

MICHAEL MOTLEY, PH.D., P.E.

Curriculum Vitae

Department of Civil and Environmental Engineering
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EDUCATIONAL HISTORY

Princeton University, Princeton, NJ
Ph.D., Civil and Environmental Engineering, 2011
Dissertation: “Probabilistic design and analysis of self-adaptive composite marine structures”

Virginia Polytechnic Institute and State University, Blacksburg, VA
M.S., Civil Engineering, 2004
Thesis: “Finite element analysis of the application of synthetic fiber ropes to reduce blast response in frames”

The Citadel, Charleston, SC
B.S., Civil Engineering, 2003

EMPLOYMENT HISTORY

University of Washington, Department of Civil and Environmental Engineering
Seattle, WA, USA
John R. Kiely Associate Professor of Civil and Environmental Engineering, January 2021-Present
Associate Professor, September 2018 – December 2020
Assistant Professor, September 2012 – September 2018

University of Michigan, Department of Naval Architecture and Marine Engineering
Ann Arbor, MI, USA
Postdoctoral Fellow, June 2011 – August 2012

The LPA Group Incorporated
Tallahassee, FL, USA
Design Engineer, January 2005 – August 2007

AWARDS AND HONORS

John R. Kiely Associate Professorship in Civil Engineering, 2021
Best Paper, Ocean Renewable Energy Symposium, OMAE 2009

AFFILIATIONS AND OTHER APPOINTMENTS

None

PUBLICATIONS

All citations listed are from Google Scholar and are accurate as of 3/25/2023. Superscripts represent graduate students¹ and postdoctoral scholars².

Refereed archival journal publications

1. N. Lewis¹, A.O. Winter², J. Bonus, M.R. Motley, M.O. Eberhard, P. Arduino, and D.E. Lehman, “Open-Source Simulation of Strongly-Coupled Fluid-Structure Interaction between Non-conformal Interfaces”, *Frontiers in Built Environment*, in press, 2023. (0 Citations)
2. B. Terry¹, R. Wiebe, and M.R. Motley, “Interaction between Instabilities in Vertical-Axis Turbine Blades”, *Journal of Engineering Mechanics*, Vol. 149 (6), 04023028, 2023. (0 Citations)
3. N.S. Lewis¹, D.E. Lehman, M.R. Motley, P. Arduino, C.W. Roeder, and C.N. Pike, “Integrated Study of Existing Tsunami Design Standards”, *Journal of Structural Engineering*, Vol. 148 (12), 04022200, 2022. (0 Citations; Editor’s Choice, December 2022)
4. K. Tozato, S. Moriguchi, S. Takase, Y. Otake, M.R. Motley, A. Suppasri, and K. Terada, “Optimal probabilistic placement of facilities using a surrogate model for 3D tsunami simulations”, *Natural Hazards and Earth System Sciences Discussions*, pp. 1-28, 2022. (0 Citations)
5. M. Pregnolato, A.O. Winter², D. Mascarenas¹, A.D. Sen², P. Bates, and M.R. Motley, “Assessing flooding impact to riverine bridges: an integrated analysis”, *Natural Hazards and Earth System Sciences*, Vol. 22 (5), pp. 1559-1576, 2022. (8 citations)
6. E. Maly, K. Terada, R.J. LeVeque, N. Kuriyama, D.B. Abramson, L.T. Nguyen, A. Bostrom, J. Leon, M.R. Motley, P.A. Catalan, S. Koshimura, Y. Yamaguchi, C. Garrison-Laney, A. Suppasri, and E. Mas, “Advances of international collaboration on M9 disaster science: scientific session report”, *Journal of Disaster Research*, Vol. 15 (7), pp. 890-899, 2020. (2 Citations)
7. K. Shekhar, P. Arduino, G. Miller, A. Winter¹, M. Motley, M. Eberhard, M.S. Alam, P. Lomonaco, D. Cox, and A. Barbosa, “Conceptual Evaluation of Tsunami Debris Damming and Impact Forces”, *Journal of Port, Waterway, Coastal, and Ocean Engineering*, Vol. 146 (6), 04020039, 2020. (11 citations)
8. A.O. Winter¹, M.S. Alam, K. Shekhar, M.R. Motley, M.O. Eberhard, A.R. Barbosa, D.T. Cox, P. Lomonaco, and P. Arduino, “Tsunami-Like Wave Forces on an Elevated Coastal Structure: Shielding and Channeling Effects due to the Built Environment”, *Journal of Port, Waterway, Coastal, and Ocean Engineering*, Vol. 146 (4), 04020021, 2020. (22 citations)
9. M.S. Alam, A.O. Winter¹, G. Galant, K. Shekhar, M.R. Motley, A.R. Barbosa, M.O. Eberhard, D.T. Cox, P. Arduino, and P. Lomonaco, “Experimental Investigation of Lateral and Uplift Forces on an Elevated Structure Subjected to Tsunami-Like Waves”, *Journal of Port, Waterway, Coastal, and Ocean Engineering*, 146 (4), 04020006, 2019. (19 citations)
10. X. Qin¹, R.J. LeVeque, and M.R. Motley, “Accelerating an Adaptive Mesh Refinement Code for Depth-Averaged Flows using Graphics Processing Units (GPUs)”, *Journal of Advances in Modeling Earth Systems*, *Journal of Advances in Modeling Earth Systems*, Vol. 11 (8), pp. 2606-2628, 2019. (13 citations)
11. X. Qin,¹ M. Motley, R. LeVeque, F. Gonzalez, and K. Mueller², “A Comparison of a Two-Dimensional Depth Averaged Flow Model and a Three-Dimensional RANS Model for Predicting Tsunami Inundation and Fluid Forces”, *Natural Hazards and Earth System Sciences*, Accepted for Publication, 2018. (31 citations).
12. X. Qin¹, M.R. Motley, and N.A. Marafi, “Three-Dimensional Modeling of Tsunami Forces on Coastal Communities”, *Coastal Engineering*, Vol. 140, pp. 43-59, 2018. (30 citations).

13. P. Babuska¹, R.W. Wiebe, and M.R. Motley, “A Beam Finite Element for Analysis of Composite Beams with the Inclusion of Bend-Twist Coupling”, *Journal of Composite Structures*, Vol. 189, pp. 707-717, 2018. (9 citations)
14. M. Gear¹, M. Motley, S. Crofts, A. Witt, A. Summers, and P. Ditsche, “Mechanical properties of harbor seal skin and blubber – a test of anisotropy”, *Zoology*, Vol. 126, pp. 137-144, 2018. (14 citations)
15. A.O. Winter¹, M.R. Motley, and M.O. Eberhard, “Tsunami-like Wave Loading of Individual Bridge Components”, *Journal of Bridge Engineering*, Vol. 23, No. 2, 04017137, 2018. (23 Citations)
16. A. Grant, J. Wartman, C. Massey, M. Olsen, M. O’Banion, and M. Motley, “The Impact of Rockfalls on Dwellings During the 2011 Christchurch, New Zealand, Earthquake”, *Landslides*, Vol. 15, No. 1, pp. 31-42, 2018. (12 citations)
17. R.B. Barber¹, C.S. Hill, P.F. Babuska¹, R.W. Wiebe, A. Aliseda, and M.R. Motley, “Flume Scale Testing of an Adaptive Pitch Marine Turbine System”, *Composite Structures*, Vol. 168, pp. 465-473, 2017. (15 citations)
18. R.B. Barber¹ and M.R. Motley, “Cavitating Response of Passively Controlled Tidal Turbines”, *Journal of Fluids and Structures*, Vol. 66, pp. 462-475, 2016. (18 citations)
19. Y.L. Young, M.R. Motley, E.J. Chae, and R.B. Barber¹, “Adaptive Hydrodynamic Lifting Bodies: Current State-of-the-Art and Future Challenges”, *Applied Mechanics Review*, Vol. 68, No. 6, 2016. (86 citations)
20. M.R. Motley, H.K. Wong¹, X. Qin¹, A.O. Winter¹, and M.O. Eberhard, “Tsunami-Induced Forces on Skewed Bridges”, *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 2015, 04015025. (61 citations)
21. M.R. Motley, B.R. Savander, and Y.L. Young, “Influence of Spatially Varying Flow on the Dynamic Response of a Waterjet Inside an SES”, *International Journal of Rotating Machinery*, Article No. 275916, 2014. (6 citations)
22. M.R. Motley and R.B. Barber¹, “Passive Control of Marine Hydrokinetic Turbine Blades”, *Composite Structures*, Vol. 110, pp. 133-139, 2014. (51 citations)
23. M.R. Motley, M.R. Kramer, and Y.L. Young, “Free Surface and Solid Boundary Effects on the Free Vibration of Cantilevered Composite Plates”, *Composite Structures*, Vol. 96, pp. 365-375, February 2013. (44 citations)
24. M.R. Kramer, M.R. Motley, and Y.L. Young, “An Integrated Probability-Based Propulsor-Hull Matching Methodology,” *Journal of Offshore Mechanics and Arctic Engineering*, Vol. 135, No. 1, pp. 011801-1-8, February 2013. (9 citations)
25. E. Bachynski, M.R. Motley, and Y.L. Young, “Dynamic Hydroelastic Scaling of the Underwater Shock Response of Composite Marine Structures,” *Journal of Applied Mechanics*, Vol. 79, No. 1, pp. 014501.1-014501.7, 2012. (17 citations)
26. M.R. Motley and Y.L. Young, “Scaling of the Transient Hydroelastic Response and Failure Mechanisms of Self-Adaptive Composite Marine Propellers,” *International Journal of Rotating Machinery*, Article No. 632856, 2012. (16 citations)
27. M.R. Motley, M. Nelson, and Y.L. Young, “Integrated Probabilistic Design of Marine Propulsors to Minimize Lifetime Fuel Consumption,” *Ocean Engineering*, Vol. 45, pp. 1-8, May 2012. (42 citations)
28. M.R. Motley, Y.L. Young, and Z. Liu, “Three-Dimensional Underwater Shock Response of Composite Marine Structures,” *Journal of Applied Mechanics*, Vol. 78, No. 6, 061013, November 2011. (20 citations)
29. M.R. Motley and Y.L. Young, “Influence of Uncertainties on the Response and Reliability of Self-Adaptive Composite Rotors,” *Composite Structures*, Vol. 94, No. 1, pp. 114-120, 2011. (50 citations) **Note alternate title in 8 citations: “*Influence of design tolerance on the hydroelastic response of adaptive marine rotors.*”

30. M.R. Motley and Y.L. Young, "Performance-Based Design and Analysis of Flexible Composite Propulsors," *Journal of Fluids and Structures*, Vol. 27, No. 8, pp. 1310-1325, 2011. (95 citations)
31. Z. Liu, Y.L. Young, and M.R. Motley, "Transient Response of Partially-Bonded Sandwich Plates subject to Underwater Explosions," *Journal of Shock and Vibration*, Vol. 17, No. 3, pp. 233-250, 2010. (7 citations)
32. M.R. Motley and J.H. Prevost, "Simulation of transient heat conduction using one-dimensional mapped infinite elements," *International Journal of Numerical Methods in Engineering*, Vol. 83, No. 5, pp. 598-610, 2010. (6 citations)
33. Y.L. Young, J. Baker, and M.R. Motley, "Reliability-Based Design and Optimization of Adaptive Marine Structures," *Composite Structures*, Vol. 92, No. 2, pp. 244-253, 2010. (86 citations)
34. Y.L. Young, M.R. Motley, and R.W. Yeung, "Three-Dimensional Numerical Modeling of the Transient Fluid-Structural Interaction Response of Tidal Turbines," *Journal of Offshore Mechanics and Arctic Engineering*, Vol. 132, No. 1, pp. 011101-1-12, 2010. (76 citations)
35. M.R. Motley, Z. Liu, and Y.L. Young, "Utilizing Fluid-Structure Interactions to Improve Energy Efficiency of Composite Marine Propellers in Spatially Varying Wake," *Composite Structures*, Vol. 90, No. 3, pp. 304-313, 2009. (150 citations)
36. M.R. Motley and R.H. Plaut, "Application of Synthetic Fiber Ropes to Reduce Blast Response of a Portal Frame," *International Journal of Structural Stability and Dynamics*, Vol. 6, No. 4, pp. 513-526, 2006. (13 citations)
37. H. Kapoor, S. Chun, R.K. Kapania, M.R. Motley, and R.H. Plaut, "Nonlinear Response of Highly Flexible Structures to Air Blast Loads: Application Shelters," *AIAA Journal*, Vol. 44, No. 9, pp. 2034-2042, 2006. (5 citations)

Conference proceedings and other non-journal articles

Fully refereed publications

1. **D.P. Viero**, T. Lazzarin, S. Dazzi, M. Pregolato, A. Winter, M.R. Motley, P. Mignosa, F. Ballio, R. Vacondio, "Hydraulic Modelling for Bridge Vulnerability Analysis (in Italian)", ICIRBM-2022, University of Calabria, Italy, 2022. (0 Citations)
2. **J. Bonus**, P. Arduino, M. Motley, M. Eberhard, "Multi-scale numerical simulation of tsunami-driven debris-field impacts", PORTS '22, Honolulu, HI, September 2022. (0 Citations)
3. **D. Mascarenas**¹, M.R. Motley, M. Eberhard, P. Arduino, and A. Serrone¹, "Quantifying and understanding structural loading from wave-driven debris fields", PORTS '22, Honolulu, HI, September 2022. (0 Citations)
4. **A.O. Winter**² and M.R. Motley, "Development of a Fluid-Structure Interaction Model of an Oscillating Wave Surge Converter Using OpenFOAM", 39th International Conference on Ocean, Offshore, and Arctic Engineering, Fort Lauderdale, FL, May 2020. (1 Citation)
5. **M. Pregolato**, P. Bates, A.O. Winter², D. Mascarenas¹, A.D. Sen², and M.R. Motley, "An integrated impact analysis for riverine bridges subjected to high river flows", 10th International Conference on Bridge Maintenance, Safety, and Management, Sapporo, Japan, June 2020. (2 citations)
6. **M. Motley**, A. Winter¹, C. Gills¹, F. Gonzalez, M. Eberhard, R. LeVeque, X. Qin¹, "Multi-Scale and Probabilistic Modeling of Tsunami Forces on Structures", 11th National Conference on Earthquake Engineering (Refereed Extended Abstract), Los Angeles, CA, June 2018.
7. **M.T. Stephens**, A. Winter¹, M.R. Motley, and D.E. Lehman, "Comparing Seismic and Tsunami Load Demands on Reinforced Concrete and Concrete Filled Steel Tube Bridges", IABSE Symposium Report, Vol. 109, No. 61, International Association for Bridge and Structural Engineering, 2017. (3 citations)

8. **R.B. Barber**¹, C.S. Hill, P. Babuska¹, A. Aliseda, and M.R. Motley, “Performance of an Adaptive Pitch Marine Hydrokinetic Turbine in Turbulent Inflow”, 12th European Wave and Tidal Energy Conference, Cork, Ireland, September 2017. (1 citations)
9. **M.E. Grear**¹ and M.R. Motley, “Tidal Turbine Collision Assessment Using the Bulk and Shear Modulus of Marine Mammals’ Soft Tissue”, 12th European Wave and Tidal Energy Conference, Cork, Ireland, September 2017. (2 citations)
10. **R.B. Barber**¹ and M.R. Motley, “Adaptive Composites for Load Control in Marine Applications”, 36th International Conference on Ocean, Offshore, and Arctic Engineering, Trondheim, Norway, June 2017. (2 citations)
11. **X. Qin**¹, M.R. Motley, R.J. LeVeque, and F.I. González, “Multi-scale Modeling of a 500-year CSZ Tsunami Inundation with Constructed Environment”, 2017 International Workshop on Computing in Civil Engineering, Seattle, WA, June 2017. (3 citations)
12. **R.B. Barber**¹, C.S. Hill, P. Babuska, M. Somoano, A. Aliseda, R. Wiebe, and M.R. Motley, “Adaptive Pitch Marine Hydrokinetic Turbine Blades: Experimental Loading, Performance, and Wake Imaging”, 5th Annual Marine Energy Technology Symposium, Washington, DC, April 2017. (3 citations)
13. **R.B. Barber**¹ and M.R. Motley, “A Numerical Study of the Effect of Passive Control on Cavitation for Marine Hydrokinetic Turbines”, 11th European Wave and Tidal Energy Conference Series, Nantes, France, September 2015. (14 citations)
14. **M.E. Grear**¹ and M.R. Motley, “Numerical Modeling of the Impact Response of Tidal Devices and Marine Mammals”, 11th European Wave and Tidal Energy Conference Series, Nantes, France, September 2015. (3 citations)
15. M.R. Motley and **R.B. Barber**¹, “Passive Pitch Control of Horizontal Axis Marine Hydrokinetic Turbine Blades”, 33rd International Conference on Ocean, Offshore, and Arctic Engineering, San Francisco, CA, June 2014. (9 citations)
16. **D. Sale**, A. Aliseda, M.R. Motley, and Y. Li, “Structural Optimization of Composite Blades for Wind and Hydrokinetic Turbines”, 5th Global Marine Renewable Energy Conference, Washington, DC, April 2013. (22 citations)
17. **D.L. Witt**, M.R. Motley, D.P. Helfers, and Y.L. Young, “Analysis of Controllable Pitch Propellers for an All-Electric Naval Combatant”, 2012 SNAME Annual Meeting Student Papers, Providence, RI, October 2012. (0 citations)
18. **M.R. Motley**, Y.L. Young, and B.R. Savander, “Transient Hydroelastic Analysis of Pump Performance of an SES-Waterjet System,” 31st International Conference on Ocean, Offshore, and Arctic Engineering, Rio de Janeiro, Brazil, June 2012. (0 citations)
19. **Y.L. Young** and M.R. Motley, “Influence of Material and Loading Uncertainties on the Hydroelastic Performance of Advanced Marine Propellers,” 2nd International Symposium on Marine Propulsors, SMP’11, Hamburg, Germany, June 15-17, 2011. (19 citations)
20. **Y.L. Young** and M.R. Motley, “Influence of Uncertainties on the Reliability of Self-Adaptive Composite Rotors”, 16th International Conference on Composite Structures, ICCS16, Porto, Portugal, June 2011. (0 citations)
21. **M.R. Motley** and Y.L. Young, “Performance-Based Design of Adaptive Composite Marine Propellers,” 28th Symposium of Naval Hydrodynamics, Pasadena, CA, September 12-17, 2010. (21 citations)
22. **M.R. Kramer**, M.R. Motley, and Y.L. Young, “Probabilistic-Based Design of Waterjet Propulsors for Surface Effect Ships,” 29th American Towing Tank Conference, Annapolis, MD, August 11-13, 2010. (11 citations)
23. **M.R. Motley** and Y.L. Young, “Reliability-Based Global Design of Self-Adaptive Marine Rotors,” 7th International Symposium on Fluid-Structure Interactions, Flow-Sound Interactions, and Flow-Induced Vibration & Noise, Montreal, Canada, August 1-5, 2010. (8 citations)

24. **Y.L. Young** and M.R. Motley, “Rate-Dependent Hydroelastic Response of Self-Adaptive Composite Propellers in Fully Wetted and Cavitating Flows, CAV2009: 7th International Symposium on Cavitation, Ann Arbor, MI, August 16-22, 2009. (12 citations)
25. **M.R. Motley**, Y.L. Young, and J.W. Baker, “Reliability-Based Design and Optimization of Self-Twisting Composite Marine Rotors,” 28th International Conference on Ocean, Offshore and Arctic Engineering, Honolulu, Hawaii, May 31 – June 5, 2009. (6 citations)
26. **Y.L. Young**, M.R. Motley, and R.W. Yeung, “Hydroelastic Response of Wind or Tidal Turbines,” 28th International Conference on Ocean, Offshore and Arctic Engineering, Honolulu, Hawaii, May 31 – June 5, 2009. (17 citations, selected OMAE 2009 Best Paper of Ocean Renewable Energy Symposium).
27. **Y.L. Young**, Z. Liu, and M.R. Motley, “Influence of Material Anisotropy on the Hydroelastic Behaviors of Composite Marine Propellers,” 27th Symposium on Naval Hydrodynamics, Seoul, Korea, October 5-10, 2008. (34 citations)
28. Z. Liu, **Y.L. Young**, M.R. Motley, and W.F. Xie, “Transient Response of Submerged Composite Structures Subject to Underwater Explosions,” 27th Symposium on Naval Hydrodynamics, Seoul, Korea, Oct. 5-10, 2008. (4 citations)
29. **H. Kapoor**, S. Chun, R.K. Kapania, M.R. Motley, and R.H. Plaut, “Structural Response of Large, Flexible, Deployable Shelters to Blast Loads,” 46th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference, Austin, TX, April 18-21, 2005. (1 citation).

Refereed by abstract only

30. M. Pregolato, M.R. Motley, A.D. Sen², A.O. Winter², D.M. Mascarenas¹, “Assessing flooding impact to riverine bridges”, 8th International Conference on Flood Management, Iowa City, IA, August 2021. (0 Citations)
31. **P. Lomonaco**, M.S. Alam, P. Arduino, A. Barbosa, D.T. Cox, T. Do, M. Eberhard, M. Motley, K. Shekhar, T. Tomiczek, H. Park, J.W. van de Lindt, A. Winter¹, “Experimental Modeling of Wave Forces and Hydrodynamics on Elevated Coastal Structures Subject to Waves, Surge, or Tsunamis: The Effect of Breaking, Shielding, and Debris”, Coastal Engineering Proceedings, 36 (1), p. 53. (5 Citations)
32. **R.B. Barber**¹ and M.R. Motley, “Multi-Fidelity Modeling of Adaptive Marine Turbines”, poster presentation at METS2016, Washington, DC, April 2016. (0 citations)
33. **M.R. Motley**, G.I. Lemoine², and S.N. Livermore¹, “Three-Dimensional Loading Effects of Tsunamis on Bridge Superstructures”, Structures Congress 2014, Boston, MA, April 2014. (8 citations)
34. **Y.L. Young** and M.R. Motley, “Influence of Uncertainties on the Lifetime Reliability of Self-Adaptive Composite Rotors,” 18th International Conference on Composite Materials (ICCM18), Jeju Island, Korea, August 21-26, 2011. (0 citations)

Book Chapters

1. M. Pregolato, P. Bates, A.O. Winter², D. Mascarenas¹, A.D. Sen², and M.R. Motley, “An integrated impact analysis of riverine bridges subjected to high river flows”, *Bridge Maintenance, Safety, Management, Life-Cycle Sustainability and Innovations*, Eds. H. Yokota and D. Frangopol, CRC Press, 2021.
2. R.B. Barber¹ and M.R. Motley, “Marine Renewable Energy”, *Marine Composites: Design and Performance*, Eds. R. Pemberton, J. Summerscales, and J. Graham-Jones, Woodhead Publishing, 2018, pp. 345-362.

Other significant research dissemination

1. P. Arduino, K. Shekhar, M. Motley, A. Barbosa, P. Lomonaco, D. Cox, "NHERI Debris Impact Experiments Jupyter Notebook", DesignSafe-CI, <https://doi.org/10.17603/ds2-2y9x-qm74> v1, 2020.
2. M. Motley, M. Eberhard, P. Arduino, A. Winter¹, A. Barbosa, T. Maddux, K. Shekhar, and M. Alam, "Probabilistic Assessment of Tsunami Forces on Coastal Structures", DesignSafe-CI, <https://doi.org/10.17603/ds2-q2w5-0t48>, 2019.
3. K. Shekhar, M. Alam, P. Arduino, M. Motley, M. Eberhard, D. Cox, A. Barbosa, P. Lomonaco, A. Winter¹, "NHERI Debris Impact Experiments: DesignSafe-CI, <https://doi.org/10.17603/DS2T09V>, 2018.

MISCELLANEOUS

Outside Professional Work for Compensation (1460s)

None

OTHER SCHOLARLY ACTIVITY

Invited lectures and seminars

1. M.R. Motley, "Applicability of Bare Earth Models in the Assessment of the Built Environment during Inundation Events", National Academics COSEG Spring 2023 Meeting, May 11, 2023.
2. M.R. Motley, "Engineering a tsunami resilient coastline", University House Wallingford weekly speaker series, February 28, 2022.
3. D. Kilmer, D. Abramson, A. Bostrom, and M. Motley, "Mitigating Tsunami Risk on the Washington Coast", 2021 Daniel L. and Irma Evans Lecture, University of Washington, Seattle, WA, June 3, 2021.
4. M.R. Motley, "Experimental Investigation of Pressure and Force Distributions on Coastal Structures Subjected to Tsunami-like Wave and Debris Impacts", NHERI Workshop for Coastal Hazards Engineering, Corvallis, OR, July 20, 2017.
5. M.R. Motley, "OpenFOAM Modeling of Tsunami Wave Forces on Bridge Structures", Tsunami Pooled Fund Working Group #2, Corvallis, OR, July 21, 2016.
6. M.R. Motley, "OpenFOAM Modeling of Tsunami Wave Forces on Bridge Structures", ERDC FSI Workshop, Vicksburg, MS, April 14-15, 2016.
7. M.R. Motley, "OpenFOAM Modeling of Tsunami Forces on Coastal Structures", PEER Annual Meeting, Berkeley, CA, January 28, 2016.
8. J. Vidale, A. Frankel, J. Berman, and M. Motley, "Cascadia Megathrust Earthquakes: Reducing Risk through Science, Engineering, and Planning", opening keynote of SEAOC convention, Seattle, WA, September 10, 2015.
9. M.R. Motley and Y.L. Young, "Reliability-Based Global Design of Self-Adaptive Marine Rotors," SNAME Panel H-8 (Propulsor Hydrodynamics) Committee Meeting, West Bethesda, MD, May 26, 2010.
10. M.R. Motley and Y.L. Young, "Influence of Material Anisotropy on the Hydroelastic Behaviors of Composite Marine Propellers," SNAME Panel H-8 (Propulsor Hydrodynamics) Committee Meeting, Walpole, MA, October 22, 2008.

Presentations given at conferences

1. **N. Lewis**¹, M. Motley, D. Lehman, P. Arduino, M. Eberhard, “Fluid-Structure Interaction for Earthquake and Tsunami Resilience Analysis and Design”, 47th Annual Natural Hazards Research and Applications Workshop, July 2022.
2. **P. Arduino**, J. Bonus, M.R. Motley, and M.O. Eberhard, “Tsunami Driven Debris Effects on Structures using a Multi-GPU MPM Tool, *Mecanica Computacional*, 2021
3. **B. Terry**¹, R. Wiebe, and M. Motley, “Exploring the Interaction Between Different Instability Phenomena in Vertical Axis Turbine Blades”, EMI2022, Baltimore, MD, June 2022 (EMI Best Student Presentation).
4. **M.R. Motley**, “Experimental and Numerical Evaluation of Tsunami Loads on Vertical Evacuation Structures”, World Bosai Forum 2019, Sendai, Japan, November 2019.
5. **M.R. Motley**, M.O. Eberhard, A.O. Winter¹, “Component-level analysis of bridges structures under extreme wave loading”, Third International Bridge Seismic Workshop, Seattle, WA, October 2019.
6. **A.O. Winter**¹, M.R. Motley, and M.O. Eberhard, “Channeling and Shielding Effects on Wave Loading of Structures”, EMI2019, Pasadena, CA, June 2019.
7. **M.R. Motley**, M.O. Eberhard, A.O. Winter¹, “Three-Dimensional Loading on Tsunami Evacuation Structures in Dense Coastal Communities”, lightning round presentation at 2019 Structures Congress, Orlando, FL, April 2019.
8. A. Winter¹, M.R. Motley, and M.O. Eberhard, “Tsunami-like Wave Forces on an Elevated Coastal Structure: Effects of Flow Shielding and Channeling”, M9 Final Stakeholders Workshop, Seattle, WA, March 2019.
9. **X. Qin**¹, R.J. LeVeque, and M.R. Motley, “Acceleration Wave-Propagation Algorithms on Adaptive Mesh with the Graphics Processing Unit (GPU)”, poster presentation at CSDMS 2018, Boulder, CO, June 2018.
10. **X. Qin**¹, W. Zhang, M. Katz, M.R. Motley, R.J. LeVeque, and F.I. Gonzalez, “Accelerating Adaptive Mesh Refinement (AMR) with Thousands of GPUs”, poster presentation at GPU Technology Conferences 2018, San Jose, CA, March 2018.
11. **M. Grear**¹ and M. Motley, “Testing Marine Mammal Soft Tissue to Understand Injury Risk from Tidal Turbine Collision”, Ocean Sciences Meeting, Portland, OR, 2018.
12. **M. Grear**¹, M. Motley, and A. Summers, “Nonlinear Mechanics of Marine Mammal Skin”, Society for Integrative and Comparative Biology Annual Meeting, San Francisco, CA, 2018.
13. **X. Qin**¹, W. Zhang, M. Katz, M.R. Motley, R.J. LeVeque, and F.I. Gonzalez, “Accelerating Adaptive Mesh Refinement (AMR) with Thousands of GPUs”, Biennial Meeting of SIAM PNW 2017, Corvallis, OR, 2017.
14. **R.B. Barber**¹, C.S Hill, P.F. Babuska¹, R.W. Wiebe, A. Aliseda, and M.R. Motley, “Adaptive Pitch Marine Hydrokinetic Turbine Blades: Experimental Loading, Performance, and Wake Imaging”, 2017 Marine Energy Technology Symposium (METS), Washington, DC, May 2017.
15. **X. Qin**¹, M.R. Motley, R.J. LeVeque, and F.I. González, “Numerical Prediction of Water Level and Hydrodynamic Loads in Coastal Communities During a 500-year CSZ Tsunami”, poster presentation at 2017 SIAM Conference on Computational Science and Engineering, Atlanta, GA, March 2017.
16. **M.E. Grear**¹, M.R. Motley, and P. Ditsche, “Development of a Material Constitutive Model for Killer Whale and Harbor Porpoise”, Society of Integrative and Comparative Biology, New Orleans, LA, January 2017 (1 Citation).
17. **X. Qin**¹, M.R. Motley, R.J. LeVeque, and F.I. González, “Multi-scale Modeling of Tsunami Flows and Tsunami-Induced Forces”, poster presentation at 2016 AGU Fall Meeting, San Francisco, CA, December 2016.

18. **M.E. Grear**¹ and M.R. Motley, “Modeling Marine Mammal Tissue to Understand Tidal Turbine Collision”, Northwest National Marine Renewable Center Annual Meeting, Portland, OR, December 2016.
19. **A.O. Winter**¹, M.R. Motley, and M.O. Eberhard, “Tsunami-Induced Forces on Bridge Components”, EMI2016, Nashville, TN, May 2016.
20. **X. Qin**¹, M.R. Motley, R.J. LeVeque, and F.I. Gonzalez, “Community-scale multi-fidelity modeling of tsunami forces on coastal structures”, EMI2016, Nashville, TN, May 2016.
21. **M.E. Grear**¹ and M.R. Motley, “Experimental and numerical development of material constitutive properties for marine mammals”, EMI2016, Nashville, TN, May 2016.
22. **X. Qin**¹, M.R. Motley, R.J. LeVeque, and F.I. Gonzalez, “Community-scale multi-fidelity modeling of tsunami forces on coastal structures”, poster presentation at CSDMS conference, Boulder, CO, May 2016.
23. **M.J. Olsen**, M.S. O’Banion, P. Burns, J.W. Wartman, and M.R. Motley, “Ground-based LIDAR and Structure from Motion 3D data acquisition of rockfall-damaged homes in Christchurch”, poster presentation at Geotechnical and Structural Engineering Congress 2016, Phoenix, AZ, February 2016.
24. **M.R. Motley**, M.J. Olsen, J.W. Wartman, R.B. Barber¹, and A. Grant, “Assessment of Community-Scale Structural Resilience against Rockfall Impacts”, Lightning round presentation at Geotechnical and Structures Congress 2016, Phoenix, AZ, February 2016.
25. **M.E. Grear**¹, S. Crofts, A. Copping, M.R. Motley, A. Summers, and P. Ditsche, “Finite Element Material Model of Harbor Seals”, Society for Integrative and Comparative Biology Annual Meeting, Portland, OR, January 2016.
26. **R.J. LeVeque**, X. Qin¹, and M.R. Motley, “Comparison of 2D and 3D Numerical Models with Experiments of Tsunami Flow through a Built Environment”, poster presentation at 2015 AGU Fall Meeting, San Francisco, CA, December 2015.
27. **A. Grant**, J.W. Wartman, C. Massey, M.J. Olsen, M.R. Motley, D. Hanson, and J. Henderson, “Vulnerabilities to Rock-Slope Failure Impacts from Christchurch, NZ Case History Analysis”, poster presentation at 2015 AGU Fall Meeting, San Francisco, CA, December 2015. (1 Citation)
28. **M.E. Grear**¹ and M.R. Motley, “Marine Mammal and Tidal Turbine Collision”, INORE North American Symposium, Friday Harbor, WA, October 2015.
29. **R.B. Barber**¹ and M.R. Motley, “Cavitating Response of Passively Controlled Tidal Turbine Blades”, poster presented at 2015 INORE North American Symposium, Friday Harbor, WA, October 2015.
30. M.R. Motley, M.J. Olsen, C. Massey, J.W. Wartman, and **R.B. Barber**¹, “Structural Resilience to Post-Earthquake Rockfall Impacts in Christchurch, New Zealand”, poster presented at 2015 Structures Congress, Portland, OR, April 2015.
31. **K. Muller**² and M.R. Motley, “FEM Modelling of the Fluid-Air-Structure Interaction of a Tsunami Impact on a Bridge Superstructure”, 2015 Structures Congress, Portland, OR, April 2015.
32. **R.B. Barber**¹ and M.R. Motley, “Passive Pitch Control in Marine Hydrokinetic Turbine Blades”, poster presented at 2014 INORE North American Symposium, Halifax, NS, Canada, November 2014.
33. **M.R. Motley** and S.N. Livermore¹, “Effects of Material Uncertainties on the Shock Response of Sandwich Composites”, 17th International Conference on Composite Structures, Porto, Portugal, June 2013.
34. **Y.L. Young** and M.R. Motley, “Scaling of the Dynamic Response and Failure Mechanisms of Self-Adaptive Composite Rotors,” 17th International Conference on Composite Structures, Porto, Portugal, June 2013.
35. **M. Nelson**, M.R. Motley, and Y.L. Young, “Integrated Design of Naval Propulsion System to Reduce Lifetime Fuel Consumption”, NEEC Summer Meeting, 2011.

36. **Y.L. Young**, Z. Liu, M.R. Motley, and W.F. Xie, “Numerical Investigation of Shock and Blast Loads on Composite Marine Structures”, 2nd Canada France Congress, Modeling Fluid-Structure Interaction in Naval Architecture Mini-symposium, Montreal, Canada, June 1-5, 2008.

Certifications

Professional Engineer, Washington, Certification No. 51588

Reviewer for Journals

Civil Engineering Infrastructure	Journal of Disaster Research
Composite Structures	Journal of Marine Science and Application
Computers and Fluids	Journal of Marine Science and Engineering
Energies	Journal of Marine Sciences and Technology
Journal of Bridge Engineering	Journal of Process Mechanical Engineering
Journal of Fluids and Structures	Journal of Waterway, Port, Coastal, and Ocean Engineering
Journal of Offshore Mechanics and Arctic Engineering	
Ocean Engineering	
Earthquake Spectra	
International Journal of Marine Energy	
International Journal of Steel Structures	

Reviewer for Proposals

National Science Foundation	UW Royalty Research Foundation
Technology Foundation STW	TEAMER

Professional Society Memberships

Structural Engineering Institute, 2013-2020
American Society of Civil Engineers, 2013-2020
American Society of Mechanical Engineers, 2014-2015

STUDENT SUPERVISION

Chaired Doctoral Students

Student Name	Dissertation Topic/Title	Completed	Current Employer
Ramona Barber	Adaptive Pitch Composite Blades for Axial-Flow Marine Hydrokinetic Turbines	Spring 2017	Glosten (Seattle, WA)
Molly Gear	Characterization of Marine Mammal Biomechanics to Evaluate Tidal Turbine Collision Impact	Spring 2018	PNNL (Seattle, WA)
Xinsheng Qin	Efficient Tsunami Simulation at Local and Global Scales	Summer 2019	Waymo (San Francisco, CA)
Andrew Winter (Co-Chair with Marc Eberhard)	Effects of Flow Shielding and Channeling on Tsunami-Induced Loading of Coastal Structures	Summer 2019	Siemens (Bellevue, WA)

Current Doctoral Students

Student Name	Dissertation Topic/Title	Status
Nicolette Lewis (Co-Chair with Dawn Lehman, Marc Eberhard)	Tsunami Loading on Vertical Evacuation Structures	General exam completed, anticipated degree Summer 2023
Abbey Serrone	Lahar Loading on the Built Environment	First-year

Chaired Masters Students

Student Name	Level of Supervision	Thesis/Paper Title	Completed (Year)	Current Employer
Madeline Riddle	MSCE Thesis	CFD Modeling of an Oscillating Wave Surge Converter using the Overset Grid Method	2022	SRF Consulting (Minneapolis, MN)
Benjamin Terry (Co-chair with Richard Wiebe)	MSCE Thesis	Interaction between Instabilities in Vertical Axis Turbine Blades	2022	Degenkolb (Seattle, WA)
Dakota Mascarenas (Co-chair with Marc Eberhard)	MSCE Thesis	Experimental Evaluation of Loads from Inundation-Driven Debris Fields	2022	Ph.D. student in CEE H&H
Cassidy Gills (Co-chair with Marc Eberhard)	MSCE Thesis	Experimental and Numerical Validation of Three-Dimensional Tsunami Wave Pressures and Forces on an Elevated Structure	2018	AbleTo (Boulder, CO)
Pavel Babuska (Co-chair with Richard Wiebe)	MSCE Thesis	Bend-Twist Coupled Carbon-Fiber Laminate Beams: Fundamental Behavior and Applications	2017	The Aerospace Corporation (Pasadena, CA)
Hin Kei Wong (Co-chair with Marc Eberhard)	MSCE Thesis	Three-Dimensional Modeling of Tsunami-Structure Interaction Problems	2015	Brienen Structural Engineering (Kent, WA)
Ramona Barber	MSCE Thesis	Passive Pitch Control in Marine Hydrokinetic Turbine Blades	2014	Glosten (Seattle, WA)
Spencer Livermore (Co-chair with Marc Eberhard)	MSCE Thesis	Analysis of Tsunami Design Codes and Recommendations for Bridges Susceptible to Tsunami Inundation	2014	Walter P. Moore (Dallas, TX)

Current Masters Students

Student Name	Dissertation Topic/Title	Status
Tony Clay (Co-Chair with Richard Wiebe)	Structural Dynamics of a Vertical Axis Tidal Turbine	Anticipated completion Summer 2023

Other Supervision

Name	Level of Supervision	Dates	Current Employer
Kaspar Müller	Valle Exchange Advisor	2014-2015	PhD Student at ETH
Grady Lemoine	Postdoctoral Research	2013-2014	CD-Adapco, Bellevue, WA
Andrew Sen	Postdoctoral Research	2019-2020	Marquette University
Andrew Winter	Postdoctoral Research	2019-2020	Siemens
Michael Wood	Undergraduate Research	2020	UW
Abbey Serrone	Undergraduate Research	2021	UW
Haley Herberg	Undergraduate Research	2021	UW
Astrid Bowden	Undergraduate Research	2023	UW

Membership on Degree Committees

Student Name	Degree	Date
Justin Bonus	PhD	2023 (Expected)
Katherine Van Ness	PhD	2022
Kamal Ahmed	PhD	2021
Ann Albright	MSCE	2021
Jacob Chekhal	MSCE	2021
Kristinn Bjarnason	MSCE	2020
Ken Sullivan	MSCE	2020
Christopher Pyke	MSCE	2020
Anne Magnus	MSCE	2019
Tyler Van Iderstein	MSCE	2018
Chi-Pu Lin	MSCE	2017
Donsub Rim (GSR)	PhD	2017
Zach Whitman	MSCE	2015
Travis Thonstad	MSCE	2013
Patricia Clayton	PhD	2013

RESEARCH ACTIVITIES

Funded Research

Funding Agency	Title	Role	Total Amount; My Amount	Dates
City of Fife, WA	Fife City Hall and Vertical Evacuation Structure and Evacuation Planning	PI	Total amount: \$8k My amount \$8k <i>(represents remaining funds from industry capstone course)</i>	3/2023-6/2023
NSF	<i>NHERI Computational Modeling and Simulation Center 2021-2025</i>	Senior Personnel (PI: DeJong, UC-Berkeley; Co-PIs: Kareem, Notre Dame; Deierlein, Stanford; Lowes, UW; Rao, Govindjee, UC-Berkeley)	Total amount: \$12.750M My amount: ~\$150k	10/2021-9/2025
DOE (ARPA-E SHARKS)	<i>Confinement-Exploiting Cross-flow Turbine Arrays</i>	Co-PI (PI: Polagye, UW, co-PIs: Brunton, Williams, Johnson, Wiebe (UW); Blackman, Jenne (NREL), Franck (Wisconsin))	Total amount: \$2M My amount: ~\$200k	6/2021-5/2024
NSF	<i>Understanding and Quantifying Structural Loading from Tsunami-Induced Debris Fields</i>	PI (co-PIs: Arduino, Eberhard, Miller; all UW)	Total amount: \$691k My amount: ~\$450k	9/2019-8/2022
NAVFAC	<i>Marine and Hydrokinetic Energy Advancement for Naval Facilities: Part 3</i>	PI for Sub-Award	Total amount: \$369k My amount: \$369k	5/2018-4/2021
NAVSEA	<i>Additional Tasking for ARL/HNEI Wave Energy Test Site (WETS) Research</i>	PI (co-PI: Polagye, UW)	Total amount: \$100k My amount: \$50k	12/2017-8/2019
UW (COE)	<i>Strategic Instruction Initiative: Multidisciplinary Arduino Project-Based Learning in Early Engineering Education</i>	Faculty Team (w/ K. Morgansen; D. Dabiri; A. Davidson; J. Hermanson; C. Lum; I. Shen, all UW)	Total amount: \$25k/yr My amount: N/A	9/2017-8/2018
NSF	<i>Novel Design and Modeling Approaches for Vertical Evacuation Structures Subjected to Sequential Hazard Loading</i>	Co-PI (PI: D. Lehman; Co-PIs: P. Arduino, C. Roeder, all UW)	Total amount: \$1.007M My amount: ~\$275k	9/2017-8/2020

NAVFAC	<i>Marine and Hydrokinetic Energy Advancement for Naval Facilities: Part 2</i>	PI for Sub-Award	Total amount: \$260k My amount: \$260k	10/2016 -9/2019
NSF	<i>NHERI Computational Modeling and Simulation Center</i>	Senior Personnel (PI: Mahin, UC-Berkeley; Co-PIs: Kareem, Notre Dame; Deierlein, Stanford; Lowes, UW; Crittendon, UC-Berkeley)	Total amount: \$10.9M My amount: ~\$60k	3/2016-2/2021
NSF	<i>A Framework for Probabilistic Tsunami Hazard Assessment of Forces on Coastal Structures</i>	PI (Co-PIs: LeVeque, UW; González, UW)	Total amount: \$300k My amount: ~\$277k	10/2015 -9/2018
NSF	<i>MRI: Acquisition of a 3D X-Ray Computed Tomography Scanner for Imaging of Large Size Infrastructure, Biological, and Mechanical Components</i>	Project Personnel (PI: Berman, UW. Co-PIs: Kramer; Khbeis; Storti; Yang, all UW)	Total amount: \$988k My amount: N/A	8/2014-7/2017
NSF	<i>RAPID: Rockfall Impacts on Structures: High Resolution Data Acquisition, Visualization, and Analyses</i>	Co-PI (PI: Wartman, UW)	Total amount: \$85k My amount: ~\$42k	5/2014-4/2015
NSF	<i>Hazard SEES Type 2: Magnitude 9 Earthquake Scenarios – Probabilistic Modeling, Warnings, Response, and Resilience</i>	Senior Researcher; (PI: Vidale, UW. Co-PIs: Duvall; Abramson; Bostrom; Berman, all UW)	Total amount: \$3M My amount: ~\$100k	9/2013 – 8/2017
NSF	<i>NEESR Planning: Simulation and Design Tools for Tsunami Bridge Engineering</i>	PI (Co-PIs: Eberhard, UW; Arduino, UW)	Total amount: \$315k My amount: ~\$150k	10/2013 – 9/2016
UW (RRF)	<i>Performance-Based Strength Design and Analysis of Horizontal Axis Marine Turbines</i>	PI	Total amount: \$37k My amount: \$37k	3/2013 – Present
Totals	<i>16 Funded Projects</i>		Total: ~\$32.84M My amount: ~\$2.43M	

Pending Proposals

Funding Agency	Title	Role	Total Amount; My Amount,	Dates
RRF	<i>Quantifying Lahar-Type Flow Effects on the Built Environment within Puget Sound</i>	PI	Total amount: ~\$40k My amount: \$40k	9/2022- 8/2025

DOCUMENTATION OF TEACHING EFFECTIVENESS

Courses Taught & Student Evaluations (scores shown are adjusted median scores)

Course	Title	Quarter	Credit Hrs	Enrollment	Evaluations? Response	Item 1	Item 3	Item 4	Avg of Items 1-4
CEE 377	Intro to Structural Design	Winter 2023	5	41	Yes, 15/41	3.7	3.6	4.1	3.8
CEE 377	Intro to Structural Design	Autumn 2022	5	46	Yes, 14/46	4.9	4.9	5.0	4.9
CEE 377	Intro to Structural Design	Winter 2022	5	59	Yes, 24/59	4.3	4.5	4.5	4.4
CEE 220	Intro to Mechanics of Materials	Autumn 2021	4	80	Yes, 26/80	4.6	5.0	5.0	4.8
CEE 377	Intro to Structural Design	Autumn 2021	5	60	Yes, 22/60	4.3	4.8	4.5	4.5
CEE 500	CEE Seminar	Spring 2021	1	19	Yes, 3/19	3.3	3.3	3.3	3.3
CEE 442	Str/Geo Capstone (co-instructor)	Spring 2021	5	45	Yes, 7/45	4.6	4.8	4.6	4.7
CEE 377	Intro to Structural Design	Winter 2021	5	56	Yes, 21/56	3.6	3.9	3.8	3.7
CEE 377	Intro to Structural Design	Autumn 2020	5	70	Yes, 16/70	4.9	5.1	5.1	5.0
CEE 451	Design of Metal Structures	Autumn 2020	4	51	Yes, 18/51	4.2	4.5	4.3	4.3
CEE 504	Finite Element Methods	Spring 2020	4	42	Yes, 23/42	4.1	4.3	4.3	4.3
CEE 457	Structural Analysis I	Winter 2020	3	33	Yes, 17/33	4.2	4.8	4.6	4.3
CEE 377	Intro to Structural Design	Autumn 2019	5	79	Yes, 69/79	4.6	5.0	4.7	4.7

CESG 504	Finite Element Methods	Spring 2019	4	50	Yes, 27/50	4.4	4.6	4.5	4.5
CEE 457	Structural Analysis I	Winter 2019	3	34	Yes, 21/34	4.3	4.9	4.5	4.5
CEE 377	Intro to Structural Design	Autumn 2018	5	71	Yes, 29/71	4.6	4.9	4.5	4.6
CESG 504	Finite Element Methods	Spring 2018	3	17	Yes, 11/17	4.3	4.5	4.8	4.5
CEE 457	Structural Analysis I	Winter 2018	3	42	Yes, 35/42	4.0	4.1	4.0	4.0
CEE 377	Intro to Structural Design	Autumn 2017	5	68	Yes, 63/68	4.2	4.4	4.2	4.3
CEE 504	Finite Element Methods	Spring 2017	3	29	Yes, 24/29	4.4	4.8	4.8	4.6
CEE 507	Structural Stability	Winter 2017	3	18	Yes, 16/18	4.4	4.8	4.4	4.4
CEE 220	Mech. of Materials	Autumn 2016	4	77	Yes, 45/76	4.3	4.6	4.4	4.4
CEE 504	Finite Element Methods	Spring 2016	3	43	Yes, 37/43	4.2	4.5	4.3	4.3
CEE 456	Structural Analysis I	Spring 2016	5	79	Yes, 58/79	4.8	5.0	5.0	4.9
CEE 507	Structural Stability	Winter 2016	3	27	Yes, 21/27	4.4	4.7	4.6	4.4
CEE 504	Finite Element Methods	Spring 2015	3	43	Yes, 35/43	4.2	4.4	4.2	4.2
CEE 456	Structural Analysis I	Spring 2015	5	80	Yes, 65/80	4.8	4.8	4.9	4.8
CEE 599	Structural Stability	Winter 2015	3	28	Yes, 24/28	4.3	4.7	4.6	4.5
CEE 456	Structural Analysis I	Spring 2014	5	73	Yes, 50/73	4.6	4.7	4.6	4.6
CEE 504	Finite Element Methods	Winter 2014	3	43	Yes, 32/43	4.3	4.6	4.3	4.4
CEE 504	Finite Element Methods	Winter 2013	3	41	Yes, 32/41	3.9	4.0	3.5	3.8
CEE 451	Design of Metal Structures	Autumn 2012	3	51	Yes, 36/51	4.6	4.6	4.7	4.6

Peer Teaching Evaluations

Course	Quarter	Reviewer
CEE 451	Autumn 2012	Charles Roeder
CEE 456	Spring 2014	Jeff Berman
CEE 504	Spring 2015	Pedro Arduino
CEE 456	Spring 2016	Laura Lowes
CESG 504	Spring 2017	Marc Eberhard
CESG 504	Spring 2020	Laura Lowes
CEE 377	Winter 2022	Jeff Berman
CEE 377	Winter 2023	Jeff Berman

Supervision of Independent Study

Course	Title or Student Name	Quarter	# of Students (Total Credit Hrs)
CEE 499	Richard Punt – FEM coding	Spring 2017	1 (3)
CEE 499	Tsunami loading of structures	Winter 2017	1 (3)
CEE 499	Rockfall impacts in Christchurch	Spring 2015	2 (3)

SERVICE

Departmental service

- Associate Chair for Online Education (2020-2022)
- CEE Faculty Search Chair – Structures (2020)
- CEE Faculty Search Executive Committee – Transportation (2013)
- CEE Faculty Search Executive Committee – Construction (2013)
- CEE Faculty Search Executive Committee – Structures (2014)
- CEE Faculty Search Executive Committee – Geotechnical (2016)
- CEE Faculty Search Executive Committee – Hydrology and Hydrodynamics (2016)
- CEE Faculty Search Executive Committee – Department Wide (2021)
- CEE Graduate Education Committee (2013-2015, 2016-2018; Chair, 2016-17)
- CEE Faculty Affairs Committee (2015-2016)
- CEE Departmental and Faculty Affairs Committee (2018-2020)
- CEE Undergraduate Education Committee (2022-Present)
- CEE Ad Hoc Committee on Faculty Performance (2020-2021)
- CEE Structures Program Graduate Program Coordinator (2015-2018)
- CEE Structures Program Lead (2018-2021)
- SEAW Student Chapter Faculty Advisor (2015-Present)

College of Engineering Service

- Volunteer Mentor, Washington State Academic Redshirt (STARS) program, 2017-2018
- Member, Direct to College Admissions Subcommittee, 2019-2020
- Member, College Council (CEE Representative), 2022-Present

Professional society and other service

- Chair, ASCE/SEI Advances in Simulation Committee, 2019-2021
- Vice Chair, ASCE/SEI Advances in Simulation Committee, 2017-2019
- Secretary, ASCE/SEI Advances in Simulation Committee, 2016
- Conference session organizer (with Michael Scott, Oregon State University), “Tsunami Structure Interaction”, 2015 Structures Congress, Portland, OR, April 2015.
- Completed one promotion review case for a faculty member at a peer institution, 2022.

National Service

- Associate Member, ASCE 7-22 Tsunami Loads and Effects Subcommittee
- Volunteer advisor, Tsunami Design Guide Specifications for Bridges (Pooled Fund Project), Working Group 2: Tsunami Loading of Bridges, 2016-2019