

CV & Sample Publications (3 pages max)

Name: Aly Mousaad Aly, Ph.D., P.E., M.ASCE Position Title: Associate Professor, Louisiana State Univ. Citizenship: USA Website: https://faculty.lsu.edu/aly/	Address: 3230 H Patrick F. Taylor Hall, Baton Rouge, LA - 70803 Phone: (225) 578-6654 Email: aly@lsu.edu
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(a) Education

Institution	Degree	Year	Field of Study
Polytechnic University of Milan	Ph.D.	2009	Mechanical Engineering
Florida International University	Postdoc	2009 – 2010	Wind/Structural Engineering
University of Western Ontario	Postdoc	2012 – 2013	Wind/Structural Engineering

(b) Professional License

Professional Engineer, Louisiana, License # 45524.

(c) Appointments

2023-Present	Faculty, Oregon State University
2013-Present	Assistant/Associate Professor, Civil Engineering, Louisiana State University
2022-2022	Visiting Researcher, U.S. Air Force Research Lab (summer)
2012-2013	Research Fellow, Wind Engineering, University of Western Ontario
2011-2012	Visiting Researcher, Wind Engineering, Polytechnic University of Milan
2010-2011	Assistant Professor, Mechanical Engineering, Alexandria University
2009-2010	Postdoctoral Res. Assoc., Wind Engineering, Florida International University
2006-2009	Research Assistant, Wind Engineering, Polytechnic University of Milan
2001-2006	Assistant Lecturer, Mechanical Engineering, Alexandria University

(d) Sample Products (Underlined authors are students. For more products, see <https://faculty.lsu.edu/aly/publications.php>)

1. Aly, A.M., Thomas, M. (2023), "Wind Induced Pressures on a Large Low-Sloped Gable Roof Building with Parapet," Architectural Science Review. <https://doi.org/10.1080/00038628.2023.2174066>
2. Chapain, S., Aly, A.M. (2023), "Vibration Attenuation in a High-Rise Hybrid-Timber Building: A Comparative Study," Applied Sciences, 2023, 13(4), 2230. <https://doi.org/10.3390/app13042230>
3. Aly, A.M., Benson, J. (2023), "Wind Loads on Overhead Sign Structures: A Comparative Study," Applied Sciences, 2023, 13(3). <https://doi.org/10.3390/app13031682>
4. Aly, A.M., Khaled, M.F., Clancy*, R. (2022), "Large-Scale Open-Jet Testing: A new frontier in structural wind Engineering," Engineering Structures, 266, 1 September 2022, 114567. *Undergraduate student (sophomore when started). <https://doi.org/10.1016/j.engstruct.2022.114567>
5. Aly, A.M., Chapain, S. (2022), "Large-Scale Open-Jet Testing for Cladding Design in High-Rise Buildings: Higher Peak Pressures Compared to Wind Tunnels," Practice Periodical on Structural Design and Construction, ASCE, 27(2). [https://doi.org/10.1061/\(ASCE\)SC.1943-5576.0000689](https://doi.org/10.1061/(ASCE)SC.1943-5576.0000689)
6. Aly, A.M., Goodlow, B., Conerly*, J. (2022), "Urban Heat Island Mitigation via Geometric Configuration," Theoretical and Applied Climatology. *Undergraduate student. <https://doi.org/10.1007/s00704-022-04116-2>
7. Aly, A.M., Hoffmann, M. (2022), "A Case Study of Protecting Bridges Against Overheight Vehicles," Steel and Composite Structures, 43(2), 165-183. <https://doi.org/10.12989/scs.2022.43.2.165>
8. Khaled, M.F., Aly, A.M. (2022), "Assessing aerodynamic loads on low-rise buildings considering Reynolds number and turbulence effects: A review," Advances in Aerodynamics, 4(24). <https://doi.org/10.1186/s42774-022-00114-0>
9. Aly, A.M., Whipple, J. (2022), "Wind Forces on Ground-Mounted Solar Systems: A Comparative Study," Applied Solar Energy 57(5) (2021). <https://doi.org/10.3103/S0003701X21050030>

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10. Aly, A., Chacon, P., Gol-Zaroudi, H. et al. (2022), "Proposed Practical Overheight Detection and Alert System," *Automatic Control and Computer Sciences*, 56(5) 467–480. <https://doi.org/10.3103/S0146411622050017>
 11. Khaled, M.F., Aly, A.M., Elshaer, A. (2021), "Computational Efficiency of CFD Modeling for Building Engineering: An Empty Domain Study," *Journal of Building Engineering*, 102792. <https://doi.org/10.1016/j.jobe.2021.102792>
 12. Aly, A.M., da Fonseca Yousef, N. (2021), "High Reynolds number aerodynamic testing of a roof with parapet," *Engineering Structures* 234, 1120061. <https://doi.org/10.1016/j.engstruct.2021.112006>
 13. Aly, A.M., Dougherty, E. (2021), "Bridge Pier Geometry Effects on Local Scour Potential: A Comparative Study," *Ocean Engineering*, 234, 109326. <https://doi.org/10.1016/j.oceaneng.2021.109326>
 14. Aly, A.M., Thomas, M. (2021), "Experimental investigation of the aerodynamics of a large industrial building with parapet," *Advances in Aerodynamics*, 3, 26. <https://doi.org/10.1186/s42774-021-00080-z>
 15. Chapain, S., Aly, A.M., (2021), "Vibration attenuation in wind turbines: A proposed robust pendulum pounding TMD," *Engineering Structures* 233, 111891. <https://doi.org/10.1016/j.engstruct.2021.111891>
 16. Aly, A.M., Gol-Zaroudi, H., Rezaee, M. (2021), "A Framework for Vibration Attenuation in Traffic Mast Arm Structures under Wind Loads," *Experimental Techniques*. <https://doi.org/10.1007/s40799-021-00495-9>
 17. Zucca, M., Longarini, N., Simoncelli, M., Aly, A.M. (2021), "Tuned Mass Damper Design for Slender Masonry Structures: A Framework for Linear and Nonlinear Analysis," *Applied Sciences* 11 (8), 3425. <https://doi.org/10.3390/app11083425>
 18. Chacon, P.J., Park, J.Y., Aly, A.M., Voyadjis, G.Z., Choi, J.W., (2021), "A moving vehicle height monitoring sensor system for overheight impact avoidance," *Infrastructures*, 6(6), 91. <https://doi.org/10.3390/infrastructures6060091>
 19. Aly, A.M., Rezaee, M. (2021), "Accelerated Controller Tuning for Wind Turbines Under Multiple Hazards," *Journal of Energy and Power Technology* 3(1), 1-31. DOI: 10.21926/jept.2101011.
 20. **Book:** 2021. Mofid Gorji-Bandpy and Aly-Mousaad Aly (2021). *Aerodynamics*. ISBN: 978-1-83880-168-7; IntechOpen Limited, London, United Kingdom. <https://www.intechopen.com/books/aerodynamics>
 21. **Patent:** (2020), "Overheight vehicles impact avoidance and incident detection system," United States, Pub. No. US20200391761A1
 22. Aly, A.M., Gol Zaroudi, H. (2020), "Peak pressures on low rise buildings: CFD with LES versus full scale and wind tunnel measurements," *Wind and Structures*, 30(1), 99-117. <https://doi.org/10.12989/was.2020.30.1.099>
 23. Aly, A.M., Dragomirescu, E. (2018). *Wind Engineering for Natural Hazards: Modeling, Simulation, and Mitigation of Windstorm Impact on Critical Infrastructure*. American Society of Civil Engineers, ISBN 0784481849, 9780784481844, 238 pages. <https://ascelibrary.org/doi/book/10.1061/9780784415153>
 24. Chapain, S., Aly, A.M. (2019), "Vibration Attenuation in High-Rise Buildings to Achieve System-Level Performance under Multiple Hazards," *Engineering Structures*, 197(15): 109352. <https://doi.org/10.1016/j.engstruct.2019.109352>
 25. Rezaee, M., Aly, A.M. (2019), "Proposed Theory of Semiactive Gains for Smart Dampers in MDOF Systems," *Journal of Structural Engineering*, ASCE, 145(12): 04019155. [https://doi.org/10.1061/\(ASCE\)ST.1943-541X.0002453](https://doi.org/10.1061/(ASCE)ST.1943-541X.0002453)
 26. Aly, A.M., Chokwitthaya, C., Poche*, R. (2017), "Retrofitting building roofs with aerodynamic features and solar panels to reduce hurricane damage and enhance eco-friendly energy production," *Sustainable Cities and Society*, 35, 581-593. *Undergraduate student (sophomore when started). <https://doi.org/10.1016/j.scs.2017.09.002>
 27. Rezaee, M., Aly, A.M. (2018), "Vibration Control in Wind Turbines to Achieve Desired System-Level Performance under Single and Multiple Hazard Loadings," *Structural Control and Health Monitoring*, 2018;25:e2261. <https://doi.org/10.1002/stc.2261>
 28. Aly, A.M., Bresowar*, J.R. (2016), "Aerodynamic mitigation of wind-induced uplift forces on low-rise buildings: a comparative study," *Journal of Building Engineering*, Elsevier, 5, 267–276. *Undergraduate student (sophomore when started). <https://doi.org/10.1016/j.jobe.2016.01.007>
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(e) Synergistic Activities:

Aly has contributed to various activities that promote the advancement of fluid dynamics research and sustainable building practices. Some of his notable contributions are:

- Chairing the EMI Fluid Dynamics Committee at the American Society of Civil Engineers (ASCE) and serving as its Vice Chair and Secretary in the past, which facilitates the development of fluid dynamics research and practice.
- Serving as an Associate Editor for the Practice Periodical on Structural Design and Construction published by ASCE, ensuring the quality and relevance of the publication.
- Serving as an Editor for the journal Wind & Structures, which disseminates high-quality research on wind engineering and science.
- Being a member of the editorial board for Frontiers in Built Environment: Wind Engineering and Science, which publishes cutting-edge research on wind-related topics in the built environment.
- Editing special issues for Shock and Vibration, a journal that publishes research on the dynamics of mechanical and structural systems.
- Editing a special issue for the journal Wind and Structures titled "Wind Impact on High-Rise Structures: Load Characterization, Response Evaluation, and Mitigation," which contributes to the understanding of wind effects on tall buildings.
- Organizing and chairing mini-symposiums and conference sessions at ASCE EMI conferences and the International Conference on Advances in Wind and Structures, where experts from diverse backgrounds discuss topics related to fluid dynamics and wind engineering.
- Serving on the technical committee for the 2017 ASCE Report Card on Louisiana's Infrastructure, which evaluates the state's bridge infrastructure.
- Serving on the scientific committee for the World Sustainable Built Environment Conference (WSBE) in 2017 and the 8th Brazilian Conference on Environmental and Energy Efficiency Building (BBAA) in 2016, which contribute to the development of sustainable building practices.
- Serving as a panelist and reviewer for proposals submitted to the National Science Foundation (NSF) and scientific journals, where he evaluates the scientific merit and feasibility of the proposed research.
- Being a fellow with the Louisiana Sea Grant's Louisiana Discovery, Integration, and Application Program (LaDIA), contributing to the development of innovative solutions to coastal sustainability challenges.
- Serving on an expert panel for the Council on Tall Buildings and Urban Habitat (CTBUH), which develops guidelines and standards for tall building design and construction.
- Emphasizing diversity in STEM fields and creating a research team that includes students from diverse backgrounds at different levels, fostering a learning environment that embraces individual differences and promotes creativity and innovation.