RESUME – Nigel Berkeley Kaye

PERSONAL DATA

Professor
Glenn Department of Civil Engineering
School of Civil & Environmental Engineering & Earth Sciences
Clemson University
Clemson, SC 29634
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U.S. permanent resident (green card holder),
British and Australian citizen

EDUCATION

Ph.D., Cambridge University, 1998, Environmental Fluid Mechanics (Department of Applied Mathematics and Theoretical Physics).
B. Eng., University of New South Wales, 1994, Mechanical Engineering

PROFESSIONAL EXPERIENCE

Full-time appointments

Clemson University, 2023-present, Civil Engineering Undergraduate Program Director
Clemson University, 2019-Present, Professor of Civil Engineering
Clemson University, 2013-2019, Associate Professor of Civil Engineering
Clemson University, 2007-2013, Assistant Professor in Civil Engineering
Clemson University, 2006-2007, Lecturer in Civil Engineering
Imperial College London, 2002-2006, Post-Doctoral Research Associate
Community of Science, 1999-2002, Vice President and Director of Operations

Other appointments

Victoria University, Australia, 8/2023-present, Adjunct Professor, Institute for Sustainable Industries and Liveable Cities.
University of Sydney, Australia, 12/2016-5/2017, Visiting Researcher in the School of Aerospace, Mechanical and Mechatronic Engineering
University of Wollongong, Australia, 12/2016-5-2017, Visiting Principal Fellow at the Sustainable Buildings Research Center.

MEMBERSHIPS

Member, American Society of Civil Engineers, ASCE (2007 – Present)
Member, American Association for Wind Engineering, AAWE (2012 – Present)
Member, International Association for Fire Safety Science (2016 – Present) ‘
Member, American Society for Engineering Education (2023-Present)

HONORS AND AWARDS

1. Outstanding Teacher of the Year for 2021-22, Glenn Department of Civil Engineering

2. Robert Alfred Carr Prize, Institution of Civil Engineers (2021)
3. Outstanding Teacher of the Year for 2019-20, Glenn Department of Civil Engineering
4. Telford Medal for the best publication of 2013 in Proceedings of the Institution of Civil Engineers (2014)
5. Commonwealth Scholar, Commonwealth Scholarship Fellowship Plan (1994-97)
6. Cambridge Commonwealth Trust Scholar (Honorary) (1994-97)
7. External Research Studentship, Trinity College, Cambridge (Honorary) (1994-97)
8. Institution of Engineers Australia Graduate Award, Mechanical (1994)
9. University Medal (Mechanical Engineering), University of New South Wales (1994)

PUBLICATIONS

Google Scholar H-Index: 27

ResearchGate H-Index: 26

Refereed Journal Publications

1. Akhter, R. & Kaye, N. B., "Measurements of Wake Concentration from the Continuous Release of a Dense Fluid Upstream of a Cubic Obstacle" Fluids **10**(2) 46 (2025) https://doi.org/10.3390/fluids10020046

2. Al-Bashiti, M.K., Nguyen, D., Naser, M.Z., & Kaye, N.B. "Predicting Wildfire Ember Hot-Spots on Gable Roofs via Deep Learning." *Fire*, **7**(5), 153. (2024) https://doi.org/10.3390/fire7050153

3. Alnahit, A. O., Kaye, N. B., & Khan, A. A." Understanding the Influence of Buoyancy Sign on Buoyancy-Driven Particle Clouds" *Fluids* **9**(5): 101. (2024) https://doi.org/10.3390/fluids9050101

4. Piminchumo Sausa, A. R., Li, S., Kaye, N. B., & Flynn, M. R. "The coalescence of adjacent turbulent plumes in a stratified and unstratified environment" *Environmental Fluid Mechanics* (2023). https://doi.org/10.1007/s10652-023-09952-y

5. Martin, W. D., & Kaye, N. B. "Modeling of the hydrologic performance of distributed LID stormwater under a changing climate: Municipal scale performance improvements" A.S.C.E. Journal of Sustainable Water in the Built Environment (2023) https://doi.org/10.1061/JSWBAY.SWENG-477

6. Van Valkinburgh, K., Nafchi, A. M., Mousavi, E. Blouin, V., Kaye, N. & Metcalf, A, R., "Assessing Mitigation Strategies to Reduce Potential Exposures to Indoor Particle Release Events" Aerosol and Air Quality Research **22**(9), (2022) https://doi.org/10.4209/aaqr.220054

7. Nguyen, D. & Kaye, N. B. "The role of surrounding buildings on the accumulation of embers on rooftops during an ember storm" Fire Safety Journal **131,** (2022) https://doi.org/10.1016/j.firesaf.2022.103624

8. Sharmin, R., Martin, W. D., & Kaye, N. B. "Hydrologic performance of distributed LID stormwater infrastructure on land developments under a changing climate: Site scale performance improvements" A.S.C.E. Journal of Irrigation & Drainage Engineering **148**(7), (2022) https://doi.org/10.1061/(ASCE)IR.1943-4774.0001684

9. Kaye, N. B., Robinson, D. M., Akhter, R., Ahsanullah, Md. S., Jordan, T. A., & Martinez, O. E. "The transition of a line plume to round plume" Environmental Fluid Mechanics **22**(4), pp. 763–787 (2022) https://doi.org/10.1007/s10652-022-09852-7

10. Kaye, N. B., & Ogle, J. "Overcoming Misconceptions and Enhancing Student's Physical Understanding of Civil and Environmental Engineering Fluid Mechanics" Physics of Fluids **34**(4) (2022) https://doi.org/10.1063/5.0083993

11. Nguyen, D. & Kaye, N. B. "Quantification of ember accumulation on the rooftops of isolated buildings in an ember storm" Fire Safety Journal **128** (2022) https://doi.org/10.1016/j.firesaf.2022.103525

12. J. Gonzalez & N. B. Kaye "An entrainment model for air curtain effectiveness" *Building & Environment*, **208** (2022) https://doi.org/10.1016/j.buildenv.2021.108576

13. Mohammadi Nafchi, A.; Blouin, V.; Kaye, N.; Metcalf, A.; Van Valkinburgh, K. & Mousavi, E. "Room HVAC Influences on the Removal of Airborne Particulate Matter: Implications for School Reopening during the COVID-19 Pandemic" *Energies,* **14** (2021) https://doi.org/10.3390/en14227463

14. Ahsanullah, M. S., Kaye, N. B., & Bridges, W. C. "A stochastic model for the aerodynamics of irregularly shaped gravel" *Journal of Wind Engineering and Industrial Aerodynamics* **218** (2021) https://doi.org/10.1016/j.jweia.2021.104782

15. Nguyen, D. & Kaye, N. B. "Experimental investigation of rooftop hotspots during wildfire ember storms" Fire Safety Journal **125** (2021) https://doi.org/10.1016/j.firesaf.2021.103445

16. Philips, R. C., Kaye, N. B., & Saylor, J. R. "A multi-reservoir study of the impact of uncertainty in pool evaporation estimates on water availability models" *Journal of South Carolina Water Resources* **7**(1) article 5 (2021) https://doi.org/10.34068/JSCWR.07.03

17. Afrin, T., Kaye, N. B., & Khan, A. A. "Numerical investigation of rectangular pipe free overfall for various upstream" *A.S.C.E. Journal of Hydraulic Engineering*, 147(9): 04021030 (2021) https://doi.org/10.1061/(ASCE)HY.1943-7900.0001906

18. Kaye N. B., Williamson, N., Huang, D. & Armfield, S.W. "Buoyancy distribution in a filling box segmented by a planar jet" Environmental Fluid Mechanics **21** pp. 239—261 (2021) https://doi.org//10.1007/s10652-020-09768-0

19. Martin, W. D., Kaye, N. B. "A simple method for sizing modular green-blue roof systems for design storm peak discharge reduction" *SN Applied Sciences* **2**(11) 1874 (2020) https://doi.org/10.1007/s42452-020-03725-8 .

20. Akhter, R. & Kaye, N. B. "Experimental investigation of a line plume in a filling box" Environmental Fluid Mechanics **20** pp. 1579—1601 (2020) https://doi.org/10.1007/s10652-020-09754-6. (***Top 5 most downloaded papers of 2020***)

21. Martin, W. D., Kaye, N. B., & Mohammadi, S. "A physics-based routing model for modular green roof systems" Proceedings of ICE – Water Management **173**(3), pp. 142-151, (2020). https://doi.org/10.1680/jwama.18.00094 ***Winner of the 2021 Institution of Civil Engineers Robert Alfred Carr Prize.***

22. Hodges, Jonathan, Saylor, J. R., and Kaye, Nigel "A Comparison of the Diurnal Variation in Lake Surface Temperature for the Five Major Lakes of the Savannah River Basin," *Journal of South Carolina Water Resources*: **6**(1), pp. 18-27, (2020).

23. Green, A. & Kaye, N. B. "On the use of sprays to intercept airborne embers during wildfires" *Fire Safety Journal* **108** https://doi.org/10.1016/j.firesaf.2019.102842 (2019)

24. Linvill, D., Tallapragada, M., & Kaye, N. B. "Engineering identity and communication outcomes: Comparing integrated engineering and traditional public speaking courses" *Communication Education*, 68(3) pp. 308—327 doi:10.1080/03634523.2019.1608367 (2019)

25. Kaye, N. B & Cooper, P. "Source and boundary condition effects on unconfined and confined vertically distributed turbulent plumes" *Journal of Fluid Mechanics* **850** pp. 1032-1065 (2018)

26. Kaye, N. B. & Baratain-Ghorghi, Z. "The role of ambient turbulence in dense gas dispersion from confined urban regions" *A.S.C.E. Journal of Hydraulic Engineering* **144**(2) (2018)

27. Tohidi, A. & Kaye, N. B. "Stochastic Modeling of Firebrand Shower Scenarios" *Fire Safety Journal* **91** pp. 91-102 (2017)

28. Tohidi, A. & Kaye, N. B. "Aerodynamic characterization of rod-like debris with application to firebrand transport" *Journal of Wind Engineering and Industrial Aerodynamics* **168** pp. 297-311 (2017)

29. Tohidi, A. & Kaye, N. B. "Comprehensive wind tunnel experiments of lofting and downwind transport of non-combusting rod-like model firebrands during firebrand shower scenarios" *Fire Safety Journal* **90** pp. 95-111 (2017) – ***Editor-in-Chief's Featured Article for June 2017.***

30. Afrin T., Kaye, N. B., Khan, A. A., & Testik, F. Y. "Numerical investigation of free overfall from a circular pipe flowing full upstream" *A.S.C.E. Journal of Hydraulic Engineering* **143**(6) (2017).

31. Afrin T., Kaye, N. B., Khan, A. A., & Testik, F. Y. "A parametric study of perforated pipe underdrains surrounded by loose aggregate" *A.S.C.E. Journal of Hydraulic Engineering* **142**(12) (2016).

32. Hodges, J., Saylor, J. R., & Kaye, N. B. "A functional form for the diurnal variation of lake surface temperature on Lake Hartwell, northwestern South Carolina" *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* **9**(8) pp. 3564—3577 (2016).

33. Philips, R., Saylor, J. R., Kaye, N. B., & Gibert, J. M. "A multi-lake study of seasonal variation in lake surface evaporation using MODIS satellite derived surface temperature" *Limnology* **17**(3) pp. 273—289 (2016).

34. Afrin, T., Khan, A. A., Kaye, N. B., & Testik, F. Y. "Numerical Model for the Hydraulic Performance of Perforated Pipe Under-Drains Surrounded by Loose Aggregate" *A.S.C.E. Journal of Hydraulic Engineering* **142**(8) (2016).

35. West, D., Kaye, N. B., Putman, B. J., & Clark, R. "Quantifying the non-linear hydraulic behavior of pervious concrete" *ASTM Journal of Testing and Evaluation* **44**(6) (2016).

36. Tohidi, A. & Kaye, N. B. "Highly Buoyant Bent-Over Plumes in a Boundary Layer" *Atmospheric Environment* **131** pp. 97—114 (2016).

37. Martin, W. & Kaye, N. B. "Hydrologic characterization of an underdrained porous pavement" *A.S.C.E. Journal of Hydrologic Engineering* **20**(2) (2016).

38. West, D. W., Kaye, N. B. & Putman, B. "Surface flow and spread calculations for the preliminary design of porous pavement bike lanes" *A.S.C.E. Journal of Irrigation & Drainage Engineering* **142**(2) (2016)

39. Hutton, D., Kaye, N. B., & Martin, W. "Analysis of Climate Change and 24-Hour Design Storm Depths for a Range of Return Periods Across South Carolina" Journal of South Carolina Water Resources **2**(1) pp. 70—79 (2015)

40. Martin, W. & Kaye, N. B. "Effects of aggregate masking on soil infiltration under an aggregate bed" *A.S.C.E. Journal of Irrigation & Drainage Engineering* **141**(9) (2015)

41. Tohidi, A., Kaye, N. B., & Bridges, W. "Statistical description of firebrand size and shape distribution from coniferous trees for use in Metropolis Monte Carlo simulations of firebrand flight distance" *Fire Safety Journal* **77**, 21—35 (2015)

42. Kaye, N. B. "Solutions to the compact debris flight equations." *Journal of Wind Engineering and Industrial Aerodynamics* **138**, 69-76 (2015).

43. Martin, W. & Kaye, N. B. "Characterization of undrained porous pavements using a broken-line model" *A.S.C.E. Journal of Hydrologic Engineering* **20**(2), 04014043-1-8 (2015).

44. Murphy, P., Kaye, N. B., & Khan, A. A. "Hydraulic performance of aggregate beds with perforated pipe underdrains flowing full." *A.S.C.E. Journal of Irrigation & Drainage Engineering* **140**(8), 04014023-1-7 (2014).

45. Martin, W. and Kaye, N. "Hydrologic Characterization of Undrained Porous Pavements." *A.S.C.E. Journal of Hydrologic Engineering*, **19**(6), 1069–1079 (2014).

46. Martin, W., Kaye, N. B., & Putman, B. "Impact of vertical porosity distribution on the permeability of pervious concrete" *Construction & Building Materials* **59** pp. 78—84 (2014)

47. Martin, W., Putman, B. & Kaye, N. B. "Using Image Analysis to Measure the Porosity Distribution of a Porous Pavement" *Construction & Building Materials* **48** pp. 210—217 (2013)

48. Baratian-Ghorghi, Z., & Kaye, N. B. "Modeling the purging of dense fluid from a street canyon driven by an interfacial mixing flow and skimming flow" *Physics of Fluids* **25** 076603 (2013)

49. Giannakopoulos, B. A., Kaye, N. B., & Hunt, G. R. "Smoke filling times for a room – influence of room geometry" *Proc. I.C.E. Engineering and Computational Mechanics* **166(2)**, pp. 68—87 (2013) ***– Winner of the 2013 Telford Medal for the best publication of 2013 in Proceedings of the Institution of Civil Engineers***.

50. Heiliger, C., Kaye, N. B., & Testik, F. Y. "A computational study of the role of particle size standard deviation on the collision frequency in differential settling" *International Journal of Sediment Research*, **28** pp. 42—53 (2013)

51. Stanford, S., Benson, L., Alluri, P., Martin, W., Klotz, L., Ogle, J., Kaye, N., Sarasua, W., and Schiff, S. "Evaluating Student and Faculty Outcomes for a Real-World Capstone Project with Sustainability Considerations." *A.S.C.E. Journal of Professional Issues in Engineering Education Practice*, **139**(2), pp. 123–133 (2013)

52. Durrani, F., Cook, M. J., McGuirk, J. J., & Kaye, N. B. "Large eddy simulation of buoyancy-driven natural ventilation: twin-plume flow" *International Journal of Ventilation*, **11**, pp. 353-366 (2013)

53. Karimpour, A., & Kaye, N. B. "Wind tunnel measurement of the parapet height role on roof gravel blow-off rate for two-dimensional low-rise buildings" *Journal of Wind Engineering and Industrial Aerodynamics 114* pp. 38-47 (2013)

54. Baratian-Ghorghi, Z., & Kaye, N. B. "Shear driven flushing of dense fluid from a canyon" *Journal of Visualization* 16 (1) pp. 29-37 (2013)

55. Baratian-Ghorghi, Z., & Kaye, N. B. "The effect of canyon aspect ratio on flushing of dense pollutants from an isolated street canyon" *Science of the Total Environment* **443** pp. 112-122 (2013)

56. Baratian-Ghorghi, Z., & Kaye, N. B. "Flushing a finite volume of dense fluid from a square street canyon by a turbulent overflow" *Atmospheric Environment* **60** pp. 392-402 (2012)

57. Karimpour, A., & Kaye, N. B. "The critical velocity for aggregate blow-off from a built-up roof" *Journal of Wind Engineering and Industrial Aerodynamics 107*-**108** 83-93 (2012)

58. Baratian-Ghorghi, Z., Kaye, N. B., Khan, A. A., & Smith, J. R. "The merging of two unequal axisymmetric parallel turbulent jets" *Journal of Hydrodynamics* **24** (2) 257-262 (2012)

59. Karimpour, A., & Kaye, N. B. "On the stochastic nature of compact debris flight" *Journal of Wind Engineering and Industrial Aerodynamics* **100** 77-90 (2012)

60. Karimpour, A, Kaye, N. B., & Baratian-Ghorghi, Z. "Modeling the neutrally stable atmospheric boundary layer for laboratory scale studies of the built environment" *Building & Environment* **49** 203-211 (2012)

61. Kaye, N., & Scase, M. "Straight-sided solutions to classical and modified plume flux equations" *Journal of Fluid Mechanics* **680** 564-573 (2011)

62. Karimpour, A., Kaye, N. B., & Khan, A. A. "A CFD study of merging turbulent slot jets" *A.S.C.E. Journal of Hydraulic Engineering* **137** 381-385 (2011)

63. Kaye, N. B., Flynn, M. R., Cook, M. J., & Ji, Y. "The role of diffusion on the interface thickness in a ventilated filling box" *Journal of Fluid Mechanics* **652** 195-205 (2010)

64. Prohaska, P. D., Khan, A. A., & Kaye, N. B. "Investigation of flow through orifices in riser pipes" *A.S.C.E. Journal of Irrigation & Drainage Eng.* **136** 340-347 (2010)

65. Prohaska, P. D., Khan, A. A., & Kaye, N. B. "Investigation of Detention Pond Outflow Characteristics." *Proc. I.C.E. Water Management* **163** 123-131 (2010)

66. Kaye, N. B., & Hunt, G. R. "The effect of floor heat source area on the induced airflow in a room." *Building & Environment* **45** (3) 839-847 (2010)

67. Kaye, N. B., & Hunt, G. R. "An experimental study of large area source turbulent plumes" *Int. J. Heat & Fluid Flow* **30** (6) 1099-1105 (2009)

68. Kaye, N. B., Ji, Y., & Cook, M. J. "Numerical simulation of transient flow development in a naturally ventilated room." *Building & Environment* **44** (4) 889-897 (2009)

69. Kaye, N. B. "Turbulent plumes in stratified environments: A review of recent work." *Atmosphere Ocean* **46** (4) 433–441 (2008)

Prior to Clemson

70. Kaye, N. B., & Hunt, G. R. "Smoke filling time for a small fire in a room: the effect of ceiling height to floor width aspect ratio." *Fire Safety Journal* **42,** 329–339 (2007)

71. Kaye, N. B., & Hunt, G. R. "Overturning in a Filling Box" *Journal of Fluid Mechanics* **576**, 297–323 (2007)

72. Kaye, N. B., & Hunt, G. R. "Heat source modelling and natural ventilation efficiency" *Building & Environment* **42** (4) 1624–1631 (2007)

73. Kaye, N. B., & Hunt, G. R. "Weak fountains" *Journal of Fluid Mechanics* **558** 319–328 (2006)

74. Hunt, G. R., & Kaye, N. B. "Pollutant flushing with natural displacement ventilation" *Building & Environment* **41** (9) 1190–1197 (2006)

75. Linden, P. F., & Kaye, N. B. "Interacting turbulent plumes in a ventilated box" *International Journal of Ventilation* **4** (4) 301–310 (2006)

76. Kaye, N. B., & Linden, P. F. "Colliding turbulent plumes" *Journal of Fluid Mechanics* **550** 85–109 (2006)

77. Hunt, G. R., & Kaye, N. B. "Lazy plumes" *Journal of Fluid Mechanics* **533** 329–338 (2005)

78. Kaye, N. B., & Hunt, G. R. "Time-dependent flows in an emptying filling box" *Journal of Fluid Mechanics* **520** 135–156 (2004)

79. Kaye, N. B., & Linden, P. F. "Coalescing axisymmetric turbulent plumes" *Journal of Fluid Mechanics* **502** 41–63 (2004)

80. Hunt, G. R., & Kaye, N. "Virtual origin correction for lazy turbulent plumes" *Journal of Fluid Mechanics* **435** 377–396 (2001)

Refereed journal discussions and closures

1. Kaye, N. B. "Discussion of 'Light Attenuation Model for Waters: Linear and Nonlinear Dependencies on Suspended Sediment' by R. L. Stewart and J. F. Fox." *A.S.C.E. Journal of Hydraulic Engineering,* **145**(5) (2019).

2. Martin, W., Kaye, N. B., & Putman, B. J. "Closure to 'Effects of Aggregate Masking on Soil Infiltration under an Aggregate Bed' by William D. Martin III, Nigel B. Kaye and Bradley J. Putman" *A.S.C.E. Journal of Irrigation & Drainage Engineering* **142**(6) (2016).

3. Prohaska, P. D., Khan, A. A., & Kaye, N. B. "Closure to 'Investigation of flow through orifices in riser pipes' by Prohaska, P. D., Khan, A. A., & Kaye, N. B." *A.S.C.E. Journal of Irrigation & Drainage Eng.* **137**(9) 633-633 (2011)

Books Edited

1. Wind-borne Debris Hazards (Ed. N. B. Kaye), ASCE (2018) https://doi.org/10.1061/9780784414965

2. Proceedings of the 6th American Association for Wind Engineering Workshop (Ed. N. B. Kaye), Clemson University (held online) May 12-14, 2021. https://doi.org/10.34068/report10

Book Chapters

1. Tohidi, A, & Kaye, N. B. (2022) "Firebrands" In: Wildland Fire Dynamics: Fire Effects and Behavior from a Fluid Dynamics Perspective, (Ed. K. Speer & S. Goodrick) Cambridge University Press (2022)

2. Martin, W., Sumanasooriya, M., Kaye, N. B., & Putman B. "Design of porous pavements for improved water quality and reduced runoff" in Handbook of Environmental Engineering (Ed. M. Kutz) Wiley (2018)

3. Kaye, N. B., Khan, A. A., & Testik, F. Y. "Environmental fluid mechanics" in Handbook of Environmental Engineering, (Ed. M. Kutz) Wiley (2018)

4. Kaye, N. B. "Introduction" in *Wind-Borne Debris Hazards* (Ed. N. B. Kaye) ASCE (2018)

5. Kaye, N. B. & Karimpour, A.in "Debris motion initiation" *Wind-Borne Debris Hazards* (Ed. N. B. Kaye) ASCE (2018)

6. Kaye, N. B., & Flynn, M. R. "Air flows through buildings." In *Handbook of Environmental Fluid Mechanics* (Ed. H. J. S. Fernando) Taylor Francis (2012)

Conference Proceedings (Reviewed)

1. Kaye, N. B., Benson, L., Taylor, E., and Headley, M.. "RIEF: Implementing Problem-Based Learning to Facilitate Problem Abstraction Skills in a Statics Course" Proceedings of the 2025 ASEE Annual Conference & Exposition, Montreal QC, June 22-25 (2025).

2. Taylor, E., Benson, L., Kaye, N. B., and Headley, M.. "The Real Problem of Problem Abstraction: Examining Performance and Self-Efficacy in a Civil Engineering Classroom" Proceedings of the 2025 ASEE Annual Conference & Exposition, Montreal QC, June 22-25 (2025).

3. Kaye, N. B., & Benson, L., & Headley, M., & Sonavane, K. R. (2024, June), Board 304: Improving Engineering Mechanics Self-efficacy by Focusing on Abstracting the Physical World as a Precursor to Analysis *Paper presented at 2024 ASEE Annual Conference & Exposition, Portland, Oregon.* https://doi.org/10.18260/1-2--46882

4. Ahsanullah, Md. S. & Kaye, N. B. "Pressure Coefficients On A Square Plan Building With Different Parapet Heights" *14th Americas Conference on Wind Engineering, Lubbock, TX, May 17-19 (2022).*

5. Nguyen, D. & Kaye, N. B. "Experimental and computational modeling of ember hot-spots on roofs during wildland fires" *6th American Association for Wind Engineering Workshop. Clemson, SC (online), May 12-14, (2021).*

6. Ahsanullah, Md. S. & Kaye, N. B. "A stochastic model for the aerodynamics of irregularly shaped gravel" *6th American Association for Wind Engineering Workshop. Clemson, SC (online), May 12-14, (2021).*

7. Sarasua, Wayne, Kaye, Nigel B., Ogle, Jennifer H., Benaissa, Mehdi N., Benson, Lisa, Putman, Bradley J., & Pfirman, Aubrie L., "Engaging Civil Engineering Students Through a "Capstone-like" Experience in their Sophomore Year" American Society for Engineering Education Annual Conference and Exposition. Montreal, Quebec, Canada. (2020).

8. Linvill, D. L., Tallapragada, M., & Kaye, N. B. (2019, June). "Training future engineers to become better communicators: The effects of engineering specific communication courses on student attitudes and identity." American Society for Engineering Education Annual Conference and Exposition. Tampa, FL (2019)

9. Linvill, D. L., Tallapragada, M., & Kaye, N. B. (2019, May). "Engineering identity and communication outcomes: Comparing integrated engineering and traditional public speaking courses." International Communication Association annual conference, Washington, D.C. **(Top Five Paper, Instructional and Developmental Division).**

10. Tohidi, A. & Kaye, N. B. “Experimental and numerical modeling of fire spotting phenomenon” 8th International Colloquium on Bluff Body Aerodynamics and Applications, Boston, MA, U.S.A. June 7-11, 2016.

11. Kaye, N. B. & Karimpour, A. “A preliminary CFD study of the impact of wind heterogeneity on the flight of compact debris in a 2-D urban canyon” 8th International Colloquium on Bluff Body Aerodynamics and Applications, Boston, MA, U.S.A. June 7-11, 2016.

12. Martin, W. & Kaye, N.B., “Simple Preliminary Hydrologic Design Tools for Porous Pavements” Proceedings of the North American Surface Water Quality Conference and Exposition, StormCon 2013 (2013)

13. Tohidi, A. & Kaye, N. B. “The sensitivity of modeled flight distance to the lofting to transport transition criterion in coupled ember flight models” 12th Americas conference on wind engineering, June 16-20, Seattle, WA, USA (2013)

14. Kaye, N. B. “Analytic and semi-analytic solutions to the 2D compact debris flight equations” 12th Americas conference on wind engineering, June 16-20, Seattle, WA, USA (2013)

15. Durrani, F., Cook, M. C., McGuirk, J., & Kaye, N. B. “CFD Modelling of Plume Interaction in Natural Ventilation” *12th Conference of International Building Performance Simulation Association*, Sydney, November 14-16, 2011, Sydney, Australia 1175-1181 (2011)

16. Kaye, N. B., Flynn, M. R., Cook, M. J., & Ji, Y. “The role of turbulent diffusion on thermal comfort in naturally ventilated buildings” *A.A.W.E. Comp. Wind Eng. Conf.* (2010)

17. Kaye, N. B., & Karimpour, A. “The debris flight equations in a model atmospheric boundary layer” *A.A.W.E. Comp. Wind Eng. Conf.* (2010)

Prior to Clemson

18. Wadee, M.A., & Kaye, N.B. “Buckling of thin-walled tubes under combined bending and pressure loading.” *The Third International Conference on Structural Engineering, Mechanics and Computation, Cape Town, S.A.* Ed. A. Zingoni, Millpress, 339-340 (2007)

19. Kaye, N. B., & Hunt, G. R. “Outflow from a plume impinging on a horizontal boundary” in *Proc. 15th Australasian Fluid Mech. Conf. (CD-ROM*) Eds. M. Behnia, W. Lin, and G. D. McBain, The University of Sydney (2004)

20. Hunt, G. R., & Kaye, N. B. “On Transient Flow in a Ventilated Filling Box” in *Proc. 15th Australasian Fluid Mech. Conf. (CD-ROM)* Eds. M. Behnia, W. Lin, and G. D. McBain, The University of Sydney (2004)

21. Kaye, N. B., & Hunt, G. R. "Pollutant flushing with natural ventilation" in *Proc. 2004 CIBSE Natl. Conf.* (2004)

Conference Panels

1. Prevatt, D. (Chair), Chen, S., Kaye, N. B., Levitan, M., Liang, Sritharan "Mechanics of wind-structure and windborne debris impacts of NSWS and mitigation strategies: Advancing the need for an MsRI Facility" Workshop - Mid-scale RI-EW: Concepts for a Tornado-Downburst-Gust Testing Facility to Study Wind/Debris Impact on Civil Infrastructure, Chicago, IL, October 20-21 (2022)

2. John Van De Lindt (panel chair) Alice Alipour; Marc L. Levitan; Nigel Kaye; Tracy L. Kijewski-Correa; Carol Friedland; Hannah Blum; Ashraf El Damatty, "Identify MsRI components/equipment/instrumentation needed to fill research gaps in achieving storm readiness and speedy post-event recovery of civil infrastructure and communities by vulnerability modeling, shifting vulnerabilities via intervention, and enhancing reliability of systems." MsRI-EW: Conference to Identify Research Infrastructure Concepts for a National Full-Scale 200 mph Wind and Wind-Water Testing Facility, August 20-21, Florida International University, Miami, FL. [conducted online] (2020).

3. Cuny, K., A. Brooks, B. K. Kirchoff, N. B. Kaye and P. McMillan. [Panel Discussion] "Communicating with Scientists about Scientific Communication." National Association of Communication Centers Annual Excellence at the Center Conference, March 28, Clemson, SC. [conducted online] (2020).

Conference Proceedings (Unreviewed)

1. Ahsanullah, Md. S. & Kaye, N. B. "Quantification of the conditions for roof gravel blowoff" 15th Americas Conference on Wind Engineering, St. Louis, MO, May 19-22, (2025).

2. Yadav, A. & Kaye, N. B. "Parametric study of tornado-borne debris" 15th Americas Conference on Wind Engineering, St. Louis, MO, May 19-22, (2025).

3. Flynn, M. R., Li, S., Kaye, N. B., & Piminchumo Sausa, A. R. "Plume merger: double rows, area sources and ambient stratification", *76th Ann. Meet. Of Div. Fluid Dyn, of A.P.S. Washington, DC, November 19-21, (2023).*

4. Ogle, J., Woolard, C., & Kaye, N. B., "Gearing up for successful team teaching" *RED consortium meeting, Alexandria, VA, September 20-23 (2023).*

5. al-Bashiti, M. K., Nguyen, D. Kaye, N. B., & Naser, M. Z. "Predicting Wildfire Ignition and Windborne Ember Accumulation on Roofs via Deep Learning (DL)" *Engineering Mechanics Institute Conference 2023, Atlanta, GA, June 6-9, (2023)*.

6. Ahsanullah, Md. S. & Kaye, N. B. "Experimental study of roof gravel motion initiation" *Engineering Mechanics Institute Conference 2023, Atlanta, GA, June 6-9, (2023)*.

7. Akhter, R. & Kaye, N. B. "Experimental study on the flow behavior of a finite dense fluid release at upstream from cubic building face for different Richardson numbers" *75th Ann. Meet. Of Div. Fluid Dyn, of A.P.S. Indianapolis, IN, November 20-22, (2022).*

8. Kaye, N. B. (2022) "Mechanics of wind-borne debris impact on structural loading due to NSWS" Workshop - Mid-scale RI-EW: Concepts for a Tornado-Downburst-Gust Testing Facility to Study Wind/Debris Impact on Civil Infrastructure, Chicago, IL, October 20-21

9. Nguyen, D. & Kaye, N. B. "Improving Disaster Resilience by Quantifying WUI Community Ember Exposure" *2022 NIST Disaster Resilience Symposium (held online) September 14-15, (2022).*

10. Kaye, N. B. & Nguyen, D. "Improving Disaster Resilience by Quantifying WUI Community Ember Exposure" *2021 NIST Disaster Resilience Symposium (held online) July 20-21, (2021).*

11. Akhter, R. & Kaye, N. B. "Dense Gas Dispersion in the Wake of a Cubic Building" *Twenty-fourth Annual George Mason University Conference on Atmospheric Transport and Dispersion Modeling, December 8-10, (held online) 2020*

12. Sharmin, R. & Kaye, N. B. "Computational Study of Dense Gas Dispersion in a 2D Urban Canyon" *Twenty-fourth Annual George Mason University Conference on Atmospheric Transport and Dispersion Modeling, December 8-10, (held online) 2020*

13. Akhter, R. & Kaye, N.B. "Mixing of a finite dense fluid release around a downstream cube." *73rd Ann. Meet. Of Div. Fluid Dyn, of A.P.S. Chicago, IL, November 21-24,* (held online), *(2020).*

14. Kaye, N.B. & Akhter, R. "Plume outflow and deflection time for a line plume in a filling box" *73rd Ann. Meet. Of Div. Fluid Dyn, of A.P.S. Chicago, IL, November 21-24,* (held online), *(2020).*

15. Nguyen, D. & Kaye, N. B. "Quantifying WUI Community Ember Exposure - Identifying rooftop hot spots" *2020 NIST Disaster Resilience Symposium (held online), (2020).*

16. Alnahit, A., Kaye, N. B., & Khan, A. A. "Modeling of Round Buoyancy Driven Particle Clouds" *72nd Ann. Meet. Of Div. Fluid Dyn, of A.P.S. Seattle, WA, November 23-26, (2019)*

17. Kaye, N. B. & Williamson, "Buoyancy distribution in a filling box segmented by a planar jet" *72nd Ann. Meet. Of Div. Fluid Dyn, of A.P.S. Seattle, WA, November 23-26, (2019)*

18. Sharmin, R. & Kaye, N. B. "Computational modeling of dense gas flushing from urban canyons" *72nd Ann. Meet. Of Div. Fluid Dyn, of A.P.S. Seattle, WA, November 23-26, (2019)*

19. Kaye, N. B. & Nguyen, "Improving disaster resilience by quantifying WUI community ember exposure." *NIST Disaster Resilience Symposium, Gaithersburg, MD, August 7-8 (2019)*

20. Kaye, N., Nguyen, D., & Davis, Z. "Quantifying WUI community ember exposure – identifying rooftop hot spots" *NIST Wildland Urban Interface Fire Day, Gaithersburg, MD (moved to U.MD FPE due to federal government shutdown), January, (2019)*

21. Kaye, N. B., Williamson, N. J., & Armfield, S. "On the use of air curtains to control smoke spread in an enclosed fire" *71st Ann. Meet. Of Div. Fluid Dyn, of A.P.S. Atlanta, GA, November 18-20, (2018)*

22. Akhter, R., Compton, J. D., & Kaye, N. B. "Line plumes in a filling box" *71st Ann. Meet. Of Div. Fluid Dyn, of A.P.S. Atlanta, GA, November 18-20, (2018)*

23. Kaye, N. B., Martin, W. &, Mohammadi, S. "Hydraulic design of modular green roof systems for improved stormwater detention" S*outh Carolina Water Resources Center 2018 Conference, Columbia, SC, October 17-18 (2018)*

24. Afrin, T., Khan, A. A., & Kaye, N. B. "Numerical investigation of free overfall from circular pipe flowing upstream full" *South Carolina Water Resources Center 2018 Conference, Columbia, SC, October 17-18 (2018)*

25. Sharmin, R., Martin, W., & Kaye, N. B. "Quantification of site peak discharge reduction from modular green roofs and porous pavements." *South Carolina Water Resources Center 2018 Conference, Columbia, SC, October 17-18 (2018)*

26. Martin, W., Sharmin, R., & Kaye, N. B. "Impact of land developments using LID stormwater technologies on municipal storm sewer systems" *South Carolina Water Resources Center 2018 Conference, Columbia, SC, October 17-18 (2018)*

27. Nguyen, D. Davis, Z., & Kaye, N. B. "Experimental identification of rooftop hotspots during wind driven ember storms" *5th American Association for Wind Engineering Workshop. Miami, Florida, August 12-14, (2018)*

28. Kaye, N. B., Nguyen, D., & Davis, Z. "Quantifying WUI Community Ember Exposure - Identifying rooftop hot spots" *NIST Disaster Resilience Symposium, Gaithersburg, MD, August 14-15 (2018)*

29. A. Tohidi, S. Caton, M. Gollner, N.B. Kaye, N. Brayner, "Breakage and Transport of Firebrands from Wildland Fuels", *(invited talk), The Fire Continuum Conference, May 2018, MT, USA*

30. Kaye, N. B. "Improving Disaster Resilience by Quantifying WUI Community Ember Exposure" *NIST Wildland Urban Interface Fire Day, Gaithersburg, MD, January 17, (2018)*

31. Tohidi, A., Caton, S., Gollner, M., Kaye, N., and Bryner, N. "Firebrand formation and transport, a critical mechanism of wildfire propagation" *Fire Prediction Across Scales – Initiative on Extreme Weather and Climate, Columbia University*, Oct. 23-25 *(2017).*

32. Tohidi, A., Kaye, N. B., & Gollner, M. "Cross-flow shearing effects on the trajectory of highly buoyant bent-over plumes"*70th Ann. Meet. Of Div. Fluid Dyn, of A.P.S. Denver, CO, November 19-21, (2017)*

33. Kaye, N. B. & Cooper, P. "Source and boundary condition effects on confined vertically distributed turbulent plumes" *70th Ann. Meet. Of Div. Fluid Dyn, of A.P.S. Denver, CO, November 19-21, (2017)*

34. Kaye, N. B. & Tohidi, A. "Ember flight modeling and experiments" Proc. 13th Americas Conf. on Wind Eng., Gainesville, FL. May 20-24, (2017)

35. Tohidi, A. & Kaye, N. B. "Experimental and numerical modeling of non-combusting model firebrand transport" *Prog. 69th Ann. Meet. Of Div. Fluid Dyn, Bull. A.P.S.* 61 No. 20 (2016)

36. Afrin, T., Kaye, N. B., Khan, A. A., & Testik, F. Y. "Discharge Characteristics of Perforated Pipe Underdrain Aggregate System" South Carolina Water Resources Center 2016 Conference, Columbia, SC, October 12-13 (2016)

37. Martin, W., Kaye, N. B, & Mishra, A. "Impact of climate change on site rainfall-runoff characteristics" South Carolina Water Resources Center 2016 Conference, Columbia, SC, October 12-13 (2016)

38. Robinson, J. L., Whitfield, M., Martin, W., & Kaye, N. B. "An Engineering Methodology to Quantify the Hydraulic and Hydrologic performance of Green Roofs" South Carolina Water Resources Center 2016 Conference, Columbia, SC, October 12-13 (2016)

39. Afrin, T., Khan, A. A., Kaye, N. B., & Testik, F. Y. "Numerical investigation for hydraulic performance of perforated underdrains surrounded by loose laid aggregate" ASCE EWRI International Low Impact Development conference, Portland, Maine, August 29-31 (2016).

40. Kaye, N. B. & Tohidi, A. “An Experimental Study of Rod-Like Debris Flight with Particular Application to Fire Spotting", Engineering Mechanics Institute Conference (EMI), Vanderbilt University, USA, (2016).

41. Tohidi, A. & Kaye, N. B. “An Experimental Study of Stochastic Nature of Firebrand Flight", 5th International Fire Behavior and Fuels Conference, Portland, Oregon, USA, (2016).

42. Kaye, N. B. “Ups and downs of using ‘kitchen sink’ experiments in an introductory fluid mechanics class” *Prog. 68th Ann. Meet. Of Div. Fluid Dyn, Bull. A.P.S.* 60 No. 21 p. 300 (2015)

43. Tohidi, A. & Kaye, N. B. “Trajectory of plume in a power-law boundary layer” *Prog. 68th Ann. Meet. Of Div. Fluid Dyn, Bull. A.P.S.* 60 No. 21 p. 300 (2015)

44. Martin, W. D. & Kaye, N. B. “Taking hydrologic advantage of porous pavement systems through simplified models and design” World Environmental & Water Resources Congress, Austin, Texas, May 17-21 (2015)

45. Hutton, D. R., Kaye, N. B., & Martin, W. D. “Effectiveness of LID Technologies to mitigate the impact of climate change on stormwater design storms” Georgia Water Resources Conference, Athens, GA, April 28-29 (2015)

46. Kaye, N. B. & Baratian-Ghorghi “Flushing of a stably stratified urban canyon” Euromech 567 Turbulent mixing in stratified flows, Cambridge, UK, March 22-25 (2015)

47. Kaye, N. B., Benson, L. & Sill, B. “Inside Out: Active learning in fluid dynamics in and out of the classroom” *Prog. 67th Ann. Meet. Of Div. Fluid Dyn, Bull. A.P.S.* 59 No. 20 p. 484 (2014)

48. Kaye, N. B. & Tohidi, A. “Bent-over plume models for large-area highly-buoyant turbulent plumes” *Prog. 67th Ann. Meet. Of Div. Fluid Dyn, Bull. A.P.S.* 59 No. 20 p. 457 (2014)

49. Kaye, N. B. & Martin, W. “A proposal for standard reporting of extensive modular green roof hydraulic performance parameters” South Carolina Water Resources Center 2014 Conference, Columbia, SC, October 15-16 (2014)

50. Philips, R., Saylor, J. R., Kaye, N. B., & Gibert, J. “A comparison of remote sensing estimates of lake evaporation with pan evaporation measurements along the Savannah River Basin” South Carolina Water Resources Center 2014 Conference, Columbia, SC, October 15-16 (2014)

51. Philips, R., Kaye, N. B., & Saylor, J. R. “The effect of uncertainty in evaporation rate on predictions of water availability in the Savannah River basin” South Carolina Water Resources Center 2014 Conference, Columbia, SC, October 15-16 (2014)

52. Hodges, J., Saylor, J. R. & Kaye, N. B. "Improving satellite measurements of reservoir surface temperature via a thermal model of lake surface temperature for improved evaporation measurements" South Carolina Water Resources Center 2014 Conference, Columbia, SC, October 15-16 (2014)

53. Martin, W. & Kaye, N. B. "Characterization of the hydraulic behavior of porous pavements" South Carolina Water Resources Center 2014 Conference, Columbia, SC, October 15-16 (2014)

54. Hutton, D., Martin, W., & Kaye, N. B. "Analysis of the impact of climate change on stormwater design storms for the state of South Carolina" South Carolina Water Resources Center 2014 Conference, Columbia, SC, October 15-16 (2014)

55. Kaye, N. B. "Possible mechanisms for the initiation of roof gravel blow off" 2014 Conference of the Engineering Mechanics Institute of ASCE, Hamilton, ON, Canada, August 5-8, (2014)

56. Tohidi, A. & Kaye, N. B. "Comparison of experiments with stochastic modeling of cylindrical debris flight" 2014 Conference of the Engineering Mechanics Institute of ASCE, Hamilton, ON, Canada, August 5-8, (2014)

57. Martin, W. M. & Kaye, N. B. "Turbulent fountains as a model for mixing at a density interface" *Prog. 66th Ann. Meet. Of Div. Fluid Dyn, Bull. A.P.S.*58 No. 18 p. 353 (2013)

58. Tohidi, A. & Kaye, N. B. "Characterization of firebrand geometry and flight dynamics" Large Wildland Fires, Missoula, MT, USA, May 19-23 (2014)

59. Kaye, N. B., & Baratain-Ghorghi, Z. "Flushing of a dense pollutant from a square 2D street canyon" *Prog. 65th Ann. Meet. Of Div. Fluid Dyn, Bull. A.P.S.*57 No. 17 p. 78 (2012)

60. West, D., Kaye, N.B., & Putman, B. "An experimental and modeling study of porous pavement bike lanes" South Carolina Water Resources Center 2012 Conference, Columbia, SC, October 10-11 (2012)

61. Martin, W., Kaye, N.B., & Putman, B. "Hydrological characterization of porous pavement systems" South Carolina Water Resources Center 2012 Conference, Columbia, SC, October 10-11 (2012)

62. Karimpour, A., & Kaye, N. B. "Reynolds # effects in small scale studies of roof gravel blow-off" 2012 Joint Conference of the Engineering Mechanics Institute and 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability (EMI/PMC 2012)

63. Baratain-Ghorghi, Z., & Kaye, N. B. 2011 "Flushing of a dense fluid from an urban canyon part 2: Transient flows." *Prog. 64th Ann. Meet. Of Div. Fluid Dyn, Bull. A.P.S.,* 56 No. 18 p. 229

64. Kaye, N. B., & Baratain-Ghorghi, Z. 2011 "Flushing of a dense fluid from an urban canyon part 1: Steady state measurements." *Prog. 64th Ann. Meet. Of Div. Fluid Dyn, Bull. A.P.S.,* 56 No. 18 p. 229

65. Kaye, N.B., & Scase, M. 2010 "Steady solutions for plumes in non-uniform stratifications" *Prog. 63rd Ann. Meet. Of Div. Fluid Dyn, Bull. A.P.S.* 55 No. 16 p. 401

66. Kaye, N. B., & Flynn, M. 2009 "The role of diffusion in natural displacement ventilation" *Prog. 62 Ann. Meet. of Div. Fluid Dyn., Bull. A.P.S. 54 No. 19*

67. Kaye, N. B., Hunt, G. R., & Syrios, K. 2008 "Flushing of a buoyant pollutant from an urban canyon." *Prog. 61 Ann. Meet. of Div. Fluid Dyn., Bull. A.P.S. 53 No. 15, P. 210*

68. Smith, J. R., Kaye, N. B., & Khan, A. A. 2008 "Coalescing axisymmetric turbulent jets." South Carolina Acad. Sci. Annual Meeting *Bull. S.C. Acad. Sci*. *70*, pp. 86-87

69. Prohaska, P. D., Khan, A. A., & Kaye, N. B. 2008 "An experimental investigation of the discharge coefficient for an orifice in a circular pipe wall." South Carolina Acad. Sci. Annual Meeting *Bull. S.C. Acad. Sci*. *70*, pp. 81

Prior to Clemson

70. Kaye, N., & Hunt, G. 2007 "The role of heat source area on the transition from displacement to mixing flow in natural ventilation." *Prog. 60 Ann. Meet. of Div. Fluid Dyn., Bull. A.P.S. 52 No. 17,* p. 282

71. Kaye, N., & Hunt, G. 2006 "An experimental study of highly lazy plumes." *Prog. 59 Ann. Meet. of Div. Fluid Dyn., Bull. A.P.S. 51 No. 9,* p. 205

72. Hunt, G. R., & Kaye, N. B. 2006 "Turbulent Entrainment in Weak Fountains" *Proc. EUROMECH Fluid Mechanics Conference 6* p. 95, Royal Institute of Technology, Stockholm

73. Kaye, N., & Hunt, G. 2005 "Overturning in a cylindrical filling box" *Prog. 58 Ann. Meet. of Div. Fluid Dyn., Bull. A.P.S. 50 No. 9*, p. 268

74. Hunt, G., & Kaye, N. 2005 "Rise heights of lazy fountains" *Prog. 58 Ann. Meet. of Div. Fluid Dyn., Bull. A.P.S. 50 No. 9*, p. 306

75. Kaye, N. B., & Hunt, G. R. 2004 "Entrainment by lazy plumes" *Prog. 57 Ann. Meet. Of Div. Fluid Dyn., Bull. A.P.S. 49 No. 9*, p.117

76. Hunt, G., & Kaye, N. 1999 "Virtual origin correction for lazy turbulent plumes" *Prog. 52 Ann. Meet. of Div. Fluid Dyn., Bull. A.P.S. 44 No. 8*, Ed. D. Baudrau, p. 18

Conference Posters

1. Kaye, N. B., Benson, L., Taylor, E., and Headley, M.. "RIEF: Implementing Problem-Based Learning to Facilitate Problem Abstraction Skills in a Statics Course" Proceedings of the 2025 ASEE Annual Conference & Exposition, Montreal QC, June 22-25 (2025).

2. Kaye, N. B., Benson, L., Headley, M., and Sonavane, K. "RIEF: Improving Engineering Mechanics Self-Efficacy By Focusing On Abstracting The Physical World As A Precursor To Analysis" Proceedings of the 2024 ASEE Annual Conference & Exposition, Portland, OR, June 23-26 (2024).

3. Nguyen, D. & Kaye, N. B. "Ember accumulation on buildings roofs during wildland fires" Burgers Program and Combustion Institute Summer School on Fire Safety Science – Wildland/WUI Fire Behavior, University of Maryland, June 5-9, (2023)

4. Bao, J., Kaye, N.B., Mousavi, E., Post, C., Blouin, V. & Metcalf, A. R., "Assessing Indoor Air Quality in Educational Buildings Using a Low-Cost Sensor Network", 40th American Association of Aerosol Research Annual Conference, Raleigh, NC, October 3-7, (2022)

5. Nguyen, D., Prasad, K., & Kaye, N.B. "Experimental and computational modeling of ember hot-spots on roofs" 13th IAFSS Symposium, April 26-30, Hosted online by University of Waterloo, April 26-30, (2021)

6. Van Valkinburgh, K., Kaye, N. B., Mousavi Rizi, E., Blouin, V. Y. M., Nafchi, A. M., & Metcalf, A. R., "Assessing Potential Airborne Virus Transmission in University Classrooms," American Association of Aerosol Research, 38th Annual Conference (Virtual.) October 8, (2020).

7. Afrin, T, Kaye, N. B., & Khan, A. A., " Numerical Investigation of a Free Overfall From A Rectangular Pipe For Various Inlet Conditions" A.S.C.E. EWRI Congress, Pittsburgh, Pennsylvania, May 19-23, (2019)

8. Murphy, P., Kaye, N. B., & Khan, A. A. "Hydraulic performance of full flowing perforated pipe underdrains surrounded by loose laid aggregate" South Carolina Water Resources Center 2014 Conference, Columbia, SC, October 15-16 (2014)

9. Afrin, T., Khan, A. A., Kaye, N. B., Testik, F. Y. "Numerical model for hydraulic performance of under-drained perforated pipe surrounded by loose aggregate" South Carolina Water Resources Center 2014 Conference, Columbia, SC, October 15-16 (2014)

10. Phillips, R., Saylor, J. R., & Kaye, N.B. “Inclusion of evaporation physics in modeling of water availability in the Savannah River Basin” *South Carolina Water Resources Center 2012 Conference (2012) (2nd place in student poster competition)*

Datasets Published

1. Kaye, N., M. Ahsanullah, W. Conklin, D. Chen, P. Irwin, A. Gan Chowdhury, J. Erwin. (2024) "Gravel roof pressure and shear stress measurements", in Roof gravel motion initiation. DesignSafe-CI. https://doi.org/10.17603/ds2-s3fm-2870

2. Kaye, N., M. Ahsanullah, W. Conklin, D. Chen, P. Irwin, A. Gan Chowdhury, J. Erwin. (2024) "Gravel removal tests", in Roof gravel motion initiation. DesignSafe-CI. https://doi.org/10.17603/ds2-xt1n-w752

3. Kaye, N., M. Ahsanullah, W. Conklin, D. Chen, P. Irwin, A. Gan Chowdhury, J. Erwin. (2024) "Smooth roof pressure tests", in Roof gravel motion initiation. DesignSafe-CI. https://doi.org/10.17603/ds2-vsbn-t326

Technical Reports

1. Kaye, N. B., Nielson, B., & Karimpour, A. 2009 “The Effect of Surrounding Buildings on the Pressure Coefficients for Low Rise Housing.” Submitted to *The South Carolina Department of Labor, Licensing, and Regulation*

Other publications

1. Akhter, R., Ahsanullah, Md. S. & Kaye, N. B 2023 “Flow separation and wind damage to buildings” *Science as Art,* Clemson University, April 6, 2023.

PRESENTATIONS

1. Kaye, N. B. “Home ignition in wildfires” Chi Epsilon Research Night, February 21, Glenn Department of Civil Engineering, 2022.

2. Kaye, N. B. “Ember transport and accumulation in WUI fires” Department of Scientific Computing at Florida State University Seminar, April 7, 2021

3. Kaye, N. B. “Revisiting roof gravel blow-off” National Institute of Standards and Technology, Gaithersburg, MD, July 15, 2015

4. Kaye, N. B. “Flushing of a stably stratified fluid from a horizontally confined space”, School of Aerospace, Mechanical, and Mechatronic Engineering, University of Sydney, Sydney, Australia June 19, 2014

5. Kaye, N. B. “Dense gas dispersion in urban areas” Sustainable Buildings Research Centre, University of Wollongong, Wollongong, Australia, June 17, 2014

6. Kaye, N. B. "Mixing in stratified flows: Implications for dense gas dispersion in urban areas." *Clemson University College of Engineering and Science Research Symposium, May 8, 2014.*

7. Kaye, N. B., "Turbulent Plumes in Stratified Environments: A review of recent work." Invited talk at the *Workshop on plumes and gravity currents in stratified environments,* University of Alberta and the Pacific Institute for the Mathematical Sciences, October 2007

8. Kaye, N. B. "Air flows and pollutant transport in buildings" *Fluid Mechanics Seminar Series, Clemson University*, February 2007

9. Kaye, N. B. "Coalescing axisymmetric turbulent plumes" *Fluid Mechanics Seminar Series, Dept. Civil Eng., Imperial College London,* May 2004

10. Kaye, N. "Colliding turbulent plumes" *Geophysical and Environmental Fluid Dynamics Seminar, DAMTP, Cambridge University,* May 1998

RESEARCH GRANTS

1. "Mid-scale RI-1 (M1:DP): National Testing Facility for Enhancing Wind Resiliency of Infrastructure in Tornado-Downburst-Gust Front Events (NEWRITE)" National Science Foundation (sub-award through Iowa State University), $149,499 ($149,944) (2023-2025)

2. "Research Initiation: Improving engineering mechanics self-efficacy by focusing on abstracting the physical world as a precursor to analysis" National Science Foundation (NSF), Principal Investigator, $200,000 ($100,000) 2023-2025)

3. "Quantifying Aerosol Deposition Mechanisms in Model Dry Cask Storage Systems" Department of Energy (DOE), Co-Principal Investigator, $800,000 ($88,000) (2022-2025)

4. "3D firebrand flight experimentation and modelling" Commonwealth Scientific and Industrial Research Organization (CSIRO) (Australia) un-paid Co-Supervisor (2023-2025)

5. "Making Buildings Safer by Improving Indoor Air Quality" Clemson University CECAS SERCEES, Co-Principal Investigator, $20,926 ($3,488) (2021-2022)

6. "Understanding Particle Scale Motion Initiation Physics for Loose-laid Building Rooftop Aggregates in Severe Windstorms" National Science Foundation (NSF), Principal Investigator, $369,968 ($369,968) (2019-2022)

7. "Quantifying dense gas dispersion in urban areas" National Science Foundation (NSF), Principal Investigator, $329,988, ($329,988) (2017-2022)

8. “Improving disaster resilience by quantifying WUI community ember exposure” National Institute for Standards and Technology (NIST), Principal Investigator, $300,807, ($300,807) (2017-2022)

9. “IUSE/PFE:RED: Clemson University: Learning Teams and Innovation Ventures for Adaptable Training in Engineering (CULTIVATE), National Science Foundation (NSF), Co-Investigator, $1,999,291.00 ($51,982) (2017-2022)

10. “Enhancing Engineering Students' Oral and Visual Communication Skills through Cross-Curricular Education” Engineering Information Consortium, Co-Principal Investigator, $17,528, ($8,764) (2016-2017)

11. “Performance Based Design of Low Impact Development Technologies in Response to Climate Change Induced Changes in Rainfall Patterns” South Carolina Sea Grant Foundation, Principal Investigator, $99,620 ($49,810) (2016-2018)

12. “Clemson University's Solar Decathlon 2015: A Techno-Local Solar House for South Carolina”, UNITED STATES DEPARTMENT OF ENERGY (DOE) Blouin, Vincent $50,000.00 ($1,000.00) (2014-2016)

13. “Low impact development (LID) stormwater management techniques as a tool for mitigating climate change induced increases in rainfall intensity and frequency” South Carolina Water Resources Center, Principal Investigator, $23,254, ($11,627), (2014-2015).

14. “Enhancing satellite measurements of water surface temperature using a thermal model of the lake surface for improved evaporation estimates” South Carolina Water Resources Center, Co-Principal Investigator, $30,000, ($15,000), (2013-2014).

15. “Experimental and modeling study of risk from ember storms” National Science Foundation (NSF), Principal Investigator, $200,448, ($200,448), (2012-2016)

16. “A modeling study of water shortages in the Savannah River basin: sensitivity of water availability to evaporative loss and climate change” South Carolina Water Resources Center, Principal Investigator, $29,999, ($14,999.50), (2012-2013).

17. “Wild Fire Ignition Resistant Home Design” Savannah River Nuclear Solutions Co-Principal Investigator, $74,850, ($37,425), (2010-2011).

GRADUATE STUDENT ADVISING

Doctoral Graduates

1. Ahsanullah, S. (Ph.D.) “Wind-induced gravel blow-off: Experimental investigations and predictive modeling for resilient roof design.” May 2025
2. Sharmin, R. (Ph.D.) “Computational Study of Dense Gas Dispersion in Urban Areas” May 2022

3. Nguyen, D. (Ph.D.) "Improving Disaster Resilience by Quantifying Wildland Urban Interface Community Ember Exposure" August 2021
4. Tohidi A. "Experimental and numerical modeling of wildfire spread through fire spotting" August 2016 – ***Winner of the America's Region Best Ph.D. Thesis award of the International Association for Fire Safety Science.***
5. Afrin, T. "Numerical investigation of porous and non-porous pipe with free overfall" May 2016 (co-advisor with Dr. Abdul Khan and Dr. Firat Testik)
6. Martin, W. "Hydrologic characterization of pervious pavements" August 2013 (co-advisor with Dr. Brad Putman)
7. Baratian-Ghorghi, Z. "Flushing of a dense gas pollutant from an urban canyon" August 2012
8. Karimpour, A. "Debris flight in strong windstorms" August 2011

Masters Thesis Graduates

1. Yadav, A. "A parametric study of tornado driven debris flight." May 2025
2. Jordan, Ta'Jon "An Experimental and Computational Study of 3-Dimensional Compact Windborne Debris Flight" December 2021
3. Ahsanullah, S. "A stochastic model for the aerodynamics of irregularly shaped gravel" December 2020
4. Wu, Z. "CFD modeling of wind driven lake cooling" May 2019 (with major advisor Dr. Khan)
5. Akhter, R. "Line plume in a filling box" May 2019
6. Hutton, D. "Low impact development (LID) stormwater management techniques as a tool for mitigating climate change induced increases in rainfall intensity and frequency" May 2015 (with co-advisor Dr. William Martin)
7. Hodges, J. "A model of the diurnal variation in lake surface temperature" December 2014 (with co-advisor advisor Dr. John Saylor)
8. Philips, R. "Evaporation and Modeling Water Availability in the Savannah River Basin" December 2013 (with co-advisor Dr. John Saylor)
9. Murphy, P. "The hydraulic performance of perforated pipe under-drains surrounded by loose aggregate" May 2013 (co-advisor with Dr. Abdul Khan)
10. West, D. "A methodology for designing pervious bicycle lanes for stormwater management" May 2013 (with co-advisor Dr. Brad Putman)
11. Daffin, P. "Analysis of energy and cost savings through the use of displacement ventilation in domestic buildings" December 2012 (with co-advisor Dr. Vincent Blouin)
12. Harris, H. "Stochastic modeling of windborne fire brands" December 2011
13. Heiliger, C. "A numerical and experimental study of differential settling of cohesive sediments" December 2010 (with co-advisor Dr. Firat Testik)
14. Betz, K. "Comparison of small-scale laboratory experiments with standard dense gas dispersion models" May 2010
15. Smith, J. R. "Coalescing axisymmetric turbulent jets" December 2008 (with co-advisor Dr. Abdul Khan)
16. Prohaska, P. D. "An experimental investigation of the discharge coefficient for an orifice in a circular pipe wall" August 2008 (with co-advisor Dr. Abdul Khan)

Current Graduate Advising

1. Akhter, R. (Ph.D.) "Experimental modeling of dense gas dispersion in urban areas." (expected May 2026)

Graduate Research Student Committees

1. Jianing Bao (Ph.D. expected 2025) Environmental Engineering and Earth Sciences
2. Somnath Mondal (Ph.D. 2023)
3. Sovanroth Ou (M.Sc. 2023)
4. James Richardson (Ph.D. 2022) Engineering, **Cambridge University, United Kingdom)**
5. Jonathon Hollingsworth (M.Sc., 2021)
6. Mengjie Ding (Ph.D. 2020) Mechanical Engineering
7. Jared Delk (M.Sc. 2020)
8. Genshen Fang (Ph.D. 2019)
9. Rahul Wadhwani (Ph.D. 2019), Institute of Sustainable Industries and Liveable Cities (ISILC) **Victoria University, Australia.**
10. Chieh-Hsun Wu (Ph.D. 2017) Department of Civil Engineering, **Western University, Ontario, Canada.**
11. Jamie Partridge (Ph.D. 2015) Department of Applied Mathematics and Theoretical Physics, **Cambridge University, United Kingdom**.
12. Khuong Nguyen (Ph.D. 2015) Mechanical Engineering.
13. Fangqian Liu (Ph.D. 2015)
14. William Ashman (M.Sc. 2015)
15. Farzam Safarzadeh Makeki (Ph.D. May 2014)
16. Niraj Poudel (Ph.D. May 2014) Architecture
17. Murray Fisher (Ph.D. December 2012)
18. Mijunar Chowdhury (Ph.D. December 2011)
19. Michael Grayson (M.Sc. December 2011 & Ph.D. August 2014)
20. David Duncan (M.Sc. December 2011)
21. Matthew Hornack (M.Sc. May 2011)
22. Bagyalakshmi Shanmugam (Ph.D. May 2011)
23. Michael Case (Ph.D. August 2010) Mathematical Sciences
24. Angelina Gleason (M.Sc. May 2009)

TEACHING

Courses Taught

EM 2010	Engineering Mechanics – Statics, F06, S07, S09, F24
EM 2010H	Engineering Mechanics – Statics Honors S07
CE 2080	Civil Engineering Dynamics, S07, F16, S22(x2) F22, F23, S25
CE 2100	Springer: Introduction to Civil Engineering Design I, F19, F20, F21, F22
CE 3410	Introductory Fluid Mechanics, F06, S07, F07, F08(x2), F09, F10, S11, S12, F12, F13, F14, S15, F15, S16, F16, F17, S18, F18, S19, F19, S20, F20, F21, S23, F23

CE 3410 Introductory Fluid Mechanics Honors contract, S18, F24

CE 3430 Introductory Fluid Mechanics Lab F20, S21, F21, S22, F22, S23, F23, F24

CE 4/6470 Stormwater Management, S11, F11, S13, S14, S15

CE 4910 Numerical Methods in Civil Engineering, F09

CE 4480 Introduction to Environmental Fluid Mechanics S19, S20, S21, S22

CE 4900 Special Topics in Fluid Mechanics S23

CE 8070 Wind Engineering, S08

CE 8680 Environmental Fluid Mechanics, S09, F11, S13, F17, S21

CE 8890 Special Topics in Environmental Fluid Mechanics F19

Honors Thesis and Contracts

Spring 2023 – CE 3410, Ryan Bakken, Fluid flow particle interaction.

Spring 2018 – CE 3410, Zachary Davis, Developing demonstrations for rotational hydrostatics.

Spring 2013 – Rebecca Clark, Filtering efficiency and clogging of porous pavements.

New Course Development

Creative Inquiry class on the use of advanced materials for energy efficient building design with Dr. Brad Putman. S08, F08, S09

Creative inquiry class on energy efficiency retro-fits for mobile homes in South Carolina with Dr. Vincent Blouin, Dr. Ulrike Heine, and Dr. Don Beasley. S13

Numerical Methods in Civil Engineering, F09

Introduction to Environmental fluid mechanics, S19

Springer 1 with Dr. Wayne Sarasua, Dr. Steve Sanders, Dr. Da Li, and Dr. Jennifer Ogle. F19

Teaching Fellowships

2008 ASCE ExCEEd Teaching Fellow, Fayetteville, Arkansas, July 2008

Other teaching activities

- Member of the Faculty learning community on teaching teamwork (2019-20)
- Attendee at the Clemson Teaching Excellence Conference (2019, 2023)
- Publish Blog on active learning activities and demonstrations for teaching undergraduate fluid mechanics (https://teachingfluids.wordpress.com/) that averages 10,000 page views per year.

PROFESSIONAL ACTIVITIES

1. Member, ASCE Engineering Mechanics Institute Education committee (2024-Present)
2. Editorial board member for Environmental Fluid Mechanics (2022-present)

3. American Association for Wind Engineering
    a. Elected board member (2017-2021)
4. American Society of Civil Engineers:
    a. Member, Environmental Wind Engineering Committee (2010 – 2017)
    b. Chair, Subcommittee on Windborne Debris (2012 – 2017)

UNIVERSITY AND PUBLIC SERVICE
(in addition to professional service listed under Professional activities on first page)

Committees

Department:

1. Member, Chair 3-year review committee (2025)
2. Member, Water resources search committee (2024-2025)
3. Chair, Curriculum Committee (2020-present)
4. Chair, Accreditation Committee (2018-2023)
5. Chair, Variance Committee (2020-present)
6. Chair, Department Chair Search Committee (2022)
7. Member, Accreditation Committee (2024-present)
8. Member, cluster faculty hire search committee (2021-2022)
9. Member, Department chair search committee (2018-19)
10. Member, Faculty search committee (2017-18)
11. Member, Chairs Advisory Committee (2008-2010, 2015-18)
12. Member, Glenn Endowment Committee (2012-2020)
13. Member, Glenn Professorship screening committee (2012-2020)
14. Member, Scholarship and Awards Committee (2007-18)
15. Chair, Alumni engagement (2013-2015)
16. Member, Diversity and Outreach Committee (2010-2015, 2018-2021)
17. Member, Faculty search committee (2012-13)
18. Member, Technician Search Committee (2010)

College:

1. Vice chair CECAS Curriculum Committee (2024-present)
2. Member CECAS Curriculum Committee (2020-present)
3. CECAS UG Research Grants Advisory Board (2021-22)
4. Member, Dean's Advisory Council (2017-2020)
5. Member, Associate Dean of Undergraduate Studies Advisory Committee (2015-2016)
6. Member, International Committee (2013-2016)
7. Member, Alumni Distinguished Professor Selection Committee (2008-09, 2014-15)
8. Member, Eng. & Sci. Ed. Department Chair Search Committee (2011-12)
9. Member, EE&S Water Resources/Water Quality Faculty Search Committee (2008-09)

University:

1. Member, Provost's Open Access Task Force (2023-2024)

2. Member, University Undergraduate Curriculum Committee (2022-2023, 2025-present)
3. Member, University Graduate Curriculum Committee (2023-2025)
4. Member, General Education Committee (2022-2025)
5. Member, University Assessment Committee (2018-2021)
6. CECAS Faculty Senator Alternate (2020-2021)
7. Faculty Senate Welfare Committee (2020-2021)

Professional Service

Reviewer of papers for:

1. Advances in Wind Engineering
2. Aerosol Science & Technology
3. Annals of Occupational Hygiene
4. Applied Thermal Energy
5. ASCE Journal of Hydraulic Engineering
6. ASCE Journal of Hydrologic Engineering
7. ASCE Journal of Structural Engineering
8. ASCE Journal of Transportation Engineering
9. ASCE Natural Hazards Review
10. ASME Journal of Fluids Engineering
11. ASME Journal of Thermal Science and Engineering Applications
12. Atmospheric Environment
13. Australian and New Zealand Industrial and Applied Mathematics Journal
14. Building & Environment
15. Building Simulation: An International Journal
16. Computational Thermal Sciences
17. Construction & Building Materials
18. Energy
19. Engineering Structures
20. Environmental Fluid Mechanics
21. Environmental Processes
22. Experimental Thermal and Fluid Science
23. Experiments in Fluids
24. Fire safety Journal
25. Flow Measurement and Instrumentation
26. Fluid Dynamics Research
27. Frontiers in Built Environment
28. Frontiers in Mechanical Engineering
29. Fuel
30. Heat Transfer
31. Indoor Air
32. International Journal of Fluid Mechanics Research
33. International Journal of Heat and Mass Transfer
34. International Journal of Thermal Sciences
35. International Journal of Ventilation
36. International Journal of Wildland Fire
37. Journal of Applied Meteorology and Climatology

38. Journal of Engineering Education
39. Journal of Environmental Management
40. Journal of Fluid Mechanics
41. Journal of Fluids and Structures
42. Journal of Geophysical Research - Earth Surface
43. Journal of Geophysical Research - Solid Earth
44. Journal of Hydraulic Research
45. Journal of Hydro-environment research
46. Journal of Wind Engineering and Industrial Aerodynamics
47. Physical Review: Fluids
48. Physics of Fluids
49. Probabilistic Engineering Mechanics
50. Proc. ICE - Engineering and Computational Mechanics
51. Royal Society - Open Science
52. Science of the Total Environment
53. Sustainable cities and society
54. Theoretical and Computational Fluid Dynamics
55. Water

Reviewer of funding proposals for:

1. National Science Foundation
2. Canadian Foundation for Climate and Atmospheric Sciences
3. Canadian National Science and Engineering Research Council
4. Georgia National Science Foundation

Conference activities:

1. Session chair, "Debris Effects on Structures – Simulations and Vulnerability Assessments" 15th Americas Conference on Wind Engineering, St. Louis, MO, May 19-22, (2025).
2. Reviewer for the 2025 ASEE Annual Conference & Exposition, Montreal QC, June 22-25 (2025).
3. Reviewer for the 14th International Symposium on Fire Safety Science
4. Session facilitator for the ASCE Civil Engineering Education Summit, Clemson University, April 3-5, 2023
3. Workshop Chair for the 6th AAWE Workshop (online) May 12-14 (2021).
4. Scientific committee member for the 9th International Colloquium on Bluff Body Aerodynamics and Applications. University of Birmingham, UK, July 20-23 (Meeting canceled due to COVID-19) (2020)
5. Chair for Session C13, Convection and Buoyancy-driven Flows: Environmental Flows, 72nd Annual Meeting of the APS Division of Fluid Dynamics, November 23–26, 2019; Seattle, Washington
6. Student Poster Competition Judge, 72nd Annual Meeting of the APS Division of Fluid Dynamics, November 23–26, 2019; Seattle, Washington
7. Session chair on 'Hydrologic Monitoring and Modeling' at the *South Carolina Water Resources Center 2018 Conference, Columbia, SC, October 17-18 (2018)*

8. Scientific Advisory Committee member for the 8th International Colloquium on Bluff Body Aerodynamics and Applications, Boston, MA, U.S.A. June 7-11, 2016.
9. Session chair on 'Environmental flows – architectural engineering' at the 8th International Colloquium on Bluff Body Aerodynamics and Applications, Boston, MA, U.S.A. June 7-11, 2016.
10. Organizing Committee member for The Fifth International Symposium on Computational Wind Engineering, Chapel Hill, NC, U.S.A. May 23-27, 2010.
11. Session chair on 'Convection' at the 2008 APS division of fluid dynamics conference in San Antonio, TX.
12. Organized COES Fluid Mechanics Seminar Series, S06, F07, F08, F09

Outreach and Other Activities:

1. Poster judge for the 2024 Summer Sustainability Symposium at the Watt Family Innovation Center
2. Co-Lead of the senior Design Challenge for the first cohort of the GE NEXT Engineers program.
3. Assisted with wind tunnel testing of model airplane for "Design, Build, Fly" CI team.
4. Ran tour of wind load test facility for 20 high school students for the Clemson "Civil Engineering Camp" (June 2022)
5. Ran "What is an engineer" for the 'Clemson Career Workshop' for 100 high school students (June 2022)
6. Judge for CECAS REU poster competition (July 2019)
7. Assisted with "Clemson Career Workshop" class on engineering by running a design build and test project for 50 rising senior high school students (July 2019).
8. Assisted with wind tunnel testing of jump aerodynamics for the Clemson University Waterski team (May 2019).
9. Judge for CECAS REU poster competition (July 2018)
10. Assisted with aerodynamic testing and flow visualization for the Clemson University Formula SAE race car team (April 2019).
11. Co-organized and ran STEM outreach day for WISE on campus April 2018
12. Co-organized and ran STEM outreach day for PEER on campus February 2018
13. Organized and ran the high school fluid mechanics demonstrations for the "E-magine your future as an engineer" school outreach day in Spartanburg in February 2014.
14. Organized and ran the fluid mechanics demonstrations for the "E-magine your future as an engineer" school outreach day on campus April 2013
15. Organized and ran the 'power of water' demonstrations for the school outreach day run in parallel with the National Steel Bridge competition in May 2012
16. Organized and ran the hydraulics event for the April 2012 ASCE Carolinas Conference

Community Service

1. Member of the Pickens County Carrer and Technology Advisory Board (2024-present)

MISCELLANEOUS

Undergraduate research project advising

1. Young Salisbury “Impact of parapet height on pressure distributions on flat roofs.” (2021)
2. Holmes, Megan “Experimental investigation of gravel aerodynamics” (2020)
3. Cherry, Jacovia “Development of a low-cost PIV system for environmental flows” (2019-20)
4. Reux, Hunter “Development of experimental techniques for quantifying ember accumulation on buildings.” (2019)
5. Lehr, Matthew “Development of experimental techniques for quantifying ember accumulation on buildings.” (2019)
6. Hopkins, Andrew “Image analysis of ember locations on roof tops” (2018-19)
7. Compton, James "Line plumes in a filling box" (2018)
8. Davis, Zach "Identifying ember accumulation points on rooftops" (2018-19)
9. An, Yifu (Andy) "Quantifying ember friction properties on rooftops" (2018)
10. Maass, Alexandra "Experimental study of ember flight" (2015)
11. Frye, Meredith "Experimental study of ember flight" (2015)
12. Philosa, Frank "Experimental study of rod-like debris" (2014)
13. Allison, Leigh "Criteria for branch breakoff in strong winds" (2013)
14. Chen, S. "Theoretical modeling of compact debris flight" (2012)
15. Essink, A. "Experimental and theoretical analysis of head loss in a channel junction" (2012)
16. Harrison, W. "Indoor air quality: Contaminated buoyant source mass concentration study" (2011)
17. West, D. "Effects of using pervious concrete as a thermal buffer in naturally ventilated buildings" (2010)
18. Patskowski, J. "Error analysis for numerical methods for pond routing" (May 2010)
19. Birckbichler, K. "Measurement of evaporation from a small lake using a floating evaporation pan" (2010)
20. Conley, C. "Role of wind angle on the discharge coefficient for flow through an open window" (2009)
21. Long, J. "Merging co-flowing jets" (2009)
22. Heiliger, C. "Wind tunnel study of debris flight" (2009)
23. Betz, K. "Dense gas dispersion in urban building arrays" (2009)

Date of most recent resume update – June 9, 2025