Sungmoon Jung

Department of Civil and Environmental Engineering
FAMU-FSU Engineering (A joint college by Florida A&M and Florida State University)
2525 Pottsdamer Street
Tallahassee, Florida, USA 32310-2870
Phone: 850-410-6386
Email: sjung@eng.famu.fsu.edu
Web: http://eng.famu.fsu.edu/~sjung

Research Interests

Structural engineering and mechanics focusing on wind loading and impact loading; Applications of machine-learning in mechanics problems; Wind energy; Vehicle safety.

Professional Appointments

Professor, Civil and Environmental Engineering, FAMU-FSU Engineering, 2020 – present
Associate Professor, Civil and Environmental Engineering, FAMU-FSU Engineering, 2014 – 2020
Visiting Professor, Civil and Environmental Engineering, Seoul National University, 2018 Spring
Assistant Professor, Civil and Environmental Engineering, FAMU-FSU Engineering, 2008 – 2014
Staff Engineer, Caterpillar Champaign Simulation Center (Belcan Corporation), 2006 – 2008
Postdoctoral Research Associate, University of Illinois at Urbana-Champaign, 2005

Education

Ph.D.	University of Illinois at Urbana-Champaign	Civil Engineering (Structural Eng.)	2004
M.S.	Seoul National University	Civil Engineering (Structural Eng.)	1999
B.S.	Seoul National University	Civil Engineering	1997

Publications and Scholarly Works

Peer-Reviewed Journal Papers

Underline: indicates current or former student

1. Nahian, Z. M., An, L. S., Fernández-Cabán, P. L., & Jung, S. (under review), Artificial neural networks for mean wind profile prediction over heterogeneous terrains
2. Alinejad, N., Jung, S., Cai, J., & Liu, X. (accepted), Land coverage prediction using convolutional neural network for enhanced wind loading estimation, Smart and Sustainable Built Environment
3. An, L. S., Alinejad, N., & Jung, S. (2024), Experimental study on the influence of terrain complexity on wind pressure characteristics of mid-rise buildings, Engineering Structures, 321, 118907
4. An, L. S., & Jung, S. (2024), Data-driven prediction of wind pressure on low-rise buildings in complex heterogeneous terrains, Building and Environment, 265, 112022
5. Adegbulugbe, O., Jung, S., & Kampmann, R. (2024), Impact behavior of prestressed concrete piles with glass FRP spirals: experiments and finite element analysis, ASCE Journal of Composites for Construction, 28, 04024049
6. Farzaneh, F., Zhang, Q., & Jung, S. (2024), Enhancing electric vehicle battery safety and performance: Aluminum tubes filled with PCM, Journal of Energy Storage, 97, 112922

7. Ma, M., Huang, W., Jung, S., Oslon, C., Yin, K., & Xu, S. (2024), Evaluating vegetation effects on wave attenuation and dune erosion during hurricane, Journal of Marine Science and Engineering, 12(8), 1326
8. Ma, M., Huang, W., Vijayan, L., & Jung, S. (2024), Modeling wave-surge effects on barrier-island breaching in St. Joseph Peninsula during Hurricane Michael, Natural Hazards, 1-28
9. Alagheband, M., Zhang, Q., & Jung, S. (2024), Investigating the influence of infill patterns and mesh modifiers on fatigue properties of 3D printed polymers. International Journal of Fatigue, 108463
10. Kim, S., Alinejad, N., Jung, S., & Kim, H.-K. (2024), The effect of open-to-suburban terrain transition on wind pressures on a low-rise building, Journal of Building Engineering, 85, 108651
11. Alinejad, N., Kim, S., & Jung, S. (2024), Wind-tunnel testing of low- and midrise buildings under heterogeneous upwind terrains, Journal of Structural Engineering, 150(5), 04724001
12. Farzaneh, F., An, L. S., & Jung, S. (2024), Prediction of full-scale crashworthiness performance based on component-level testing: application to bus structures, International Journal of Crashworthiness, 1-12
13. An, L. S., & Jung, S. (2024), Experimental investigation on influence of terrain complexity for wind pressure of low-rise building, Journal of Building Engineering, 83, 108350
14. Rashid, M. M., Seyedi, M., & Jung, S. (2024), Simulation of pedestrian interaction with autonomous vehicles via social force model, Simulation Modelling Practice and Theory, 132, 102901
15. Rashid, M. M., Farzaneh, F., Seyedi, M., & Jung, S. (2024), Evaluation of risk injury in pedestrians' head and chest region during collision with an autonomous bus, International Journal of Crashworthiness, 29, 367-377
16. Kim, S., Cheon, H. Y., Jung, S., & Kim, H.-K. (2024), Wind-induced accidents on the transition section of a cable-stayed bridge: cause and remedy, Journal of Bridge Engineering, 29, 05023013
17. Qu, C., Farzaneh, F., Jung, S., & Zhang, Q. (2024), Strengthening reinforced concrete bridge piers against heavy vehicle collisions with ultra-high performance concrete collars: A finite element analysis study, Advances in Structural Engineering, 13694332241237575
18. Ma, M., Huang, W., Jung, S., Xu, S., & Vijayan, L. (2024), Modeling hurricane wave propagation and attenuation after overtopping sand dunes during storm surge, Ocean Engineering, 292, 116590
19. Alinejad, N., Jung, S., Kakareko, G., & Fernández-Cabán, P. L. (2023), Wind-tunnel reproduction of nonuniform terrains using local roughness zones, Boundary-Layer Meteorology, 188, 463-484
20. An, L.-S., Alinejad, N., Kim, S., & Jung, S. (2023), Experimental study on wind characteristics and prediction of mean wind profile over complex heterogeneous terrain, Building and Environment, 243, 110719
21. Farzaneh, F., & Jung, S. (2023), Experimental and numerical investigation on enhancing capped-end tube energy absorption capacity by orifice effect, Structures, 53, 1450-1462
22. Kim, S., Jung, S., Seyedi, M. R., & Kim, H.-K. (2023), Ventilation efficiency in road vehicles and probability of respiratory infection, Transportation Engineering, 12, 100173
23. Farzaneh, F., & Jung, S. (2023), Lifecycle carbon footprint comparison between internal combustion engine versus electric transit vehicle: A case study in the U.S., Journal of Cleaner Production, 390, 136111
24. Adegbulugbe, O., Jung, S., Kampmann, R., Freeman, C., Wan, G., & Herrera, R. (2023), Experimental technique for impact testing of concrete piles, Experimental Techniques, 47, 1111-1123

25. Seyedi, M. R., Jung, S., & Wekezer, J. (2022), A comprehensive assessment of bus rollover crashes: integration of dynamic and finite element simulation methods, International Journal of Crashworthiness, 27, 273-288
26. Islam, M. M., Jung, S., & Zhang, Q. (2022), Mechanical properties of corroded steel rebars after 20 years of saltwater exposure, Journal of Failure Analysis and Prevention, 22, 1714-1724
27. Seyedi, M. R., Koloushani, M. R., Jung, S., & Vanli, O. A. (2021), Safety assessment and a parametric study of forward collision-avoidance assist based on real-world crash simulations, Journal of Advanced Transportation, 4430730
28. Dolzyk, G., Jung, S., & Ufodike, C. O. (2021), Crashworthiness of circular tubes with rhombus star grooving pattern, Materials Today Communications, 29, 102899
29. Kakareko, G., Jung, S., Mishra, S., & Vanli, O. A. (2021), Bayesian capacity model for hurricane vulnerability estimation, Structure and Infrastructure Engineering, 17, 638-648
30. Ufodike, C. O., Wang, H., Ahmed, M. F., Dolzyk, G., & Jung, S. (2021), Design and modeling of bamboo biomorphic structure for in-plane energy absorption improvement, Materials & Design, 205, 109736
31. Kakareko, G., Jung, S., & Ozguven, E.E. (2020), Estimation of tree failure consequences due to high winds using convolutional neural networks, International Journal of Remote Sending, 41, 9039-9063
32. Martin, S., Jung, S., & Vanli, O. A. (2020), Impact of near-future turbine technology on the wind power potential of low wind regions, Applied Energy, 272, 115251
33. Seyedi, M. R., & Jung, S. (2020), Numerical assessment of occupant responses during the bus rollover test: a finite element parametric study, Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 234, 2195-2215
34. Seyedi, M. R., Jung, S., Wekezer, J., Kerrigan, J. R., & Gepner, B. (2020), Rollover crashworthiness analyses – an overview and state of the art, International Journal of Crashworthiness, 25, 328-350
35. Kakareko, G., Jung, S., & Vanli, O. A. (2020), Hurricane risk analysis of the residential structures located in Florida, Sustainable and Resilient Infrastructure, 5, 395-409
36. Han, S.-W., Park, Y. C., Kang, S.-C., Jung, S., & Kim, H.-K. (2019), Collapse analysis of ERW pipe based on roll-forming and sizing simulations, Journal of Marine Science and Engineering, 7, 410
37. Seyedi, M. R., Jung, S., Dolzyk, G., & Wekezer, J. (2019). Experimental assessment of vehicle performance and injury risk for cutaway buses using tilt table and modified dolly rollover tests, Accident Analysis & Prevention, 132, 105287
38. Dolzyk, G., & Jung, S. (2019), Tensile and fatigue analysis of 3D-printed polyethylene terephthalate glycol (PETG), Journal of Failure Analysis and Prevention, 19, 511-518
39. Nicholson, D., Vanli, A., Jung, S., & Ozguven, E. (2019), A spatial regression and clustering method for place-specific social vulnerability indices, International Journal of Disaster Risk Reduction, 38, 101224
40. Fung, K., Jung, S. & Sobanjo, J. (2019), Main effects of driving postures changes in frontal collisions due to aging, International Journal of Vehicle Safety, 11, 74-92
41. Fung, K., Jung, S., Sobanjo, J., & Xu, R. (2019), Development and testing of a simplified dummy for frontal crash, Experimental Techniques, 43, 7-14
42. Mishra, S., Vanli, O. A., Kakareko, G., & Jung, S. (2019), Preventive maintenance of wood-framed buildings for hurricane preparedness, Structural Safety, 76, 28-39

43. Kocatepe, A, Ulak, M. B., Kakareko, K, Ozguven, E. E., Jung, S., & Arghandeh, R. (2019), Measuring the accessibility of critical facilities in the presence of hurricane-related roadway closures and an approach for predicting future roadway disruptions, Natural Hazards, 95, 615-635
44. Ok, S., Jung, S., & Song, J. (2018), Multi-objective optimization approach for robust bridge damage identification against sensor noise, Shock and Vibration, 3024209
45. Wicker, M., Alduse, B. P., & Jung, S. (2018), Detection of hidden corrosion in metal roofing shingles utilizing infrared thermography, Journal of Building Engineering, 20, 201-207
46. Ferreira, L., Amirinia, G., & Jung, S. (2018), Surface pressure distribution in patterned cylinders under simulated atmospheric boundary layer winds, The Structural Design of Tall and Special Buildings, 27(1), e1404
47. Kakareko, G., Jung, S., Vanli, O. A., Tecle, A., Khemici, O., & Khater, M. (2017), Hurricane loss analysis based on the population-weighted index, Frontiers in Built Environment, 3, 46
48. Amirinia, G., & Jung, S. (2017), Buffeting response analysis of offshore wind turbines subjected to hurricanes, Ocean Engineering, 141, 1-11
49. Amirinia, G., & Jung, S. (2017), Along-wind response of high-rise buildings subjected to hurricane boundary layer winds, ASCE Journal of Structural Engineering, 143, 04017087
50. Amirinia, G., & Jung, S. (2017), Along-wind buffeting responses of wind turbines subjected to hurricanes considering unsteady aerodynamics of the tower, Engineering Structures, 138, 337-350
51. Mishra, S., Vanli, O. A., Alduse, B. P., & Jung, S. (2017), Hurricane loss estimation in wood-frame buildings using Bayesian model updating: assessing uncertainty in fragility and reliability analyses, Engineering Structures, 135, 81-94
52. Patil, A., Jung, S., & Kwon, O. S. (2016), Structural performance of a wind turbine tower subjected to strong ground motions, Engineering Structures, 120, 92-102
53. Gepner, B., Gleba, M., Jung, S., & Wekezer, J. (2016), Strain rate dependency in paratransit bus rollover, International Journal of Heavy Vehicle Systems, 23, 1-20
54. Jung, S., Kim., S. R., Patil, A., & Hung, L. C. (2015), Effect of monopile foundation on the structural response of a 5-MW offshore wind turbine tower, Ocean Engineering, 109, 479-488
55. Alduse, B. P., Jung, S., Vanli, O. A., & Kwon, S. D. (2015), Effect of uncertainties in wind speed and direction on the fatigue damage of long-span bridges, Engineering Structures, 100, 468-478
56. Alduse, B. P., Jung, S., & Vanli, O. A. (2015), Condition-based updating of the fragility for roof covers under high winds, Journal of Building Engineering, 2, 36-43
57. Vanli, O. A., & Jung, S. (2014), Statistical updating of finite element model with Lamb wave sensing data for damage detection problems, Mechanical Systems and Signal Processing, 42, 137-151
58. Jung, S., & Masters, F. J. (2013), Characterization of open and suburban boundary layer wind turbulence in 2008 Hurricane Ike, Wind and Structures, 17, 135-162
59. Jung, S., & Kwon, S. D. (2013), Weighted error functions in artificial neural networks for improved wind energy potential estimation, Applied Energy, 111, 778-790
60. Lewis, J., Jung, S., & Mtenga, P. (2013), Performance of screen enclosures under repeated loading cycles, ASCE Journal of Performance of Constructed Facilities, 27, 415-423
61. Jung, S., Vanli, O. A., & Kwon, S. D. (2013), Wind energy potential assessment considering the uncertainties due to limited data, Applied Energy, 102, 1492-1503
62. Schellhammer, M., & Jung, S. (2012), Assessment of aluminum screen enclosure connections subjected to strong winds, Engineering Structures, 43, 78-87

63. Patil, A., Jung, S., Lee, S., & Kwon, S. D. (2011), Mitigation of vortex-induced vibrations in bridges under conflicting objectives, Journal of Wind Engineering and Industrial Aerodynamics, 99(12), 1243-1252
64. Jung, S., & Ghaboussi, J. (2010), Inverse identification of creep of concrete from in situ load-displacement monitoring, Engineering Structures, 32(5), 1437-1445
65. Jung, S., Ok, S. Y., & Song, J. (2010), Robust structural damage identification based on multi-objective optimization, International Journal for Numerical Methods in Engineering, 81(6), 786-804
66. Song, J., Kang, W. H., Kim, K. S., & Jung, S. (2010), Probabilistic shear strength models for reinforced concrete beams without shear reinforcement, Structural Engineering and Mechanics, 34(1), 15-38
67. Hashash, Y. M. A., Song, H., Jung, S., & Ghaboussi, J. (2009), Extracting inelastic metal behaviour through inverse analysis: a shift in focus from material models to material behavior, Inverse Problems in Science and Engineering, 17(1), 35-50
68. Jung, S., & Kim, K. S. (2008), Knowledge-based prediction of shear strength of concrete beams without shear reinforcement, Engineering Structures, 30(6), 1515-1525
69. Fu, Q. W., Hashash, Y. M. A., Jung, S., & Ghaboussi, J. (2007), Integration of laboratory testing and constitutive modeling of soils. Computers and Geotechnics, 34(5), 330-345
70. Jung, S., Ghaboussi, J., & Marulanda, C. (2007), Field calibration of time-dependent behavior in segmental bridges using self-learning simulation, Engineering Structures, 29(10), 2692-2700
71. Hashash, Y. M. A., Marulanda, C., Ghaboussi, J., & Jung, S. (2006), Novel approach to integration of numerical modeling and field observations for deep excavations, ASCE Journal of Geotechnical and Geoenvironmental Engineering, 132(8), 1019-1031
72. Jung, S., & Ghaboussi, J. (2006), Characterizing rate-dependent material behaviors in self-learning simulation, Computer Methods in Applied Mechanics and Engineering, 196(1-3), 608-619
73. Jung, S., & Ghaboussi, J. (2006), Neural network constitutive model for rate-dependent materials, Computers & Structures, 84(15-16), 955-963
74. Hashash, Y. M. A., Jung, S., & Ghaboussi, J. (2004), Numerical implementation of a neural network based material model in finite element analysis, International Journal for Numerical Methods in Engineering, 59(7), 989-1005
75. Jung, S., Ghaboussi, J., & Kwon, S. D. (2004), Estimation of aeroelastic parameters of bridge decks using neural networks, ASCE Journal of Engineering Mechanics, 130(11), 1356-1364
76. Hashash, Y. M. A., Marulanda, C., Ghaboussi, J., & Jung, S. (2003), Systematic update of a deep excavation model using field performance data, Computers and Geotechnics, 30(6), 477-488
77. Kwon, S. D., Jung, S., & Chang, S. P. (2000), A new passive aerodynamic control method for bridge flutter, Journal of Wind Engineering and Industrial Aerodynamics, 86(2-3), 187-202

Conference Papers and Presentations

1. An, L.-S., & Jung, S. (2024), Experimental study on the influence of terrain complexity on wind pressure characteristics of mid-rise buildings, BBAA IX Conference, Birmingham, UK, July 29-August 2 [J]
2. Alagheband, M., Jung, S., & Zhang, Q. (2024), Influence of infill patterns on the mechanical and fatigue characteristics of fused filament fabricated polymer parts, Engineering Mechanics Institute Conference 2024, Chicago, IL, USA, May 28-31 [J]

3. An, L.-S., Alinejad, N., Kim, S., & Jung, S. (2023), Application of Deaves and Harris model for complex heterogeneous terrain, 18th International Conference on Wind Engineering, Florence, Italy, August 27-31 [J]
4. Nahian, Z. M., An, L.-S., & Jung, S. (2023), Prediction of wind profile in heterogeneous terrain using artificial neural network, Engineering Mechanics Institute Conference 2023, Atlanta, GA, USA, June 6-9 [X]
5. Farzaneh, F., & Jung, S. (2023), Experimental investigation on enhancing tube energy absorption capacity by orifice effect, Engineering Mechanics Institute Conference 2023, Atlanta, GA, USA, June 6-9 [X]
6. Kim, S., Alinejad, N., Jung, S., & Fernández-Cábán, P. L. (2023), Investigating the accuracy of wind tunnel simulations for wind profiles over heterogeneous terrain: a comparison study with field measurements, Engineering Mechanics Institute Conference 2023, Atlanta, GA, USA, June 6-9 [X]
7. An, L.-S., & Jung, S. (2023), Experimental study on the effect of complex heterogeneous terrain on wind pressure in low-rise building, Engineering Mechanics Institute Conference 2023, Atlanta, GA, USA, June 6-9 [X]
8. Alinejad, N., & Jung, S. (2023), Producing heterogeneous upwind terrain dataset for wind tunnel testing using image classification method, Engineering Mechanics Institute Conference 2023, Atlanta, GA, USA, June 6-9 [X]
9. Alagheband, M., Jung, S., & Seyedi, M. R. (2023), Effect of occupant position on ejection and injury mitigation during the rollover of cutaway buses, Engineering Mechanics Institute Conference 2023, Atlanta, GA, USA, June 6-9 [X]
10. Kosarimovahhed, M., Zhang, Q., & Jung, S. (2023), Charactering the basic creep behavior of 3D printed concrete with layered structures, Engineering Mechanics Institute Conference 2023, Atlanta, GA, USA, June 6-9 [X]
11. Adegbulugbe, O., & Jung, S. (2023), Prestressed concrete piles with GFRP spirals against corrosion hazard, Engineering Mechanics Institute Conference 2023, Atlanta, GA, USA, June 6-9 [X]
12. Alinejad, N., Cai, J., Jung, S., & Liu, X. (2022), Producing complex terrain for wind engineering studies using Convolutional Neural Network and Landsat-8 image, 8th European-African Conference on Wind Engineering, Bucharest, Romania, September 20-23 [J]
13. Kim, S., Alinejad, N., Jung, S., & Fernández-Cábán, P. L. (2022), Comparison of the effective roughness length between field measurements and wind tunnel testing, 8th European-African Conference on Wind Engineering, Bucharest, Romania, September 20-23 [J]
14. Adegbulugbe, O., & Jung, S. (2022), Finite element analysis of piles and information for installation monitoring, 11th International Conference on Bridge Maintenance, Safety and Management, Barcelona, Spain, July 11-15 [J]
15. Taondeyande, F., Kim, S., & Jung, S. (2022), Effect of balconies on surface pressure distribution on a mid-rise building, 14th Americas Conference on Wind Engineering, Lubbock, Texas, USA, May 17-19 [#]
16. Kim, S., Alinejad, N., & Jung, S. (2022), Effect of upwind obstacle distribution on wind loading of low-rise building in suburban area, 14th Americas Conference on Wind Engineering, Lubbock, Texas, USA, May 17-19 [#]
17. Alinejad, N., Kim, S., & Jung, S. (2022), Effect of upwind roughness change on the pressure of a low-rise building model in wind tunnel, 14th Americas Conference on Wind Engineering, Lubbock, Texas, USA, May 17-19

18. Alinejad, N., Jung, S., & Fernández-Cábán, P. L. (2021), Comparison of wind tunnel testing with FCMP field data of heterogeneous terrains, Engineering Mechanics Institute Conference 2021, Virtual Event, May 25-28 [X]
19. Adegbulugbe, O., Seyedi, M. R., Jung, S., & Kampmann, R. (2021), Experimental technique for the impact testing of concrete piles, Engineering Mechanics Institute Conference 2021, Virtual Event, May 25-28 [X]
20. Han, S.-W., Kang, S.-C., Jung, S., Park. Y. C., & Kim, H.-K. (2019), Evaluation of structural performance of the pipe considering ERW pipe manufacturing process through numerical analysis, 29th International Ocean and Polar Engineering Conference, Honolulu, Hawaii, USA, June 16-21
21. Jung. S., Amirinia, G., & Kakareko, G. (2019), Analysis of hurricane wind effects on buildings and community, Structures Congress 2019, Orlando, Florida, USA, April 24-27 [JX]
22. Jung, S., Seyedi, M. R., Dolzyk, G., & Wekezer, J. (2019), Toward injury-based rollover crashworthiness assessment of cutaway bus, Structures Congress 2019, Orlando, Florida, USA, April 24-27 [JX]
23. Seyedi, M. R., Dolzyk, G., Jung, S., & Wekezer, J. (2019), Characteristic analysis of dolly rollover test: a study of effects of initial conditions on the kinematics of the vehicle and occupants, 37th International Modal Analysis Conference, Society of Experimental Mechanics, Orlando, Florida, USA, January 28-31
24. Seyedi, M. R., Dolzyk, G., Jung, S., & Wekezer, J. (2018), Skin performance in the rollover crashworthiness analysis of cutaway bus, 36th International Modal Analysis Conference, Society of Experimental Mechanics, Orlando, Florida, USA, February 12-15
25. Amirinia, G., Jung, S., & Kakareko, G. (2018), Effect of piezoelectric material in mitigation of aerodynamic forces, 36th International Modal Analysis Conference, Society of Experimental Mechanics, Orlando, Florida, USA, February 12-15
26. Jung, S., & Amirinia, G. (2018), Hurricane effects on offshore wind turbines considering tower aerodynamics, 2018 Wind Energy Symposium (pp. 1733), Kissimmee, Florida, USA, January 8-12
27. Amirinia, G., & Jung, S. (2017), Low cycle fatigue analysis of offshore wind turbines subjected to hurricane, Proceedings of the ASME 2017 36th International Conference on Ocean, Offshore and Arctic Engineering (OMAE 2017), Trondheim, Norway, June 25-30 [J]
28. Jung, S., Kakareko, G., Ozguven, E. E., & Weresa, S. (2017), A new approach for road closure probability estimation caused by hurricane winds, Engineering Mechanics Institute Conference 2017, San Diego, California, USA, June 4-7 [JX]
29. Amirinia, G., & Jung, S. (2017), Comparison of loads from IEC 61400-3 extreme conditions with loads from recently observed hurricane models, Proceeding of the 13th Americas Conference on Wind Engineering, Gainesville, Florida, USA, May 21-24
30. Al-Kaimakchi, A., Jung, S., Rambo-Roddenberry, M., & Amirinia, G. (2017), Optimization of alternative towers for wind turbines in low wind resource regions, Proceeding of the 13th Americas Conference on Wind Engineering, Gainesville, Florida, USA, May 21-24
31. Kakareko, G., Jung, S., Vanli, O. A., Tecle, A., Khemici, O., & Khater, M. (2017), Hurricane loss analysis of wood-frame structures in Florida, Proceeding of the 13th Americas Conference on Wind Engineering, Gainesville, Florida, USA, May 21-24
32. Dolzyk, G., Seyedi, M. R., Jung, S. & Wekezer, J. (2017), Experimental and analytical studies of rollover accidents of cutaway buses, Verification and Validation Symposium 2017, Las Vegas, Nevada, USA, May 3-5 [X]

33. Seyedi, M. R., Dolzyk, G., Jung, S. & Wekezer, J. (2017), Experimental and numerical analysis of injury risk in side impacted cutaway bus, Verification and Validation Symposium 2017, Las Vegas, Nevada, USA, May 3-5 [X]
34. Fung, K., Jung, S. & Sobanjo, J. (2016), Main effects of driving postures changes in frontal collisions due to aging, International Conference on Transport and Health (ICTH) 2016, San Jose, CA, USA, June 13-15 [X]
35. Amirinia, G., & Jung, S. (2016), Time domain analysis of unsteady aerodynamic forces on a parked wind turbine tower subjected to high winds, 8th International Colloquium on Bluff Body Aerodynamics and Applications, Boston, MA, USA, June 7-11
36. Kakareko, G., Jung, S., Vanli, O. A., & Mishra, S. (2016), Vulnerability estimation of low-rise buildings against wind hazard considering uncertainty in building components, Engineering Mechanics Institute Conference 2016, Nashville, TN, USA, May 22-26 [X]
37. Amirinia, G., & Jung, S. (2016), Dynamics of wind turbine structure subjected to hurricane winds, Engineering Mechanics Institute Conference 2016, Nashville, TN, USA, May 22-26 [X]
38. Mishra, S., Vanli, O. A., Huffer, F. W., & Jung, S. (2016), Regularized discriminant analysis for multi-sensor decision fusion and damage detection with Lamb-waves, SPIE Smart Structures / NDE Conference, Las Vegas, Nevada, USA, March 20-24
39. Amirinia, G., & Jung, S. (2016), Hurricane effects on wind turbines, Federal Alliance for Safe Homes (FLASH) 2016, Orlando, FL, USA, January 28-29 [X]
40. Vanli, O. A., Mishra, S., Jung, S., & Alduse, B. P., (2015), Integration of computer and physical experiments for improving predictive inference: an application for property loss estimation due to hurricane winds", INFORMS Annual Meeting, Philadelphia, PA, USA, Nov 1-4, 2015 [X]
41. Jung, S., Vanli, O. A., & Alduse, B. P. (2015), A framework for assessing wind hazard on buildings considering uncertainties in structural performance, Engineering Mechanics Institute 2015, American Society of Civil Engineers, Stanford University, California, USA, June 16-19 [JX]
42. Gleba, M., Siervogel, J., Wekezer, J., & Jung, S. (2015), Testing program for crashworthiness assessment of cutaway buses, SEM 2015 Annual Conference and Exposition on Experimental and Applied Mechanics, Costa Mesa, California, USA, June 8-11
43. Amirinia, G., Jung, S., & Alduse, B. P. (2015), Effect of different hurricane spectrums on wind turbine loads and responses, Windpower 2015, American Wind Energy Association, Orlando, Florida, USA, May 15-21 [#]
44. Jung, S., Kim, S.-R., Patil, A., & Hung, L. C. (2013), Effect of foundation modeling on the structural response of offshore wind turbines, 12th Americas Conference on Wind Engineering (12ACWE), American Association for Wind Engineering, Seattle, Washington, USA, June 16-20 [J]
45. Kwon, S.-D., Alduse, B. P., Jung, S., & Vanli, O. A. (2013), Bayesian approach for fatigue damage assessment of a bridge under gust, 12th Americas Conference on Wind Engineering (12ACWE), American Association for Wind Engineering, Seattle, Washington, USA, June 16-20 [J]
46. Vanli, O. A., & Jung, S. (2012), Statistical updating of finite element model with Lamb wave sensing data for structural damage detection, INFORMS Annual Meeting, Phoenix, AZ, USA, October 14-17 [X]
47. Jung, S., Munoz, G. J., & Kwon, S.-D. (2012), Mitigation of vortex-induced vibrations of circular cylinders by surface perturbations, Engineering Mechanics Institute 2012, American Society of Civil Engineers, Notre Dame, Indiana, USA, June 17-20 [JX]

48. Jung, S., Vanli, O. A., & Kwon, S.-D. (2012), Wind energy potential assessment considering the uncertainty in wind speed data, Engineering Mechanics Institute 2012, American Society of Civil Engineers, Notre Dame, Indiana, USA, June 17-20 [JX]
49. Jung, S., Alduse, B. P., Vanli, O. A., & Kwon, S.-D. (2011), Effect of uncertainties on the buffeting-induced fatigue of long-span bridges, 13th International Conference on Wind Engineering, International Association for Wind Engineering, Amsterdam, Netherlands, July 11-15 [#]
50. Jung, S., Schellhammer, M., & Lewis, J. (2011), Mitigation of damage on aluminum screen enclosures through improved connections, 13th International Conference on Wind Engineering, International Association for Wind Engineering, Amsterdam, Netherlands, July 11-15 [#]
51. Munoz, G. J., & Jung, S. (2011), Effect of varying actuation frequencies of micro-fiber composites to control vortex-induced vibrations, Engineering Mechanics Institute 2011, American Society of Civil Engineers, Boston, Massachusetts, USA, June 2-4 [X]
52. Jung, S., & Masters, F. J. (2010), Ground-level turbulence characteristics of hurricane wind measured from mobile towers during hurricane Ike, Engineering Mechanics Institute 2010, American Society of Civil Engineers, Los Angeles, California, USA, August 8-11 [J]
53. Jung, S., Sobanjo, J. O., & Munoz, G. J. (2010), Visualization and assessment of the aging infrastructure using self-organizing map, 19th Analysis & Computation Specialty Conference, 2010 Structures Congress, American Society of Civil Engineers, Orlando, Florida, USA, May 12-15 [J]
54. Jung, S., Ok, S.-Y., & Song, J. (2010), Structural damage identification based on multi-objective optimization, IMAC XXVIII A Conference and Exposition on Structural Dynamics, Society for Experimental Mechanics, Jacksonville, Florida, USA, February 1-4 [J]
55. Patil, A., Jung, S., & Kwon, S.-D. (2010), Mitigation of vortex-induced vibrations in long-span bridges, IMAC XXVIII A Conference and Exposition on Structural Dynamics, Society for Experimental Mechanics, Jacksonville, Florida, USA, February 1-4
56. Jung, S., Ok, S.-Y., & Song, J. (2009), Benchmark problem on health monitoring of highway bridges: a multi-objective optimization based approach, 2009 TRB Conference on Developing a Research Agenda for Transportation Infrastructure Preservation and Renewal, Transportation Research Board, Washington D.C., USA, November 12-13 [#]
57. Jung, S., Patil, A., & Kwon S.-D. (2009), Optimum retrofit of long-span bridges under conflicting objectives, 11th Americas Conference on Wind Engineering, American Association for Wind Engineering, San Juan, Puerto Rico, June 22-26 [J]
58. Bae, H., Jung, S., Repalle, J., & Ha, C. (2008), Subspace-based reliability method (SBRM) for sequential improvement of probability estimation, 49th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, AIAA/ASME/ASCE/AHS/ASC, Schaumburg, Illinois, USA, April 7-10
59. Jung, S., Ok, S.-Y., & Song, J. (2008), Structural damage detection using multiple measurements of uncertain responses, 49th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, AIAA/ASME/ASCE/AHS/ASC, Schaumburg, Illinois, USA, April 7-10 [J]
60. Jung, S., Ok, S.-Y., & Song, J. (2007), Multi-objective optimization based structural condition assessment, ASCE 18th Engineering Mechanics Division Conference (EMD2007), American Society of Civil Engineers, Blacksburg, Virginia, USA, June 3-6 [J]
61. Song, J., Kang, W.-H., Kim, K. S., & Jung, S. (2006), Probabilistic shear strength models for reinforced concrete beams by Bayesian updating based on experimental observations, 5th

Computational Stochastic Mechanics Conference (CSM5), International Association for Structural Safety and Reliability, Rodos, Greece, June 21-23

62. Hashash, Y. M. A., Ghaboussi, J., & Jung, S. (2006), Characterizing granular material constitutive behavior using SelfSim with boundary load-displacement measurements, ASCE Earth and Space 2006 - Proceedings of the 10th Biennial International Conference on Engineering, Construction, and Operations in Challenging Environments, American Society of Civil Engineers, Houston, Texas, USA, March 5-8
63. Marulanda, C., Hashash, Y. M. A., Jung, S., & Ghaboussi, J. (2004), Integration of field measurements in model simulation of urban excavations, International Conference on Geotechnical Engineering, International Society of Soil Mechanics and Geotechnical Engineering, Beirut, Lebanon, May 19-22
64. Hashash, Y. M. A., Marulanda, C., Ghaboussi, J., & Jung, S. (2003), Update of a numerical model of a deep excavation using field measurements, 12th Panamerican Conference on Soil Mechanics and Geotechnical Engineering, International Society of Soil Mechanics and Geotechnical Engineering, Cambridge, Massachusetts, USA, June 22-26
65. Hashash, Y. M. A., Ghaboussi, J., Jung, S., & Marulanda, C. (2002), Systematic update of a numerical model of a deep excavation using field performance data, Eighth International Symposium on Numerical Models in Geomechanics - NUMOG VIII, NUMOG, Rome, Italy, April 10-12
66. Hashash, Y. M. A., Ghaboussi, J., Jung, S., & Marulanda, C. (2002), Direct field calibration of model simulations of deep excavations, Plasticity, Damage and Fracture at Macro, Micro and Nano Scales, Numerical Engineering Analysis and Testing, Aruba, January 3-9
67. Kwon, S.-D., Jung, S., & Chang, S.-P. (2000), Passive aerodynamic control of bridge flutter by modifying airflow, Fourth International Colloquium on Bluff Body Aerodynamics and Application, International Association for Wind Engineering, Bochum, Germany, September 11-14

[J] Work presented by S. Jung
[#] Poster presentation and paper
[X] Presentation without paper

Invited Lectures

1. Jung, S. (2022), Effect of Heterogeneous Terrain on Wind Loads on Buildings, University of Florida, January 7
2. Jung, S. (2021), Recent Advances in Machine Learning and Its Applications in Wind Engineering, University of Seoul, July 20
3. Jung, S. (2021), Recent Advances in Machine Learning and Its Applications in Wind Engineering, Connecticut Society of Civil Engineers, June 23
4. Jung, S. (2019), Wind Effects on Buildings and Community, University of Virginia, November 22
5. Jung, S. (2018), Machine Learning and Structural Health Monitoring, Korea Institute of Civil Engineering and Building Technology, May 29
6. Jung, S. (2018), Wind Turbine Support Structures under Typhoon Loading, Seoul National University, May 24
7. Jung, S. (2018), Wind Turbine Support Structures under Typhoon Loading, Korea Institute of Ocean Science and Technology, May 10
8. Jung, S. (2018), Structural Monitoring and Damage Assessment Using Artificial Neural Network, Korea Institute of Civil Engineering and Building Technology, April 24

9. Jung, S. (2018), Structural Monitoring and Damage Assessment Using Artificial Neural Network, University of Seoul, April 20
10. Jung, S. (2018), Mitigation of Wind and Impact Effects on Structures, University of New Mexico, January 26
11. Jung, S. (2015), Recent Advances in Wind Hazard Research and Future Opportunities, University of Central Florida, May 19
12. Jung, S. (2013), Wind Energy: Fundamentals, Challenges, and Opportunities, FAMU-FSU College of Engineering, September 13
13. Jung, S. (2011), Overview of Wind Engineering Research, FAMU-FSU College of Engineering, November 8
14. Jung, S. (2010), Aerodynamic Analysis of Long-Span Bridges and Smart Structural Systems, Dong-A University, December 16
15. Jung, S. (2009), Computational Intelligence for Material Modeling and Structural Health Monitoring, FAMU-FSU College of Engineering, December 13
16. Jung, S. (2008), Computational Intelligence for Material Modeling and Structural Health Monitoring, High-Performance Materials Institute, October 10
17. Jung, S. (2005), Applications of Artificial Neural Networks in Engineering Problems, Caterpillar Champaign Simulation Center, November 2

Technical Reports

1. Jung, S., Farzaneh, F., Alagheband, M., & Siervogel, J. (2024), Crashworthiness Evaluation of Paratransit Buses, Project Year 2024, Florida Department of Transportation
2. Adegbulugbe, O., Jung, S., & Kampmann, R. (2023), Evaluation of Glass Fiber Reinforced Polymer (GFRP) Spirals in Corrosion Resistant Concrete Piles, FDOT BVD-30-977-27 and BED-30-977-12, Florida Department of Transportation
3. Jung, S., Seyedi, M. R., & Rashid, M. M. (2022), Safety Assessment of the Interaction Between the Autonomous Shuttle Bus and Vulnerable Road Users, Transit-IDEA Project, Transportation Research Board
4. Jung, S., Kim, S., An, L.-S., Farzaneh, F., Alagheband, M., & Siervogel, J. (2022), Crashworthiness Evaluation of Paratransit Buses, Project Year 2022, Florida Department of Transportation
5. Jung, S., Seyedi, M. R., & Siervogel, J. (2021), Crashworthiness Evaluation of Paratransit Buses, Project Year 2021, Florida Department of Transportation
6. Jung, S., Seyedi, M. R., Wekezer, J., Siervogel, J., & Dolzyk, G., (2020), Crashworthiness Evaluation of Paratransit Buses, Project Year 2020, Florida Department of Transportation
7. Jung, S., Wekezer, J., Siervogel, J., Dolzyk, G., & Seyedi, M. R. (2019), Crashworthiness Evaluation of Paratransit Buses, Project Year 2019, Florida Department of Transportation
8. Jung, S., Wekezer, J., Siervogel, J., Dolzyk, G., & Seyedi, M. R. (2018), Crashworthiness Evaluation of Paratransit Buses, Project Year 2018, Florida Department of Transportation
9. Jung, S., Wekezer, J., Siervogel, J., Dolzyk, G., & Seyedi, M. R. (2017), Crashworthiness Evaluation of Paratransit Buses, Project Year 2017, Florida Department of Transportation
10. Wekezer, J., Jung, S., Siervogel, J., Dolzyk, G., Seyedi, M. R. & Gleba, M. (2016), Crashworthiness Evaluation of Paratransit Buses, Project Year 2015-16, Florida Department of Transportation
11. Wekezer, J., Jung, S., Siervogel, J., & Gleba, M. (2015), Crashworthiness Evaluation of Paratransit Buses, Project Year 2014-15, Florida Department of Transportation

12. Masters, F. J., & Jung, S. (2014), Full Scale Wind Load Testing of Aluminum Screen Enclosures, Florida Building Commission (PO Number A95F33)
13. Wekezer, J., Jung, S., Kwasniewski, L., Siervogel, J., Gepner, B., & Gleba, M. (2014), Crashworthiness Evaluation of Paratransit Buses, Project Year 2013-14, Florida Department of Transportation.
14. Roddenberry, M., Jung, S., & Patil, A. (2014), Axle Equivalent Transverse Loading on Segmental Bridge Decks, Florida Department of Transportation (BDK83 977-16)
15. Wekezer, J., Kwasniewski, L., Jung, S., Siervogel, J., Gepner, B., & Armaghani, S. (2013), Crashworthiness Evaluation of Paratransit Buses, Florida Department of Transportation
16. Jung, S., Patil, A., & Alduse, B. P. (2012), Integrated Aerodynamic Analysis for Long-Span Cable Bridges, Korean Institute of Construction and Transportation Technology Evaluation and Planning
17. Wekezer, J., Kwasniewski, L., Jung, S., Siervogel, J., Gepner, B., Turley, J., & Armaghani, S. (2012), Crashworthiness Evaluation of Paratransit Buses, Florida Department of Transportation
18. Jung, S., Mtenga, P., Lewis, J., & Stilson, A. (2011), Assessment of Retrofit Options for Aluminum Screen Enclosures to Assist Mitigation Planning, Florida Division of Emergency Management Residential Construction Mitigation Program (11-RC-62-13-00-22-314)
19. Jung, S., Roddenberry, M. D., & Stilson, A. (2011), Evaluation of the Altimeter for Measuring Bridge Deflections, Florida Department of Transportation (BDK83 TWO #988-05)
20. Schellhammer, M., & Jung, S. (2011), Testing of Connections to Improve Hurricane Resistance of Aluminum Structures, Florida Catastrophic Storm Risk Management Center
21. Jung, S., Schellhammer, M., & Lewis, J. (2010), Mitigation of Damage on Aluminum Structures through Improved Connections, Florida Division of Emergency Management Residential Construction Mitigation Program (10-RC-26-13-00-22-207)

Patented Inventions

1. Farzaneh, F., & Jung, S. (2023), Multifunctional lithium-ion battery protection, United States Patent, provisional draft has been filed in the U.S. Patent Office.
2. November 21, 2023, Application Serial No. 63/601,317)
3. Norato, J. A., Jung, S., Athreya, B. P., & Ha, C. (2012), Method and system for determining welding sequences, United States Patent Application 20120325782, Caterpillar
4. Kwon, S.-D., Jung, S., & Chang, S.-P. (2001), Aerodynamic manual controller to suppress flutter of bridge, Korea Patent Application 1019990014496, IPC E01D19/00

Contracts and Grants

1. Jung, S. (Aug 2024 – Aug 2025), Crashworthiness and Safety Assessment of Cutaway Buses, Florida Department of Transportation, $268,000
2. Zhang, Q., & Jung, S. (May 2024 – Apr 2027), Strengthening Piers to Resist Vehicular Collision (Phase 2), Florida Department of Transportation, $547,355
3. Fernández-Cabán, P. L., & Jung, S. (Jan 2024 – Jan 2026), Harnessing Physics-Based Knowledge and Deep Learning to Enhance Civil Infrastructure Performance in Extreme Winds, Florida State University Council on Research and Creativity, $66,450
4. Jung, S., & Liu, X. (May 2022 – Aug 2023), MDS: Design of Structures Using Machine Learning, Florida State University Council on Research and Creativity, $25,000
5. Jung, S. (Sep 2021 – Sep 2024), The Railroader of the Mid-Century, Federal Railroad Administration (through University of New Mexico), $120,000

6. Zhang, Q., & Jung, S. (Jun 2022 – Apr 2024), Strengthening Piers to Resist Vehicular Collision, Florida Department of Transportation, $149,889
7. Jung, S. (Jan 2021 – Aug 2024), Crashworthiness and Safety Assessment of Cutaway Buses, Florida Department of Transportation, $773,584
8. Zhang, Q., & Jung, S. (Jun 2021 – Dec 2022). PG: Understanding the Creep of 3D Printed Concrete Materials. Florida State University Council on Research and Creativity, $24,492
9. Jung, S., & Seyedi, M. R. (Oct 2020 – Jul 2022), Safety Assessment of the Interaction between the Autonomous Shuttle Bus and Vulnerable Road Users, Transportation Research Board IDEA Program, $100,000
10. Jung, S., & Liu, X. (Aug 2019 – Jul 2023), Effect of Heterogeneous Terrain on Wind Loads on Buildings, National Science Foundation, $451,993
11. Jung, S., & Kampmann, R. (Jan 2019 – Dec 2023), Evaluation of Glass Fiber Reinforced Polymers (GFRP) Spirals in Corrosion Resistant Concrete Piles, Florida Department of Transportation, $350,329
12. Jung, S., & Seyedi, M. R. (Dec 2019 – Dec 2021), Crashworthiness and Safety Assessment of Cutaway Buses, Florida Department of Transportation, $520,000
13. Jung, S., & Wekezer, J. (Dec 2016 – Dec 2019), Crashworthiness and Safety Assessment of Cutaway Buses, Florida Department of Transportation, $775,000
14. Jung, S. (May 2013 – Apr 2018), CAREER: Offshore Wind Turbines Subjected to Hurricanes: Simulation of Wind-Wave-Structure Interaction and Aerodynamic Load Reduction, National Science Foundation, $400,000
15. Ozguven, E., Jung, S., & Sobanjo, J. (Sep 2016 – Dec 2017), Senior Community Resilience: Assessing the Interdependencies between Critical Transportation Infrastructures and Implications on Aging People's Households, Federal Highway Administration through FSU Transportation Center, $144,498
16. Jung, S., & Vanli, O. A. (Jan 2015 – Aug 2016), Promoting Preventive Mitigations of Buildings against Hurricanes through Enhanced Risk-Assessment and Decision-Making, National Oceanic and Atmospheric Administration through Florida Sea Grant, $200,000
17. Wekezer, J., & Jung, S. (Aug 2011 – Dec 2016), Crashworthiness Evaluation of Paratransit Buses, Florida Department of Transportation, $1,136,000
18. Sobanjo, J., Jung, S., & Wekezer, J. (Jan 2015 – Dec 2016), Biomechanics of Older Drivers to Mitigate Injury, Federal Highway Administration through FSU Transportation Center, $150,003
19. Jung, S. (Jan 2014 – June 2014), Full Scale Wind Load Testing of Aluminum Screen Enclosures, Florida Building Commission, Subcontract through University of Florida (PI: Masters, F. J.), $13,691
20. Rambo-Roddenberry, M. D., & Jung, S. (Nov 2011 – Dec 2013), Axle Equivalent Transverse Loading on Segmental Bridge Decks, Florida Department of Transportation, $99,607
21. Vanli, O. A., & Jung, S. (Apr 2012 – Mar 2013), Reliability Assessment of Aging Structures Subject to Hurricanes Using Senor-Based Condition Data, Florida State University Council on Research and Creativity, $12,000
22. Jung, S. (May 2009 – Mar 2012), Integrated Analysis of Aerodynamic Effects on Long-Span Cable Bridges, Korea Institute of Construction and Transportation Technology Evaluation and Planning, $87,867
23. Jung, S., & Rambo-Roddenberry, M. D. (May 2010 – Aug 2011), Evaluation of the Altimeter for Measuring Bridge Deflections, Florida Department of Transportation, $11,224

24. Jung, S., & Mtenga, P. V. (Feb 2011 – Jun 2011), Assessment of Retrofit Options for Aluminum Screen Enclosures to Assist Mitigation Planning, Florida Division of Emergency Management, $94,419
25. Jung, S. (Oct 2009 – Dec 2010), Testing of Connection to Improve Hurricane Resistance of Aluminum Structures, Florida Department of Financial Services, Subcontract through Florida State University (PI: Maroney, P.), $49,580
26. Jung, S. (Jan 2010 – Jun 2010), Mitigation of Damage on Aluminum Structures through Improved Connections, Florida Division of Emergency Management, $99,858
27. Jung, S. (May 2009 – Aug 2009), Innovative Visualization and Assessment of the Nation's Aging Infrastructure, Florida State University Council on Research and Creativity, $17,000

Awards

- ASCE Alfred Noble Prize (2019): "given for a technical paper of exceptional merit accepted by the Committee on Publications"
- National Science Foundation CAREER Award (2013): "NSF's most prestigious awards in support of early-career faculty who have the potential to serve as academic role models in research and education"
- FAMU-FSU College of Engineering Research Excellence Award (2013)
- Caterpillar Innovation Fair Award (2008)

Supervision of Research

Postdoctoral Researchers

1. Lee-Sak An, 2022 – 2023
2. Sejin Kim, 2021 – 2022
3. MohammadReza Seyedi, 2021 – 2022

Chair of Dissertation and Thesis Research Committee

1. Rumman Abrar, Ph.D. student (expected completion in 2028), *Interface Behavior of 3D Printed Materials and Structures*.
2. Zihan Mahmood Nahian, Ph.D. student (expected completion in 2026; Co-advisor: Dr. Fernández-Cábán, P. L.), *Machine Learning in Wind Engineering*.
3. Reza Alishahi, Ph.D. student (expected completion in 2026), *Assessment of Hurricane Hazard Using Machine Learning*.
4. Mohamad Alagheband, Ph.D. candidate (expected completion in 2025), *Performance of Structures Printed with Robotic Arm*.
5. Mohammadhossein Kosarimovahhed, Ph.D. candidate (expected completion in 2024; Co-advisor: Dr. Zhang, Q.), *Effect of Creep and Shrinkage in 3D Printed Concrete*.
6. Farhad Farzaneh, Ph.D. candidate (expected completion in 2025), *Development of a Multifunctional Lithium-Ion Battery Module for Electric Vehicle*.
7. Mengdi Ma, Ph.D., 2024 (Co-advisor: Dr. Huang, W.), *Numerical Modeling of Hurricane Wave and Storm Surge Overtopping Sand Dunes and Barrier Island*.
8. Nasrollah Alinejad, Ph.D., 2024, The *Effect of Heterogeneous Terrain on Wind Loads on Buildings*.

9. Olayiwola Adegbulugbe, Ph.D., 2023, *Evaluation of Glass Fiber Reinforced Polymers (GFRP) Spirals in Corrosion Resistant Concrete Piles*.
10. Sean Martin, Ph.D., 2022, *Wind Resource Estimation and Conceptual Design of a Near Future Wind Turbine for Tropical Cyclone Winds*.
11. Grzegorz Dolzyk, Ph.D., 2021, *Energy Absorption of Grooved Circular Tubes and 3-D Printed Structures*.
12. MohammadReza Seyedi, Ph.D., 2020, *Structural Performance and Occupant Response in Cutaway Bus Rollover Crash.*
13. Grzegorz Kakareko, Ph.D, 2019, *Multi-Scale Loss Estimation of Buildings Subjected to Hurricanes*.
14. Gholamreza Amirinia, Ph.D., 2017, *Offshore Wind Turbines Subjected to Hurricanes*.
15. Kakit Fung, Ph.D., 2017, *Biomechanics of Older Drivers in Vehicular Crashes*.
16. Atul Patil, Ph.D., 2015, *Response of a Wind Turbine Structure to Strong Ground Motions and High Velocity Winds*.
17. Bejoy P. Alduse, Ph.D., 2014, *Prediction of Wind Induced Damage Using Prior Knowledge and Monitored Data*.
18. Bronislaw Gepner, Ph.D., 2014 (Co-adviser: Dr. Wekezer, J.), *Rollover Procedures for Crashworthiness Assessment of Paratransit Bus Structures*.
19. Michelle Grand, M.S. expected in 2024, *Effect of Heterogeneous Terran on Mid-Rise Building Wind Loading*
20. Fabrice Taondeyande, M.S., 2022, *Effect of Balconies on Surface Pressure Distribution on a Mid-Rise Building*.
21. Md Mobasshir Rashid, M.S., 2022, *Analysis of Pedestrian Behavior during Interaction with Autonomous Vehicles*.
22. Ryan McDugle, M.S., 2018 (Co-Advisor: Dr. Ozguven, E.), *The Effects of Residential Structural Integrity on Evacuation Orders Due to Tropical Storm Events*.
23. Anwer Al-Kaimakchi, M.S., 2017, *Optimization of Alternative Wind Turbine Towers in Low Wind Resource Regions*.
24. Ran Xu, M.S., 2016, *The Effect of Aging Altered Driving Posture in Low Speed Frontal Impact*.
25. Paola Vasquez, M.S., 2016, *Wind Energy Potential on the Northeastern Island Territories in Venezuela Considering Uncertainties*.
26. Michal Gleba, M.S., 2015 (Co-Advisor: Dr. Wekezer, J.), *Effect of Friction on Vehicle Crashworthiness during Rollover*.
27. Larissa Ferreira, M.S., 2015, *Pressure Drag Reduction on Patterned Cylindrical Models Inspired by Biomimicry*.
28. Seyamend Armaghani, M.S., 2014, *Behavior of Plywood and Fiberglass Steel Composite Tube Structures Subjected to Impact Loading*.
29. Joshua Turley, M.S., 2013, *Side Impact of a Paratransit Bus*.
30. Gustavo Munoz, M.S., 2012, *Mitigation of Vortex-Induced Vibrations in Cables Using Macro-Fiber Composites*.
31. Michael Schellhammer, M.S., 2011, *Mitigation Techniques for Aluminum Pool Enclosure Connections in High Wind Speeds*.
32. Jeyre Lewis, M.S., 2011, *Investigations on Various Connections and Mitigation Options to Improve the Structural Behavior of Screen Enclosures*.
33. Atul Patil, M.S., 2010, *Mitigation of Vortex Induced Response in Long Span Bridges*.

Member of Dissertation and Thesis Research Committee

1. Ahmed Hassanien, Ph.D. candidate
2. Robert Smith, Ph.D. candidate
3. Peizhi Wang, Ph.D. candidate

4. Sifat Khan, Ph.D. candidate
5. Ayodele Akin-Adamu, Ph.D. student
6. Chunpeng Qu, Ph.D. student
7. Arezoo Bakhshizadeh, Ph.D. student
8. Omar Abdulateef, Ph.D. student
9. Maral Nazemi, Ph.D. student
10. Md. Mashfiqul Islam, Ph.D., 2024
11. Danielle Nicholson, Ph.D., 2024
12. Nikhil Khobragade, Ph.D., 2022
13. Andrew Baldwin, Ph.D., 2021
14. Tadeu Fagundes, Ph.D., 2020
15. Lee Mears, Ph.D., 2020
16. Anwer Al-Kaimakchi, Ph.D., 2020
17. Md Abu S. Shohag, Ph.D., 2019
18. Jonathan McNally, Ph.D., 2018
19. Aniket Ingrole, Ph.D., 2018
20. Marcella Carnes, Ph.D., 2017
21. Spandan Mishra, Ph.D., 2016
22. Ashley Solek, M.S., 2018
23. Ibukun Titiloye, M.S., 2018
24. Olayiwola Adegbulugbe, M.S., 2018
25. Ibukun Titiloye, M.S., 2018
26. Kojo Ackah, M.S., 2016
27. Kunal Joshi, M.S., 2013
28. Kakit Fung, M.S., 2013
29. Desi Maldonado, M.S., 2013
30. Michael Lewis, M.S., 2012
31. Marcella Carnes, M.S., 2011
32. Jonathan Chipperfield, M.S., 2010
33. Christopher Rawl, M.S., 2010
34. Eduardo Taft, M.S., 2010
35. Sujatha Kalyanam, M.S., 2009
36. Meghana Chythanya, M.S., 2008

Undergraduate Students

1. Rameen Ahmad, Undergrad Researcher in 2024
2. Darius Bostick, FAMU EESI Outreach Team, 2023-24
3. Catherine-Jolie Tabe, FAMU EESI Outreach Team, 2023-24
4. Gabrielle Frost, FAMU EESI Outreach Team, 2023-24
5. Cody O'Brien, FSU UROP Program, 2023-24
6. Aaron Bookstein, FSU UROP Program, 2023-24
7. Ashley Lawlor, FSU UROP Program, 2023-24

8. Bryce Collier, FAMU EESI Outreach Team, 2022-23
9. Nagiya Blue, FAMU EESI Outreach Team, 2022-23
10. Joshua Smith, FAMU EESI Outreach Team, 2022-23
11. Camryn Sikora, Undergrad Researcher in 2019-2021
12. Crisol Ortiz-Socas, Undergrad Researcher in 2019
13. Michael Wicker, Undergrad then M.Eng 2012, Researcher in 2011-12
14. Chris Roberts, Undergrad Researcher in 2011-12
15. Jude Rosilien, Undergrad Researcher in 2011
16. Austin Stilson, Undergrad Researcher in 2010-11
17. Steven Sullivan, Undergrad Researcher in 2010

Visiting Scholars

1. Seung-Yong Ok, Hankyong National University, 2019
2. Se-Jin Jeon, Ajou University, 2019
3. Do Young Moon, Kyungsung University, 2016 – 2017
4. Ho-Kyung Kim, Seoul National University, 2015
5. Hyun Woo Park, Dong-A University, 2015
6. Jae-Yo Kim, Kwangwoon University, 2014 – 2015
7. Juhyoung Kim, Korea Institute of Construction Technology, 2013 – 2014
8. Gyehee Lee, Mokpo National Maritime University, 2012 – 2013
9. Sungryul Kim, Dong-A University, 2012 – 2013
10. Inho Yeo, Korea Railroad Research Institute, 2011 – 2012
11. Dongmei Tan, Wuhan University of Technology, 2009 – 2010

Teaching

Courses Taught and Instructor Assessment (Excellent = 5.0)

- CES6116 Finite Element Methods (Spring 2024) 4.7
- CES5209 Structural Dynamics (Fall 2023) 4.9
- EGM3512 Engineering Mechanics (Spring 2023) 4.7
- EGN5950 Research Methods in Engineering (Fall 2022) 5.0
- CES5585 Wind Engineering (Spring 2022) 4.5
- CES5209 Structural Dynamics (Fall 2021) 4.9
- CES6116 Finite Element Methods (Spring 2021) 4.8
- CES5585 Wind Engineering (Fall 2020) 4.8
- EGN3331 Strength of Materials (Spring 2020) 4.9
- CES5209 Structural Dynamics (Fall 2019) 4.6
- EGN3331 Strength of Materials (Spring 2019) 4.6
- CES6116 Finite Elements in Structures (Fall 2018) 4.2
- CES5585 Wind Engineering (Fall 2017) 5.0
- CES5209 Structural Dynamics (Spring 2017) 5.0

- EGN3331 Strength of Materials (Spring 2017) 4.9
- CES6116 Finite Elements in Structures (Fall 2016) 4.7
- CES5585 Wind Engineering (Spring 2016) 5.0
- EGN3331 Strength of Materials (Spring 2016) 4.5
- CES5209 Structural Dynamics (Fall 2015) 4.8
- CGN5930 Wind Energy (Spring 2015) 5.0
- CES6116 Finite Elements in Structures (Fall 2014) 5.0
- CES5585 Wind Engineering (Spring 2014) 5.0
- EGN3331 Strength of Materials (Spring 2014) 4.9
- CES5209 Structural Dynamics (Fall 2013) 5.0
- CES6116 Finite Elements in Structures (Spring 2013) 5.0
- EGM3512 Engineering Mechanics (Spring 2013) 4.9
- CES5585 Wind Engineering (Fall 2012) 4.8
- EGN3331 Strength of Materials (Fall 2012) 4.5
- CES5209 Structural Dynamics (Spring 2012) 5.0
- CES6116 Finite Elements in Structures (Fall 2011) 5.0
- EGN3331 Strength of Materials (Fall 2011) 4.6
- CGN5930 Wind Engineering (Spring 2011) 4.9
- EGM3512 Engineering Mechanics (Spring 2011) 4.7
- EGM3512 Engineering Mechanics (Fall 2010) 4.5
- EGN3331 Strength of Materials (Fall 2010) 4.7
- CES5209 Structural Dynamics (Spring 2010) 4.9
- EGM3512 Engineering Mechanics (Spring 2010) 4.5
- EGM3512 Engineering Mechanics (Fall 2009) 4.7
- CGN5930 Wind Engineering (Spring 2009) 4.9
- EGM3512 Engineering Mechanics (Spring 2009) 4.5
- EGM3512 Engineering Mechanics (Fall 2008) 4.1

New Course Development

- CGN5930 Wind Energy: project-based multidisciplinary course
- CES5585 Wind Engineering

Directed Individual Study Courses Taught

- CGN5905 Matlab for Wind Engineering (Summer 2021)
- CGN5905 Application of Deep Neural Network (Spring 2021)
- CGN5905 Effect of Terrain on Wind Loading (Spring 2020, Fall 2020)
- CGN5905 Advanced Behavior of Concrete under Dynamic Load (Fall 2019)
- CGN5905 Applications of the Finite Element Method (Summer 2019)
- CGN5905 Contemporary Issues in Vehicle Safety (Fall 2016)

- CGN5905 Applications of Artificial Neural Networks in Civil Engineering (Summer 2016)
- CGN5905 Atmospheric Boundary Layer Flows (Summer 2016)
- CGN5905 Contemporary Issues in Vehicle Safety (Fall 2015)
- CGN5905 Fragility and Vulnerability Analysis in Wind Engineering (Summer 2015)
- CGN5905 Nonlinear Transient Finite Element Analysis (Fall 2014)
- EGN4906 Taller Wind Turbine for Low Wind Speed Regions (Fall 2014)
- CGN5905 Atmospheric Boundary Layer Flows (Summer 2014)
- CGN5905 Theory of Bridge and Tower Aerodynamics (Spring 2014)
- EGN4906 Applications of Infrared Thermography in Civil Engineering (Spring 2012)
- CGN5905 Wind Energy (Spring 2011)
- CGN5905 Theory of Bridge Aerodynamics (Summer 2010)
- EGN4906 Applications of Artificial Neural Networks in Civil Engineering (Summer 2009)

Professional Activities to Enhance Teaching

- ACUE's Effective Teaching Practice Framework (2020 – 2021): Online education modules for teaching excellence, composed of 26 lecture modules (about 1 hour for each module).
- Multidisciplinary Senior Design Project (2012 – 2015): Developed new senior design projects, which involved senior students from civil, mechanical, and electrical engineering.
- KidWind Wind Senators Workshop (2013): Attended a five-day workshop on K-12 education and outreach, focusing on renewable energy education.

Service

Editor for Peer-Reviewed Journals

- Associate Editor, Journal of Offshore Mechanics and Arctic Engineering (2017 – 2023)
- Associate Editor, KSCE Journal of Civil Engineering (2014 – 2020)
- Editorial Board, Advances in Wind Engineering (2024 – present)

Reviewer for Peer-Reviewed Journals

- Engineering Structures (2011, 2014, 2017-18, 2020, 2022-23)
- Journal of Building Engineering (2015, 2017, 2018-20, 2022)
- Journal of Wind Engineering and Industrial Aerodynamics (2018, 2021-24)
- Journal of Bridge Engineering (2009, 2015, 2018)
- Wind and Structures (2013-14, 2017)
- Journal of Engineering Mechanics (2011-13, 2016)
- Journal of Offshore Mechanics and Arctic Engineering (2020-21)
- Ocean Engineering (2017, 2020)
- Applied Ocean Research (2018-19)
- Journal of Architectural Engineering (2019, 2020)
- Journal of Structural Engineering (2012-13)
- Journal of Civil Structural Health Monitoring (2024)

- Natural Hazards Review (2022)
- Wind Energy (2017)
- Journal of Earthquake Engineering (2013)
- Journal of Aerospace Engineering (2018)
- Journal of Civil Structural Health Monitoring (2019)
- International Journal of Steel Structures (2018)
- Infrared Physics & Technology (2018)
- Structural and Multidisciplinary Optimization (2014)
- Engineering with Computers (2011)
- International Journal of Concrete Structures and Materials (2014)
- Materials (2014)
- KSCE Journal of Civil Engineering (2010, 2014)
- Advances in Engineering Software (2009)
- Computational Materials Science (2008)

Reviewer or Panelist for Grant Applications

- National Science Foundation: as a panelist (2013, 2014, 2015: twice, 2017, 2018, 2020, 2021, 2022: twice, 2023: twice, 2024: twice)
- National Science Foundation: as an ad hoc reviewer (2014, 2017, 2019, 2020, 2023)
- An Anonymous State Funding Agency (2013, 2020)
- National Oceanic and Atmospheric Administration (2010, 2011)

Committee Activities in Professional Organizations

- Non-voting member, ASCE 7-22 Subcommittee on Wind Loads (2017 – current)
- Member, Experimental Analysis and Instrumentation Subcommittee, Engineering Mechanics Institute (2015 – present)

Membership in Professional Organizations (Current and Past)

- Member, American Association for Wind Engineering
- Member, American Society of Civil Engineers
- Member, Engineering Mechanics Institute (EMI)
- Member, EMI Experimental Analysis and Instrumentation Committee

Conference Organization, Session Chair or Moderator

- Scientific Committee Member, BBAA IX Conference (2024)
- Session Chair, BBAA IX Conference (2024)
- Co-Chair, Machine Learning Applications in Wind Engineering, Engineering Mechanics Institute Conference (2024)
- Co-Chair, Machine Learning Applications in Wind Engineering, Engineering Mechanics Institute Conference (2023)
- Scientific Committee Member, 15th Americas Conference on Wind Engineering (2025)

- Scientific Committee Member, 14th Americas Conference on Wind Engineering (2022)
- Scientific Committee Member, 9th International Colloquium on Bluff Body Aerodynamics and Applications (2020)
- Scientific Committee Member, 8th International Colloquium on Bluff Body Aerodynamics and Applications (2016)
- Scientific Committee Member, 13th Americas Conference on Wind Engineering (2017)
- Chair, Analytical and experimental investigation of the resiliency of the critical infrastructures under multiple hazards, Engineering Mechanics Institute Conference (2017)
- Co-Chair, Offshore renewable energy – Wind energy analysis & operation – Fatigue, Conference on Ocean Offshore & Arctic Engineering (2017)
- Moderator, Codes and Standards III, Americas Conference on Wind Engineering (2017)

Professional Consulting

- Korea Institute of Construction Technology (2014 – 2015)

College and Department Committee

- Chair, Department P&T Committee (2021, 2024)
- Chair, Department Graduate Committee (2018 – 2022)
- Chair, Department Laboratory Committee (2013 – 2016)
- Chair, Department Faculty Search Committee (2023 – 2025)
- Member, Florida State University RCC Management Board (2020 – 2022).
- Member, Florida State University RCC Committee (2020).
- Member, Search Committee: CEE Chair (2018 – 2019)
- Member, Search Committee: Faculty (2013 – 2015, 2020 – 2021)
- Member, Department P&T Committee (2022 – 2023)
- Member, Department Graduate Committee (2009 – 2017, 2022 – 2023)
- Member, Department Laboratory Committee (2017 – 2022)
- Member, College Information Technology Committee (2012)

Professional Training to Enhance Service

- FSU's Emerging Leader Program (2020 – 2021): Two-semester meetings for leadership development.

Outreach Activities

- RIDER Open House (2024)
- FAMU-FSU College of Engineering Open House (2018, 2019, 2020)
- Wind Energy Workshop (2014, 2015, 2016): Hosted K-12 teachers on wind energy education in K-12. This half-a-day workshop is based on the material that the PI learned from a 5-day workshop offered by KidWind.
- Florida State University Young Scholars Program (2012, 2013, 2014): Hosted high school students for laboratory research. The students worked in the PI's lab for about ten days for the five-week period to complete research projects.