DB, **Dabiri JO**, Yang D (2019) “Effect of helical-shape blades on the wake flow characteristics of vertical axis wind turbines,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-26, Seattle, WA.
150. Wei NJ, Brownstein ID, Cardona JL, Howland MF, **Dabiri JO** (2019) “A wake in the middle of the night: 3D-PTV measurements around full-scale vertical-axis wind turbines,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-26, Seattle, WA.
149. Xu NW, **Dabiri JO** (2019) “Metabolic costs of enhancing propulsion in artificially controlled live jellyfish,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-26, Seattle, WA.
148. Howland MF, Lele SK, **Dabiri JO** (2019) “Field experiment of wind farm power optimization through wake steering,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-26, Seattle, WA.
147. Fu M, Houghton IA, **Dabiri JO** (2019) “Towards quantification of biologically generated turbulence through 3D scanning particle image velocimetry,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-26, Seattle, WA.
146. Xu NW, **Dabiri JO** (2019) “Stimulation of latent enhanced propulsion in freely swimming jellyfish,” *Society of Integrative and Comparative Biology Annual Meeting*, January 3-7, 2019, Tampa, FL.

145. Houghton IA, Koseff JR, Monismith SG, **Dabiri JO** (2018) “Hydrodynamics of swarms at intermediate Reynolds number,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Atlanta, GA.
144. Cardona JL, **Dabiri JO** (2018) “Application of recurrent neural networks to wind speed prediction from flapping flags,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Atlanta, GA.
143. Xu NW, **Dabiri JO** (2018) “Stimulation of latent enhanced propulsion in freely swimming jellyfish,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Atlanta, GA.
142. Schlueter-Kuck KL, **Dabiri JO** (2018) “Model parameter estimation using coherent structure coloring,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Atlanta, GA.
141. Husic BE, Schlueter-Kuck KL, **Dabiri JO** (2018) “Unsupervised machine learning for coherent structure identification,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Atlanta, GA.
140. **Dabiri JO** (2018) “Biological fluid mechanics,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Atlanta, GA.
139. Troutman VA, **Dabiri JO** (2018) “Deployment of a diver-operated 3D particle tracking imaging system,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Atlanta, GA.
138. Leftwich MC, **Dabiri JO**, Colin SP, Gemmell BJ, Lucas KN, Costello JH (2018) “The relationship between torque and body shape of maneuvering swimmers,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Atlanta, GA.
137. Howland MH, Lele SK, **Dabiri JO** (2018) “Data-driven yaw optimization of a full-scale 60 MW wind farm,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Atlanta, GA.
136. Xu N, **Dabiri JO** (2018) “Spatiotemporal control of jellyfish swimming,” *U.S. National Congress for Theoretical and Applied Mechanics*, June 4-9, 2018, Chicago, IL.
135. Hui I, Cain BE, **Dabiri JO** (2018) “What’s memorable? Differential responses to treatment cues among activists and new learners,” *Western Political Science Association Annual Meeting*, March 29-31, San Francisco, CA.
134. Troutman VA, **Dabiri JO** (2018) “Development and deployment of a diver-operated volumetric velocimetry imaging system,” *Ocean Sciences Meeting*, February 11-16, Portland, OR.

133. Houghton IA, **Dabiri JO** (2018) “Swarm-scale eddies generated by collective swimmers,” *Ocean Sciences Meeting*, February 11-16, Portland, OR.
132. Schlueter-Kuck KL, **Dabiri JO** (2018) “A spectral graph-theoretic approach to identification of coherence in ocean flows,” *Ocean Sciences Meeting*, February 11-16, Portland, OR.
131. Du Clos K, **Dabiri JO**, Gemmell BJ (2018) “The pressure’s on, then off: sea lampreys rapidly switch from push to pull thrust when accelerating from rest,” *Ocean Sciences Meeting*, February 11-16, Portland, OR.
130. Xu N, **Dabiri JO** (2018) “External control of jellyfish swimming and validation of turning kinematics,” *Society of Integrative and Comparative Biology Annual Meeting*, January 3-7, 2018, San Francisco, CA.
129. Schlueter-Kuck KL, **Dabiri JO** (2017) “Identification of individual coherent sets associated with flow trajectories using Coherent Structure Coloring,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Denver, CO.
128. Troutman VA, **Dabiri JO** (2017) “Non-spherical object tracking utilizing DDPIV for ocean measurements,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Denver, CO.
127. Cardona JL, **Dabiri JO** (2017) “Toward field measurements of tree kinematics in wind,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Denver, CO.
126. Brownstein ID, **Dabiri JO** (2017) “Aerodynamic interactions between pairs of vertical-axis wind turbines,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Denver, CO.
125. Xu NW, **Dabiri JO** (2017) “Characterization of jellyfish turning using 3D-PTV,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Denver, CO.
124. Houghton IA, **Dabiri JO** (2017) “Swarm-scale eddies generated by collective swimmers,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Denver, CO.
123. Costello JH, Colin SP, **Dabiri JO**, Leftwich MC (2017) “Role of body surface pressure and kinematics in fish turning,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Denver, CO.
122. Miller MA, Duvvuri S, Brownstein ID, Lee M, **Dabiri JO**, Hultmark M (2017) “Vertical axis wind turbine experiments at full dynamic similarity,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Denver, CO.

121. Schlueter-Kuck KL, **Dabiri JO** (2016) "Coherent structure coloring: identification of coherent structures from sparse flow trajectories using graph theory," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Portland, OR.
120. Troutman VA, **Dabiri JO** (2016) "Development of a diver-operated single camera volumetric velocimetry system," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Portland, OR.
119. Xu NW, **Dabiri JO** (2016) "Simultaneous measurements of jellyfish bell kinematics and flow fields using PTV and PIV," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Portland, OR.
118. Craig AE, **Dabiri JO**, Koseff JR (2016) "Low order physical models of vertical axis wind turbines," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Portland, OR.
117. Brownstein ID, **Dabiri JO** (2016) "3D-PTV around operational wind turbines," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Portland, OR.
116. Nawroth JC, Guo H, Ruby E, **Dabiri JO**, McFall-Ngai M, Kanso E (2016) "Be together, not the same: Spatiotemporal organization of different cilia types generates distinct transport functions," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Portland, OR.
115. Houghton IA, **Dabiri JO** (2016) "Measurements of fluid transport by controllable vertical migrations of plankton," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Portland, OR.
114. Abkar M, **Dabiri JO** (2016) "An LES study of vertical-axis wind turbine wakes aerodynamics," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Portland, OR.
113. Xu NW, **Dabiri JO** (2016) "How pacemaker numbers affect swimming behavior in jellyfish," *Society for Integrative and Comparative Biology Annual Meeting*, January 3-7, Portland, OR.
112. Lucas KN, **Dabiri JO**, Lauder GV (2016) "Pressure field measurements in the study of fish-like swimming," *Society for Integrative and Comparative Biology Annual Meeting*, January 3-7, Portland, OR.
111. **Dabiri JO**, Brownstein ID (2015) "Optimization of wind farm performance using low-order models," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Boston, MA.

110. Araya DB, **Dabiri JO** (2015) "Transition to bluff body dynamics in the wake of vertical-axis wind turbines," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Boston, MA.
109. Craig AC, **Dabiri JO**, Koseff JR (2015) "Patterns of 3D flow in a rotating cylinder array," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Boston, MA.
108. Brownstein ID, **Dabiri JO** (2015) "In situ particle tracking around kW sized wind turbines," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Boston, MA.
107. Colin SP, Gemmell BJ, Costello JH, Morgan JR, **Dabiri JO** (2015) "Efficient swimmers use bending kinematics to generate low pressure regions for suction-based swimming thrust," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Boston, MA.
106. Zenit R, **Dabiri JO** (2015) "The dynamics of a vortex ring crossing a density interface," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Boston, MA.
105. Lucas KN, **Dabiri JO**, Lauder GV (2015) "Application of PIV-based pressure measurements to the study of aquatic propulsion," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Boston, MA.
104. Costello JH, Colin SP, Gemmell BJ, **Dabiri JO**, Sutherland KR (2015) "Multi-jet propulsion organized by clonal development in a colonial siphonophore," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Boston, MA.
103. Schlueter KL, **Dabiri JO** (2015) "Pressure evolution in the shear layer of vortex rings as an indicator of pinch-off," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Boston, MA.
102. Nawroth JC, **Dabiri JO** (2015) "Hydrodynamic interactions of bacteria and particles with ciliated surfaces," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Boston, MA.
101. Hezaveh SH, Bou-Zeid E, Lohry M, Martinelli L, Kinzel M, **Dabiri JO** (2015) "Multiscale simulations of vertical-axis wind turbines using offline-coupled LES and URANS," *International Conference on Model Integration across Disparate Scales in Complex Turbulent Flow Simulation*, June 15-17, 2015, State College, PA.

100. Nawroth JC, Guo H, **Dabiri JO**, Kanso E, McFall-Ngai MJ (2014) “Beyond the mucus escalator: Complex ciliary hydrodynamics in disease and function,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Francisco, CA.
99. Wilhelmus MM, Collins S, Nawroth JC, Gemmell BJ, **Dabiri JO** (2014) “A hybrid numerical-experimental study of fluid transport by migrating zooplankton aggregations,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Francisco, CA.
98. Araya DB, **Dabiri JO** (2014) “Velocity measurements in the wake of laboratory-scale vertical axis turbines and rotating circular cylinders,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Francisco, CA.
97. Brownstein ID, Araya DB, Kinzel M, **Dabiri JO** (2014) “In situ measurements of the flow around a single vertical-axis wind turbine,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Francisco, CA.
96. Schlueter KL, Braun NO, **Dabiri JO** (2014) “A pressure-based analysis of vortex ring pinch-off,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Francisco, CA.
95. **Dabiri JO**, Lucas KN, Thornycroft PJM, Lauder GV (2014) “PIV-based pressure, force, and torque measurements of a robotic model swimmer,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Francisco, CA.
94. Kinzel M, Araya DB, **Dabiri JO** (2014) “Comparison between vertical-Axis wind turbine arrays and plant canopies,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Francisco, CA.
93. Craig AE, **Dabiri JO**, Koseff JR (2014) “Mean and turbulent flow development through an array of rotating elements,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Francisco, CA.
92. Ryan KJ, Coletti F, **Dabiri JO**, Eaton JK (2014) “Three-dimensional velocity measurements around and downstream of a rotating vertical-axis wind turbine,” *ASME Turbo Expo*, June 16-20, Dusseldorf, Germany.
91. Sutherland KR, Costello JH, Colin SP, **Dabiri JO** (2014) “Ambient fluid motions influence swimming and feeding by the ctenophore *Mnemiopsis leidyi*,” *ASLO/AGU Ocean Sciences Meeting*, February 20-24, Honolulu, HI.
90. Nawroth JC, **Dabiri JO** (2013) “The Hawaiian bobtail squid as a model system for selective particle capture in microfluidic systems,” *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Pittsburg, PA.

89. Kinzel M, Araya D, Dabiri JO (2013) "Kinetic energy transport in a vertical-axis wind turbine array," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Pittsburg, PA.
88. Coletti F, Ryan L, **Dabiri JO**, Eaton J (2013) "Three-dimensional velocity measurements around a rotating vertical axis wind turbine," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Pittsburg, PA.
87. Araya D, Dabiri JO (2013) "Experimental investigation of the wake characteristics of flow-powered and motorized laboratory-scale wind turbines," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Pittsburg, PA.
86. Pierce B, Moin P, **Dabiri JO** (2013) "Evaluation of drag forcing models for vertical axis wind turbine farms," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Pittsburg, PA.
85. Craig AE, Zeller R, Zarama FJ, Weitzman J, **Dabiri JO**, Koseff JR (2013) "The horizontal planar structure of kinetic energy in a model vertical-axis wind turbine array," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Pittsburg, PA.
84. Whittlesey RW, Dabiri JO (2013) "Optimal propulsive efficiency of vortex enhanced propulsion," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Pittsburg, PA.
83. Martinez-Ortiz M, Dabiri JO (2013) "Local fluid transport by planktonic swarms," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Pittsburg, PA.
82. O'Farrell C, Dabiri JO (2013) "Nested contour-dynamic models for axisymmetric vortex rings and vortex wakes," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Pittsburg, PA.
81. Nawroth JC, Lee H, Feinberg AW, Ripplinger CM, McCain ML, Grosberg A, Dabiri JO, Parker KK (2012) "Learning from real and tissue-engineered jellyfish: How to design and build a muscle-powered pump at intermediate Reynolds numbers," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, San Diego, CA.
80. Whittlesey RW, Dabiri JO (2012) "Total energetic efficiency of a passively-pulsed underwater vehicle," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, San Diego, CA.
79. O'Farrell C, Dabiri JO (2012) "Perturbation response of vortex rings and dipoles," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, San Diego, CA.

78. Kinzel M, Araya D, **Dabiri JO** (2012) "The influence of rotor configurations on the energy production in an array of vertical-axis wind turbines," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, San Diego, CA.
77. Martinez-Ortiz MP, **Dabiri JO** (2012) "Scalar transport by planktonic swarms," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, San Diego, CA.
76. Araya D, **Dabiri JO** (2012) "Low-order flow modeling of vertical-axis wind turbine arrays," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, San Diego, CA.
75. Taylor KA, **Dabiri JO** (2012) "Start-up dynamics of vertical-axis turbines," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, San Diego, CA.
74. Fu MK, **Dabiri JO** (2012) "Flow behavior around counter-rotating turbines in steady flow," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, San Diego, CA.
73. Colin SP, Sutherland KR, Costello JH, **Dabiri JO** (2012) "Effects of foraging mode and turbulence on the encounter rates of the lobate ctenophore *Mnemiopsis Leidy*," *ASLO/AGU Ocean Sciences Meeting*, February 20-24, Salt Lake City, UT.
72. Sutherland KR, **Dabiri JO**, Costello JH, Colin SP (2012) "Fluid interactions during predation by the invasive ctenophore *Mnemiopsis Leidy*," *ASLO/AGU Ocean Sciences Meeting*, February 20-24, Salt Lake City, UT.
71. Whittlesey RW, **Dabiri JO** (2011) "Improving propulsive efficiency through passive mechanisms using a Starling vortex generator," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Baltimore, MD.
70. Martinez-Ortiz MP, **Dabiri JO** (2011) "Laboratory studies of ocean mixing by microorganisms," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Baltimore, MD.
69. Nawroth JC, **Dabiri JO** (2011) "Lessons learned from the jellyfish: Fluid transport at intermediate Reynolds numbers," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Baltimore, MD.
68. Kinzel M, Mulligan Q, **Dabiri JO** (2011) "Quantitative full-Scale wind turbine flow measurements," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Baltimore, MD.

67. O'Farrell C, **Dabiri JO** (2011) "The formation of vortex rings from elliptical nozzles," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Baltimore, MD.
66. Mulligan Q, Kinzel M, **Dabiri JO** (2011) "Wind resource evaluation at the Caltech Field Laboratory for Optimized Wind Energy," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Baltimore, MD.
65. Nawroth JC, **Dabiri JO** (2011) "Jellyfish-inspired fluid transport at intermediate Reynolds numbers," *48th Annual Technical Conference of The Society of Engineering Sciences*, October 12-14, Evanston, IL.
64. **Dabiri JO** (2010) "Caltech's Fish-inspired Wind Farm: Results from the first summer," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Long Beach, CA.
63. Kinzel M, **Dabiri JO** (2010) "A compact Self-Contained Underwater Velocimetry Apparatus (SCUVA) for in situ field measurements in daytime," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Long Beach, CA.
62. Nawroth JC, **Dabiri JO** (2010) "Learning from jellyfish: Fluid transport in muscular pumps at intermediate Reynolds numbers," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Long Beach, CA.
61. O'Farrell C, **Dabiri JO** (2010) "The stability of a family of vortex rings," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Long Beach, CA.
60. Sutherland KR, **Dabiri JO**, Koehl MAR (2010) "Marine ostracod swimming behavior in the benthic boundary layer under different field flow conditions," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Long Beach, CA.
59. Whittlesey RW, **Dabiri JO** (2010) "Passively pulsed propulsion of aquatic vehicles," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Long Beach, CA.
58. Katija K, **Dabiri JO** (2010) "A Darwinian mechanism for biogenic ocean mixing," *American Society of Limnology and Oceanography Ocean Sciences Meeting*, February 22-26, Portland, OR.
57. Nawroth JC, **Dabiri JO** (2010) "Adaptive phenotypic plasticity in juvenile Scyphomedusae facilitates effective animal-fluid interaction," *Society for Integrative and Comparative Biology Annual Meeting*, January 3-7, Seattle, WA.

56. Breitburg DL, Crump BC, **Dabiri JO**, Gallegos CL (2010) "Ecosystem engineers in the pelagic realm: Habitat alteration by species ranging from microbes to jellyfish," *Society for Integrative and Comparative Biology Annual Meeting*, January 3-7, Seattle, WA.
55. Katija K, **Dabiri JO** (2009) "A Darwinian mechanism for biogenic ocean mixing," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Minneapolis, MN.
54. O'Farrell C, **Dabiri JO** (2009) "A Lagrangian approach to identifying vortex pinch-off," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Minneapolis, MN.
53. Whittlesey RW, **Dabiri JO** (2009) "Fish schooling as a basis for wind farm design," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Minneapolis, MN.
52. **Dabiri JO**, Colin SP, Katija K, Costello JH (2009) "A wake-based correlate of swimming performance in seven jellyfish species," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 22-24, Minneapolis, MN.
51. Peng J, **Dabiri JO** (2009) "A fluid mechanical model for mixing in a plankton predator-prey system," *European Geosciences Union General Assembly*, April 19-24, Vienna, Austria.
50. Colin SP, Costello JH, Hansson LJ, Titelman, J, **Dabiri JO** (2009) "Fluid interactions of the lobate ctenophore *Mnemiopsis leidyi*," *American Society of Limnology and Oceanography Aquatic Sciences Meeting*, January 25-30, Nice, France.
49. **Dabiri JO**, Peng J, Colin SP, Costello JH (2009) "A new fluid dynamic model for analysis of planktonic predator-prey systems and small-scale fluid motions," *American Society of Limnology and Oceanography Aquatic Sciences Meeting*, January 25-30, Nice, France.
48. Nawroth JC, Ripplinger CM, Feinberg AW, **Dabiri JO**, Parker KK (2009) "Optical mapping of electrical impulse propagation in the striated muscle of live jellyfish," *Program of European Neuroscience Schools*, January 11-18, Obergurgl, Austria.
47. Peng J, **Dabiri JO** (2009) "A fluid mechanical model for current-generated feeding of jellyfish and the effect of prey size and escape forces," *Society for Integrative and Comparative Biology Annual Meeting*, January 3-7, Boston, MA.
46. **Dabiri JO** (2008) "The 'upstream wake' of swimming and flying animals revealed by Lagrangian Coherent Structures," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Antonio, TX.

45. Katija K, **Dabiri JO** (2008) "Mixing efficiency of swimming animals in stratified fluids," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Antonio, TX.
44. Peng J, **Dabiri JO** (2008) "A fluid mechanical model for current-generating, feeding jellyfish," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Antonio, TX.
43. Ruiz L, **Dabiri JO** (2008) "Propulsive performance comparison of a steady and unsteady self-propelled swimmer," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Antonio, TX.
42. Miller MD, **Dabiri JO** (2008) "Potential vortex model for wind power extraction," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, San Antonio, TX.
41. **Dabiri JO**, Peng J (2008) "The 'upstream wake' of swimming and flying animals and its correlation with propulsive efficiency," *International Congress of Theoretical and Applied Mechanics*, August 25-29, Adelaide, Australia.
40. Katija K, **Dabiri JO** (2008) "Scaling of wake energy and propulsive efficiency of two representative jellyfish species: *Aurelia* and *Mastigias*," *International Congress of Theoretical and Applied Mechanics*, August 25-29, Adelaide, Australia.
39. Peng J, Miller MD, **Dabiri JO** (2008) "The fluid mechanical basis of jellyfish feeding and the effects of prey size and escape forces," *International Congress of Theoretical and Applied Mechanics*, August 25-29, Adelaide, Australia.
38. Trevino LA, **Dabiri JO** (2008) "Experimental comparison of a steady and unsteady self-propelled swimmer," *International Congress of Theoretical and Applied Mechanics*, August 25-29, Adelaide, Australia.
37. Regula C, Colin SP, **Dabiri JO**, Costello JH, Katija K (2008) "Feeding determinants in the cruising hydromedusae *Aequorea victoria*," *Proceedings of the American Society of Limnology and Oceanography 2008 Ocean Sciences Meeting*, March 2-7, Orlando, FL.
36. Peng J, **Dabiri JO** (2008) "Optimal stroke patterns for a model jellyfish swimmer with thin, flexible body," *Society for Integrative and Comparative Biology Annual Meeting*, January 2-8, San Antonio, TX.
35. Katija K, **Dabiri JO** (2008) "Comparing the energetics of jellyfish motion: laboratory and field measurements using a Self-Contained Underwater Velocimetry Apparatus (SCUVA)," *Society for Integrative and Comparative Biology Annual Meeting*, January 2-8, San Antonio, TX.

34. **Dabiri JO**, Colin SP, Costello JH (2007) "Fluid dynamic constraints on morphology and propulsion of medusae at low Reynolds numbers," Session on Ontogeny and Fluid Dynamics, *American Geophysical Union Fall Meeting*, December 10-14, San Francisco, CA.
33. Katija K, **Dabiri JO** (2007) "Comparing the energetics of jellyfish motion: laboratory and field measurements using a Self-Contained Underwater Velocimetry Apparatus (SCUVA)," Session on Ontogeny and Fluid Dynamics, *American Geophysical Union Fall Meeting*, December 10-14, San Francisco, CA.
32. Weston J, Colin SP, Costello JH, **Dabiri JO** (2007) "Developmental changes in the form and function of rowing hydromedusae," Session on Ontogeny and Fluid Dynamics, *American Geophysical Union Fall Meeting*, December 10-14, San Francisco, CA.
31. Feitl KE, Millett AF, Costello JH, Colin SP, **Dabiri JO** (2007) "Functional morphology and fluid interactions during early development of scyphomedusae," Session on Ontogeny and Fluid Dynamics, *American Geophysical Union Fall Meeting*, December 10-14, San Francisco, CA.
30. **Dabiri JO**, Katija K (2007) "Progress toward 3D wake structure measurements of aquatic animals using SCUVA," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Salt Lake City, UT.
29. Katija K, **Dabiri JO** (2007) "Energetics of jellyfish locomotion determined from field measurements using a Self-Contained Underwater Velocimetry Apparatus (SCUVA)," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Salt Lake City, UT.
28. Peng J, **Dabiri JO** (2007) "Optimal stroke patterns for a model jellyfish swimmer with thin, flexible body," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Salt Lake City, UT.
27. Trevino LA, **Dabiri JO** (2007) "Experimental comparison of steady and unsteady propulsion of a self-propelled swimmer," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 18-20, Salt Lake City, UT.
26. Katija K, **Dabiri JO** (2007) "Real-time field measurements of *Aurelia aurita* using a self-contained underwater velocimetry apparatus (SCUVA)," *Second International Jellyfish Blooms Symposium*, June 24-27, Brisbane, Australia.
25. Peng J, **Dabiri JO** (2007) "Hydrodynamic force evaluation based on vortex structure," *Southern California Symposium on Flow Physics*, April 7, Pasadena, CA.
24. Katija K, **Dabiri JO** (2007) "Dynamics of tethered versus free-swimming jellyfish: A motivating argument for the Self-Contained Underwater Velocimetry Apparatus (SCUVA)," *Southern California Symposium on Flow Physics*, April 7, Pasadena, CA.

23. Katija K, **Dabiri JO** (2007) "Tethering versus free-swimming: a wake analysis of *Aurelia aurita*," *Society for Integrative and Comparative Biomechanics Annual Meeting*, January 3-7, Phoenix, AZ.
22. Costello JH, Colin SP, **Dabiri JO** (2007) "Morphological diversity of medusan lineages in shaped by animal-fluid interactions," *Proceedings of the American Society of Limnology and Oceanography 2007 Aquatic Sciences Meeting*, February 4-9, Santa Fe, NM.
21. **Dabiri JO** (2006) "A vorticity-free approach to wake-based swimming/flying force estimation," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Tampa, FL.
20. Peng J, **Dabiri JO** (2006) "Identification of vortex structures in the wake of swimming and flying animals," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Tampa, FL.
19. Katija K, **Dabiri JO** (2006) "Dynamics of tethered versus free-swimming animals: a wake structure comparison," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Tampa, FL.
18. Shadden SC, Katija K, **Dabiri JO**, Marsden JE (2006) "Transport induced by vortex formation," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 19-21, Tampa, FL.
17. Peng J, **Dabiri JO** (2006) "Determination of vortex structures in the wake of swimming and flying animals," *World Congress of Biomechanics*, July 29-August 4, Munich, Germany.
16. Katija K, Gharib M, **Dabiri JO** (2006) "Flow-induced flutter of prosthetic heart valves," *World Congress of Biomechanics*, July 29-August 4, Munich, Germany.
15. **Dabiri JO** (2005) "On the estimation of swimming and flying forces from wake measurements," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Chicago, IL.
14. Katija K, Gharib M, **Dabiri JO** (2005) "Characterization of fluid flow through a simplified heart valve model," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Chicago, IL.
13. Shadden SC, **Dabiri JO**, Marsden JE (2005) "Geometry of unsteady flows," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 20-22, Chicago, IL.

12. Thomas AMP, **Dabiri JO**, Mohseni K, Burdick JW (2005) "Synthetic jet propulsion for small underwater vehicles," *14th International Symposium on Unmanned Untethered Submersible Technology*, August 21-24, Durham, NH.
11. **Dabiri JO**, Colin SP, Costello JH, Gharib M (2005) "Flow patterns generated by oblate medusan swimmers: *in situ* observation and analysis," *Proceedings of the American Society of Limnology and Oceanography 2005 Aquatic Sciences Meeting*, February 20-25, Salt Lake City, UT.
10. **Dabiri JO**, Gharib M (2004) "Fluid transport by pulsed-jet swimmers: entrainment and added mass in vortex wakes," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Seattle, WA.
9. Krueger PS, **Dabiri JO**, Gharib M (2004) "The formation number of vortex rings formed in the presence of uniform background co-flow," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 21-23, Seattle, WA.
8. **Dabiri JO**, Morell R, Thompson N, Gharib M (2003) "Vortex rings as an essential feature of animal swimming," *International Symposium on Aqua Bio-mechanisms*, September 14-17, Honolulu, HI.
7. Krueger PS, **Dabiri JO**, Gharib M (2003) "Swimming performance limits in vortex ring-based propulsive mechanisms," *International Symposium on Aqua Bio-mechanisms*, September 14-17, Honolulu, HI.
6. **Dabiri JO**, Milano M, Gharib M (2003) "Generalization and optimization of biological and biomimetic ejection mechanisms," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 23-25, East Rutherford, NJ.
5. **Dabiri JO**, Gharib M (2002) "Toward empirical evaluation of left ventricle function: a novel mathematical mapping," *Joint Meeting of the IEEE Engineering in Medicine and Biology Society and the Biomedical Engineering Society*, October 23-26, Houston, TX.
4. **Dabiri JO**, Krueger PS, Gharib M (2002) "The effect of uniform background flow on vortex ring formation and pinch-off," *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, November 24-26, Dallas, TX.
3. **Dabiri JO** (2002) "Ejection mechanisms and kinematics of the left ventricle," *Proceedings of the 2002 Southern California Biomedical Engineering Symposium*, January 18, Los Angeles, CA.
2. **Dabiri JO** (2000) "Analysis of ejection mechanisms and vortex dynamics during hydrozoan jelly locomotion," *Proceedings of the 2000 California Institute of Technology Fellowship Seminars*, August 15 and September 18, Pasadena, CA.

1. **Dabiri JO** (1999) “Analysis and optimization of small-scale rotor blades using computational fluid dynamics and experimental methods,” *Proceedings of the Ninth NASA Space Grant Conference*, August 15, Hoboken, NJ.

Patents and Patent Applications

- “Self-Contained Underwater Velocimetry Apparatus” U.S. Patent No. 7,864,305
- “Two-Dimensional Array of Turbines” U.S. Patent No. 8,545,168
- “Methods and systems for comparing vertical axis turbine arrays and providing configurations thereof” U.S. Patent No. 8,949,097 and 9,399,981
- “V-shaped arrangements of turbines” U.S. Patent No. 9,175,669
- “Devices and methods for harvesting power from arrays of wind turbines” U.S. Patent No. 9,214,811
- “Tissue-engineered pumps and valves and uses thereof” U.S. Patent No. 9,669,141

Teaching Experience

California Institute of Technology

Instructor (2005 – present)

- Biological Flows: Propulsion (Aeronautics/Bioengineering 242; one-term course). *Newly developed course*. Taught 2005-2006, 2006-2007, 2010-2011, 2021-2022.
- Biomechanics (Bioengineering 5/105; one-term course). Taught 2009-2010, 2011-2012. *Taught as a Freshman Seminar in 2011-2012*.
- Experimental Methods (Aeronautics/Applied Physics 104; three-term course). Taught 2007-2008, 2008-2009, 2020-2021, 2023-2024, 2024-2025, 2025-2026.
- Fluid Mechanics (Mechanical Engineering 19; two-term course). Taught 2011-2012, 2013-2014.

Participating Faculty (2006)

- Frontiers in Dynamical Systems (Control and Dynamical Systems 273).

Guest Lecturer (2002 – 2005)

- Bio-fluid Mechanics (Bioengineering/Aeronautics 243, 2003 – 2005).
- Advanced Fluid Mechanics (Aeronautics 201, 2002).

Research Co-mentor (2002 – 2004)

- Summer Undergraduate Research Fellowship Program

Stanford University

Instructor (2015 – 2019)

- Fluid Mechanics (Mechanical Engineering). Taught 2016-2017.
- Mechanics of Fluids (Civil and Environmental Engineering). Taught 2015-2016.
- Physics of Wind Energy (Civil and Environmental Engineering and Mechanical Engineering). *Newly developed course*. Taught 2015-2016, 2017-2018.
- Principles of Mechanical Measurements (Mechanical Engineering). *Newly developed course*. Taught 2018-2019.

Participating Faculty (2018)

- Mechanical Engineering Senior Design Capstone

Princeton University

Study Hall Instructor (2000 – 2001)

Freshman Physics and Mathematics

Tutor (1998 – 2000)

Freshman Physics and Mathematics

Laboratory Instructor (1998 – 1999)

Introduction to Computer Science

Professional Service

Board of Directors, NVIDIA Corporation (2020 – present)

Board of Trustees, Gordon and Betty Moore Foundation (2020 – present)

Advisory Board, XPRIZE Wildfire (2023 – present)

Guest Editor, *Proceedings of the National Academy of Sciences* (2012 – present)

President’s Council of Advisors on Science and Technology (2021 – 2025)

Secretary of Energy Advisory Board (2021 – 2025)

Board of Directors, Hypothesis Fund (2022 – 2024)

Editorial Board, *Journal of the Royal Society Interface* (2014 – 2023)

National Academies of Science, Engineering, and Medicine Committee on Science, Technology, and Law (2020 – 2023)

Chair, American Physical Society Division of Fluid Dynamics (2021)

Vice Chair, American Physical Society Division of Fluid Dynamics (2019 – 2020)

Scientific Consultant, “NOPE” (2022, Directed by Jordan Peele)

Editorial Board, *Journal of Fluid Mechanics* (2016 – 2020)

Referee (2005 – present)

Bioinspiration and Biomimetics, Chaos, Computers and Fluids, European Journal of Fluid Mechanics, Experimental Mechanics, Experiments in Fluids, Geophysical Research Letters, Integrative and Comparative Biology, International Journal of Marine Sciences, Journal of Computational Physics, Journal of Experimental Biology, Journal of Fluid Mechanics, Journal of Fluids and Structures, Journal of Nonlinear Science, Journal of Visualization, Nature Energy, Ocean Modelling, Physical Review Letters, Physics Letters A, Physics of Fluids, Proceedings of the National Academy of Sciences, Proceedings of the Royal Society A, Research Letters in Ecology, Scientia Marina, Theoretical and Computational Fluid Dynamics, National Science Foundation (mail and panel review), U.S. Agency for International Development

American Physical Society Division of Fluid Dynamics, Fluid Dynamics Prize Committee (2024 – present; Vice Chair, 2024; Chair, 2025)

American Physical Society Division of Fluid Dynamics Fellowship Committee (2017 – 2020; Chair, 2020)

American Physical Society Division of Fluid Dynamics Program Committee (Chair, 2020)

Co-Organizer, Future Leaders in Mechanical and Aerospace Engineering (2020 – present)

Advisory Council, Princeton University Department of Mechanical and Aerospace Engineering (2015 – present)

Co-Chairman (with T. Zohdi), AmeriMech Symposia, U.S. National Committee for Theoretical and Applied Mechanics, (2015 – 2018)
Advisor to X, the Moonshot Factory at Alphabet (2018 – 2019)
Member, American Physical Society Division of Fluid Dynamics ExComm (2014 – 2017)
Board of Advisors, University of California at Riverside Department of Mechanical Engineering (2016 – 2018)
Member, U.S. National Committee for Theoretical and Applied Mechanics, (2013 – 2016)
Organizing Committee, International Conference on Theoretical and Applied Mechanics (2016)
External Research Advisory Committee, Cabrillo Marine Aquarium (2007 – 2015)
Defense Science Study Group (2014 – 2015)
Organizing Committee, NSF Workshop on Fluid Dynamics of Living Systems (2014)
Organizing Committee, SIAM Conference on Applications of Dynamical Systems (2013)
Guest Editor, Special Issue on Wind Energy, *Journal of Turbulence* (2013)
American Physical Society Committee on Media and Science Relations (2013 – 2014)
American Physical Society Andreas Acrivos Award Committee (2010 – 2011, 2015 – 2016; Chair, 2011; Vice Chair, 2015)
Organizing Committee, American Physical Society Division of Fluid Dynamics 2010 Meeting (2006 – 2010)
Minisymposium Co-Organizer, “Wind Energy Fluid Dynamics,” American Physical Society Division of Fluid Dynamics Meeting (2011)
Minisymposium Co-Organizer, “Biological Perspectives on Locomotion,” American Physical Society Division of Fluid Dynamics Meeting (2010)
Minisymposium Organizer, “Lagrangian Coherent Structures in Fluid Flows,” American Physical Society Division of Fluid Dynamics Meeting (2008)
Handling Editor, *Theoretical and Computational Fluid Dynamics* (2007 – 2009)
Guest Editor, Special Issue on Lagrangian Coherent Structures, *Chaos* (2009)

Academic Service

California Institute of Technology

Executive Committee, Resnick Sustainability Institute (2019 – present)
Building Committee, Resnick Sustainability Institute (2019 – present)
First-Year Academic Advisor (2023 – present)
Faculty Athletics Committee (2023 – present)
Faculty Liaison, Women’s Basketball Team (2023 – present)
Housner Fund Committee (2022 – present)
Chair, Aerospace Faculty Search Committee (2022 – 2024)
Director, Translational Science Facilities, Resnick Sustainability Institute (2019 – 2022)
Committee on Diversity, Equity and Inclusion, Division of Engineering and Applied Science (2020 – 2022)
Committee on Diversity, Equity and Inclusion, Division of Geological and Planetary Sciences (2020 – 2021)
Committee on Patents and Relations with Industry (2020 – present; Chair, 2021 – 2022)
Dean of Undergraduate Students (2014 – 2015)
Director, Center for Bioinspired Wind Energy (2010 – 2015)

Faculty Board (2007 – 2015; Vice Chair, 2011 – 2012; Chair, 2013 – 2014; *ex officio*, 2014 – 2015)

Board of Trustees Institute-Alumni Relations Committee (*ex officio*, 2013 – 2015)

Institute Administrative Council (*ex officio*, 2013 – 2015)

Committee on Undergraduate Education (*ex officio*, 2013 – 2015)

Curriculum Committee (*ex officio*, 2013 – 2015)

Core Curriculum Steering Committee (*ex officio*, 2013 – 2015)

Convocations Committee (*ex officio*, 2013 – 2015)

Scholarships and Financial Aid Committee (*ex officio*, 2013 – 2015)

Student Life and Housing Committee (*ex officio*, 2013 – 2015)

Undergraduate Academic Standards and Honors Committee (*ex officio*, 2013 – 2015)

Administrative Management Council (*ex officio*, 2013 – 2014)

Athenaeum House Committee (*ex officio*, 2013 – 2014)

Committee on Online Education (2013 – 2014)

Faculty Committee on Membership and Bylaws (Chair *ex officio*, 2011 – 2012)

Convocation Committee (*ex officio*, 2011 – 2012)

Summer Undergraduate Research Fellowship Administrative Committee (2009 – 2014)

Review Committee, Senior Research Fellow, Associate and Lecturer Appointments (2006 – 2015)

Faculty Co-chair, Graduate Student-Faculty Colloquium (2012)

Faculty Search Committee, (Applied Physics, 2007 – 2008; Bioengineering, 2006 – 2009; Biology, 2006 – 2010; Mechanical Engineering, 2009 – 2011)

Faculty Club Advisor, Techers for a Sustainable Future (2013 – 2015)

Faculty Club Advisor, Caltech Christian Fellowship (2013 – 2015)

Faculty Club Advisor, Korean Campus Crusade for Christ (2013 – 2015)

Bioengineering Undergraduate Curriculum Committee (2007 – 2009)

Graduate Admissions Committee (Aeronautics, 2005 – present; Bioengineering, 2007 – 2008)

GALCIT Awards Committee (2009)

GALCIT Machine Shop Committee (2007 – 2008)

Selection Committee, Richard Bruce Chapman Memorial Award in Hydrodynamics (2009)

Selection Committee Chair, Demetriades-Tsafka Prize in Bioengineering/Related Fields (2007)

Panel Member, Academic Job Search, Women-Mentoring-Women Program (2008)

Panel Member, New Faculty Seminar (2008)

Panel Member, Caltech Project for Effective Teaching (2007)

Coordinator, GALCIT Colloquium (2013 – 2014)

Coordinator, GALCIT Research Conference (2006 – 2007, 2010 – 2011)

Coordinator, Bioengineering Seminar Series (2005 – 2006)

Coordinator, Freshman Summer Institute Research Program (2003 – 2008)

Coordinator, Biomechanics Colloquium (2003 – 2004)

Student Representative, Option in Bioengineering (2002)

Graduate Review Board (2002)

Graduate Student Council Board of Directors (2001 – 2002)

Stanford University

Academic Council Advisory Board (2018)
Board of Directors, Center for Advanced Study in the Behavioral Sciences (2018 – 2020)
Academic Advisory Council, Center for Advanced Study in the Behavioral Sciences (2018 – 2020)
Board of Trustees Committee on Development (2018 – 2019)
Long-Range Planning Design Team Co-Chair, Flexible Resources (2018 – 2019)
Committee on Undergraduate Admissions and Financial Aid (2017 – 2019)
Undergraduate Advisory Council, Vice Provost for Undergraduate Education (2018 – 2019)
Strategic Advisory Council, TomKat Center for Sustainable Energy (2018 – 2019)
Hasso Plattner Institute of Design (d.school) Director's Council (2018 – 2019)
Faculty Affordability Committee (2018 – 2019)
Long-Range Planning Area Steering Group for Research (2017 – 2018)
Elected Member, Senate of the Academic Council (2017 – 2019)
Steering Committee, Senate of the Academic Council (2018 – 2019)
Director of Graduate Studies, Mechanical Engineering (2018 – 2019)
Graduate Curriculum Committee, Mechanical Engineering (2015 – 2019)
Committee on Graduate Student Experience, Mechanical Engineering (2016 – 2019; Co-chair 2016)
Vision Committee, Civil and Environmental Engineering (2017 – 2019)
Frontiers in Civil and Environmental Engineering Seminar Series Committee (2016 – 2019)
Faculty Resource Advisor, DARE (Diversifying Academia, Retaining Excellence) Doctoral Fellowship Program (2016 – 2019)
Selection Advisory Committee, DARE (Diversifying Academia, Retaining Excellence) Doctoral Fellowship Program (2016 – 2019)
Faculty Athletics Fellow, Men's Soccer Team (2016 – 2019)
Founding Director, Catalyst for Collaborative Solutions (2016 – 2017)
Center for Turbulence Research Steering Committee (2015 – 2017)
Coordinator, Fluid Mechanics Seminar Series (Winter term, 2015 – 2016)

Princeton University

Alumni Schools Committee, Princeton University (2001 – 2004)
Undergraduate Engineering Committee, Princeton University (2000 – 2001)
School of Engineering Leadership Council, Princeton University (2000)

Other

Professional Staff Selection Committee, University of Toledo (2001)

Current Graduate Students & Postdoctoral Scholars

Simon Anuszczyk, B.S. (Columbia University), M.S. (Caltech)
Maggie Brown, B.S. (Brown University), M.S. (Caltech)
Noa Yoder, B.S. (Massachusetts Institute of Technology), M.S. (Caltech)

Former Graduate Students & Postdoctoral Scholars

Nina Mohebbi, Ph.D. (Aeronautics), 2025
Peter J. Gunnarson, Ph.D. (Aeronautics), 2024
Nathan J. Wei, Ph.D. (Aeronautics), 2023
Malaika Cordeiro, M.S. (Bioengineering), 2023
Jennifer L. Cardona, Ph.D. (Mechanical Engineering), 2021
Michael F. Howland, Ph.D. (Mechanical Engineering), 2020
Nicole W. Xu, Ph.D. (Bioengineering), 2020
Valerie A. Troutman, Ph.D. (Mechanical Engineering), 2019
Isabel A. Houghton, Ph.D. (Civil and Environmental Engineering), 2019
Ian D. Brownstein, Ph.D. (Mechanical Engineering), 2018
Kristy L. Schlueter-Kuck, Ph.D. (Mechanical Engineering), 2018
Anna Craig, Ph.D. (Mechanical Engineering), 2017
Monica Martinez Wilhelmus, Ph.D. (Mechanical Engineering), 2015
Daniel Araya, Ph.D. (Aeronautics), 2015
Robert W. Whittlesey, Ph.D. (Aeronautics), 2013
Clara O'Farrell, Ph.D. (Control and Dynamical Systems), 2013
Janna C. Nawroth, Ph.D. (Biology), 2012
Kakani Katija Young, Ph.D. (Bioengineering), 2010
Lydia Ann Ruiz, Ph.D. (Mechanical Engineering), 2009
Jifeng Peng, Ph.D. (Bioengineering), 2009
Madeline Diane Miller, M.S. (Mechanical Engineering), 2009
Cole D. Lepine, M.S. (Control and Dynamical Systems), 2008
Ann-Marie Polsenberg-Thomas, Ph.D. (Mechanical Engineering), 2006

Roni Hilel Goldshmid, Postdoctoral Scholar (Aerospace), 2024
Kelsi Rutledge, Postdoctoral Scholar (Aerospace), 2024
Matthew Fu, Postdoctoral Scholar (Aeronautics), 2022
Michael Howland, Postdoctoral Scholar (Aeronautics), 2021
Mahdi Abkar, Postdoctoral Scholar (Mechanical Engineering), 2017
Matthias Kinzel, Postdoctoral Scholar (Aeronautics), 2014
Janna C. Nawroth, Postdoctoral Scholar (Bioengineering), 2013
Kelly Rakow Sutherland, Postdoctoral Scholar (Bioengineering), 2011
Shawn C. Shadden, Postdoctoral Scholar (Bioengineering), 2006

Ph.D. Dissertation Committees

Tristan Villanueva, Mechanical Engineering, Caltech
Grace Chen, Chemistry, Caltech
Sean Mendoza, Aeronautics, Caltech
Meredith Hooper, Aeronautics, Caltech
Alejandro Stefan Zavala, Aeronautics, Caltech
Scott Boltt, Aeronautics, Caltech
Sean Devey, Aeronautics, Caltech
Hong Han, Medical Engineering, Caltech
Yuting, Huang, Mechanical Engineering, Caltech
Sze Chai Leung, Mechanical Engineering, Caltech
Ioannis Mandralis, Aeronautics, Caltech
Stephanie O’Gara, Mechanical Engineering, Caltech (Ph.D. 2025)
Eric Ballouz, Mechanical Engineering, Caltech (Ph.D. 2025)
Sorina Lupu, Aeronautics, Caltech (Ph.D. 2025)
Tanner Harms, Aeronautics, Caltech (Ph.D. 2024)
Jean Sebastien Spratt, Aeronautics, Caltech (Ph.D. 2024)
Victor Dorobantu, Computing and Mathematical Sciences, Caltech (Ph.D. 2023)
Emily Palmer, Aeronautics, Caltech (Ph.D. 2023)
Kelsi Rutledge, Ecology and Evolutionary Biology, UCLA (Ph.D. 2023)
Peter Renn, Aeronautics, Caltech (Ph.D. 2023)
Ethan Pickering, Mechanical Engineering, Caltech (Ph.D. 2021)
Anna-Katharina von Krauland, Civil and Environmental Engineering, Stanford
Emile Oshima, Aeronautics, Caltech (Ph.D. 2022)
Ellande Tang, Aeronautics, Caltech (Ph.D. 2022)
Nils Tack, Biology, University of South Florida (Ph.D. 2022)
Ryan Song, Mechanical Engineering, Caltech (Ph.D. 2022)
Chris Dougherty, Aeronautics, Caltech (Ph.D. 2022)
Scott Katalenich, Civil and Environmental Engineering, Stanford (Ph.D. 2020)
Lei Fang, Civil and Environmental Engineering, Stanford (Ph.D. 2020)
Giacomo Lamberti, Civil and Environmental Engineering, Stanford (Ph.D. 2020)
Brooke Husic, Chemistry, Stanford (Ph.D. 2019)
Alexander Ioannidis, Computational and Mathematical Engineering, Stanford (Ph.D. 2019)
Michelle DiBenedetto, Civil and Environmental Engineering, Stanford (Ph.D. 2019)
Ben Hightower, Mechanical Engineering, Stanford (Ph.D. 2019)
David Ching, Mechanical Engineering, Stanford (Ph.D. 2019)
Diana Chin, Mechanical Engineering, Stanford (Ph.D. 2019)
Haripriya Mukundarjan, Bioengineering, Stanford (Ph.D. 2019)
Aditya Ghate, Aeronautics and Astronautics, Stanford (Ph.D. 2018)
Daniel Borup, Mechanical Engineering, Stanford (Ph.D. 2018)
Rivers Ingersoll, Mechanical Engineering, Stanford (Ph.D. 2017)
Santiago Padron, Aeronautics and Astronautics, Stanford (Ph.D. 2017)
Uche Monu, Electrical Engineering, Stanford (Ph.D. 2017)
Justin Briggs, Materials Science and Engineering, Stanford (Ph.D. 2017)
Hsieh-Chen Tsai, Mechanical Engineering, Caltech (Ph.D. 2016)
Kevin Ryan, Mechanical Engineering, Stanford (Ph.D. 2016)

Clara Druzgalski, Mechanical Engineering, Stanford (Ph.D. 2016)
Georgios Katsikis, Bioengineering, Stanford (Ph.D. 2016)
Reeve Dunne, Mechanical Engineering, Caltech (Ph.D. 2015)
Julia Cosse, Aeronautics, Caltech (Ph.D. 2014)
Joy Zhao, Electrical Engineering, Caltech (Ph.D. 2014)
Adrianus Aria, Aeronautics, Caltech (Ph.D. 2013)
Hesham Azizgolshani, Bioengineering, Caltech (Ph.D. 2013)
Philipp Boettcher, Aeronautics, Caltech (Ph.D. 2012)
Wendian Shi, Electrical Engineering, Caltech (Ph.D. 2012)
Pablo Abad-Manterola, Mechanical Engineering, Caltech (Ph.D. 2011)
John Meier, Mechanical Engineering, Caltech (Ph.D. 2011)
Daegyoum Kim, Aeronautics, Caltech (Ph.D. 2010)
Jeff Krimmel, Mechanical Engineering, Caltech (Ph.D. 2010)
Philip DuToit, Control and Dynamical Systems, Caltech (Ph.D. 2009)
Jennifer Franck, Mechanical Engineering, Caltech (Ph.D. 2009)
Brian Kot, Ecology and Evolutionary Biology, UCLA (Ph.D. 2009)
Ben Lin, Bioengineering, Caltech (Ph.D. 2009)
Mike Liu, Bioengineering, Caltech (Ph.D. 2009)
Emily McDowell, Bioengineering, Caltech (Ph.D. 2009)
Gwyneth Card, Bioengineering, Caltech (Ph.D. 2008)
Derek Rinderknecht, Bioengineering, Caltech (Ph.D. 2008)
Kunihiko Taira, Mechanical Engineering, Caltech (Ph.D. 2008)
Laurence Loumes, Aeronautics, Caltech (Ph.D. 2007)
Shawn Shadden, Control and Dynamical Systems, Caltech (Ph.D. 2006)

Undergraduate Research Advisees

Kyra Phaychanpheng (2025, SURF)
Siddhartha Shendrikar (2024, SURF)
Giannka Garcia Picache (2023, WAVE)
Joonha Hwang (2023, SURF)
Shelby Madruga (2022, AMP)
Danna Xue (2018, SURI)
Hannah Williams (2018, SURI)
Kelyn Wood (2017 – 2018, SURI, SUPER)
Marina Dimitrov (2017, SURI)
Carrie von Muench (2016 – 2017)
Minh Ngo Duc (2016 – 2017, SURI)
Sara Berg-Love (2016 – 2017, SURI)
Claudia Brunner (2016)
Shalini Majumdar (2014)
Leslie Timms (2014)
Vivian Huang (2013 – 2014, SURF)
Nicole Xu (2013, SURF)
Kelsey Lucas (2013)
Aditya Bhattaru (2012)

Matthew Fu (2012, SURF, Senior Thesis, Mechanical Engineering)
Timea Kosztin (2012)
Katherine Taylor (2012, SURF)
Anna Craig (2011 – 2012, SURF, Senior Thesis, Applied Physics)
Megan Larisch (2011, SURF)
Quinn Mulligan (2011, SURF)
Brad Saund (2011, SURF)
Garrett Lewis (2010 – 2011, Senior Thesis, Applied Physics)
Joseph Laurenti (2010, SURF)
Caitlin Regan (2010, SURF)
Karthik Balakrishnan (2008 – 2009, Senior Thesis, Mechanical Engineering)
Brant Belson (2006, SURF)
Fei Yang (2008, SURF)
Zhonglin Zhang (2007 – 2008, Senior Thesis, Control and Dynamical Systems)

Professional Affiliations

American Association for the Advancement of Science
American Geophysical Union
American Institute for Aeronautics and Astronautics
American Physical Society
American Society of Mechanical Engineers
IEEE Engineering in Medicine and Biology Society
Sigma Xi National Research Honor Society
Society for Integrative and Comparative Biology
Tau Beta Pi National Engineering Honor Society