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COMPREHENSIVE CURRICULUM VITAE

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Table of Contents

Please note that, in all sub-sections, appointments or activities are listed in chronological order from the latest to the earliest item.

1. EDUCATION / EMPLOYMENT HISTORY
    1.1. Education
    1.2. Academic Accreditations
    1.3. Employment History: Primary Academic Position
    1.4. Employment History: Secondary Academic Affiliations and Visiting Positions
    1.5. Employment History: Academic Activities prior to Completion of Doctorate Degree
    1.6. Employment History: Engineering Consulting and Others
    1.7. Professional Recognition: Awards and Study Fellowships
    1.8. Professional Engineering Registration
2. RESEARCH / SCHOLARSHIP
    2.1. Research Interests
    2.2. Publications
    2.3. Invited Lectures and Presentations
3. GRANTS
    3.1. External
    3.2. Internal to Northeastern University
5. TEACHING AND ADVISING (NORTHEASTERN UNIVERSITY)
    4.1. Courses Taught at Northeastern University
    4.2. Courses Taught at Other Institution (Invited Lecturer)
    4.3. Supervision of Post-doctoral Fellows and Associates
    4.4. Supervision of Graduate Students
    4.5. Supervision of Undergraduate Students
    4.6. Teaching and Advising Activities - Others
    4.7. Outreach Activities
5. SERVICE AND PROFESSIONAL DEVELOPMENT
    5.1. Service to Northeastern University
    5.2. External Services – Professional
6. ADDITIONAL INFORMATION
7. REFERENCES

1. Education / Employment History

1.1. Education

2001	**Doctor of Philosophy** ("Dottore di Ricerca") in Structural Engineering, University of Trieste. *Doctoral program*: "Design and Preservation of Structures". **Dissertation title:** "Wind-Structure Oscillation on Long-span Suspension Bridges" (in English). Advisor: Prof. P. D'Asdia, University of Chieti-Pescara (Italy); co-advisors: Profs. N. P. Jones and R. H. Scanlan, Johns Hopkins University, Baltimore (MD); Prof. V. Sepe, University of Chieti-Pescara.
1997	**Five-year Diploma** ("laurea") with honors in Civil Engineering–Structures, from the University of Trieste, Faculty of Engineering. **Thesis (topic):** long-span bridge aeroelasticity.

1.2. Academic Accreditations

May 8, 2019 – May 8, 2025	**Full Professor** ("Professore Prima Fascia"), National Scientific Habilitation, Scientific Discipline ICAR 08/B2, Civil Engineering/Structural Mechanics ("Scienza delle Costruzioni"), Directorial Decree ("Decreto Direttoriale") 2175/2018, Ministry of Instruction, University and Research (MIUR), Italy.
May 7, 2019 – May 7, 2025	**Full Professor** ("Professore Prima Fascia"), National Scientific Habilitation, Scientific Discipline ICAR 08/B3, Civil Engineering/Structural Design ("Tecnica delle Costruzioni"), Directorial Decree ("Decreto Direttoriale") 2175/2018, Ministry of Instruction, University and Research (MIUR), Italy.
2013 – Dec. 11, 2019	**Full Professor** ("Professore Prima Fascia"), National Scientific Habilitation, Scientific Discipline ICAR 08/B3, Civil Engineering/Structural Design ("Tecnica delle Costruzioni"), Directorial Decree ("Decreto Direttoriale") 222/2012, Ministry of Instruction, University and Research (MIUR), Italy.

1.3. Employment History: Primary Academic Position

Sept. 2011-present	**Associate Professor with Tenure**, Department of Civil and Environmental Engineering, Northeastern University, Boston, Massachusetts.
January 2005-August 2011	**Assistant Professor**, Department of Civil and Environmental Engineering, Northeastern University, Boston, Massachusetts.
July 2002-Dec. 2004	**Post-doctoral Research Associate**, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign (UIUC). Activities: wind engineering (supervisor: Prof. N.P. Jones); development of operations and management plan for the NEES MUST-SIM facility (supervisors: Profs. A. Elnashai and B.F. Spencer Jr.)
April 2001-June 2002	**Post-doctoral Fellow**, Department of Civil Engineering, Johns Hopkins University, Baltimore, MD (JHU).

1.4. Employment History: Secondary Academic Affiliations and Visiting Positions

May/June 2020 (forthcoming)	**Visiting Professor**, Department of Civil, Environmental and Mechanical Engineering, University of Trento, Italy.
2019-present	**Member of the International Faculty Board (Affiliated Faculty)**, International Doctoral Program in Civil and Environmental Engineering, University of Perugia, Perugia, Italy.
2013–2015	**Research Fellow**, Department of Civil, Environmental and Mechanical Engineering, University of Trento, Italy (on sabbatical leave from NU, October – December 2014).

1.5. Employment History: Academic Activities prior to Completion of Doctorate Degree

June 2000-July 2000	**Visiting Graduate Student**, Department of Civil Engineering, Johns Hopkins University, Baltimore (JHU). Aerodynamic/aeroelastic experimental testing in the "S. Corrsin" Wind Tunnel.
Sept. 1999-Mar. 2000	**Visiting Graduate Student** ("Visiting Scholar"), Department of Civil Engineering (JHU). Preparation for aerodynamic/aeroelastic tests in the "S. Corrsin" Wind Tunnel; also attended graduate courses.
1998	**Title of "Subject Expert"** (equivalent to Instructor) in Structural Design, Faculty of Engineering, University of Trieste, Italy.
1997-2000	**Graduate Research Assistant**, Department of Civil Engineering, University of Trieste, Italy

1.6. Employment History: Engineering Consulting and Others

2002-2003	**Structural Engineering Consultant** (in a team). Executive design of a road by-pass in the City of Muggia, Italy (design of a one-kilometer underwater by-pass). Design team: Geodata Engineering, Turin, Italy, COWI Engineers, Lyngby, Denmark, Steam Engineering, Padova, Italy and Gambirasio Architecture and Planning, Bergamo, Italy).
2000-2001	**Traffic-induced Noise Engineer** (consultant in a team). Various projects: Italian National Route 415 (Paullese) between Crema and Spino d'Adda, Italy; New Northern Beltway of Cremona, Italy.
2001	**Road Design** (in a team). For: *a)* junction between the Italian National Routes 14 & 55; *b)* alternate by-pass to the Italian National Route n.14 from km 161 to km 164"; Region Friuli-Venezia Giulia, Italy.
2000	**Transportation Engineering Consultant** (in a team). Environmental Impact Study for the completion of the Siracusa-Gela Motorway, from Rosolini to Gela East (80 km). Motorway Administr. of Sicily, Italy.
1999	**Traffic Engineering Consultant** (in a team). Traffic Monitoring Campaign. Province of Gorizia, Italy (monitoring of 20 stations)
1999	**Engineering Consultant** (in a team). Traffic and Revenue Study. Additional Report", for the feasibility of the Zagreb-Gorican Trans-European Motorway (Croatia); Astaldi Engineering, Rome.
1997-1998	**Coast Guard Officer** (Ensign, military duty). Commercial Port of Chioggia (Venice, Italy) after completing the 97th/L Reserve Course at

Italian Navy Academy of Livorno. Maritime Safety Control surveys.

1.7. Professional Recognition: Awards and Study Fellowships

Awards

2019	**Global Experience Office (GEO), Northeastern University,** GEO Faculty Fellow 2019.
2015	**Elsevier, Certificate of Outstanding Contribution in Reviewing.** Journal of Sound and Vibration, awarded May 2015.
2014	**Elsevier, Certificate of Excellence in Reviewing.** Engineering Structures 2013.
2014	**Elsevier, Certificate of Excellence in Reviewing.** Journal of Wind Engineering and Industrial Aerodynamics 2013.
2010	**ASCE Outstanding Reviewer Award.** ASCE Journal of Bridge Engineering.
2009	**Faculty Early CAREER Development Award**. NSF.

Study Fellowships

2004	**Recipient** of a travel fellowship. Engineering Mechanics Division of the American Society of Civil Engineers to attend the 17th EM Conference.
1999, 2000	**Recipient** of two one-month study fellowships, "Short-Term Mobility Program of Researchers". Italian National Research Council (CNR), Department of International Exchanges (as a Visiting Scholar at JHU).

1.8. Professional Engineering Registration

1998	Italian National Civil Engineering Registration, Trieste No. 2003 (note: while licensure still standing, actual affiliation and registration with the civil engineering board was interrupted in 2016 since registration is incompatible with LC's current residence in a country other than Italy).

2. SCHOLARSHIP / RESEARCH

2.1. Research Interests

Please note that numbered items, indicated in parentheses, refer to sample journal publications in each area (listed in Section 2.2).

- Structural dynamics (J4 to J9; J11 to J13; J15 to J24, J28, J30, J33, J44, J59, J62)
- Wind engineering: long-span bridges (J1 to J3, J10, J14, J23, J24, J27, J29, J31, J40, J41, J69-J70)
- Wind engineering: tall buildings (J21, J34, J38, J39, J45, J47, J49, J50, J51, J52, J57, J60, J61, J62, BC1, J66, J67, J68, J72, J73, J74)
- Wind energy and Wind-based energy harvesting (J20, J36, J56, J65, J75)
- Fluid-structure interaction: wind borne debris (J25, J26, J32, J42)
- Fluid-structure interaction: other topics (J7, J10, J12, J13, J14, J28, J43)
- Linear and nonlinear cable/stay and cable network dynamics (J5, J6, J8, J9, J18 and J22, J33, J35, J37, J44, J58, J59, J71)

- Climate change effects in structural engineering (J40, J52)

2.2. Publications

*Graduate and undergraduate student co-authors, who are current or former students supervised by L. Caracoglia, are respectively denoted by superscripts "**" and "*"; post-doctoral fellows supervised by L. Caracoglia are denoted by "***". For Refereed Book Chapters ("BC") and Journal Publications ("J") the corresponding author (or research leader) is denoted by "†". For Conferences ("C") and Posters ("PS") with two or more co-authors the lead presenter is indicated by "‡".*

Refereed Book Chapters (BC)

Book chapters, listed in this section, are "full research papers", which are peer reviewed and listed on peer-reviewed digital databases after publication

Published

BC1. Caracoglia, L., *"Investigation on a Generalized Intervention Cost Function to Examine Wind-Induced Damage on Tall Buildings,"* **Special ASCE Book Publication "Wind Engineering in Natural Hazards"**, Ed. by A. M. Aly and E. Dragomirescu, American Society of Civil Engineers (ASCE), Reston, VA, USA, ISBN: 978-0-7844-1515-3 (print), 2018, pp. 25-53, DOI: 10.1061/9780784415153.ch02.

Refereed Journal Publications (J)

Published (please refer to Table 1 at the end of this list for Impact Factors).

J80. Rizzo, F.*** and Caracoglia, L.†, "*Artificial Neural Network Model to Predict the Flutter Velocity of Suspension Bridges,*" **Computers and Structures**, Vol. 233, 2020, 106236 (20 pages), DOI: 10.1016/j.compstruc.2020.106236.

J79. Le, V.** and Caracoglia, L.†, "*A Neural Network Surrogate Model for the Performance Assessment of a Vertical Structure Subjected to Non-stationary, Tornadic Wind Loads,*" **Computers and Structures**, Vol. 231, 2020, 106208 (17 pages), DOI: 10.1016/j.compstruc.2020.106208.

J78. Le, V.** and Caracoglia, L.†, "*Life-cycle Cost Analysis of a Monopole Structure Subjected to Tornadic Wind Loads,*" **ASCE Journal of Structural Engineering**, Vol. 146, No. 2, 2020, 04019194 (14 pages), DOI: 10.1061/(ASCE)ST.1943-541X.0002480.

J77. Cui, W.*** and Caracoglia, L.†, "*Performance-Based Wind Engineering of Tall Buildings Based on Life-Cycle Downtime and Multi-Source Wind Damage,*" **ASCE Journal of Structural Engineering**, Vol. 146, No. 1, 2020, 04019179 (12 pages), DOI: 10.1061/(ASCE)ST.1943-541X.0002479.

J76. Cui, W.*** and Caracoglia, L.†, "*A New Stochastic Formulation for Synthetic Hurricane Simulation over the North Atlantic Ocean,*" **Engineering Structures**, Vol. 199, 2019, 109597, DOI: 10.1016/j.engstruct.2019.109597.

J75. Ierimonti, L.***, Venanzi, I., Caracoglia, L.† and Materazzi, A.L., *"Cost-based Design of Nonstructural Elements for Tall Buildings under Extreme Wind Environments,"* **Journal of Aerospace Engineering, ASCE**, Vol. 32, No. 3, 2019, 04019020 (16 pages), DOI: 10.1061/(ASCE)AS.1943-5525.0001008.

J74. Li, S.[**] and Caracoglia, L.[†], "*Surrogate Model Monte Carlo Simulation for Stochastic Flutter Analysis of Wind Turbine Blades,*" **Journal of Wind Engineering and Industrial Aerodynamics**, Vol. 188, 2019, pp. 43-60, DOI: 10.1016/j.jweia.2019.02.004.

J73. Le, V.[**] and Caracoglia, L.[†], "G*eneration and Characterization of a Non-Stationary Flow Field in a Small-Scale Wind Tunnel using a Multi-blade Flow Device,*" **Journal of Wind Engineering and Industrial Aerodynamics**, Vol. 186, 2019, pp. 1-16, DOI: 10.1016/j.jweia.2018.12.017.

J72. Caracoglia, L., *"Unified Stochastic Dynamic and Damage Cost Model for the Structural Analysis of Tall Buildings in Thunderstorm-like Winds,"* **ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering**, Vol. 4, No. 4, 2018, 04018043 (17 pages), DOI: 10.1061/AJRUA6.0000999.

J71. Giaccu, G.-F. and Caracoglia, L.[†], "*Wind-Load Fragility Analysis of Monopole Towers by Layered Stochastic-Approximation-Monte-Carlo Method,*" **Engineering Structures**, Vol. 174, 2018, pp. 462-477, DOI: 10.1016/j.engstruct.2018.07.081.

J70. Rizzo, F.[***,†], Caracoglia, L., Montelpare, S., "*Predicting the Flutter Speed of a Pedestrian Suspension Bridge through Examination of Laboratory Experimental Errors,*" **Engineering Structures**, Vol. 172, 2018, pp. 589-613, DOI: 10.1016/j.engstruct.2018.06.042.

J69. Rizzo, F.[***] and Caracoglia, L.[†], "*Examination of Experimental Errors in Scanlan Derivatives of a Closed-Box Bridge Deck,*" **Wind and Structures – An International Journal**, Vol. 26, No. 4, 2018, pp. 231-251, DOI: 10.12989/was.2018.26.4.231.

J68. Cui, W.[**] and Caracoglia, L.[†], "*A Unified Framework for Performance-Based Wind Engineering of Tall Buildings in Hurricane-Prone Regions Based on Lifetime Intervention-Cost Estimation,*" **Structural Safety**, Vol. 73, 2018, pp. 75-86, DOI: 10.1016/j.strusafe.2018.02.003.

J67. Le, V.[**] and Caracoglia, L.[†], "*Computationally Efficient Stochastic Approach for the Fragility Analysis of Vertical Structures Subjected to Thunderstorm Downburst Winds,*" **Engineering Structures**, Vol. 176, 2018, pp. 152-169, DOI: 10.1016/j.engstruct.2018.03.007.

J66. Ierimonti, L.[**,†], Venanzi, I. and Caracoglia, L., *"Life-Cycle Damage-Based Cost Analysis of Tall Buildings Equipped with Tuned Mass Dampers,"* **Journal of Wind Engineering and Industrial Aerodynamics**, Vol. 176, 2018, pp. 54-64, DOI: 10.1016/j.jweia.2018.03.009.

J65. Caracoglia, L., *"Modeling the Coupled Electro-Mechanical Response of a Torsional-Flutter-Based Wind Harvester with a Focus on Energy Efficiency Examination,"* **Journal of Wind Engineering and Industrial Aerodynamics**, Vol. 174, 2018, pp. 437-450, DOI: 10.1016/j.jweia.2017.10.017.

J64. Cui, W.[**] and Caracoglia, L.[†], "*A Fully-Coupled Generalized Model for Multi-Directional Wind Loads on Tall Buildings: A Development of the Quasi-Steady Theory,*" **Journal of Fluids and Structures**, Vol. 78, 2018, pp. 52-68, DOI: 10.1016/j.jfluidstructs.2017.12.008.

J63. Abbiati G., La Salandra, V., Bursi, O.S.[†] and Caracoglia, L., "*A Composite Experimental Dynamic Substructuring Method Based on Partitioned Algorithms and Localized Lagrange Multipliers*," **Mechanical Systems and Signal Processing**, Vol. 100, 2018, pp. 85–112, DOI: 10.1016/j.ymssp.2017.07.020.

J62. Ierimonti, L.[**,†], Caracoglia, L., Venanzi, I. and Materazzi A.L., *"Life-Cycle Loss Estimation in*

Tall Buildings Accounting for Wind Directionality Effects," **Journal of Wind Engineering and Industrial Aerodynamics**, Vol. 171, 2017, pp. 207-218, DOI: 10.1016/j.jweia.2017.09.020.

J61. Cui, W.[**] and Caracoglia, L.†, "*Examination of Experimental Variability in HFFB Testing of a Tall Building under Multi-Directional Winds,*" **Journal of Wind Engineering and Industrial Aerodynamics**, Vol. 171, 2017, pp. 34-49, DOI: 10.1016/j.jweia.2017.09.001.

J60. Le, T.-H. and Caracoglia, L.†, "*Computer-based Model for the Transient Dynamics of a Tall Building during Digitally Simulated Andrews AFB Thunderstorm,*" **Computers and Structures**, Vol. 193, 2017, pp. 44-72, DOI: 10.1016/j.compstruc.2017.07.019.

J59. Giaccu, G.-F.†, and Caracoglia, L., "*A Displacement-Based Approach for Determining Non-Linear Effects on Pre-Tensioned-Cable Cross-Braced Structures,*" **Journal of Sound and Vibration**, Vol. 394, 2017, pp. 465-481, DOI: 10.1016/j.jsv.2017.01.008.

J58. Caracoglia, L.†, Giaccu, G.-F. and Barbiellini, B., "*Estimating the Standard Deviation of Eigenvalue Distributions for the Nonlinear Free-Vibration Stochastic Dynamics of Cable Networks,*" **Meccanica – An International Journal of Theoretical and Applied Mechanics AIMETA**, Vol. 52, No. 1, 2017, pp. 197-211, DOI 10.1007/s11012-016-0388-0.

J57. Caracoglia, L., *"Examining Monetary Losses due to Transient-Wind-Load Damage on Tall Building Envelopes by Stochastic Modeling,"* **Wind Engineers - Official Journal of the Japan Association for Wind Engineering, JAWE**, Vol. 41, No. 4 [No. 149], 2016, pp. 325-329 (ISSN 0912-1935), DOI: 10.5359/jawe.41.326.

J56. Canor, T. [**†], Caracoglia, L. and Denoël, V., "*Perturbation Methods in Evolutionary Spectral Analysis for Linear Dynamics and Equivalent Statistical Linearization*," **Probabilistic Engineering Mechanics**, Vol. 46, 2016, pp. 1-17, DOI: http://dx.doi.org/10.1016/j.probengmech.2016.07.001.

J55. Pourazarm, P., Caracoglia, L., Lackner, M. and Modarres-Sadeghi Y.†, "*Perturbation Methods for the Reliability Analysis of Wind-Turbine Blade Failure due to Flutter*," **Journal of Wind Engineering and Industrial Aerodynamics**, Vol. 156, 2016, pp. 159–171, DOI: http://dx.doi.org/10.1016/j.jweia.2016.07.011.

J54. Sorace, S.†, Blocken, B., Borri, C., Caracoglia, L., Molina, F.J., and Müller, G., *"Advanced Materials and Technologies for Structural Performance Improvement,"* **Advances in Materials Science and Engineering**, Vol. 2016, Article ID 1854839, 2016, DOI: http://dx.doi.org/10.1155/2016/1854839

J53. Egger, P.[**], Caracoglia, L.† and Kollegger J., "*Modeling and Experimental Validation of a Multiple-Mass-Particle Impact Damper for Controlling Stay-Cable Oscillations,*" **Structural Control and Health Monitoring**, Vol. 23, No. 6, 2016, pp. 960-978, DOI: 10.1002/stc.1812.

J52. Cui, W.[**] and Caracoglia, L.†, "*Exploring Hurricane Wind Speed along US Atlantic Coast in Warming Climate and Effects on Predictions of Structural Damage and Intervention Costs,*" **Engineering Structures**, Vol. 122, 2016, pp. 209-225, DOI: 10.1016/j.engstruct.2016.05.003.

J51. Le, T.-H. and Caracoglia, L.†, "M*odeling Vortex-Shedding Effects for the Stochastic Response of Tall Buildings under Non-Synoptic Winds,*" **Journal of Fluids and Structures**, Vol. 61, 2016, pp. 461-491, DOI: http://dx.doi.org/10.1016/j.jfluidstructs.2015.12.006.

J50. Caracoglia, L., *"Comparison of Reduced-Order Models to Analyze the Dynamics of a Tall*

Building under the Effects of Along-Wind Loading Variability," **ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering**, Vol. 2, No. 2, 2016, C4015002 (13 pages), DOI: 10.1061/AJRUA6.0000833.

J49. Cui, W.[**] and Caracoglia, L.[†], "*Physics-based Method for the Removal of Spurious Resonant Frequencies in High-Frequency Force Balance Tests,*" **ASCE Journal of Structural Engineering**, Vol. 142, No. 2, 2016, 04015129, DOI: 10.1061/(ASCE)ST.1943-541X.0001414.

J48. Izzi. M.[**], Caracoglia, L.[†] and Noè, S., *"Investigating the Use of Targeted-Energy-Transfer Devices for Stay-Cable Vibration Mitigation,"* **Structural Control and Health Monitoring**, Vol. 23, No. 2, 2016, pp. 315 - 332, DOI: 10.1002/stc.1772.

J47. Cui, W.[**] and Caracoglia, L.[†], "*New GPU Computing Algorithm for Wind Load Uncertainty Analysis on High-Rise Systems,*" **Wind and Structures – An International Journal,** Special issue on "Wind Impact on High-Rise Structures: Load Characterization, Response Evaluation and Mitigation", Vol. 21, No. 5, 2015, pp. 461-487, DOI: http://dx.doi.org/10.12989/was.2015.21.5.461.

J46. Le, T.-H.[†] and Caracoglia, L., "*High-Order, Closely-Spaced Modal Parameter Estimation Using Wavelet Analysis,*" **Structural Engineering and Mechanics - An International Journal, Techno Press, South Korea**, Vol. 56, No. 3, 2015, pp. 423-442, DOI: http://dx.doi.org/10.12989/sem.2015.56.3.423.

J45. Le, T.-H. and Caracoglia, L.[†], "*Wavelet-Galerkin Analysis to Study the Coupled Dynamic Response of a Tall Building against Transient Wind Loads,*" **Engineering Structures**, Vol. 100, 2015, pp. 763–778, DOI: 10.1016/j.engstruct.2015.03.060.

J44. Egger, P.[**] and Caracoglia, L.[†], "*Analytical and Experimental Investigation on a Multiple-Mass-Element Pendulum Impact Damper for Vibration Mitigation,*" **Journal of Sound and Vibration**, Vol. 353, 2015, pp. 38–57, DOI: 10.1016/j.jsv.2015.05.003.

J43. Le, T.-H. and Caracoglia, L.[†], "*Rectangular Prism Pressure Coherence by Modified Morlet Continuous Wavelet Transform,*" **Wind and Structures – An International Journal**, Vol. 20, No. 5, 2015, pp. 661-682, DOI: 10.12989/was.2015.20.5.661.

J42. Moghim, F.[**], Xia, F.T.[*] and Caracoglia, L.[†], "*Experimental Analysis of a Stochastic Model for Estimating Wind-Borne Compact Debris Trajectory in Turbulent Winds,*" **Journal of Fluids and Structures,** Vol. 54, 2015, pp. 900–924, DOI: 10.1016/j.jfluidstructs.2015.02.007.

J41. Canor, T.[**], Caracoglia, L. and Denoël, V.[†], "*Application of Random Eigenvalue Analysis to Assess Bridge Flutter Probability*," **Journal of Wind Engineering and Industrial Aerodynamics**, Vol. 140, 2015, pp. 79-86, DOI: 10.1016/j.jweia.2015.02.001.

J40. Seo, D.-W.[**] and Caracoglia, L.[†], "*Exploring the Impact of "Climate Change" on Lifetime Replacement Costs for Long-Span Bridges Prone to Torsional Flutter*," **Journal of Wind Engineering and Industrial Aerodynamics**, Vol. 140, 2015, pp. 1-9, DOI: 10.1016/j.jweia.2015.01.013.

J39. Le, T.-H. and Caracoglia, L.[†], "*Reduced-Order Wavelet-Galerkin Solution for the Coupled, Nonlinear Stochastic Response of Slender Buildings in Transient Winds,*" **Journal of Sound and Vibration**, Vol. 344, 2015, pp. 179-208, DOI: 10.1016/j.jsv.2015.01.007.

J38. Cui, W.[**] and Caracoglia, L.[†], "*Simulation and Analysis of Intervention Costs due to Wind-*

Induced Damage on Tall Buildings," **Engineering Structures,** Vol. 87, 2015, pp. 183–197, DOI: 10.1016/j.engstruct.2015.01.001.

J37. Giaccu, G.-F.[***], Barbiellini, B. and Caracoglia, L.[†], "*Stochastic Unilateral Free Vibration of an In-Plane Cable Network,*" **Journal of Sound and Vibration,** Vol. 340, 2015, pp. 95-111, DOI: 10.1016/j.jsv.2014.12.004.

J36. Pourazarm, P., Caracoglia, L., Lackner, M. and Modarres-Sadeghi Y.[†], "*Stochastic Analysis of Flow-Induced Dynamic Instabilities of Wind Turbine Blades*," **Journal of Wind Engineering and Industrial Aerodynamics**, Vol. 137, 2015, pp. 37-45, DOI: 10.1016/j.jweia.2014.11.013.

J35. Giaccu, G.-F.[***], Barbiellini, B. and Caracoglia, L.[†], "*Parametric Study on the Nonlinear Dynamics of a Three-Stay Cable Network under Stochastic Free Vibration,*" **ASCE Journal of Engineering Mechanics**, Vol. 141, No. 6, 2015, 04014166, DOI: 10.1061/(ASCE)EM.1943-7889.0000887.

J34. Caracoglia, L., *"A Stochastic Model for Examining Along-Wind Loading Uncertainty and Intervention Costs due to Wind-Induced Damage on Tall Buildings,"* **Engineering Structures**, Vol. 78, 2014, pp. 121-132, DOI: 10.1016/j.engstruct.2014.07.023.

J33. Giaccu, G.-F.[***], Caracoglia, L.[†] and Barbiellini, B., "*Modeling "Unilateral" Response in the Cross-Ties of a Cable Network: Deterministic Vibration,*" **Journal of Sound and Vibration,** Vol. 333, No. 19, 2014, pp. 4427-4443, DOI: 10.1016/j.jsv.2014.04.030.

J32. Moghim F.[**] and Caracoglia, L.[†], *"Effect of Computer-generated Turbulent Wind Field on Trajectory of Compact Debris: a Probabilistic Analysis Approach,"* **Engineering Structures**, Vol. 59, 2014, pp. 195–209, DOI: 10.1016/j.engstruct.2013.10.010.

J31. Seo, D.-W.[**] and Caracoglia, L.[†], "*Estimating Life-Cycle Monetary Losses due to Wind Hazards: Fragility Analysis of Long-Span Bridges,*" **Engineering Structures,** Vol. 56, 2013, pp. 1593–1606, DOI: 10.1016/j.engstruct.2013.07.031.

J30. Giaccu, G.-F.[***] and Caracoglia, L.[†], *"Generalized Power-Law Stiffness Model for Nonlinear Dynamics of In-Plane Cable Networks,"* **Journal of Sound and Vibration**, Vol. 332, No. 8, 2013, pp. 1961–1981, DOI: 10.1016/j.jsv.2012.12.006.

J29. Caracoglia, L., "*An Euler - Monte Carlo Algorithm Assessing Moment Lyapunov Exponents for Stochastic Bridge Flutter Predictions,*" **Computers and Structures**, Vol. 122, 2013, pp. 65–77, DOI: 10.1016/j.compstruc.2012.11.015.

J28. Hernandez, E.H.[†], Bernal, D. and Caracoglia, L., *"On-line Monitoring of Wind Induced Stresses and Fatigue Damage in Instrumented Structures,"* **Structural Control and Health Monitoring**, Vol. 20, No. 10, 2013, pp. 1291-1302, DOI: 10.1002/stc.1536.

J27. Seo, D.-W.[**] and Caracoglia, L[†], *"Statistical Buffeting Response of Flexible Bridges Influenced by Errors in Aeroelastic Loading Estimation,"* **Journal of Wind Engineering and Industrial Aerodyn.**, Vol. 104–106, 2012, pp. 129–140, DOI: 10.1016/j.jweia.2012.03.036.

J26. Moghim F.[**] and Caracoglia, L.[†], *"A Numerical Model for Wind-Borne Compact Debris Trajectory Estimation: Part 2 – Simulated Vertical Gust Effects on Trajectory and Mass Momentum,"* **Engineering Structures**, Vol. 38, 2012, pp. 163-170, DOI: 10.1016/j.engstruct.2011.12.032.

J25. Moghim F.[**] and Caracoglia, L.[†], *"A Numerical Model for Wind-Borne Compact Debris*

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J81. Venanzi, I.†, Ierimonti, L.*** and Caracoglia, L., *"Life-Cycle-Cost Optimization for the Wind*

Load Design of Tall Buildings Equipped with TMDs," **Wind and Structures, an International Journal,** Techno-Press, February 20, 2020, accepted for publication.

Table 1. Impact Factors of Peer-Reviewed Journal Publications

Journal Title	Published Papers	Impact Factor(1)
ASCE-ASME J. of Risk and Uncertainty in Engr. Systems, Part A: Civil Engr.	02	1.590
Advances in Materials Science and Engineering	01	1.399
Computer-Aided Civil and Infrastructure Engineering	01	6.208
Computers and Structures, Elsevier	04	3.354
Engineering Structures, Elsevier	20	3.084
Meccanica, An International J. of Theoretical and Applied Mechanics AIMETA	01	2.316
Journal of Aerospace Engineering, ASCE	01	1.373
Journal of Engineering Mechanics, ASCE	02	1.264
Journal of Offshore Mechanics and Arctic Engr., ASME Transactions	01	1.133
Journal of Fluids and Structures, Elsevier	03	3.070
Journal of Sound and Vibration, Elsevier	09	3.123
Journal of Structural Engineering, ASCE	03	2.528
Journal of Wind Engr. and Industrial Aerodynamics, Elsevier	19	3.010
Mechanical Systems and Signal Processing	01	5.005
Probabilistic Engineering Mechanics	01	2.329
Structural Control and Health Monitoring, Wiley	04	3.740
Structural Engineering and Mechanics, Techno Press, S. Korea	01	2.804
Structural Safety	01	3.517
Wind and Structures, Techno Press, S. Korea	04	1.256
Wind Engineers, JAWE, Japan	01	N/A
Currently under review (various journals and edited publ.)	05	

Under Review

J86. Le, V.[**] and Caracoglia, L.†, "*Performance-Based Wind Engineering Framework to Analyze Vertical Structures Subjected to Nonstationary Downburst and Tornado Loads,*" **Structural Safety**, March 26th, 2020, submitted for publication.

J85. Li, S.[**] and Caracoglia, L.†, "*Experimental Error Examination and its Effects on the Aerodynamic Characteristics of Wind Turbine Blades,*" **Journal of Wind Engineering and Industrial Aerodynamics**, March 25th, 2020, submitted for publication.

J84. Cui, W.[**], Ma T. and Caracoglia, L.†, "*Time-Cost Trade-Off Analysis for Wind-Induced Inhabitability of Tall Buildings Equipped with Tuned Mass Dampers,*" **Journal of Wind Engineering and Industrial Aerodynamics**, March 9th, 2020, submitted for publication.

J83. Le, V.[**] and Caracoglia, L.†, "E*xperimental Investigation on Non-Stationary Wind Loading Effects Generated with a Multi-Blade Flow Device,*" **Journal of Fluids and Structures**, December 24th, 2019, submitted for publication.

J82. Egger, P.[**] and Caracoglia, L.†, "*Calibration of a New Discrete Mass Model Examining the Dynamics of the Multiple-Element-Pendulum Impact Damper for Bridge Stay-Cables,*" **Engineering Structures**, August 1st, 2018, submitted for publication.

(1) Source: Journal Citation Report 2018

"***" Post-doctoral student supervised by LC - "**" Graduate student sup. by LC - "*" Undergraduate student sup.by LC - "‡" Lead presenter (if applicable) - "†" Corresponding author and Research leader (if applicable)

Conference Papers (C)

*Conference papers, listed in this section, refer to "full research papers", 8 to 12 pages. A superscript index "**PR**", placed to the left of the conference identifier (C), denotes a peer-reviewed conference paper with strict acceptance process and citation in an Engineering or Scientific Database such as "Compendex", "Inspec" or "Scopus". A number of extended abstracts (e.g., C5, C26, C76 and C80) and one-page abstracts (e.g., C53, C54, C56, C57, C59, C69, C110) are also listed in this section; a note is used to highlight these special cases.*

C118. Caracoglia, L.†, *"Stochastic Calculus for Random Flutter Analysis of Wind Turbine Blades,"* **Proceedings of the 9th International Colloquium on Bluff Body Aerodynamic and Applications,** University of Birmingham, UK, July 20–23, 2020 (four-page abstract submitted, under review).

C117. Le, V.[**,‡] and Caracoglia, L.†, *"Investigating Failure Probability of a Monopole, Point-like Structure Subjected to Tornado Winds,"* **Proceedings of the 9th International Colloquium on Bluff Body Aerodynamic and Applications,** University of Birmingham, UK, July 20–23, 2020 (four-page abstract submitted, under review).

C116. Li, S.[**,‡] and Caracoglia, L., *"Systematic Uncertainty Quantification Methods for Stochastic Flutter Analysis of Wind Turbine Blades,"* **Proceedings of the 9th International Colloquium on Bluff Body Aerodynamic and Applications,** University of Birmingham, UK, July 20–23, 2020 (four-page abstract submitted, under review).

C115. Giaccu G.F., Gallisai L., White S., Prestage R. and Caracoglia, L., *"Green Bank Radio Telescope: Wind induced Effects on Feed-arm,"* **Eurodyn 2020 Conference**, XI International Conference on Structural Dynamics, Athens, Greece, June 22-24, 2020 (abstract accepted for publication, final paper in submission).

C114. Caracoglia, L., *"Surrogate Model Formulation for Stochastic Flutter Analysis of Wind Turbine Blades under Uncertain Aerodynamics Loads,"* **Eurodyn 2020 Conference**, XI International Conference on Structural Dynamics, Athens, Greece, June 22-24, 2020 (final paper submitted, under review).

PR **C113.** Li, S.[**] and Caracoglia, L.†, *"Wind Tunnel Experimental Variability of Aerodynamic Loads for Wind Turbine Blades,"* **WindTech 2019 Conference**, North American Wind Energy Academy (NAWEA), University of Massachusetts, Amherst, USA, October 14-16, 2019. Journal of Physics: Conference Series, IOPScience, Vol. 1452, 2020, pp. 012054 (12 pages), DOI: https://doi.org/10.1088/1742-6596/1452/1/012054.

C112. Venanzi, I.[**], Ierimonti, L. and Caracoglia, L., *"Optimization of Wind-excited Tall Buildings with Tuned Mass Dampers using Life-Cycle Intervention Cost Analysis,"* **15th International Conference on Wind Engineering (ICWE-15)**, International Association for Wind Engineering (IAWE), Beijing, China, September 1-6, 2019 (4-page extended abstract, oral presentation).

C111. Caracoglia, L., *"A Preliminary Reduced-Order Model for The Stochastic Aeroelastic Instability of Wind-Turbine Blades"* **International Conference of the Engineering Mechanics Institute (EMI2018)**, American Society of Civil Engineers, MIT, Boston, MA USA, May 29 – June 1, 2018 (one-page abstract and presentation only).

C110. Li, S.[**,‡] and Caracoglia, L.†, *"Investigations on Non-Deterministic Aeroelastic Instabilities of Wind Turbine Blades Using Efficient Numerical Stochastic Solvers"* **International Conference**

of the Engineering Mechanics Institute (EMI2018), American Society of Civil Engineers, MIT, Boston, MA USA, May 29 – June 1, 2018 (one-page abstract and presentation only).

C109. Le, V.[**,‡] and Caracoglia, L.[†], *"A Preliminary Examination of Structural Fragility for a Cantilever Structure Subjected to a Thunderstorm Downburst Loading"* **International Conference of the Engineering Mechanics Institute (EMI2018)**, American Society of Civil Engineers, MIT, Boston, MA USA, May 29 – June 1, 2018 (one-page abstract and presentation only).

PR **C108.** Ierimonti, L.[**], Venanzi, I., Caracoglia, L.[†] and Materazzi A.L. *"Life-Cycle Cost-Based Wind Design of Tall Buildings,"* **Proceeding of the XV Conference of the Italian Association for Wind Engineering (IN-VENTO-2018),** Italian National Association for Wind Engineering, ANIV, Naples, Italy, September 9-12, 2018, Ed. by Ricciardelli F. and Avossa F., Springer Nature Switzerland, 2019, ISSN 2366-2565, pp. 376-386.

PR **C107.** Giaccu, G.-F.[‡], Caracoglia, L.[†] and Barbiellini, B., *"Higher-Order Moments of Eigenvalue and Eigenvector Distributions for the Nonlinear Stochastic Dynamics of Cable Networks,"* **Proceedings of the X International Conference on Structural Dynamics, EURODYN 2017,** Rome, Italy, September 10-13, 2017 Procedia Engineering, Elsevier, ISSN 1877-7058, Vol. 199, 2017, pp. 637-642, DOI: 10.1016/j.proeng.2017.09.112.

PR **C106.** Caracoglia, L., *"Numerical Investigations on the Operational Regimes of a Torsional-Flutter-Based Wind Harvester,"* **Proceedings of the X International Conference on Structural Dynamics, EURODYN 2017,** Rome, Italy, September 10-13, 2017, Procedia Engineering, Elsevier, ISSN 1877-7058, Vol. 199, 2017, pp. 3434-3439, DOI: 10.1016/j.proeng.2017.09.492.

PR **C105.** Caracoglia, L., *"Parametric Study on the Use of the Fokker-Planck Equation to Examine the Nonstationary Wind-Induced Dynamics of Tall Buildings,"* **Proceedings of the X International Conference on Structural Dynamics, EURODYN 2017,** Rome, Italy, September 10-13, 2017, Procedia Engineering, Elsevier, ISSN 1877-7058, Vol. 199, 2017, pp. 3097-3102, DOI: 10.1016/j.proeng.2017.09.567

C104. Caracoglia, L., *"Investigation on Damage and Intervention Costs Induced by Thunderstorm-Like Winds on Tall Buildings,"* **Proceedings of the 7th European and African Conference on Wind Engineering (EACWE 2017),** Liège, Belgium, July 4-6 2017 (full paper, electronic proceedings).

C103. Ierimonti, L.[**], Caracoglia, L.[†,‡] and Venanzi, I., *"Life-Cycle Loss Estimation in Tall Buildings Accounting for Wind Directionality Effects,"* **Proceedings of the 7th European and African Conference on Wind Engineering (EACWE 2017),** Liège, Belgium, July 3-7 2017 (full paper, electronic proceedings).

C102. Le, V.[**,‡] and Caracoglia, L.[†], *"A Preliminary Examination of Structural Fragility for a Cantilever Structure Subjected to a Thunderstorm Downburst Loading"* **Proceedings of the 13th Americas Conference on Wind Engineering (ACWE 2017),** American Association for Wind Engineering (AAWE), University of Florida, Gainesville, Florida, USA, May 21-24, 2017 (full paper, electronic proceedings).

C101. Cui, W.[**] and Caracoglia, L.[‡,†], *"A General Methodology for Performance-based Wind Engineering (PBWE) of Tall Buildings Damaged by Hurricane Winds"* **Proceedings of the 13th Americas Conference of Wind Engineering (ACWE 2017),** American Association for Wind

Engineering (AAWE), University of Florida, Gainesville, Florida, USA, May 21-24, 2017 (abstract only).

C100. Crisman, D.[*,‡], Izzi, M.[**], Noè, S. and Caracoglia, L.[†], *"Pressure Coefficients for Evaluating Wind Loads on Large Roofs: Comparison Between Database-Assisted Design and Italian standards,"* **Proceedings of the XIV Conference of the Italian Association for Wind Engineering (IN-VENTO-2016),** Italian National Association for Wind Engineering, ANIV, Terni, Italy, September 25-28, 2016; Ed. by Materazzi A. L. and Venanzi I., Morlacchi Publisher, Perugia, Italy, ISBN 978-88-6074-995-6, pp. 64-73 (full paper).

C99. Giaccu, G.-F.[‡], Scintu, L.[**], Caracoglia, L.[†] and Barbiellini, B., *"RMS-Based Performance Thresholds for the Wind-Induced Response of Tall Buildings by Stochastic Approximation,"* **Proceedings of the XIV Conference of the Italian Association for Wind Engineering (IN-VENTO-2016),** Italian National Association for Wind Engineering, ANIV, Terni, Italy, September 25-28, 2016; Ed. by Materazzi A. L. and Venanzi I., Morlacchi Publisher, Perugia, Italy, ISBN 978-88-6074-995-6, pp. 106-115 (full paper).

C98. Ierimonti, L.[**,‡], Caracoglia, L.[†], Venanzi, I. and Materazzi A.L., *"Wind Loss Estimation in Tall Buildings Accounting for Uncertainties in Wind Load and Damage Model Characterization,"* **Proceedings of the XIV Conference of the Italian Association for Wind Engineering (IN-VENTO-2016),** Italian National Association for Wind Engineering, ANIV, Terni, Italy, September 25-28, 2016; Ed. by Materazzi A. L. and Venanzi I., Morlacchi Publisher, Perugia, Italy, ISBN 978-88-6074-995-6, pp. 128-139 (full paper).

C97. Caracoglia, L., *"A Novel Reduced-Order Model to Study the Efficiency of a Torsional-Flutter-Based Wind Harvester,"* **Proceedings of the XIV Conference of the Italian Association for Wind Engineering (IN-VENTO-2016),** Italian National Association for Wind Engineering, ANIV, Terni, Italy, September 25-28, 2016; Ed. by Materazzi A. L. and Venanzi I., Morlacchi Publisher, Perugia, Italy, ISBN 978-88-6074-995-6, pp. 42-51 (full paper).

C96. Abbiati, G., Bursi O.S.[‡], Caracoglia, L., Di Filippo, R., and La Salandra V., *"Probabilistic Seismic Response of Tank-Piping Systems,"* **2016 ASME Pressure Vessels and Piping Conference**, Vancouver, Canada, July 17-22, 2016, ASME Paper PVP2016-63292 (ASME electronic proceedings).

C95. Cui, W.[**,‡] and Caracoglia, L.[†], *"Statistical Modeling of Hurricanes over the North Atlantic Ocean,"* **Proceedings of Engineering Mechanics Institute Conference 2016 (EMI 2016 / PMC 2016)**, Vanderbilt University, May 22-26, 2016. Four-page paper: winner of the student paper competition, ASCE-EMI – Probabilistic methods Committee.

C94. Cui, W.[**,‡] and Caracoglia, L.[†], *"A Fully-Coupled Generalized Model for Multi-directional Wind Loads on Tall Buildings: a Development of the Quasi-Static Theory,"* **Proceedings of the 8th International Colloquium on Bluff Body Aerodynamic and Applications,** Northeastern University, Boston Massachusetts, USA, June 7-11, 2016, Paper ID 223 (full paper, electronic proceedings).

C93. Pourazarm, P.[‡], Caracoglia, L., Lackner, M. and Modarres-Sadeghi Y., *"Perturbation Methods for the Reliability Analysis of Flow Induced Dynamic Instabilities of Wind Turbine Blades,"* **Proceedings of the 8th International Colloquium on Bluff Body Aerodynamic and Applications,** Northeastern University, Boston Massachusetts, USA, June 7-11, 2016, Paper ID 179 (full paper, electronic proceedings).

C92. Ierimonti, L.[**,‡], Venanzi, I. and Caracoglia, L.[†], *"Probability-Based Direct Numerical Estimation of Wind-Induced Non-Structural Damage on Tall Buildings,"* **Proceedings of the 8th International Colloquium on Bluff Body Aerodynamic and Applications,** Northeastern University, Boston Massachusetts, USA, June 7-11, 2016, Paper ID 287 (full paper, electronic proceedings).

C91. Caracoglia, L., *"A Reduced-Order Stochastic Model to Study Damage and Intervention Costs on Tall Buildings in Non-Synoptic Winds,"* **Proceedings of the 8th International Colloquium on Bluff Body Aerodynamic and Applications,** Northeastern University, Boston Massachusetts, USA, June 7-11, 2016, Paper ID 268 (full paper, electronic proceedings).

C90. Le, T.H.[‡] and Caracoglia, L.[†], *"Enabling Analytical Formulation for the Tornado-Induced Dynamic Response of Tall Buildings,"* **Proceedings of the 8th International Colloquium on Bluff Body Aerodynamic and Applications,** Northeastern University, Boston Massachusetts, USA, June 7-11, 2016, Paper ID 164 (full paper, electronic proceedings).

C89. Le, T.H.[‡] and Caracoglia, L.[†], *"Exploring the Simulation of the Stochastic Response of a Tall Building in a Tornado-like Wind,"* **Proceedings of the 16th Asia Pacific Vibration Conference,** Hanoi University of Science and Technology, Hanoi, Vietnam, November 24-26, 2015, Paper ID 531, Bach Khoa Publishing House, Hanoi 2015 (electronic proceedings).

C88. Le, T.H.[‡] and Caracoglia, L.[†], *"A Novel Analytical Method to Assess Transient Coupled Vibration of a Tall Building Against Downburst Windstorms,"* **Proceedings of the 16th Asia Pacific Vibration Conference,** Hanoi University of Science and Technology, November 24-26, 2015, Hanoi, Vietnam, Paper ID 530, Bach Khoa Publishing House, Hanoi 2015 (electronic proceedings).

C87. Cui, W.[**,‡] and Caracoglia, L., *"Climate Change Impact on Lifetime Monetary Losses due to Hurricane-Induced Damage on Tall Buildings,"* **Proceedings of the International Conference of the Engineering Mechanics Institute (EMI2015), American Society of Civil Engineers,** Stanford University, California, USA, June 16-19, 2015 (extended abstract only).

C86. Bursi O.S.[‡], Abbiati, G., Caracoglia, L., La Salandra V and Reza Md S., *"Fragility Curves of Coupled Tanks and Piping Systems under Seismic Loading,"* **2015 ASME Pressure Vessels and Piping Conference,** Boston, Massachusetts, USA, July 19-23, 2015, ASME Paper PVP2015-45131.

C85. Bursi O.S.[‡], Abbiati, G., Caracoglia, L. and La Salandra V., *"Coupling Effects on the Probabilistic Response of Tanks and Piping Systems Subject to Seismic Loading,"* **VI International Conference on Coupled Problems in Science and Engineering,** Venice, Italy, May 18-20, 2015 (extended abstract only).

C84. Caracoglia, L., *"Investigating the Quantification of Intervention Costs due to Wind-induced Damage on Tall Buildings,"* **Proceedings of the 14th International Conference on Wind**

Engineering (ICWE14), Porto Alegre, Brazil, June 21-26, 2015, Federal University of Rio Grande do Sul, ISBN 978-85-66094-07-7, Paper ID 02023 (full paper, electronic proceedings).

C83. Cui, W.[**] and Caracoglia, L.[‡], *"An Efficient Physics-Based Method for Eliminating Spurious Resonant Frequencies in High-Frequency Force Balance Tests,"* **Proceedings of the 14th International Conference on Wind Engineering (ICWE14),** Porto Alegre, Brazil, June 21-26, 2015, Federal University of Rio Grande do Sul, ISBN 978-85-66094-07-7, Paper ID 02130 (full paper, electronic proceedings).

C82. Le, T.H. and Caracoglia, L.[‡], *"Coupled Dynamic Response of a Tall Building in a Simulated Thunderstorm Downburst,"* **Proceeding of the 14th International Conference on Wind Engineering (ICWE14),** Porto Alegre, Brazil, June 21-26, 2015, Federal University of Rio Grande do Sul, ISBN 978-85-66094-07-7, Paper ID 02069 (full paper, electronic proceedings).

C81. Izzi, M.[**,‡], Caracoglia, L., and Noè, S. *"Stay-Cable Vibration Mitigation Using Nonlinear Targeted-Energy-Transfer Devices: A Parametric Study,"* **Proceedings of the Symposium on the Dynamics and Aerodynamics of Cables (SDAC)**, Technical University of Denmark, Copenhagen, Denmark, September 25-26, 2014 (electronic proceedings).

C80. Cui, W.[**,‡] and Caracoglia, L., *"A Monte-Carlo Algorithm for Analyzing Lifetime Maintenance costs on Vertical Tall Structures Induced by Wind Hazards,"* **International Conference of the Engineering Mechanics Institute (EMI2014), American Society of Civil Engineers,** McMaster University, Hamilton, Ontario, Canada, August 5-8, 2014 (4-page short paper). *Note: The paper was selected among the finalists for the Probabilistic Methods Student Paper Award.*

PR **C79.** Abbiati, G., Bursi O.S.[‡], Caracoglia, L. and Reza Md S., *"Effects of Uncertainties in Boundary Conditions on Dynamic Characteristics of Industrial Plant Components,"* **Proceedings of the 2014 ASME Pressure Vessels & Piping Division Conference,** Anaheim, California, USA, July 20-24, 2014, ASME Paper PVP2014-28177 (ASME electronic proceedings).

C78. Le, T.H.[‡] and Caracoglia, L., *"Wind-induced Stochastic Dynamic Response Analysis of a Long-Span Bridge in the Wavelet Domain,"* **Proceedings of the Vietnamese National Symposium on Vibration and Control of Structures under Actions of Wind,** Hanoi, Vietnam, February 24-25, 2014 (full paper).

C77. Le, T.H.[‡] and Caracoglia, L., *"Coupled Wind-induced Stochastic Response of a Reduced-Order Building Model using a Wavelet-Galerkin Method,"* **Proceedings of the Vietnamese National Symposium on Vibration and Control of Structures under Actions of Wind,** Hanoi, Vietnam, February 24-25, 2014 (full paper).

C76. Seo, D.-W.[‡] and Caracoglia, L., *"Lifetime Cost Analysis against Flutter Riskiness for Long-Span Bridges,"* **Proceedings of the XIII Italian National Conference on Wind Engineering**, Italian National Association for Wind Engineering, ANIV, Genoa, Italy, June 22-25, 2014. In: "Wind Engineering in Italy - Proceedings of the XIII Conference of the Italian Association for Wind Engineering (In-Vento 2014)", Carassale, L., and Repetto, M.P. Eds., Genova University Press (electronic proceedings).

C75. Izzi, M.[**,‡], Caracoglia, L., and Noè, S. *"Targeted-Energy-Transfer Devices for Stay-Cable Vibration Mitigation,"* **Proceedings of the XIII Italian National Conference on Wind Engineering**, Italian National Association for Wind Engineering, ANIV, Genoa, Italy, June 22-25, 2014. In: "Wind Engineering in Italy - Proceedings of the XIII Conference of the Italian Association for Wind Engineering (In-Vento 2014)", Carassale, L., and Repetto, M.P. Eds.,

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PS32. Le, V.[**,‡] and Caracoglia, L., "*A Framework to Extend Performance-based Engineering for the Examination of Wind Loads from Thunderstorm Downbursts and Tornadoes,*" **Research Innovation and Scholarship Expo (RISE) 2020,** Northeastern University, Boston, Massachusetts, USA, April 9, 2020, Poster ID 2917.

PS31. Le, V.[**,‡] and Caracoglia, L., *"Performance-based Tornado Engineering of a Vertical Structure via Artificial Neural Network (ANN) Surrogate Modeling,"* **The MathWorks SMART Laboratory - Northeastern University Collaboration Day Event**, Northeastern University, Boston, Massachusetts, USA, February 21, 2020.

PS30. Zhang, L.[**,‡] and Caracoglia, L., "*A Novel, Layered Stochastic Approximation Monte Carlo Framework for Structural Wind Engineering Analysis,*" **College of Engineering PhD Research Expo 2020,** Northeastern University, Boston, Massachusetts, USA, February 20, 2020, Poster ID 62.

PS29. Li, S.[**,‡] and Caracoglia, L., "*Analysis of Experimental Errors Associated with Aerodynamic Properties Of Offshore Wind Turbine Blades,*" **College of Engineering PhD Research Expo 2020,** Northeastern University, Boston, Massachusetts, USA, February 20, 2020, Poster ID 61.

PS28. Le, V.[**,‡] and Caracoglia, L., "*Performance-based Evaluation of Structures Impacted by Winds from Thunderstorm Systems via Surrogate Modeling,*" **College of Engineering PhD Research Expo 2020,** Northeastern University, Boston, Massachusetts, USA, February 20, 2020, Poster ID 64.

PS27. Li, S.[**,‡] and Caracoglia, L., "*Uncertainty Quantification for Flutter Analysis of Large-Scale Offshore Wind Turbine Blades,*" **Research Innovation and Scholarship Expo (RISE) 2019,** Northeastern University, Boston, Massachusetts, USA, April 4, 2019.

PS26. Le, V.[**,‡] and Caracoglia, L., "*Analytical Methodology for the Performance-based*

Assessment of Vertical Structures Impacted by Thunderstorm Downburst and Tornado Wind Loads," **Research Innovation and Scholarship Expo (RISE) 2019,** Northeastern University, Boston, Massachusetts, USA, April 4, 2019.

PS25. Li, S.[**,‡] and Caracoglia, L., "*Flutter Analysis of Large-Scale Offshore Wind Turbine Blades under the Impact of Stochastic Perturbations,*" **French American Innovation Day 2019,** Northeastern University, Boston, Massachusetts, USA, March 18-19, 2019.

PS24. Le, V.[**,‡] and Caracoglia, L., *"Machine Learning Algorithms for Performance-based Tornado Engineering in the MATLAB® Computing Environment,"* **The MathWorks SMART Laboratory - Northeastern University Collaboration Day Event**, Northeastern University, Boston, Massachusetts, USA, February 26, 2019.

PS23. Le, V.[**,‡] and Caracoglia, L., "*Performance-based Structural Design against Thunderstorm and Tornadic loads: Recent Numerical and Experimental Developments,*" **College of Engineering Research Expo2019,** Northeastern University, Boston, Massachusetts, USA, February 19, 2019.

PS22. Le, V.[**,‡] and Caracoglia, L., "*Investigations on the Structural Performance of Building Structures Subjected to Non-Stationary Thunderstorm Wind Loads by Wavelet-Galerkin Numerical Methods,*" **Research Innovation and Scholarship Expo (RISE) 2018,** Northeastern University, Boston, Massachusetts, USA, April 5, 2018, Abstract ID 2114.

PS21. Le, V.[**,‡] and Caracoglia, L., *"A MATLAB®-Based Numerical Algorithm for Stochastic Simulation of Structural Load, Response and Damage (MATLAB® SLRD) Induced by Non-stationary Thunderstorm Downbursts,"* **The MathWorks SMART Laboratory - Northeastern University Collaboration Day Event**, Northeastern University, Boston, Massachusetts, USA, March 12, 2018.

PS20. Cui, W.[**,‡] and Caracoglia, L., *"MATLAB® Computations for Stochastic Forecasting of Hurricane Trajectories under Climate Change Effect and Projections of Wind-Induced Damage on Tall Buildings,"* **The MathWorks SMART Laboratory - Northeastern University Collaboration Day Event**, Northeastern University, Boston, Massachusetts, USA, February 14, 2017.

PS19. Cui, W.[**,‡] and Caracoglia, L., *"Advancing MATLAB® Computations for Stochastic Simulation of Climate-Change-Induced Hurricane Damage,"* **The MathWorks SMART Laboratory - Northeastern University Collaboration Day Event**, Northeastern University, Boston, Massachusetts, USA, March 17, 2015.

PS18. Cui, W.[**,‡] and Caracoglia, L., *"Accelerated Fragility Analysis of Tall Buildings in Wind Engineering on MatLab Platform,"* **The MathWorks SMART Laboratory - Northeastern University Collaboration Day Event**, Northeastern University, Boston, Massachusetts, USA, March 27, 2014.

PS17. Seo, D.-W.[**,‡] and Caracoglia, L., *"A Life-Cycle Cost Analysis for Structural Maintenance of Flexible Bridges under Wind Hazards,"* **2012 NSF-CMMI Engineering Research and Innovation Conference,** Boston, Massachusetts, USA, July 9–12 2012 (student poster presentation).

PS16. Moghim, F.[**,‡] and Caracoglia, L., *"Computer-generated Random Trajectories of Wind-Borne Debris in Turbulent Wind for Estimating Debris Impact against Tall Buildings,"* **2012 NSF-CMMI Engineering Research and Innovation Conference,** Boston,

Massachusetts, USA, July 9–12 2012 (student poster presentation).

PS15. Caracoglia, L., *"Use of State-Space Modeling for Simulating Lateral Wind Loading Correlation Error and its Effects on the Response of Tall Buildings,"* **2012 NSF-CMMI Engineering Research and Innovation Conference,** Boston, Massachusetts, USA, July 9–12 2012.

PS14. Caracoglia, L.‡, "*Dynamic Performance of Tall Buildings against Wind Hazards: Recent Results on a New Simulation Framework,*" **CyberBridges: Developing the Next Generation of Cyberinfrastructure Faculty for Computational and Data-enabled Science and Engineering (CB 2012),** Arlington, VA June 25-26, 2012, Poster Session for invited participants only (workshop supported by NSF - Office of Cyber-Infrastructure).

PS13. Aouinati, S.*,‡, Moghim, F.** and Caracoglia, L., "*Protecting Tall Buildings against Compact Wind-Borne Debris: Calibration of a New Wind Tunnel Chamber,*" **2012 American Society of Engineering Education Northeast Conference,** University of Massachusetts, Lowell, Massachusetts, USA, April 27-28, 2012, Poster Session 1, Abstract ID 44.

PS12. Egger, F.**,‡, Caracoglia, L. and Kollegger J., "*A Novel Impact Damper for Stay-Cable Vibration Mitigation,*" **Research Innovation and Scholarship Expo (RISE) 2012,** Northeastern University, Boston, Massachusetts, USA, March 29, 2012, Abstract ID 72.

PS11. Giaccu, G.F.***,‡, Barbiellini B. and Caracoglia, L., "*Stochastic Algorithms for the Study of Non-Linear Cable Network Dynamics: Application to the Mitigation of Stay-Cable Vibration,*" **Research Innovation and Scholarship Expo (RISE) 2012,** Northeastern University, Boston, Massachusetts, USA, March 29, 2012, Abstract ID 413.

PS10. Moghim, F.**,‡ and Caracoglia, L., "*Probabilistic Damage Analysis Caused by "Wind-Borne Compact Debris" on Building Facades in Turbulent Winds,*" **Research Innovation and Scholarship Expo (RISE) 2012,** Northeastern University, Boston, Massachusetts, USA, March 29, 2012, Abstract ID 69.

PS9. Seo, D.-W.**,‡ and Caracoglia L., "*A Life-Cycle Cost Model for Structural Maintenance of Long-Span Bridges under Wind Hazards,*" **Research Innovation and Scholarship Expo (RISE) 2012,** Northeastern University, Boston, Massachusetts, USA, March 29, 2012, Abstract ID 67.

PS8. Moghim, F.**,‡ and Caracoglia, L., "*Assessing the Risk of Wind-Borne Debris Impact against Building Façades by Monte Carlo Methods,*" **NU Research Exposition 2011,** Boston, Massachusetts, USA, April 6, 2011, Research poster No. 1928.

PS7. Seo, D.-W.**,‡ and Caracoglia L., "*Statistical Buffeting Simulations of Long-span Bridge Response under Wind Hazards: Recent Case Studies,*" **NU Research Exposition 2011,** Boston, Massachusetts, USA, April 6, 2011, Research poster No. 1968.

PS6. Coyle, S.*,‡, Moghim, F.** and Caracoglia, L., "*Design of a New, Removable Testing Configuration for the NU Small-Scale Wind Tunnel for Wind Engineering Research,*" **NU Research Exposition 2010,** Boston, Massachusetts, USA, March 24, 2010, Research poster No. 1509.

PS5. Moghim, F.**,‡ and Caracoglia, L., "*Numerical Simulation of Wind-Borne Debris Trajectory in Horizontal Winds,*" **NU Research Exposition 2010,** Boston, Massachusetts,

USA, March 24, 2010, Research poster No. 1575.

PS4. Seo, D.-W.[**, ‡] and Caracoglia L., "*Estimation of Torsional Bridge Flutter Collapse by Numerical Statistical Methods,*" **NU Research Exposition 2010,** Boston, Massachusetts, USA, March 24, 2010, Research poster No. 1410.

PS3. Seo, D.-W.[**,‡] and Caracoglia L., "*Assessment of Gust Effect Factors for Wind Loading on Low-rise Buildings through Database-Assisted-Design Method and Current Structural Design Standards,*" **NU Research Exposition 2009,** Boston, Massachusetts, USA, March 26, 2009, Research poster No. 1294.

PS2. Brito, R.[**,‡], Caracoglia, L. and Schroeder, J.M.*, *"Investigations on Section-Model Aeroelasticity of Bridge Decks for an Application to Small-Scale Wind-Tunnel Experiments,"* **NU Research Exposition 2008,** sponsored by the NU Office of the Provost, Boston, Massachusetts, USA, March 26, 2008, Research poster No. 1075.

PS1. Caracoglia, L., *"Parametric Random Noise Representation of Wind Turbulence and its Effects on the Aeroelasticity of Long-Span Bridges,"* **NU University Research Exposition 2008,** sponsored by the NU Office of the Provost, Boston, Massachusetts, USA, March 26, 2008, Research poster No. 943.

Books / Ph.D. Dissertation (B)

B1. Caracoglia, L., *"Wind-Structure Oscillations on Long-Span Suspension Bridges,"* **Ph.D. Dissertation (in English), University of Trieste, Italy**, November 30, 2000. Deposited at the Italian National Library (Rome) in accordance with the Italian law requirements: Art. 73 Law (DPR) No. 382 July 11, 1980; Art. 1, Law No. 660 August 31, 1945.

2.3. Invited Lectures and Presentations

Invited Lectures / Seminars - International (IL)

IL12. Caracoglia, L., "*Fluid-Structure Interaction of Low-Damping Systems: Some Research Results,*" **Research Seminar, Department of Civil, Environmental and Mechanical Engineering, University of Trento**, Trento, Italy, January 22nd, 2020 (via web only).

IL11. Caracoglia, L., "*Wind-induced Vibrations on Long – Span Bridges: Importance of Wind Load Uncertainty Propagation,*" **Research Seminar, Department of Structural and Geotechnical Engineering, University of Rome – La Sapienza** (invited by Prof. F. Bontempi), Rome, Italy, December 11th, 2019.

IL10. Caracoglia, L., "*Aeroelastic Vibrations of Low-Damping Structures: "Bad" and "Good" Wind,*" **Research Seminar, Department of Engineering and Architecture, University of Trieste** (invited by Prof. I. Garofalo), Trieste, Italy, November 14th, 2019.

IL9. Caracoglia, L., "*Investigations on the Aeroelasticity of Flexible Structures: Examining the Link between Wind Engineering and Wind Energy (Harvesting),*" **Research Seminar, Department of Civil and Environmental Engineering, Hong Kong University of Science and Technology** (invited by Prof. Kim KT Tse), East Kowloon, Hong Kong, January 24th, 2018.

IL8. Caracoglia, L., "*Recent Investigations on the Aeroelasticity of Slender Structures: "Bad" Wind versus "Good" Wind,*" **Research Seminar, Department of Civil and**

Environmental Engineering, University of Perugia (invited by Profs. A. L. Materazzi and I. Venanzi)**,** Perugia, Italy, November 26th, 2015.

IL7. Caracoglia, L., "*Investigations on Long-span Bridge Vibrations due to Variability in the Aeroelastic Wind Loading,*" **Research Seminar, Department of Mechanical Engineering, Polytechnic of Milan – Bovisa Campus** (invited by Profs. G. Diana and A. Zasso), Milan, Italy, December 19th, 2014.

IL6. Caracoglia, L., "*Probability-based Serviceability Assessment of Tall Building Structures due to High Winds,*" **Research Seminar, Department of Civil, Chemical and Environmental Engineering (DICCA), University of Genoa** (invited by Prof. M. P. Repetto)**,** Genoa, Italy, December 18th, 2014.

IL5. Caracoglia, L., "*Probabilistic Serviceability Assessment of Tall Building Structures due to Extreme Wind Loads,*" **Research Seminar, Department of Civil and Environmental Engineering (DICA), Polytechnic of Milan** (invited by Prof. F. Perotti)**,** Milan, Italy, November 24th, 2014.

IL4. Caracoglia, L., "*Probabilistic Serviceability and "Maintenance" Assessment of Tall Building Structures due to Extreme Wind Loads,*" **Research Seminar, University of Pavia** (invited by Profs. L. Faravelli and F. Casciati, Department of Civil Engineering and Architecture)**,** Pavia, Italy, November 18th, 2014.

IL3. Caracoglia, L., "*Recent Studies on the Dynamic Response of Slender Structures to Turbulent Wind Loading with Uncertain Characteristics,*" **Research Seminar, Institute for Mechanics, College of Engineering, Leopold-Franzens University**, Innsbruck, Austria, March 4th, 2008.

IL2. Caracoglia, L., "*Wind-Induced Vibration of Slender Structural Systems in the Presence of Uncertain Inputs,*" **Department of Civil Engineering and KOCED Wind Tunnel Center, Chonbuk National University**, Jeonju (Chonju), South Korea, December 19, 2006 (KOCED: KOrea Construction Engineering Development Program).

IL1. Caracoglia, L., *"Wind Effects and Civil Engineering Applications. Rigid and Flexible Structures: Lecture for the Wind Engineering Graduate Course,"* **Universidad Autónoma Metropolitana**, Unidad Acapotzalco, Mexico City, Mexico, March 10, 2006.

Invited Lectures / Seminars – National (L)

L12. Caracoglia, L., "*Recent Studies on Structural Aeroelasticity: from Damage Reduction against Destructive Winds to Harnessing the Wind Resource,*" **Keynote Speaker - Annual Meeting of the Structural Engineers Association of Massachusetts (SEAMass)**, Boston, Massachusetts, May 14, 2015.

L11. Caracoglia, L., "*Recent Challenges in Aeroelasticity of Slender Systems: from Reducing Damage against Destructive Winds to Harnessing the Valuable Wind Resource,*" **Department of Mechanical and Industrial Engineering, University of Massachusetts at Amherst,** Amherst, Massachusetts, March 2, 2015.

L10. Caracoglia, L., "*Application of Stochastic Simulation to Uncertainty Modeling and Analysis of Wind-Induced Response of Slender Structures,*" **Department of Civil and Environmental Engineering Seminar Series, University of Massachusetts at Dartmouth,** Dartmouth, Massachusetts, December 13, 2011.

L9. Caracoglia, L., "*Bridges and Skyscrapers: Wind Engineering of Civil Structures,*"

Northeastern University at Noon ("NU@NOON"), Chatham, Massachusetts, October 12, 2010.

L8. Caracoglia, L., "*Parametric Random Noise Simulation of Wind Loading: An Application to the Aeroelastic Response of Long-Span Bridges,*" **Department of Civil and Environmental Engineering, University of Massachusetts at Amherst**, April 18, 2008.

L7. Caracoglia, L., "*Vibration of Slender Structures in the Presence of Uncertain Wind Loading Conditions – Special Seminar,*" **Wind Science and Engineering Technology Center**, Texas Tech University, Lubbock, Texas, USA, October 8 2007**.**

L6. Caracoglia, L., "*Vibration of Slender Structures in the Presence of Uncertain Wind Loading Conditions,*" **Department of Civil and Environmental Engineering, Georgia Institute of Technology**, Atlanta, Georgia, March 14th, 2007.

L5. Caracoglia, L., "*Response of Structures to Wind Loading,"* **Chi-Epsilon Sponsored Session, A Window on Active Research for Undergraduate Students**, Department of Civil and Environmental Engineering, Northeastern University, Boston, MA, 10/19/2006.

L4. Caracoglia, L., *"Wind-Induced Failures of Highway Light Poles,"* **Department of Civil and Environmental Engineering, University of Illinois at Urbana Champaign**, Urbana, Illinois, May 8, 2006.

L3. Caracoglia, L, *"Uncertainty in The Modeling and Understanding of Fluid-Structure Interaction Phenomena: Joint Seminar on Fluids and Solids*," **Department of Civil and Environmental Engineering, Massachusetts Institute of Technology**, Boston, Massachusetts, April 20, 2006.

L2. Caracoglia, L., *"Observations on Wind-Induced Dynamic Failures of Highway Light Poles,"* **Department of Civil and Environmental Engineering, Northeastern University**, Boston, Massachusetts, April 1st, 2005.

L1. Caracoglia, L., *"Wind-Induced Oscillation of Long-Span Suspension Bridges,"* **Civil Engineering Department, Johns Hopkins University**, Baltimore, Maryland, 11/13/2001.

Invited Workshop Presentations – National (WP)

WP3. Caracoglia, L. *"Stochastic Methods for Random Parametric Instability Analysis of Rotating Wind Turbine Blades,"* **Fluid-Structure Interactions Workshop, Department of Mechanical Engineering**, **University of Massachusetts at Amherst**, Massachusetts, USA, March 5, 2019.

WP2. Caracoglia, L. *"Effects of Modeling and Measurement Errors on the Wind-Induced Dynamic Response of Flexible Structures,"* **FSI 2010: A One-Day Workshop on Fluid-Structure Interactions, Department of Mechanical Engineering**, **University of Massachusetts at Amherst**, April 8, 2010.

WP1. Caracoglia, L., *"Vibration Mitigation through Cross-Ties between Cables. Analysis and Design Experiences,"* **FHWA National Workshop on Wind Induced Vibration of Cable Stay Bridges, Federal Highway Administration and Missouri Department of Transportation**, Saint Louis, Missouri, USA, April 26, 2006 (in collaboration with S. Hague, Chief Structural Engineer, HNTB Corporation, Kansas City).

Invited Workshop Presentations – International (IWP)

IWP6. V. Le[**,‡] and Caracoglia, L., *"Performance-Based Design of Vertical Structures Impacted By Thunderstorm Downburst and Tornado Wind Loads by Wavelet-Galerkin Approach,"* **First Northeastern University – Tongji University Workshop on Wind Engineering** (NU-TJU WWE1), Boston, Massachusetts, USA, June 22-26, 2019.

IWP5. S. Li[**,‡] and Caracoglia, L., *"Numerical and Experimental Studies on Stochastic Flutter of Offshore Wind Turbine Blades,"* **First Northeastern University – Tongji University Workshop on Wind Engineering** (NU-TJU WWE1), Boston, Massachusetts, USA, June 22-26, 2019.

IWP4. Caracoglia, L., *"Use of Stochastic Calculus for Non-Deterministic Flutter Analysis of Wind Turbine Blades under Random Perturbations (Special Presentation),"* **First Northeastern University – Tongji University Workshop on Wind Engineering** (NU-TJU WWE1), Boston, Massachusetts, USA, June 22-26, 2019.

IWP3. Caracoglia, L., *"Reduced-order Modeling to Investigate the Response of Tall Buildings under Stochastic Wind Loading,"* **International Conference on Interdisciplinary Research Cooperation, 2013***,* International Centre of Excellence Telč*,* Academy of Sciences of the Czech Republic*,* Telč*,* Czech Republic*,* October 30-31, 2013.

IWP2. Caracoglia, L., *"Reduced-order Modeling to Investigate the Response of Tall Buildings under Stochastic Wind Loading,"* **International Conference on Interdisciplinary Research Cooperation, 2013***,* International Centre of Excellence Telč*,* Academy of Sciences of the Czech Republic*,* Telč*,* Czech Republic*,* October 30-31, 2013.

IWP1. Caracoglia, L., *"Dynamic Response of Long-Span Bridges Influenced by Wind Loading Uncertainty: A Recently-Developed Simulation Framework,"* **Second United States – Japan Workshop on "Structural Dynamics and Monitoring of Bridges and Flexible Structures against Wind Hazards"**, Northeastern University, November 12-14, 2011.

3. GRANTS

3.1. External

Funded – Active

Principal Investigator:	**L. Caracoglia**
Project title:	*Collaborative Research: Active Control of Nonlinear Flow-Induced Instability of Wind Turbine Blades under Stochastic Perturbations (with UMass Amherst)*
Sponsor:	National Science Foundation, CMMI, Dynamics, Control and Systems Diagnostics (DCSD)
Duration:	September 1st, 2015 – August 31st, 2018 (no cost extension, 08/31/19)
Amount:	$155,000

Principal Investigator:	**L. Caracoglia**
Project title:	*Performance-Based Wind Engineering: Stochastic Approximation for the Wind-Induced Dynamics of the Next-Generation Tall Buildings and Tower Structures*

Sponsor: National Science Foundation, CMMI, Engineering for Civil Infrastructure (ECI)
Duration: May 1st 2019 – April 30th 2022
Requested Amount: $257,777

Funded – Completed

Principal Investigator: **L. Caracoglia**
Project title: *Analytical Method to Assess Dynamic Response of Tall Buildings to Downburst Windstorm*
Sponsor: National Science Foundation, CMMI, Hazard Mitigation and Structural Engineering
Duration: May 1st, 2014 – April 30th, 2018
Amount: $274,296

Principal Investigator: **L. Caracoglia**
Project title: *CAREER: An Innovative Performance-Based Simulation Framework for High-Rise Buildings against Wind Hazards*
Sponsor: National Science Foundation CAREER-Grant, Division of Civil, Mechanical and Manufacturing Innovation (CMMI)
Duration: August 2009- August 2014
Amount: $430,000

Principal Investigator: **L. Caracoglia**
Project title: *The Third AAWE Workshop Student Travel Grant, Hyannis, Massachusetts, August 12-14, 2012*
Sponsor: National Science Foundation, CMMI
Duration: September 2012 – August 2013
Requested Amount: $10,000

Principal Investigator: **L. Caracoglia**
Project title: *A Probability-Based Methodology for the Analysis of Fluctuating Wind Loads on Cable-Supported Bridges*
Sponsor: National Science Foundation, CMMI
Duration: September 1, 2006 – August 31, 2009 (No-cost extension until 2010); project completed in 2011 - 2012
Amount: $119,421

Principal Investigator: **L. Caracoglia**
Project title: *Dynamic Analysis and Testing of Highway Light Poles*
Sponsor: Illinois Department of Transportation (sub-contracted from the University of Illinois at Urbana-Champaign)
Duration: June 2005 - August 2005
Amount: $7,792

Pending

Principal Investigator: **L. Caracoglia**
Project title: *Airflow-Based Energy Harvesting Apparatus Exploiting Aeroelastic-Instability for Installation on Commercial Vehicles*
Sponsor: Massachusetts Clean Energy Center – Spring 2019 Catalyst Program
Date submitted: March 16th, 2020
Requested Amount: $65,000

Principal Investigator: **L. Caracoglia**
Co-principal Investigator(s): Svend Ole Hansen, President, SOH Wind Engineering LLC, Williston, VT.
Project title: *Advancing the Use of High-Frequency-Force-Balance and Experimental Aeroelasticity for Performance-Based Wind Engineering of Next-Generation Vertical Structures*
Sponsor: National Science Foundation, CMMI, Engineering for Civil Infrastructure (ECI)
Date submitted: February 18th, 2020
Requested Amount: $371,885 (LC $305,797)

Principal Investigator: **L. Caracoglia**
Project title: *Scavenging the Wind Energy Resource through Aeroelastic Vibration and Torsional Flutter*
Sponsor: National Science Foundation, CMMI, Dynamics, Control and Systems Diagnostics (DCSD)
Date submitted: January 29th, 2020
Requested Amount: $429,543

Principal Investigator: **L. Caracoglia**
Project title: *Multi-disciplinary, Theoretical Framework for the Economic Modeling and Financial Loss Analysis Induced by Wind Loads on Tall Structures*
Sponsor: National Science Foundation, Division of Social and Economic Sciences, Economics
Date submitted: January, 2020
Requested Amount: $289,121

<u>Not-Funded</u>

Principal Investigator: **L. Caracoglia**
Project title: *Artificial Neural Networks for Surrogate Modeling of Tornado Induced Loads on Tall Building Structures*
Sponsor: National Science Foundation, CMMI, Engineering for Civil Infrastructure (ECI)
Date submitted: November, 2019
Requested Amount: $286,249

Principal Investigator: **L. Caracoglia**

Project title:	*Stochastic Calculus to Advance the Time-Domain Parametrization of Thunderstorm-induced Loads on Tall Slender Structures*
Sponsor:	National Science Foundation, CMMI, Engineering for Civil Infrastructure (ECI)
Date submitted:	October 22nd, 2019
Requested Amount:	$311,370

Principal Investigator:	**L. Caracoglia**
Project title:	*Probability-Enhanced Wind Engineering for Nonstationary Thunderstorms: Numerical Framework and Experimental Verification*
Sponsor:	National Science Foundation, CMMI, Engineering for Civil Infrastructure (ECI)
Date submitted:	April 19th, 2019
Requested Amount:	$291,841

Principal Investigator:	**L. Caracoglia**
Co-principal Investigator(s)	Svend Ole Hansen, President, SOH Wind Engineering LLC, Williston, VT.
Project title:	*Performance-Based Wind Engineering of the Next-Generation Vertical Structures – A New Operational Approach Based on High-Frequency-Force-Balance Experimental Aeroelasticity*
Sponsor:	National Science Foundation, CMMI, Engineering for Civil Infrastructure (ECI)
Date submitted:	February 11th, 2019
Requested Amount:	$341,764 (LC $281,208)

Principal Investigator:	**L. Caracoglia**
Project title:	*MassFLAP: a Novel Wind-Based Energy Harvesting Apparatus Exploiting Aeroelastic-Instability-Induced Torsional Vibration*
Sponsor:	Massachusetts Clean Energy Center – Spring 2019 Catalyst Program
Date submitted:	March 12th, 2019
Requested Amount:	$64,993

Principal Investigator:	**L. Caracoglia**
Project title:	*Time-Domain Stochastic Simulations to Advance the Design of Wind Turbine Blades against Aeroelastic Instabilities under Parametric Perturbations and Airflow Turbulence*
Sponsor:	National Science Foundation, CMMI, Dynamics, Control and Systems Diagnostics (DCSD)
Date submitted:	February 20th, 2019
Requested Amount:	$279,091

Principal Investigator:	**L. Caracoglia**
Project title:	*Probability-based Wind Engineering for Non-stationary Downburst and Tornadic Winds: a Novel, Unified Numerical Simulation*

Framework

Sponsor: National Science Foundation, CMMI, Engineering for Civil Infrastructure (ECI)
Date submitted: October 12th, 2018
Requested Amount: $288,654

Principal Investigator: **L. Caracoglia**
Project title: *Stochastic Differential Equations for Damage and Intervention-Cost Analysis of Tall Buildings due to Nonstationary Thunderstorm Wind Loads*
Sponsor: National Science Foundation, CMMI, Engineering for Civil Infrastructure (ECI)
Date submitted: September 10th, 2018
Requested Amount: $278,363

Principal Investigator: **L. Caracoglia**
Project title: *Ubiquitous Scavenging of Wind Resource through Aeroelastic Vibration: Exploring Torsional-Flutter Energy Conversion Mechanisms in Urban Environments*
Sponsor: National Science Foundation, CMMI, Dynamics, Control and Systems Diagnostics (DCSD)
Date submitted: October 3rd, 2018
Requested Amount: $284,737

Principal Investigator: **L. Caracoglia**
Project title: *CPS: Small: Cyber-Enabled Structural Resilience of Tall Structural Systems against Destructive Wind Loads*
Sponsor: National Science Foundation, CMMI, Cyber-Physical Systems (CPS)
Date submitted: May 9th, 2018
Requested Amount: $225,644

Principal Investigator: E. Melachrinoudis, Mechanical and Ind. Engr. (NU)
Co-Investigators Y. Levendis, D. Kaeli, **L. Caracoglia** et al.
Project title: *Critical Resilient Interdependent Infrastructure Systems and Processes (CRISP 2.0) Type 2: Collaborative Research: Interdependent Infrastructures for Wildfire Prediction, Containment and Evacuation*
Sponsor: National Science Foundation, CMMI
Date submitted: March 7th, 2018
Requested Amount: $899,956

Principal Investigator: **L. Caracoglia**
Project title: *Damage and Intervention Cost Analysis for Tall Buildings Subjected to Thunderstorm Downburst Loads: Bridging the Gap between Structural Engineering and Finance*
Sponsor: National Science Foundation, CMMI, Engineering for Civil

	Infrastructure (ECI)
Date submitted:	January 24th, 2018
Requested Amount:	$226,681

Principal Investigators:	**L. Caracoglia**
Project title:	*Stochastic Solvers for Wind-Induced Dynamics of Slender Structures: Exploiting Scalability of Cyber-Grids*
Sponsor:	National Science Foundation, CMMI, Structural and Engineering and Materials (SAEM)
Date submitted:	September 15th, 2017
Requested Amount:	$269,417

Principal Investigator:	**L. Caracoglia**
Project title:	*Wind-based Torsional Flutter Harvester Equipped with Energy Conversion Mechanism: Numerical and Experimental Explorations*
Sponsor:	National Science Foundation, CMMI, Dynamics, Control and Systems Diagnostics (DCSD)
Date submitted:	September 15th, 2017
Requested Amount:	$232,590

Principal Investigator:	**L. Caracoglia**
Project title:	*Theoretical and Experimental Investigations on flutter energy harvesting using a novel blade-airfoil apparatus*
Sponsor:	National Science Foundation, CMMI, Dynamics, Control and Systems Diagnostics (DCSD)
Date submitted:	September 15th, 2015
Requested Amount:	$225,545

Principal Investigators:	**L. Caracoglia** (PI)**,** Bernardo Barbiellini-Amidei (co-PI, Department of Physics, NU)
Project title:	*Stochastic and Nonlinear Eigenvalue Solvers for Stay-cable Dynamics: Implementing Scalability for Cyber-Grids*
Sponsor:	National Science Foundation, CMMI, Sensors, Dynamics and Control (SDC)
Date submitted:	February 13th, 2015
Requested Amount:	$ 312,635

Principal Investigator:	**L. Caracoglia**
Project title:	*Wind-based Energy Conversion by Harvesting Torsional Flutter Vibration of a Blade-Airfoil Apparatus*
Sponsor:	National Science Foundation, ECCS, Energy, Power, Control and Networks
Date submitted:	November 3rd, 2014
Requested Amount:	$221,588

Principal Investigator: **L. Caracoglia**
Project title: *A Novel Apparatus for Wind Energy Conversion Exploiting Torsional Flutter Aeroelastic Instability*
Sponsor: National Science Foundation, CBET, Energy for Sustainability
Date submitted: February 20th, 2014
Amount: $268,980

Principal Investigator: **L. Caracoglia**
Project title: *Collaborative Research: Active Control of Flow-Induced Instabilities of Wind Turbine Blades under the Influence of Stochastic Perturbations (with UMass Amherst)*
Sponsor: National Science Foundation, CMMI, Control Systems
Date submitted: February 14th, 2014
Requested Amount: $165,843

Principal Investigators: **L. Caracoglia** (PI)**,** Bernardo Barbiellini-Amidei (co-PI, Department of Physics, NU)
Project title: *Cyber-Grid Scalable Algorithms Applied to Stochastic Eigenvalue Problems for Non-Linear Stay-Cable Network Dynamics*
Sponsor: National Science Foundation, Computational and Data-Enabled Science and Engineering (CDS&E) and CMMI
Date submitted: October 31st, 2013
Requested Amount: $298,976

Principal Investigator: **L. Caracoglia**
Project title: *Collaborative Research: Stochastic Dynamic Instabilities in Nonlinear Fluid-Structure Interaction Systems with a Focus on Offshore Wind Turbine Blades c*
Sponsor: National Science Foundation, CMMI, Dynamical Systems
Date submitted: October 1st, 2013
Requested Amount: $224,339

Principal Investigators: **L. Caracoglia** (PI)**,** Bernardo Barbiellini-Amidei (co-PI, Department of Physics, NU)
Project title: *Advancing the Study Of Wind-Induced Nonlinear Dynamics in Cable Networks: Harnessing Computational Resources on Northeastern University's Campus for Grid Computing*
Sponsor: National Science Foundation, Computational and Data-Enabled Science and Engineering (CDS&E) in Engineering
Date Submitted: November 2012
Amount: $303,878

Principal Investigator: **L. Caracoglia**
Project title: *A Novel and Sustainable Technology for Wind Energy Exploitation: the Leading-Edge-Flutter Wind Power Generator*
Sponsor: National Science Foundation, ECCS (Electrical, Communications and

	Cyber Systems)
Date submitted:	November 1st, 2012
Amount:	$245,781

Principal Investigator:	**L. Caracoglia**
Project title:	*Advancing the Next-Generation Prototypes for Wind Energy Harvesting: A Leading-Edge-Flutter Wind Power Generator*
Sponsor:	National Science Foundation, CMMI
Date submitted	October 3rd, 2011
Requested Amount:	$237,420

Principal Investigator:	**L. Caracoglia**
Project title:	*Feasibility Assessment of an Innovative Wind Energy Harvesting System: A Leading-Edge-Flutter Power Generator*
Agency:	National Science Foundation, CMMI
Date submitted:	February 15, 2009
Amount requested:	$113,924

Principal Investigator:	**L. Caracoglia**
Project title:	*Performance Criteria for the Design of Mitigation Systems for Wind-Induced Stay-Cable Vibration*
Agency:	Korea Construction Engineering Development Program, KOCED. White paper (pre-proposal) submitted to the KOCED Investigators
Date submitted:	March 9, 2009
Amount requested:	$30,000/year for a maximum of three years (approximate amount)

Principal Investigator:	**L. Caracoglia**
Project title:	*Resilient Damping Devices for Vibration Mitigation of Secondary Systems on Cable-Supported Bridges*
Agency:	Korea Construction Engineering Development Program, KOCED. White paper / pre-proposal submitted to the KOCED Team of Investigators
Date submitted:	February, 2009
Amount requested:	$30,000/year for a maximum of three years (approximate amount)

Principal Investigators:	D. Zuo (PI, Texas Tech University), C. Foley (Co-PI, Marquette University), **L. Caracoglia (Co-PI)**
Project title:	*NCHRP Project 10-74, Development of Fatigue Loading and Design Methodology for High-Mast Lighting Poles*
Agency:	Transportation Research Board (TRB)
Date submitted:	October 10, 2007
Amount requested:	$675,000

Principal Investigators:	**L. Caracoglia (PI)**, D. Zuo (co-PI, Texas Tech University)
Project title:	*Development of Design Procedures and Mitigation Systems for Structural Supports of Highway Signal Structures against Wind and*

	Weather Hazards
Agency:	National Science Foundation, CMMI.
Date submitted:	February 21, 2007
Amount requested:	$240,938

Principal Investigators:	**L. Caracoglia (PI)**, D. Zuo (co-PI, Texas Tech University)
Project title:	*Update to Guide to Standardized Highway Lighting Pole Hardware*
Agency:	Wyoming Department of Transportation
Date submitted:	October 20, 2006
Amount requested:	$294,997

Principal Investigator:	**L. Caracoglia**
Project title:	*CAREER: Investigations on Uncertainty in the Simulation, Prediction and Design against Wind Hazards*
Agency:	National Science Foundation, CMMI
Date submitted:	July 16, 2006
Amount requested:	$440,267

Principal Investigators:	D. Bernal (PI), **L. Caracoglia (co-PI)**, B.F. Spencer Jr (co-PI)
Project title:	*Near Fault Ground Motion: Design and Performance of Steel Structures*
Agency:	National Science Foundation, CMMI.
Date submitted:	March 01, 2005
Amount requested:	$374,690

3.2. Internal to Northeastern University

Funded – Active:

Principal Investigators:	**L. Caracoglia**
Project title:	*"Machine Learning Algorithms for Performance-based Tornado Engineering in the MATLAB® Computing Environment"*
Office/Division:	Mathworks Micro-grant, NU (program supervised by Prof. M. Leeser)
Duration:	September 2019 – March 2020 (awarded on 2/26/2019)
Amount:	$19,981

Funded – Completed

Principal Investigators:	**L. Caracoglia**
Project title:	*Advancing MatLab Computations for Stochastic Simulation of Climate-Change-Induced Hurricane Damage*
Office/Division:	Mathworks Micro-grant, NU (awarded by Prof. M. Leeser)
Duration:	July 2015 – July 2016
Amount:	$20,000

Principal Investigators:	**L. Caracoglia** and Bernardo Barbiellini Amidei (co-PI, Department of Physics, NU)
Project title:	*Stochastic Algorithms for the Study of Non-Linear Cable Network*

	Dynamics: Application to the Mitigation of Stay-Cable Vibration
Office/Division:	"Tier 1" Interdisciplinary Grants, Provost's Office, NU
Duration:	July 2011 – August 2014 (after approval of no-cost extension)
Amount:	$50,000

Investigator:	Middler Student: Frank Xia **(supervisor: L. Caracoglia)**
Project title:	*Experimental Verification of Wind-borne Debris Trajectory Model*
Office/Division:	Undergraduate Research Program (REU), Provost's Office, NU
Duration:	January – May 2012
Amount:	$1,000

Investigator:	Junior Student: Sara Coyle **(supervisor: L. Caracoglia)**
Project title:	*Design and Calibration of a New Test Chamber for Measuring Wind-borne Debris Trajectories*
Office/Division:	Undergraduate Research Program (REU), Provost's Office, NU
Duration:	April – May 2010
Amount:	$1,000

Investigator:	Senior Student: John M. Schroeder **(supervisor: L. Caracoglia**)
Project title:	*Design of a Small-scale Force Balance for Wind Tunnel Applications*
Office/Division:	Undergraduate Research Program (REU), Provost's Office, NU
Duration:	July 2 – October 31 2007
Amount:	$1,000

Principal Investigator:	**L. Caracoglia**
Project title:	*Parametric Random Noise Representation of Wind Turbulence and Its Effects on the Aeroelasticity of Long-Span Bridges*
Office/Division:	Research and Scholarship Development Fund, Provost's Office, NU
Duration:	July 2006 - June 2007
Amount:	$14,266

Pending:

Principal Investigators:	**L. Caracoglia** and Jennie Stephens (co-PI, School of Public Policy and Urban Affairs, CSSH, NU)
Project title:	*Wind Energy Resilience and Policy due To Disruptions Caused by Blade Failures and Beyond*
Office/Division:	"Tier 1" Interdisciplinary Grants, Provost's Office, NU (Fiscal Year 2021)
Duration:	July 2020 – September 2021
Amount:	$50,000

Not-Funded

Principal Investigators:	**L. Caracoglia**
Project title:	*"A Novel MATLAB® Numerical Algorithm for Stochastic Simulation of Structural Load, Response and Damage (MATLAB® SLRD) Induced by Non-stationary Winds such as Thunderstorm Downbursts"*

Office/Division:	Mathworks Micro-grant, NU (program supervised by Prof. M. Leeser)
Duration:	September 2018 – March 2019 (submitted on 2/13/2018)
Amount:	$19,872

Principal Investigators:	**L. Caracoglia** and Bernardo Barbiellini Amidei (co-PI, Department of Physics, NU) – external collaborator: Professor A. Zasso (Department of Mechanics, Polytechnic University of Milan. Italy)
Project title:	*Wind-resistant Design of Long-span Bridges Mitigating Climate Change Effects*
Office/Division:	"Tier 1" Interdisciplinary Grants, Provost's Office, NU (Fiscal Year 2017)
Duration:	July 2016 – September 2017
Amount:	$50,000

Principal Investigators:	**L. Caracoglia** and Bernardo Barbiellini Amidei (co-PI, Department of Physics, NU) – external collaborator: Professor A. Zasso (Department of Mechanics, Polytechnic University of Milan. Italy)
Project title:	*Advancing the design of the next-generation long-span bridges against wind-induced flutter by Stochastic Approximation and aeroelastic load error quantification*
Office/Division:	"Tier 1" Interdisciplinary Grants, Provost's Office, NU (Fiscal Year 2016)
Duration:	July 2015 – September 2016
Amount:	$50,000

Principal Investigators:	**L. Caracoglia**
Project title:	*Advancing the Implementation of MatLab-based GPU Algorithms for Stochastic Simulations*
Office/Division:	Mathworks Micro-grant, NU
Duration:	September 2014 – March 2015
Amount:	$20,000

Principal Investigators:	**L. Caracoglia** and Bernardo Barbiellini Amidei (co-PI, Department of Physics, College of Science, NU)
Project title:	*Intervention Costs for Damage Induced by Transient Winds on Tall Structures*
Office/Division:	"Tier 1" Interdisciplinary Grants, Provost's Office, NU
Duration:	July 2014 – July 2015
Amount:	$50,000

4. TEACHING AND ADVISING

4.1. Courses Taught at Northeastern University *(Please refer to Table 2 below)*

Table 2. List of Courses with Student Evaluations (Table with footnotes continues on the next pages)

Course number[6]	Course title	Course type[4]	Number of students (Number responded)	Overall effectiveness score[1,2,3]	Comparison[5]	
					CIV courses & Faculty	ALL courses & Faculty
CIVG 354	Wind Engineering (Fall '05). **Developed by L. Caracoglia**	Graduate. Semester (R)	6 (5)	2.6 Learning 3.0 Instructor	3.6 4.1	3.8 4.1
CIVU 425	Steel Design (Spring 2006)	Under-graduate (J/S). Semester (R)	33 (24)	3.3 Learning 2.9 Instructor	3.7 4.0	3.8 4.1
CIVU 425	Steel Design (Fall 2006)	Under-graduate (J/S). Semester (R)	23 (21)	2.8 Learning 2.7 Instructor	3.0 3.1	3.5 3.8
CIVG 352	Bridge Design (Spring 2007)	Graduate. Half-Semester (R)	8 (6)	3.0 Learning 3.4 Instructor	3.8 4.1	3.7 4.1
CIVG 354	Wind Engineering (Fall 2007)	Graduate. Semester (R)	6 (6)	4.0 Learning 3.7 Instructor	3.7 4.0	3.8 4.1
CIVU 425	Steel Design (Spring 2008)	Under-graduate (J/S). Semester (R)	32 (13)	2.8 Learning 2.7 Instructor	3.4 4.4	3.3 4.2
CIVU 425	Steel Design (Fall 2008)	Under-graduate (J/S). Semester (R)	28 (12)	4.3 Learning 3.9 Instructor	3.9 4.0	4.0 4.2
CIVG 352	Bridge Design (Fall 2008)	Graduate. Half-Semester (R)	7 (6)	3.5 Learning 4.0 Instructor	3.9 4.0	4.0 4.2
CIVG 353	Pre-stressed Concrete (Fall 2008)	Graduate. Half-Semester (R)	7 (3)	3.7 Learning 4.0 Instructor	3.9 4.0	4.0 4.2
CIVG 351	Behavior of Steel Structures (Spr. '09)	Graduate. Semester (R)	8 (3)	4.3 Learning 4.0 Instructor	4.1 4.1	4.1 4.2
CIVE 2320	Structural Analysis 1 (Fall 2009)	Under-graduate (M). Semester (R)	43 (13)	4.4 Learning 3.6 Instructor	4.1 4.1	4.1 4.2
CIVE 7354	Wind Engineering (Fall 2009)	Graduate. Semester (R)	11 (2)	5.0 Learning 5.0 Instructor	4.1 4.1	4.1 4.2
CIVE 3425	Steel Design (Spring 2010)	Under-graduate (J/S). Semester (R)	60 (31)	3.9 Learning 3.5 Instructor	4.3 4.4	4.1 4.3
CIVE 3425	Steel Design (Fall 2010)	Under-graduate (J/S). Semester (R)	27 (9)	4.3 Learning 3.9 Instructor	4.2 4.2	4.3 4.2
CIVE 2221	Statics & Strength of Materials (Fall 2010)	Under-graduate (Sp). Semester (R)	46 (12)	3.3 Learning 2.6 Instructor	4.2 4.2	4.3 4.2
CIVE 2320	Structural Analysis 1 (Spring 2011)	Under-graduate (M). Semester (R)	47 (10)	3.3 Learning 2.8 Instructor	3.6 4.1	4.1 4.3
CIVE 2221 Section 01	Statics & Strength of Materials (Fall 2011)	Under-graduate (Sp). Semester (R)	50 (23)	4.1 Learning 3.4 Instructor	4.1 4.3	4.3 4.3
CIVE 2221 Section 02	Statics & Strength of Materials (Fall 2011)	Under-graduate (Sp). Semester (R)	50 (19)	4.3 Learning 4.2 Instructor	4.1 4.3	4.3 4.3
CIVE 7354 – V30	Wind Engineering (Spring 2012)	Graduate. Semester (R)	14 (6)	3.8 Learning 3.7 Instructor	4.3 4.2	4.2 4.3
CIVE 7354 – V35	Wind Engineering (Spring 2012)	Graduate. Semester (E) - video-stream	11 (6)	3.2 Learning 3.8 Instructor	4.3 4.2	4.2 4.3
CIVE 2221 Section 02	Statics & Strength of Materials (Fall 2012)	Under-graduate (Sp). Semester (R)	59 (40)	4.3 Learning 3.8 Instructor	4.2 4.2	4.1 4.3
CIVE 3425	Steel Design (Fall 2012)	Under-graduate (J/S). Semester (R)	26 (10)	4.0 Learning 3.1 Instructor	4.2 4.2	4.1 4.3

Table 2. (continued) List of Courses with Student Evaluations

Course number[6]	Course title	Course type[4]	Number of students (Number responded)	Overall effectiveness score[1,2,3]	Comparison[5]	
					CIV courses & Faculty	ALL courses & Faculty
CIVE 7354 – V30	Wind Engineering (Spring 2013)	Graduate. Semester (R)	15 (10)	3.1 Learning 3.4 Instructor	4.3 4.3	4.2 4.3
CIVE 7354 – V35	Wind Engineering (Spring 2013)	Graduate. Semester (E) - video-stream	3	N/A	N/A	N/A
CIVE 2221 Section 02	Statics & Strength of Materials (Fall 2013)	Under-graduate (Sp). Semester (R)	43 (30)	4.3 Learning 4.0 Instructor	4.2 4.2	4.2 4.3
ENSY 7374	Wind Energy Technology (F.2013), developed with M. Taslim (MIE)	Graduate. Semester (E)	9 (7)	3.6 Learning 4.3 Instructor (scores for L. Carac. only)	4.1 4.3	4.2 4.3
CIVE 7354 – V30	Wind Engineering (Spring 2014)	Graduate. Semester (R)	11 (5)	3.0 Learning 3.4 Instructor	4.4	4.3
CIVE 7354 – V35	Wind Engineering (Spring 2014)	Graduate. Semester (E) - video-stream	2	N/A	N/A	N/A
CIVE 2221	Statics & Strength of Materials (Sp. 2014)	Under-graduate (Sp). Semester (R)	13 (3)	5.0 Learning 4.0 Instructor	4.4	4.3
CIVE 2221	Statics & Strength of Materials (Fall 2015)	Under-graduate (Sp). Semester (R)	17 (10)	4.1 Learning 4.3 Instructor	4.2 4.3	4.1 4.3
CIVE 3425	Steel Design (Fall 2015)	Under-graduate (J/S). Semester (R)	43 (24)	3.6 Learning 3.6 Instructor	4.2 4.3	4.1 4.3
CIVE 7354 – V30	Wind Engineering (Spring 2016)	Graduate. Semester (R)	4 (3)	4.3 Learning 4.3 Instructor	N/A	4.0 4.3
CIVE 7354 – V35	Wind Engineering (Spring 2016)	Graduate. Semester (E) - video-stream	4	N/A	N/A	N/A
CIVE 2221	Statics & Strength of Materials (Fall 2016)	Under-graduate (Sp). Semester (R)	19 (14)	4.2 Learning 3.7 Instructor	N/A	4.2 4.3
ENSY 5585	Wind Energy Systems (Fall 2016), with M. Taslim, MIE	Senior / Graduate. Semester (E)	4	N/A		
CIVE 3425	Steel Design (Spring 2017)	Under-graduate (J/S). Semester (R)	17 (7)	4.8 Learning 4.8 Instructor	4.3 4.3	4.2 4.2
CIVE 7354 – V30 and V35	Wind Engineering (Spring 2017)	Graduate. Semester (R) and (E) - video-stream	12 + 6 video, (7)	3.7 Learning 3.7 Instructor	4.2 4.3	4.2 4.2
CIVE 2221 – Section 1	Statics & Strength of Materials (Fall 2017)	Under-graduate (Sp). Semester (R)	27 (15)	4.1 Learning 3.4 Instructor	4.4 4.5	4.3 4.4
CIVE 3425	Steel Design (Fall 2017)	Under-graduate (J/S). Semester (R)	17 (11)	4.0 Learning 3.8 Instructor	4.4 4.5	4.3 4.4
ENSY 5585	Wind Energy Systems (Fall 2017), with M. Taslim, MIE	Graduate. Semester (E)	8 (4)	4.8 Learning 4.7 Instructor	4.3 4.4	4.3 4.4
CIVE 7354 – V30 and V35	Wind Engineering (Spring 2018)	Graduate. Semester (R) and (E)	10 + 3 video (7)	3.8 Learning 4.0 Instructor	4.4 4.4	4.3 4.4
CIVE 2221 – Section 1	Statics & Strength of Materials (Fall 2018)	Under-graduate (Sp). Semester (R)	13 (10)	4.3 Learning 3.7 Instructor	4.3 4.3	4.3 4.4
CIVE 3425	Steel Design (Fall 2018)	Under-graduate (J/S). Semester (R)	20 (9)	4.0 Learning 4.1 Instructor	4.3 4.3	4.3 4.4

Table 2. (continued) List of Courses with Student Evaluations

Course number[6]	Course title	Course type[4]	Number of students (Number responded)	Overall effectiveness score[1,2,3]	Comparison[5]	
					CIV courses & Faculty	ALL courses & Faculty
ENSY 5585 – V30 and V35	Wind Energy Systems (Fall 2018), with M. Taslim, MIE	Graduate. Semester (E)	15 (10)	4.1 Learning 4.3 Instructor	4.3 4.4	4.3 4.4
CIVE 7354 – V30 and V35	Wind Engineering (Spring 2019)	Graduate. Semester (R) and (E)	4 + 3 video (3)	3.7 Learning 4.3 Instructor	4.4 4.4	4.3 4.4
CIVE 2221 – Section 1	Statics & Solid Mechanics (Fall 2019)	Under-graduate (Sp). Semester (R)	27 (6)	4.2 Learning 3.8 Instructor	4.4 4.4	4.3 4.4
CIVE 3425	Steel Structure Design (Fall 2019)	Under-graduate (J/S). Semester (R)	15 (7)	3.9 Learning 3.4 Instructor	4.4 4.4	4.3 4.4
ENSY 5585 – V30 and V35	Wind Energy Systems (Fall 2019), with M. Taslim, MIE	Graduate. Semester (E)	3 + 2 video (2)	4.0 Learning 4.0 Instructor	4.3 4.4	4.3 4.4
CIVE 3425	Steel Structure Design (Spring 2020)	Under-graduate (J/S). Semester (R)	36 ()	Learning Instructor		

Note (1): Mean values are reported on a scale from 0.0 to 5.0.
Note (2): The "TRACE" evaluation system, currently adopted by NU, was implemented in the Spring of 2008. Prior to this date, the "TCEP" evaluations were utilized.
Note (3): For "Learning," please refer to Question #11 of TCEP, to Question Q10 of TRACE (until 2017) or question under category "Learning Related Questions" of TRACE (2016 – present): "I learned a lot in this course." For "Instructor," please refer to Question #14 of TCEP, Question Q27 of TRACE (Q24 in Spring 2008, Q28 in Spring 2010 and prior to 2017) or question under "Instructor Effectiveness" of TRACE (2016 – present): "What is your overall rating of this instructor's teaching effectiveness?"
Note (4): Course type and designations. The under-graduate curriculum is based on a five-year Co-op program with: "J/S," junior/senior (4th or 5th year), "M," "middler" (3rd year); "Sp," sophomore (2nd year). Semester: 15 weeks, 4 semester-hours, SH; Half-Semester: 7.5 weeks, 2SH. Regular load (R), Extra compensation (E).
Note (5): Comparison against CIV courses and university-wide ("ALL") courses, taught in the same semester.
Note (6): New course numbers were implemented in 2009.

4.2. Courses Taught at Other Institutions (Invited Lecturer)

Course Title: Introduction to Urban Resilience against Wind Hazards and other Natural Threats
Host University: Department of Architecture, Geology, Environment & Constructions (ArGEnCo), University of Liège, Belgium
Dates: 29 November – 20 December 2019
Course Level: Graduate course (MS students)
Course Hours: 12
Number of Students 11 students

Course Title: A Short-Course in Wind Engineering (*Un Corso Breve in Ingegneria del Vento per Studenti Iscritti al Corso di Laurea Specialistica in Ingegneria Civile*)
Host University: Department of Civil and Environmental Engineering, University of Perugia, Italy
Dates: 23 – 25 November, 2015
Course Level: Graduate course (for 5-th year Diploma students and PhD students)

Course Hours: 8
Number of Students 10 to 20 students

4.3. Supervision of Post-Doctoral Fellows, Associates and Visiting Faculty

Researcher name: Dr. Prof. Thai-Hoa Le, Visiting Assistant Professor, on leave from Vietnam National University, Hanoi, Vietnam
Co-Advisors: L. Caracoglia (**advisor**); Dr. Bernardo Barbiellini Amidei, Department of Physics, College of Science, NU (co-advisor)
Dates of supervision: September 2013 - August 2016
Project description: Stochastic algorithms for the study of dynamics and performance of tall buildings, wind turbines and long-span bridges against transient wind loads (thunderstorms, downbursts) by Wavelet – Galerkin Analysis Method
Sponsor: NSF and NU Office of the Provost, Tier 1 Research Grants
Status: **Completed**

Researcher name: Dr. Fabio Rizzo, Post-doctoral Fellow, University of Chieti – Pescara, Italy (visiting NU on temporary leave from the Univ. of Pescara)
Co-Advisors: Professor Piero D'Asdia, University of Chieti – Pescara (advisor); L. Caracoglia (**co-advisor**)
Dates of supervision: September 2013 – present (Dr. Rizzo visited NU in May - June 2014)
Project description: Estimation of flutter derivatives of closed-box girders – comparison between wind tunnel tests, conducted at NU, and Computational Fluid Dynamics simulations
Sponsor: None
Status: **Completed**

Researcher name: Dr. Gian Felice Giaccu, Post-doctoral Fellow, Visiting Researcher from the Department of Structural Engineering, University of Cagliari, Italy
Co-Advisors: L. Caracoglia (**advisor**); Dr. Bernardo Barbiellini Amidei, Department of Physics, College of Science, NU (co-advisor)
Dates of supervision: August 2011 – October 2012 (Febr. 2012 – October 2012, at NU)
Project description: Stochastic algorithms for the study of non-linear cable network dynamics and the mitigation of stay-cable vibration
Sponsor: NU, Office of the Provost, Tier 1 Research Grants, 2011 – 2012
Status: **Completed**
Current Position: Assistant Professor, Department of Architecture, Design and Urban Planning, University of Sassari, Alghero, Italy

4.4. Supervision of Graduate Students

Please note that students are listed in reverse chronological order. This order is based on the date of graduation or completion of supervision period. L. Caracoglia is the sole supervisor, unless otherwise noted.

PhD Students

Student name: Mr. Lei Zhang, Civil Engineering-Structural

Start date:	September 2019 (forthcoming)
Graduation date:	2022 (expected)
Project description:	Stochastic approximation methods for the analysis of design of next-generation tall buildings and tower structures
Sponsor:	COE Fellow and NSF (as a Research Assistant)
Status:	**In progress**

Student name:	Mr. Shaoning Li, Civil Engineering-Structural
Start date:	September 2017
Graduation date:	2021 (expected) – student passed qualifying exam on 03/27/2019
Project description:	Stochastic aeroelastic instability of wind turbine blades
Sponsor:	NSF (as a Research Assistant), Teaching Assistant
Status:	**In progress**

Student name:	Mr. Viet Le, Civil Engineering-Structural
Start date:	September 2016
Graduation date:	2020 (expected) – student passed qualifying exam on 04/12/2018
Project description:	Performance of tall buildings and vertical structures under non-stationary wind loads - thunderstorm downbursts and microbursts
Sponsor:	COE Fellow, NSF and Mathworks Micro-grant (as a Research Assistant), Teaching Assistant
Status:	**In progress**

Student name:	Mr. Wei Cui, Civil Engineering-Structural
Start date:	September 2012 (supervision started in May 2013)
Graduation date:	May 5th, 2017 (qualifying exam passed on 11/23/2013)
Project description:	Performance-based design of tall buildings under high winds
Dissertation Title	**Performance-based design framework for 3D coupled wind-induced response of tall buildings in turbulent winds** (URL: http://hdl.handle.net/2047/D20250947)
Sponsor:	NSF CAREER and Mathworks Micro-grant (as a Research Assistant)
Status:	**Completed**
Current Position	Assistant professor, Tongji University, Shanghai, P.R. China

Student name:	Mr. Farid Moghim, Civil Engineering-Structural
Start date:	June 2009
Graduation date:	February 19, 2014 with degree conferred on May 2nd, 2014 (qualifying exam passed in Spring 2011)
Project description:	Simulation and assessment wind-borne debris trajectory and damage to the glass facades of tall buildings during extreme wind events
Dissertation title:	**Wind-borne debris trajectory in high winds: application to the protection of tall building facades** (URL: http://hdl.handle.net/2047/d20005006)
Sponsor:	NSF CAREER (as a Research Assistant)
Status:	**Completed**
Current Position:	Risk Analyst, Liberty Mutual, Boston, MA (formerly, Research

Engineer, AIR Worldwide, Boston, MA)

Student name:	Mr. Dong-Woo Seo, Civil Engineering-Structural
Start date:	September 2008
Graduation date:	February 28, 2013 with degree conferred in May 2013 (qualifying exam passed in Spring 2011)
Project description:	Analysis of uncertainty propagation in aeroelastic systems: Wind-induced response simulation on long-span bridges
Dissertation title:	**Effects of errors in flutter derivatives on the wind-induced response of cable-supported bridges**
Sponsor:	NSF (as a Research Assistant) in 2008-2010 (TA/RA in 2011-2012)
Status:	**Completed**
Current Position:	Research Engineer, Structural Engineering Research Division, Korea Institute of Civil Engineering and Construction Technology, KICT, South Korea

PhD Students (Visiting from Institutions other than NU)

Student name:	Mr. Xai Xu, PhD Student, Key Laboratory for Wind and Bridge Engineering, Hunan University, Changsha, P.R. China
Co-Advisors:	Prof. Xugang Hua, Hunan University (primary advisor); L. Caracoglia (**co-advisor** during the study visit at NU)
Dates of supervision:	July 2020 – July 2021 (visit to NU)
Graduation date:	TBA (PhD degree conferred by Hunan University)
Project description:	Nonlinear characterization of Pendulum Tuned Mass Dampers for vibration control of flexible structures
Dissertation title:	TBA
Sponsor:	China Scholarship Council (CSC)
Status:	**Forthcoming**

Student name:	Ms. Laura Ierimonti, PhD Student, Department of Civil and Environmental Engineering, University of Perugia, Italy
Co-Advisors:	Prof. Ilaria Venanzi, University of Perugia (primary advisor); L. Caracoglia (**co-advisor** during the study visit at NU**,** member of the examination committee and external reviewer of the thesis)
Dates of supervision:	January 2016 – March 2016 (visit to NU)
Graduation date:	May 2018 (PhD degree conferred by Universities of Florence, Perugia, Pisa, and Braunschweig - Italy/Germany)
Project description:	Risk design optimization of smart flexible structures (tall buildings)
Dissertation title:	Life-cycle cost-based design of wind excited tall buildings
Sponsor:	University of Florence, Italy; University of Perugia, Italy
Status:	**Completed**

Student name:	Mr. Bastian Nebenführ, PhD Student, Division of Fluid Dynamics, Department of Applied Mechanics, Chalmers University of Technology, Sweden

Co-Advisors:	Prof. Lars Davidson, Chalmers University of Technology (primary advisor); L. Caracoglia (**co-advisor**)
Dates of supervision:	April 16, 2013 - July 1st, 2013 (visit to NU)
Graduation date:	2015 (PhD conferred by Chalmers University of Technology)
Project description:	Modeling, simulation and verification of CFD algorithms for solution of fluid-structure interaction problems on large wind turbines in forested areas
Dissertation title:	**Turbulence-resolving simulations for engineering applications**
Sponsor:	Swedish Wind Power Technology Center (SWPTC), Chalmers University of Technology
Status:	**Completed** (student visited NU in summer 2013)

Student name:	Mr. Thomas Canor, Visiting Research Assistant at NU (CEE) and PhD Student, Department of Civil Engineering, University of Liège, Belgium
Co-Advisors:	Professor Vincent Denoël (primary advisor), Technical University of Liège; L. Caracoglia (**co-advisor** during the study visit at NU**,** member of the examination committee)
Dates of supervision:	February 2013 - April 2013; December 2013 (visit to NU)
Graduation date:	May 2014 (PhD degree conferred by the University of Liège, Belgium)
Project description:	Use of Stochastic Calculus for the solution of random bridge flutter problem contaminated by modeling errors
Dissertation title:	**New perspectives on probabilistic methods for nonlinear transient dynamics in civil engineering**
Sponsor:	FNRS - Fonds National de la Recherche Scientifique, Brussels, Belgium
Status:	**Completed**
Current position	Senior Risk Advisor, KPMG, Belgium

Student name:	Mr. Philipp Egger, Visiting Research Assistant at NU (CEE) and PhD Student, Department of Structural Engineering, Technical University of Vienna, Austria
Co-Advisors:	Professor Johann Kollegger (primary advisor), Technical University of Vienna; L. Caracoglia (**co-advisor** during the study visit at NU)
Dates of supervision:	January 2011 – present (January 2011 - June 2011 at NU)
Graduation date:	2019, expected (PhD conferred by Technical University of Vienna)
Project description:	Innovative Damping System for Stay-Cables – Modeling and Simulation
Dissertation title:	TBA
Sponsor:	Austrian Marshall Plan Foundation (Marshallplan Jubiläumsstiftung), Vienna, Austria and Technical University of Vienna in 2011
Status:	**In progress** (collaboration will continue until student graduation)
Current Position	VSL International, Köniz, Switzerland

Student name:	Mr. Gian Felice Giaccu, Visiting Research Assistant at NU (CEE) and PhD Student, Department Structural Engr., University of Cagliari, Italy
Co-Advisors:	Professor Gian Paolo Gamberini, University of Cagliari (primary advisor); L. Caracoglia (**co-advisor**); Dr. Francesco Cambuli, University of Cagliari (co-advisor)

Dates of supervision:	February 2009 – August 2009 (visit to NU)
Graduation date:	January 2010 (PhD degree awarded from University of Cagliari)
Project description:	Nonlinear dynamic simulation of stay/cross-tie systems and in-plane cable networks
Dissertation title:	**Sulla dinamica del sistema stralli-connettori** (in Italian)
Sponsor:	University of Cagliari (while visiting NU)
Status:	**Completed**
Current position	Assistant Professor, University of Sassari, Italy

PhD Students (Advised while Collaborating / Working at other Institutions)

Student name:	Mr. Giuseppe Abbiati, PhD Student, Department of Civil, Environmental and Mechanical Engineering, University of Trento, Italy
Co-Advisors:	Prof. Salvatore Bursi, University of Trento (primary advisor)
Dates of supervision:	August – September 2013 (supervised by Luca Caracoglia while working as a Research Fellow at the University of Trento, Italy in 2013)
Graduation date:	2014 (PhD conferred by University of Trento, Italy)
Project description:	Propagation of coupling uncertainties to experimental seismic fragility curves of a typical piping system
Dissertation title:	N/A
Sponsor:	University of Trento
Status:	**Completed**
Current position	Post-doctoral Fellow, ETH, Zurich, Switzerland

MS Students with Thesis/Report

Student name:	Mr. William Michalski, Graduate Certificate in Engineering Leadership - Gordon Leadership Program (with concentration in Civil and Environmental Engineering)
Start date:	September 2015
Graduation date:	July 2016 (data of submission of Gordon Thesis) – student completed MS degree studies and graduated in 2018
Project description:	Wind load analysis a power line support structures
Leadership Challenge Project Report title:	**Sustainable design – Envision's application to the Ticonderoga 115kV overhead line refurbishment**
Sponsor:	Black & Veatch
Status:	**Completed**

Student name:	Mr. Daniel Bissex, Electrical and Computer Engineering
Co-Advisors:	Professor Gilead Tadmor, Electrical and Computer Engineering (primary advisor); L. Caracoglia (**co-advisor**)
Start date:	September 2008
Graduation date:	2010
Project description:	Accelerated compression of large data sets and reduced order modeling of fluid flows (MS Thesis)
Sponsor:	IGERT Fellow, Intelligent Diagnostics for Aging Infrastructures - NSF

Status: **Completed**

Student name: Ms. Naimi Pathak, Civil Engineering-Structural
Start date: June 2009
Graduation date: August 2009
Project description: Finite-element analysis of tall buildings under wind excitation
MS Report title: **Finite element modeling and validation of second generation wind excited tall benchmark building**
Sponsor: CEE Department (one semester only; as a Teaching Assistant)
Status: **Completed**

Student name: Mrs. Marra A. Smith (formerly Giuliani), Civil Engineering-Structural
Start date: January 2008
Graduation date: August 2009
Project description: Performance-based design of slender structures against extreme winds
MS Thesis title: **A Monte Carlo based method for the dynamic performance analysis of tall buildings under turbulent wind**
Sponsor: CEE Department (as a Teaching Assistant)
Status: **Completed**

Student name: Ms. Raulina Brito-Piña, Civil Engineering-Structural
Start date: January 2008
Graduation date: May 2009
Project description: Experimental measurement of aeroelastic coefficients for flutter and buffeting analysis of long-span bridges
MS Thesis title: **Extraction of Aeroelastic Coefficients for Bridge Decks from Small-scale Wind Tunnel Tests**
Sponsor: NSF (as a Research Assistant)
Status: **Completed**
Current position Research engineer, AIR Worldwide, Boston, MA

Student name: Mr. Antonio Velazquez-Hernandez, Civil Engineering-Structural
Start date: January 2005
Graduation date: August 2007
Project description: Monte-Carlo-based algorithms for buffeting analysis of long-span bridges
MS Thesis title: **Simulation of long-span bridge buffeting response with uncertain definition of selected aerodynamic parameters**
Sponsor: NU Provost's Office and CEE Department (as a Research Assistant)
Status: **Completed**
Current Position: Assistant Professor, Department of Civil Engineering, Ohio University

MS Students with Thesis (Visiting from Institutions other than NU)

Student name: Mr. Daniele Crisman, MS Student, Department of Civil Engineering and Architecture, University of Trieste, Italy
Co-Advisors: Prof. Salvatore Noè, University of Trieste (advisor); L. Caracoglia (**co-**

	advisor during the study visit at NU)
Dates of supervision:	September 2018 – December 2018 (at NU)
Graduation date:	March 2019 (expected)
Project description:	Database Assisted-Design (DAD) of low-rise buildings for wind loads: applicability to European and Italian standards
Diploma Thesis title:	**TBA**
Sponsor:	Study fellowship, University of Trieste, Italy
Status:	**In progress**
Student name:	Ms. Arianna Stragapede, MS Student (MS student / Five-year Diploma), Aeronautical and Aerospace Engineering, University of Rome "La Sapienza", Italy
Co-Advisors:	Professors Annalisa Fregolent (primary advisor) and Franco Mastoddi (co-advisor), Department of Mechanics and Aeronautics, University of Rome "La Sapienza"; L. Caracoglia (**external co-advisor** during the study visit at NU)
Dates of supervision:	October 2016 – February 2017 (at NU)
Graduation date:	March 14, 2017
Project description:	Aeroelastic instabilities of wind turbine blades
MS Thesis title:	**Non-deterministic flutter analysis of a reference wind turbine blade**
Sponsor:	Study fellowship, University of Rome "La Sapienza"
Status:	**Completed**
Student name:	Ms. Giulia Ansaldi, MS Student, Department of Civil and Environmental Engineering, Polytechnic University of Milan, Italy
Co-Advisors:	Professor Federico Perotti, Polytechnic University of Milan (primary advisor); Professor Luca Martinelli, Polytechnic University of Milan (co-advisor); L. Caracoglia (**external co-advisor** during the study visit at NU)
Dates of supervision:	July 2015 – September 2015 (at NU)
Graduation date:	December 2015
Project description:	Analysis of wind loading uncertainty and estimation of wind hazard and structural fragility curves for the 2nd-generation tall benchmark building
Diploma Thesis title:	**L'effetto delle incertezze sulla risposta dinamica di edifici alti soggetti all'azione del vento** (in Italian)
Sponsor:	Study fellowship, Polytechnic University of Milan
Status:	**Completed**
Student name:	Mr. Albertomaria Franzoni, MS Student, Department of Civil and Environmental Engineering, Polytechnic University of Milan, Italy
Co-Advisors:	Professor Federico Perotti, Polytechnic University of Milan (primary advisor); Professor Luca Martinelli, Polytechnic University of Milan (co-advisor); L. Caracoglia (**external co-advisor** during the study visit at NU)
Dates of supervision:	May 2013 – August 2013 (at NU)
Graduation date:	November 2013

Project description:	Study of turbulent wind loading on large-roof structures with special emphasis to the case of an aircraft hangar
Diploma Thesis title:	**Verifica numeric-sperimentale delle sollecitazioni indotte dal vento in un hangar per aeromobili** (in Italian)
Sponsor:	None
Status:	**Completed**

Student name:	Mr. Luca Scintu, MS/BS Student (Five-year Diploma), Department of Civil Engineering, Structural Engineering and Architecture, University of Cagliari, Italy
Co-Advisors:	Dr. Gian Felice Giaccu (primary advisor); L. Caracoglia (**external co-advisor**); Bernardo Barbiellini (co-advisor, NU)
Dates of supervision:	May 2013 - August 2013 (at NU)
Graduation date:	October 8, 2014 (Five-year diploma degree from University of Cagliari)
Project description:	Analysis of wind-induced response of tall buildings under uncertain wind loads due to turbulence modeling simplification; Stochastic Gradient Approximation and Stochastic Approximation Methods
Diploma Thesis title:	**Approccio Stocastico per l'analisi dinamico - prestazionale di Edifici alti soggetti al carico turbolento del vento** (in Italian)
Sponsor:	NU Office of the Provost, Tier 1 Research Grants (partial support)
Status:	**Completed**

Student name:	Mr. Alessandro De Carlo, Visiting Research Assistant at NU (CEE) and MS/BS Student (Five-year Diploma), Department of Civil Engineering, University of Trieste, Italy
Co-Advisors:	Prof. Salvatore Noè, University of Trieste (advisor); L. Caracoglia (**external co-advisor** during the study visit at NU**,** member of the examination committee)
Dates of supervision:	June 2008 – July 2008 (at NU)
Graduation date:	October 28, 2009 (Five-year diploma degree from University of Trieste)
Project description:	Numerical simulation of time-domain aeroelastic loading for bridges
Diploma Thesis title:	**Analisi numerica del flutter accoppiato per ponti di grande luce mediante l'uso di funzioni indiciali** (in Italian)
Sponsor:	None
Status:	**Completed**

MS Students with Thesis (Advised while Collaborating / Working at other Institutions)

Student name:	Ms. Ilaria Cirronis, MS student (MS student / Five-year Diploma), Civil Engineering / Structural Engineering, University of Cagliari, Italy
Co-Advisors:	Dr. Gian Felice Giaccu (primary advisor); L. Caracoglia (**external co-advisor**);
Dates of supervision:	April 2017
Graduation date:	April 26, 2017 (MS degree conferred by the University of Cagliari)
Project description:	Examining pointing error of the Sardinia Radio Telescope induced by wind load vibration
MS Thesis title:	**Sardinia Radio Telescope: valutazione del pointing error**

	determinata dall'azione turbolenta del vento (in Italian)
Sponsor:	None
Status:	**Completed**
Student name:	Mr. Matteo Izzi, MS/BS Student (Five-year Diploma), Department of Civil Engineering and Architecture, University of Trieste, Italy
Co-Advisors:	Prof. Salvatore Noè, University of Trieste (advisor); L. Caracoglia (**external co-advisor** and member of the examination committee)
Dates of supervision:	December 2012 – October 2013
Graduation date:	October 2013 (Five-year diploma degree from University of Trieste)
Project description:	Theoretical and numerical study evaluating the performance of various damping devices for stay-cable vibration mitigation, including the use of Nonlinear Target-Energy-Transfer (TET) devices
Diploma Thesis title:	**Smorzatori oleodinamici e dispositivi Targeted Energy Transfer per il controllo passivo delle vibrazioni di stralli** (in Italian)
Sponsor:	None
Status:	**Completed**

MS Students (Independent Study only)

Student name:	Mr. Qiming Liang, MS student in CE-Structures
Dates of supervision:	January 2010 - August 2010
Project description:	Independent study with project report (4 credits). Research on practical issues associated with the use of the "DAD method" for the design of low-rise buildings against wind hazards
Sponsor:	None
Status:	**Completed**
Student name:	Mr. Bing Li, MS student in CE-Structures
Dates of supervision:	January 2009 - April 2009
Project description:	Independent study with project report (4 credits). Research on the numerical modeling of the wind-borne debris trajectory equation during hurricane storms.
Sponsor:	None
Status:	**Completed**
Student name:	Mr. Antonio Velazquez-Hernandez, MS student in CE-Structures
Dates of supervision:	May 2005 - August 2005
Project description:	Independent study with project report (4 credits). Extraction of frequency and damping characteristics of highway light poles from laboratory tests
Sponsor:	Illinois Department of Transportation
Status:	**Completed**

4.5. Supervision of Undergraduate Students

BS Students with Thesis (Visiting from Institutions other than NU or Advised while

Collaborating/Working at other Institutions)

Student name:	Mr. Daniele Crisman, Three-Year Engineering Diploma Student (equivalent to BS degree), Department of Engineering and Architecture, University of Trieste, Italy
Co-Advisors:	Prof. Salvatore Noè, University of Trieste (primary advisor); L. Caracoglia (**co-advisor**); M. Izzi, University of Trieste (co-advisor)
Dates of supervision:	December 2015 – October 2016 (while student at the University of Trieste)
Graduation date:	October 3, 2016 (diploma degree conferred by University of Trieste)
Project description:	Application of the Database-Assisted-Design approach to study roof pressure coefficients on low-rise buildings and comparison against the current Italian design standards
Diploma Thesis title:	**Coefficienti di pressione per la valutazione dei carichi da vento sulle coperture. Confronto tra il Database-Assisted Design del NIST e le normative vigenti** (in Italian)
Sponsor:	None
Status:	**Completed**

REU Students (Advised while at NU)

Student name:	Camille Youngberg, Civil Engineering (Middler, Class of 2014)
Dates of supervision:	June 2012- July 2012
Project description:	Independent study: design of a section model for wind tunnel testing (truss-type bridge) using SolidWorks
Sponsor:	NSF-CAREER, REU
Status:	**Completed**

Student name:	Frank Xia, Civil Engineering (Middler/Junior, Class of 2014)
Dates of supervision:	September 2011 – February 2012
Project description:	Independent study on wind tunnel testing of wind borne debris trajectories in high winds.
Sponsor:	NSF-CAREER, REU
Status:	**Completed**

Student name:	Said Aouinati, Mechanical Engineering (visiting from MassBay Community College)
Dates of supervision:	June 2011 - August 2011 (First summer internship)
(Two times)	June 2012 - August 2012 (Second summer internship)
Project description:	Independent study on wind tunnel testing of wind borne debris trajectories in high winds.
Sponsor:	STEP-UP Program, Northeastern University
Status:	**Completed**

Student name:	Mr. John Beale, Chemical Engineering (Junior)
Dates of supervision:	July 2010 - August 2010
Project description:	Independent study on: technical issues in current wind-turbine technology engineering practice

Sponsor:	None
Status:	**Completed**
Student name:	Ms. Dana Peck, Civil Engineering (Junior, class of 2011)
Dates of supervision:	May 2010 – February 2011
Project description:	Aerodynamic coefficients of plate-like objects and assistance with laboratory experiments
Sponsor:	NSF-CAREER, REU
Status:	**Completed**
Student name:	Ms. Sara Coyle, Civil Engineering (Junior, class of 2011)
Dates of supervision:	January 2010 - May 2010
Project description:	Assistance to experimental activities in the small-scale wind tunnel and design of new chamber components for the facility
Sponsor:	NSF-CAREER, REU and NU Provost's Office
Status:	**Completed**
Student name:	Mr. John M. Schroeder, Civil Engineering (Senior, graduated in 2008)
Dates of supervision:	Summer 2007 - Fall 2007
Project description:	Design of a small-scale force balance for wind tunnel applications
Sponsor:	NSF (partially) and NU Provost's Office
Status:	**Completed**

4.6. Teaching and Advising Activities – Others

Spring Semester 2015	**Lecturer** (invited session), Wind-resistant design, Structural Engineering Capstone course, CIVE 4767, NU. Instructor: Prof. A. Myers.
Spring 2009	**Lecturer** (two sessions), Design of steel connections, Structural Engr. Capstone course, CIVE 4767, NU. Instructor: Professor M.L. Wang.
Spring Semesters 2005, 2006, 2013, 2015	**Lecturer** (invited session), Wind-resistant design, Structural Engineering Capstone course, CIVE 4767, NU. Instructor: Prof. D. Bernal.

4.7. Outreach Activities

2009-2015	**Organizer**, outreach activity for the Fluid Mechanics undergraduate course (CIVE 2331). Laboratory experience for students in collaboration with the course Instructor (Dr. A. Onnis-Hayden). Description: "Measurement of boundary layer profile in a small-scale wind tunnel."
2007-2015	**Session organizer**, "Building Bridges Open House Event" for high-school students. COE, Division of Multi-Cultural Studies (part of NSF-sponsored activities).
October 2009	**Organizer**, Wind Engineering laboratory session, CIVE 7354 graduate course. Hands-on experience for students. Title: "Measurement of H_1^* flutter derivative of a truss deck girder" (part of the NSF-sponsored activities).
October 24, 2008	**Organizer,** technical visit to the OldCastle Rotondo Precast Plant in Rehoboth, MA. Field trip for the students of the CIVE 7353 graduate course

	in collaboration with Ms. R.L. Seraderian, Executive Director of the PCI (Precast/Pre-stressed Concrete Institute), Northeast Region, Belmont, MA.
2007, 2009	**Organizer,** technical visit to the Wright Brothers Wind Tunnel Laboratory, Department of Aeronautical and Aerospace Engineering (AAE), MIT, Cambridge. Organized for the students of the CIVE 7354 graduate course. Host: Mr. R. Perdichizzi, Senior Technical Instructor, AAE, MIT.

5. SERVICE AND PROFESSIONAL DEVELOPMENT

5.1. Service to Northeastern University

Departmental Service: PhD Dissertation Committees and MS Thesis Reader

February 2020 – present	**PhD Dissertation Committee**, Structural Engr. (candidate: Xinlong Du).
February 2019 – present	**PhD Dissertation Committee**, Structural Engr. (candidate: Matt Joyner).
January 2019 – present	**PhD Dissertation Committee**, Structural Engr. (candidate: Chi Qiao).
January 2019 – August 2019	**PhD Dissertation Committee**, Structural Engr. (candidate: Fariborz Mirzaie).
November 2017 – December 2018	**PhD Dissertation Committee**, Construction Management Engr. (candidate: Niloofar Montazeri).
January 2017	**PhD Dissertation Committee**, Structural Engr. (candidate: Anshuman Kunwar).
September 2016	**PhD Dissertation Committee**, Interdisciplinary Engr. (candidate: Hao Liu).
July 2016	**PhD Dissertation Committee**, Structural Engr. (candidate: Spencer Hallowell).
May 2016	**PhD Dissertation Committee**, Structural Engr. (candidate: David Vines-Cavanaugh).
November 2015	**PhD Dissertation Committee**, Geotechnical Engr. (candidate: Fritz Rudolph Pangihutan Nababan).
September 2015	**PhD Dissertation Committee**, Interdisciplinary Engr. Civil/Mechanical (candidate: Yifeng Lu).
September 2015	**PhD Dissertation Committee**, Interdisciplinary Engr. Civil/Mechanical (candidate: Yubo Zhao).
September 2015	**PhD Dissertation Committee**, Structural Engr. (candidate: Vahid Valamesh).
August 2014	**PhD Dissertation Committee**, Structural Engr. (candidate: Y. Zhang).
August 2014	**PhD Dissertation Committee**, Structural Engr. (candidate: B. Guldur).
August 2013	**Reader and Evaluation Committee Member,** Challenge Project Report, Mechanical Engineering & Gordon Leadership Engineering Program (Christopher Magsen).

August 2013	**Reader,** MS Essay, Structural Engineering (Nestor Polanco).
August 2012	**Reader**, MS Essay, Structural Engineering (Salma Mozaffari - Kojidi).
December 2011	**PhD Dissertation Committee,** Structural Engr. (candidate: S. Sagiroglu).
April 2011	**PhD Dissertation Committee,** Geotechnical Engr. (candidate: E. Kianirad).
August 2011	**PhD Dissertation Committee,** Structural Engr. (candidate: Y. Bulut).
Dec. 2007	**PhD Dissertation Committee**, Structural Engr. (candidate: O. Tigli).
May 2007	**PhD Dissertation Committee**, Structural Engr. (candidate: E. Hernandez).
June 2006	**Reader, MS Essay**, Structural Engineering (Marcus J. Kösters).
Dec. 2005	**PhD Dissertation C.tee,** Structural Engr. (candidate: M. Tarnowski).

Departmental Service: Other Activities and Committees

Sept. 2018-present	**Member**, Undergraduate Studies Committee, CEE.
February 2018	**Member**, Merit Review Committee, CEE.
February 2016	**Member**, Merit Review Committee, CEE.
Aug. 2011-2014	**Member**, Graduate Studies Committee, CEE.
Aug. 2011-March 2012	**Member**, CEE Faculty Search Committee (one position in computational mechanics), academic year 2011-2012.
Aug. 2011-present	**Member**, Tenure and Promotion Committee, CEE, various academic years.
Aug. 2010-2104	**Faculty Advisor**, Chi-Epsilon, CEE Honor Society, NU Student Chapter (acting advisor between August 2010 and March 2011; member of Chi Epsilon since March 21, 2010).
2009-2014	**Advisor**, AISC-ASCE Steel Bridge Competition, NU Student Chapter.
2008-2014	**Lecturer**, Department of Civil and Environmental Engineering and Chi-Epsilon engineering society, Two-Hour Review Session on the Design of Steel Structures for the FE Exam (Oct. 2008, Apr. & Oct. 2009, Apr. 2010).
Fall '06-Spring 2008	**Graduate Seminar Series Coordinator,** CEE (four semesters).
Spring 2011	**Graduate Seminar Series Coordinator,** CEE**,** CIVE 7400 (>70 students).
2007-2010	**Member**, CEE Undergraduate Curriculum Committee.
2006-2007	**Member**, CEE Faculty Search Committee, Structural Engineering.
October 2006	**Lecturer**, Department of Civil and Environmental Engr. and Chi-Epsilon Engr. Society, Sponsored session on research for undergraduate students.
2005-present	**Member,** Structural Engineering PhD Qualifying Exam: January 2005 (one candidate), January 2006 (three candidates), October 2006 (four candidates), January 2007 (three candidates); January 2010 (one candidate); September 2010 (three candidates); January 2011 (two candidates).
2005-present	**Graduate Admissions Officer**, CEE.

College Service

Febr. 2019 - present	**Member,** Dean's Search Committee, College of Engineering.
February 26, 2019	**Member,** Judging Panel, COE PhD Research Expo, College of Engineering.
Dec. 2018 - present	**Member,** On Line Instructional Quality Committee, College of Engineering
Sept. 2018 - present	**Member,** Sabbatical Leave Committee, College of Engineering.
October 2011-2013	**Member,** Student Awards Committee, College of Engineering.
2008-2011	**Member**, Academic Standing Committee, College of Engineering, representing the Department of Civil and Environmental Engineering**.**
2007-2009	**Member**, Sabbatical Leave Committee, College of Engineering (two terms)
2006-2014	**Collaborator**, "Building Bridges. A Window on Academic Activities in Structural Engineering for High-School Students", NU College of Engineering (December 1st, 2006, December 7th, 2007, May 23rd, 2008, December 5th, 2009, May 2009, December 4th 2009, May 2010, December 2010, May 2011, December 2011, May 2012, December 2012, May 2013, December 2013, May 2014).

University Service

September 2019 - present	**Member,** Financial Affairs Committee, Faculty Senate, Northeastern University.
September 2019 - present	**Member,** Faculty Senate, Northeastern University.
February 2017	**Award Committee Member**, Outstanding Graduate Student Research Award, Provost's Office, Northeastern University.
Dec. 2011 - present	**Associate University Marshal,** Northeastern University Cadre.
May 6, 2011	**File Marshal** for the College of Engineering, Graduate Commencement Ceremony, Academic Year '10-'11, Matthews Arena.
May 6, 2011	**File Marshal** for the College of Engineering, Undergraduate Commencement Ceremony, Academic Year '10-'11, TD-Boston Garden.
May 7, 2010	**File Marshal** for the College of Engineering, Undergraduate Commencement Ceremony, Academic Year '09-'10, TD-Boston Garden.
May 1st, 2009	**File Marshal** for the College of Engineering, Graduate School Commencement Ceremony, Academic Year 2008-2009, Matthews Arena.

Regional, National and International Service: PhD Jury Committees

January 2019 – February 2019	**PhD Dissertation - External Reviewer**, Civil Engineering, University of Genoa, Italy (candidate: Mr. Alberto Balbi, advisor Professor Maria Pia Repetto).
January 2018	**PhD Dissertation Committee** – **Member**, Civil Engineering, The Hong Kong University of Science and Technology (candidate: Mr. Zengshun

Chen, advisor Professor Tim K. T. Tse).

January 2018 **PhD Dissertation - External Evaluator**, Civil Engineering, University of Perugia, Italy (candidate: Ms. Laura Ierimonti, advisor Professor Ilaria Venanzi).

May 2017 **PhD Dissertation - External Dissertation Reviewer**, Civil Engineering, University of La Coruña, Spain (candidate: Miguel Cid Montoya, advisors Professors S. Hernández Ibáñez and F. Nieto Mouronte).

August 2016 **PhD Dissertation Committee - External Examiner**, Civil Engineering, University of Windsor, Ontario, Canada (candidate: Javaid Ahmad, advisor Professor S. Cheng).

July 2016 **PhD Dissertation Committee – Member and Examiner**, Mechanical Engineering, University of Massachusetts – Amherst (candidate: Pariya Pourazarm).

May 2014 **Member,** International Jury of PhD Dissertation and Defense, Faculty of Applied Sciences, University of Liège, Belgium (candidate: T. Canor).

November 2011 **PhD Dissertation Committee - External Examiner,** Structural Engr., Universidad Autónoma Metropolitana, Unidad Azcapotzalco, Mexico City, Mexico, (candidate: Juan Antonio Álvarez Arellano; primary advisor, Professor Emilio Sordo - Zabal).

Regional, National and International Service: Delegation Representative, Advisory Boards, etc.

2014 - present **Tenure and Promotion External Reviewer,** Various universities (5 cases)

April 2017 **Member,** Award Committee, Richard Marshall Award 2017, American Association for Wind Engineering (AAWE)**.**

February 21-22, 2013 **Member**, United States-side Delegation, 44th Joint Panel Meeting on Wind and Seismic Effects, UJNR, National Institute for Standards and Technology, NIST. Gaithersburg, Maryland, USA.

2011–2015 **Member,** Awards Committee, American Association for Wind Engineering (AAWE)**.**

July 26-28, 2010 **Invited Participant**, US-side delegation, 5th United-States Japan Workshop on Wind Engineering, as part of the scientific activities of the Task Committee D, UJNR Panel on Wind and Seismic Effects of the US-Japan Cooperative Program in Natural Resources, UJNR, Chicago, Illinois.

October 27-28, 2009 **Participant**, United-States-Japan "Workshop on Bridge Dynamics and Monitoring", College of Engineering, JHU, Baltimore, MD (This activity was part of the UJNR Panel on Wind and Seismic Effects).

May 18-21, 2008 **Member**, United States-side Delegation, 40th Joint Panel Meeting on Wind and Seismic Effects, UJNR, National Institute for Standards and Technology, NIST. Gaithersburg, Maryland, USA.

May 14-19, 2007 **Member,** United States-side Delegation, 39th Joint Panel Meeting on Wind

and Seismic Effects, UJNR, Tsukuba, Japan.

5.2. External Services – Professional

Scientific or Professional Advisory Boards

November 2019 - present	Executive Board, Italian National Association for Wind Engineering ANIV – affiliated with IAWE (**Member**)
October 1, 2013- December 2018	International Advisory Board, Centre of Excellence Telč, Ministry of Education, Youths and Sports, Czech Republic - Advanced Research Centre for Cultural Heritage Interdisciplinary Projects, supported by European Commission 5th Framework Programme (**Member**)
Sept. 2012 - July 2017	International Executive Board, International Association for Wind Engineering - IAWE (**Member**)

Editorship of Technical Journals (with editor privileges)

Sept. 2017-present	**Member of the International Editorial Board and Associate Editor**, Journal of Fluids and Structures, Elsevier.
March 2014-present	**Associate Editor**, ASCE Journal of Bridge Engineering.
February 2015 – June 2016	**Special Guest Editor**, Advances in Materials Science and Engineering, Special Issue on "Advanced Materials and Technologies for Structural Performance Improvement (AMTI)", Hindawi Publishing Corporation (principal Guest Editor: Prof. Stefano Sorace, University of Udine, Italy)

Editorial Boards of Technical Journals (without editor privileges)

Dec. 2019 - present	**Member**, International Editorial Board, Structural Safety, Elsevier.
Dec. 2019 - present	**Member**, International Editorial Board, Wind and Structures – An International Journal, Techno Press.
Nov. 2016 - present	**Member**, International Editorial Board, Structural Control and Health Monitoring, Wiley.
Dec. 2012 - present	**Member**, International Editorial Board, Engineering Structures, Elsevier.

Technical Journal Reviewer

The alphabetical list includes those journals, for which reviews are conducted regularly – two or more times per year – and those for which review has been invited more occasionally. The Impact Factor (IF) of the Journal from year 2018 is provided as an indication of the relevance and reputation of the publication:

(1) Advanced Steel Construction – An International Journal (IF: 0.957); (2) Advances in Engineering Software, Elsevier (IF: 4.194); (3) Alexandria Engineering Journal, Elsevier (IF: 3.696); (4) Applied Energy, Elsevier (IF: 8.426); (5) Archive of Applied Mechanics, Springer (IF: 1.578) (6) ASCE Journal of Aerospace Engineering (IF: 1.373); (7) ASCE Journal of Bridge Engineering (IF: 1.840); (8) ASCE Journal of Engineering Mechanics (IF: 2.264); (9) ASCE Journal of Structural Engineering (IF: 2.528); (10) ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil

Engineering; (11) ASME Journal of Vibration and Acoustics (IF: 1929); (12) Composite Structures, Elsevier (IF: 4.829); (13) Computer-Aided Civil and Infrastructure Engineering, Blackwell (IF: 6.208); (14) Computers and Fluids, Elsevier (IF: 2.223); (15) Computers and Structures, Elsevier (IF: 3.354); (16) Earthquake Spectra, EERI (IF: 2.005); (17) Earthquakes and Structures - An International Journal, Techno Press, South Korea (IF: 1.573); (18) Engineering Computations, Emerald Group Publishing (IF: 1.246); (19) Engineering Structures, Elsevier (IF: 3.084); (20) Experimental Thermal and Fluid Science, Elsevier (IF: 3.493); (21) Experimental Techniques, Society for Experimental Mechanics, Wiley InterScience (IF: 0.779); (22) Experiments in Fluids, Springer (IF: 2.443); (23) International Journal of Non-Linear Mechanics, Elsevier (IF: 2.225); (24) Journal of Building Engineering, Elsevier (IF: 2.378), (25) Journal of Civil Engineering and Management, Taylor & Francis (IF: 2.029); (26) Journal of Computational Physics, Elsevier (IF: 2.845); (27) Journal of Earthquake Engineering, Taylor & Francis (IF: 2.754); (28) Journal of Fluids and Structures, Elsevier (IF: 3.070); (29) Journal of the Franklin Institute, Elsevier (IF: 3.653); (30) Journal of Sound and Vibration, Elsevier (IF: 3.123); (31) Journal of Vibration and Control, SAGE Publications (IF: 2.865); (32) Journal of Wind Engineering and Industrial Aerodynamics, Elsevier (IF: 3.010); (33) Measurement, Journal of the International Measurement Confederation – IMEKO - Elsevier (IF: 2.791); (34) Meccanica, International Journal of the Italian Association of Theoretical and Applied Mechanics, AIMETA, Springer-Netherlands (IF: 2.316); (35) Natural Hazards, Journal of the International Society for the Prevention and Mitigation of Natural Hazards, Springer (IF: 2.319); (36) Nonlinear Dynamics, Springer (IF: 4.604); (37) Probabilistic Engineering Mechanics, Elsevier (IF: 2.329); (38) Simulation Modelling Practice and Theory, International Journal of the Federation of European Simulation Societies (EUROSIM), Elsevier (IF: 2.426); (39) Smart Structures and Systems - An International Journal, Techno Press, South Korea (IF: 3.622); (40) Structural Control and Health Monitoring, Wiley InterScience (IF: 3.740); (41) Structural Engineering International – IABSE, Taylor & Francis (IF: 0.608) (42) Structural Engineering and Mechanics - An International Journal, Techno Press, South Korea (IF: 2.804), (43) Structural Safety, Elsevier (IF: 3.517); (44) The Structural Design of Tall and Special Buildings (IF: 2.204); (45) Wave Motion, Elsevier (IF: 1.576); (46) Wind and Structures - An International Journal, Techno Press, South Korea (IF: 1.256).

Technical Book or Book Proposal Reviewer

April 2019	Book chapter review for a book on fluid-structure interactions (two chapters, 50 pages). Author and tentative title are not included for confidentiality but are available, if needed. Requested by Book Project Coordinator, Ms. Kiruthika Kumar, Springer Nature, Chennai, India (**Reviewer**).
November 2018	Book proposal for a book on wind load effects on structures. Author and tentative title are not included for confidentiality but are available, if needed. Requested by Engineering Editor, Mr. Ryan Farrar, CRC Press, Boca Raton, Florida (**Reviewer**).
July 2016	Book proposal for a book on wind effects on building structures. Author and tentative title are not included for confidentiality but are available, if needed. Requested by Acquisition Editor, Ms. Viktoria Hartl-Vida, John Wiley & Sons, Ltd (**Reviewer**).
April 2011	Book proposal for a book on wind effects on long-span bridges. Author and tentative title are not included for confidentiality but are available, if needed. Requested by Acquisition Editor, Ms. Sophia Travis, John Wiley & Sons,

	Ltd (**Reviewer**).
January 2011	Textbook on Structural Steel Design (pre-print version, 800 pages). Author and tentative title are not included for confidentiality but are available, if needed. Requested by John Wiley & Sons, Ltd (**Reviewer**).
November 2009	Book proposal for a technical publication discussing the new wind loading provisions of ASCE7-10. Author and tentative title are not included for confidentiality but are available, if needed. Requested by the ASCE Press Acquisition Editor, Ms. Betsy Kulamer, Reston, VA (**Reviewer**).

Research Panelist / Reviewer (for NSF or other Research Agencies)

September 2019	National Science Foundation, CMMI (**Panelist**).
October 2018	National Science Foundation, CMMI (**Panelist**).
September 24, 2018	MIT (Massachusetts Institute of Technology) Sea Grant Technical Review Panel (**Panelist**).
September 2017	National Science Foundation, CMMI (**Reviewer by mail** – one proposal).
November 2016	National Science Foundation, CMMI (**Panelist**).
May 2016	National Science Foundation, CMMI (**Reviewer by mail** – four proposals).
June 2015	National Science Foundation, CMMI (**Panelist**).
April 10-11, 2013	National Science Foundation, CBET, Wind Energy Panel (**Panelist**).
February 13-14, 2013	NASA Aeronautics Scholarship Program 2013, American Society of Engineering Education, Washington DC. For fields: aeronautical/aerospace engineering (**Panelist**).
February 13, 2013	SMART Defense Scholarship for Service Program 2013, Department of Defense of the United States, American Society of Engineering Education, Washington DC. For fields: civil engineering (**Reviewer**).
October 26, 2011	National Science Foundation, CMMI (**Panelist**).
May 20, 2011	National Science Foundation, CMMI (**Panelist**).
February 11-13, 2011	ASEE & National Science Foundation Graduate Research Fellowship Program (GRFP). For fields of study: agricultural engr., ocean engr., civil engr. and environmental engr. (**Panelist**, "Civil & Environmental Engineering Panel").
February 4 – 6, 2010	ASEE & National Science Foundation Graduate Research Fellowship Program (GRFP). For fields of study: agricultural engr., ocean engr., civil engr. and environmental engr. (**Panelist**, "Civil & Environmental Engineering Panel").
December 2, 2009	National Science Foundation, Division of Civil, Mechanical and Manufacturing Innovation, CMMI (**Reviewer** by mail; CAREER proposal).
November 6, 2009	National Science Foundation, CMMI (**Panelist**).
December 2007	National Science Foundation, CMMI (**Panelist**).
November 2006	National Science Foundation, CMMI (**Panelist**).

April 2005	National Science Foundation, CMMI (**Panelist**).

International Research Panelist / Reviewer

February – March 2020	Research Grants Council (RGC) of Hong Kong, China (**Scientific Proposal Reviewer** by mail – two proposals).
February 2019	Research Grants Council (RGC) of Hong Kong, China (**Scientific Proposal Reviewer** by mail – one proposal).
November 2018	Italian Ministry of Education, University and Research (MIUR), Rita Levi Montalcini Program for Young Researchers 2018 (**Scientific Proposal Reviewer** by mail – one proposal).
July – August 2018	University of Florence, Italy, Competitive Proposals for Your Investigators / Researchers (**Scientific Proposal Reviewer** by mail – one proposal).
June – August 2018	GAČR - Czech Science Foundation (**Scientific Proposal Reviewer** by mail – two proposals).
December 2017	Natural Sciences and Engineering Research Council of Canada, Discovery Grant proposals (**Scientific Proposal Reviewer** by mail – one proposal).
December 2016	Natural Sciences and Engineering Research Council of Canada, Discovery Grant proposals (**Scientific Proposal Reviewer** by mail – one proposal).
June – July 2016	GAČR - Czech Science Foundation (**Scientific Proposal Reviewer** by mail – one proposal).
August 2015	POLIMI International Fellowships 2015, Politecnico di Milano, Italy (**Research Proposal Reviewer** by mail).
June – July 2014	GAČR - Czech Science Foundation (**Scientific Proposal Reviewer** by mail – two proposals).
August 2013	GAČR - Czech Science Foundation (**Scientific Proposal Reviewer** by mail).
March - April 2012	Canada Foundation for Innovation, Leaders Opportunity Fund (**Scientific Reviewer** by mail).
January 2012	City University of Hong Kong, P.R. China, Research Committee, Strategic Research Program, (**Proposal Reviewer** by mail).

International Scientific Award Referee

June-July 2010	2010 State Natural Science Award of the People's Republic of China, National Office for Science and Technology Awards, Beijing, P.R. China (**International Referee** by mail).

Technical Committees

2012-present	Fluid Dynamics Committee, Engineering Mechanics Institute, American Society of Civil Engineers, ASCE (**Member**)
2011-present	Probabilistic Methods Committee, Engineering Mechanics Institute, American Society of Civil Engineers, ASCE (**Member**)

2007-2008	International Technical Committee on Fluid-Structure Interaction, Pressure Vessels and Piping Division (PVP), American Society of Mechanical Engineers, ASME (**Affiliate**).
2006-present	Dynamics Committee, Engineering Mechanics Institute, American Society of Civil Engineers, ASCE (**Member**)
2006-present	Task Committee D on Wind Engineering, UJNR Panel on Wind and Seismic Effects, UJNR: United States-Japan Cooperative Program in Natural Resources (**Associate/Affiliate**).

Conference-Related Activities: Principal Conference Chairman

January 2019 – May 2019	**Organizer and Faculty Advisor,** First Northeastern University – Tongji University Workshop on Wind Engineering, Northeastern University, Boston, Massachusetts, May 22-25, 2019. Program: (link) Press release: (link)
September 2012 - June 2016	**International Conference Chairman and Principal Organizer,** BBAA VIII, 8th International Colloquium on Bluff Body Aerodynamics and Applications, Northeastern University, Boston, Massachusetts, June 7-11 2016. Web-site: http://www.northeastern.edu/bbaa8/ Press release: (link) More than 240 participants from 25 countries. Total conference income to Northeastern University: $187,365 (registration fees, university housing, contributions from sponsors, 20% tax/service fee to NU, etc.)
January 2012 - August 2012	**Workshop Chairman and Principal Organizer**, 3rd American Association for Wind Engineering Workshop, Hyannis, Massachusetts, August 12-14, 2012 (65 participants from academia and industry). Web-site: (link)
November 12-14, 2011	**Workshop Chairman and Organizer**, 2nd US-Japan mini-Workshop on "Structural Dynamics and Monitoring of Bridges and Flexible Structures against Wind Hazards", Northeastern University (by invitation only). Web-site: (link)

Conference-Related Activities: Board or Scientific Committee Member

December 2019 – September 2020	International Scientific Committee, 16th Conference of the Italian Association for Wind Engineering (IN-VENTO 2020), Lake Como, Italy, September 6-9 2020 (**Member**).
December 2019 – September 2020	International Scientific Committee, International Symposium on the Dynamics and Aerodynamics of Cables, ISDAC 2020, University of Stavanger, Norway, September 24-25, 2020 (**Member**).
July 2019 – July 2020	Scientific Committee, BBAA IX – 9th International Colloquium on Bluff Body Aerodynamics and Applications, University of Birmingham, UK, July

	20-23, 2020 (**Member**).
December 2018 – June 2019	Scientific Committee, 2nd National Conference on Wind Engineering (2NCWE 2019), Romanian Association for Wind Engineering (ARIV), June 16 - 7, 2019 (**Member**).
November 2017 – June 2018	International Scientific Committee, 7th International Symposium on Computational Wind Engineering (CWE2018), Seoul, South Korea, June 18 - 22, 2018 (**Member**).
July 2017 – 2018	International Scientific Committee, 15th Conference of the Italian Association for Wind Engineering (IN-VENTO 2018), Napoli, Italy, September 9-12, 2018 (**Member**).
December 2016 – March 2018	International Advisory Board, International Workshop on Wind-Related Disasters and Mitigation, Tohoku University, Sendai, Japan, March 11 – 14, 2018 (**Member**).
March 2017 – October 2017	International Scientific Committee, International Symposium on the Dynamics and Aerodynamics of Cables, ISDAC 2017, University of Porto, Portugal, October 30-31, 2017 (**Member**).
September 2016 – May 2017	Scientific Committee, 13th Americas Conference on Wind Engineering, (ACWE 2017), Gainesville, Florida, USA, 21-24 May 2017 (**Member**).
September 2015 – July 2017	International Scientific Committee, Seventh European-African Conference on Wind Engineering (EACWE 2017), Liège, Belgium, July 3-6, 2017 (**Member**).
October 2015 – September 2016	International Scientific Committee, 14th Conference of the Italian Association for Wind Engineering (IN-VENTO 2016), Perugia, Italy, September 25-28, 2016 (**Member**).
2014-2015	International Scientific Committee, 14th International Conference on Wind Engineering (14-ICWE), Porto Alegre, Brazil, June 21-26, 2015 (**Member**).
July 2013 – Jun. 2014	Scientific Committee, 13th Conference of the Italian Association for Wind Engineering (IN-VENTO 2014), University of Genova, Italy, June 22-25, 2014 (**Member**)
January - August 2013	Scientific Committee, 2013 Conference of the Engineering Mechanics Institute, American Association of Civil Engineers, Northwestern University, Evanston, Illinois, USA, August 4 – 7, 2013 (**Member**)
February 2013	Technical Committee, 12th Americas Conference on Wind Engineering (ACWE-12) of the AAWE (American Association for Wind Engineering), Seattle, Washington, June 2013 (**Paper Reviewer**).
2010-2011	International Advisory Board, 13th International Conference on Wind Engineering (13-ICWE), Amsterdam, NL, 2011 (**Member** and **Paper Reviewer**).
May 23-27, 2010	Special Reviewers Board, 5th International Symposium on Computational Wind Engineering (CWE2010)**,** Chapel Hill, North Carolina, USA (**Member** and reviewer of abstracts and five full papers).
September 20-23, 2009	International Reviewing Committee, 8th International Symposium on Cable Dynamics, AIM Montefiore Institute (Belgium), Paris, France (**Member**).

2008 International Scientific Committee, 6th International Colloquium on Bluff-Body Aerodynamics and Applications (BBAA VI). Center for Wind Engineering Research (CIRIVE), Polytechnic of Milan, Milan, Italy, 2008 (**Member**).

Conference-Related Activities: Session Chairman, Session Organizer, Paper Reviewer

January 2019 15th International Conference on Wind Engineering (ICWE 15), International Association for Wind Engineering (IAWE), Beijing, P.R. China, September 1-6, 2019 (**Extended Abstract/Paper Reviewer**).

September 12, 2017 X International Conference on Structural Dynamics, EURODYN 2017, Rome, Italy, September 10-13, 2017, Mini-Symposium MS25 on "Energy Sink and Energy Harvesting", Session MS25.II (**Session Co-Chairman**).

July 4, 2017 7th European and African Conference on Wind Engineering (EACWE 2017), Liège, Belgium, July 4-7, 2017, Technical Session on "Probabilistic Methods" (**Session Chairman**).

May 24, 2017 13th Americas Conference on Wind Engineering (13ACWE), University of Florida, Gainesville, Florida, USA, May 21-24, 2017, Technical Session on "High-Rise and Super-Tall Buildings I" (**Session Chairman**).

September 2016 14th Conference of the Italian Association for Wind Engineering (IN-VENTO 2016), Perugia, Italy, September 25-28, 2016, Technical Session B on "Wind-induced Load and Vibration 1" (**Session co-Chairman**).

June 2015 14th International Conference on Wind Engineering (14-ICWE), Porto Alegre, Brazil, June 21-26, 2015, Technical Session on "Wind Turbines: Control" (**Session Chairman**).

June 2014 13th Conference of the Italian National Association for Wind Engineering on Wind Engineering (IN-VENTO 2014), Genoa, Italy, June 22-25, 2014, Technical Session on "Aeroelasticity" (**Session Co-Chairman**).

August 2013 EMI2013, 2013 Conference of the Engineering Mechanics Institute, American Association of Civil Engineers, Northwestern University, Evanston, Illinois, USA, August 4 – 7, 2013, Session "Applied Aerodynamics for Engineering Systems and Applications" (**Invited Session Organizer and Session co-Chairman**)

June 2013 12th Americas Conference on Wind Engineering, Seattle, Washington, USA, June 16 – 19 2013, Session 12 "Cable-Stayed Bridges and Cable Dynamics" (**Session Moderator**)

February 2013 Technical Committee, 12th Americas Conference on Wind Engineering (ACWE-12) of the AAWE (American Association for Wind Engineering), Seattle, Washington, June 2013 (**Paper Reviewer**).

October 2012 12th Italian Conference on Wind Engineering "In-Vento-2012", Italian National Association for Wind Engineering, ANIV, Venice, Italy, October 7-10, 2012, Technical Session D "Bridges and Aeroelasticity" (**Session Co-Chairman**).

September 2012 7th International Colloquium on Bluff Body Aerodynamics and

	Applications, Shanghai, China, September 2-6, 2012, Technical Session C-2 "Prism Aerodynamics - Circular" (**Session Co-Chairman**).
July 10-15, 2011	13th International Conference on Wind Engineering, ICWE13, Amsterdam, NL, Technical Session on "Cable aerodynamics – Galloping (Part 2)" (**Session Co-Chairman**)
July 10-15, 2011	13th International Conference on Wind Engineering, ICWE13, Amsterdam, NL, 2011. Special Technical Session on "Aero-elastic stability and post-critical processes of slender structures" (**Session Co-Organizer** and **Co-Chairman**)
June 2-4, 2011	EMI2011, Engineering Mechanics Institute, American Society of Civil Engineers, Northeastern University, Boston, USA. Session #25 "Flow-Induced Vibration - Part 1 and Part 2" (**Two-part Session Organizer**).
May 9-11, 2011	"Sixth Subrata Chakrabarti International Conference on Fluid Structure Interaction 2011," Orlando, Florida, USA. Wessex Institute of Technology. Session 2 "Hydrodynamic Forces and Offshore Structures" (**Session Chairman**).
2010	ASME Pressure Vessels and Piping (PVP) Conference, American Society of Mechanical Engineers, Washington, DC (**Reviewer** of a technical paper, invited by ASME-PVP Fluid-Structure Interaction Technical Committee).
May 23-27, 2010	5th International Symposium on Computational Wind Engineering (CWE2010)**,** Chapel Hill, NC, USA. Session 9-3: Wind-structure interaction III: Bridges and cables (**Invited Session Co-Chairman**).
May 19-21, 2008	1st Inaugural Conference of the Engineering Mechanics Institute (EM08), American Society of Civil Engineers, University of Minnesota, Minneapolis, USA. Session "Structural Mechanics" (**Session Chairman**).
July 1-6, 2007	12th International Conference on Wind Engineering, Australasian Wind Engineering Society, Cairns, Australia. Session "Bridges 7 – Flutter" (**Invited Session Co-Chairman**).
June 3-6, 2007	18th Engineering Mechanics Division Conference of the American Society of Civil Engineers, Virginia Tech University, Blacksburg, Virginia, USA. Session "Dynamics" (**Session Chairman**).

National and International Scientific Workshop Participation

February 18-29, 2020	NHERI DesignSafe-CI Workshop on Artificial Intelligence in Natural Hazards Engineering, University of Texas, Austin, February 18-19, 2020 (**Participant** by invitation only)
September 14, 2012	UMass - Northeastern Workshop on Fluid-Structure Interactions, Department of Mechanical Engineering, University of Massachusetts, Amherst, September 14, 2012 - Five oral presentations by NU researchers affiliated with the "Wind Engineering and Dynamics Research Group" led by L. Caracoglia (**Workshop co-Organizer**).
June 13-14, 2012	National Workshop "Measurement Science R&D Roadmap - Windstorm and Coastal Inundation Impact Reduction", organized by the National

	Institute for Standards and Technology (NIST) in collaboration with Applied Technology Council (ATC) and NSF, American Society of Civil Engineering Headquarters, Reston, Virginia (**Workshop Invited Participant**).
March 11-13, 2012	3rd US-Japan mini-Workshop on "Structural Dynamics and Monitoring of Bridges and Flexible Structures against Wind Hazards", Texas Tech University, Lubbock, TX, USA (**Workshop Invited Participant**).
May 28-29, 2010	International Workshop on Wind Engineering Research and Practice: Current State-of-the-Art and Future Needs, William and Ida Friday Center for Continuing Education, Chapel Hill, North Carolina, USA (**Workshop Invited Participant** and **Session Moderator**).

Professional Development

November 9, 2009	NU ADVANCE Focus Group on "International Research Opportunities." Session chaired by Prof. Kathrin Zippel of NU (**Participant**)
Spring 2006	"Tenure and Promotion Workshop," Office of the Provost, Northeastern University (**Participant**).
June 1-3, 2006	"ASME/MIT Essential Teaching Seminar Series" for engineering faculty, American Society of Mechanical Engineers, Massachusetts Institute of Technology, Cambridge, MA (**Attendee with Completion Certificate**).
2005-2008	"Workshop on Preparing a NSF CAREER Proposal," organized by "NU Faculty Mentoring," Office of the Provost: Year 2005; May 9, 2006; May 10, 2007 and May 2008 (**Participant**); May 2010 (**Invited Speaker**)
Fall 2005	BSCES/ASCE Structural Group Lecture Series, 17th Edition, "The Design Process. Concept through Construction," Tufts University, Medford, MA (**Attendee with Completion Certificate**).
June 8-12, 1999	Italian National Course on "Timber Structures in the New Constructions and in the Refurbishment" (in Italian). CISM – International Centre for Mechanical Sciences, Udine, Italy (**Attendee w/ Completion Certificate**).
September 21-25, 1998	International Course on "Wind-resistant Design of Structures: Code-based and Advanced Methods" (in Italian). CISM – International Centre for Mechanical Sciences, Udine, Italy (**Attendee w/ Completion Certificate**).

Professional Memberships

2005–present	American Association for Wind Engineering (**Member**)
2009–present	American Institute of Steel Construction (**Member**)
2001–present	American Society of Civil Engineers (**Member**, primary affiliation: EMI, Engineering Mechanics Institute)
2012-2014	American Society for Engineering Education (**Member**)
2011-present	Chi Epsilon, Civil Engineering Honor Society (**Member**)
1998–present	Italian National Association for Wind Engineering, ANIV (**Member**)

2003–2012	Society for Experimental Mechanics, SEM (**Member**)
2010-2011, 2012	Structural Engineers Association of Massachusetts, SEAMass (**Member**)

Community Service

- Donor/supporter, "Engineers Without Borders," NU Chapter, in 2007, 2009.
- Community Service, "Muddy River Cleanup", Emerald Necklace Conservancy's Project; participated with Northeastern GEGES Students, years 2007 - 2009 during the "Earth Day".

6. ADDITIONAL INFORMATION

- Spoken Languages: Italian (native language); English, fluent (spoken and written); French, fair/good (spoken and written); basic knowledge of spoken Spanish (basic reading only).

7. REFERENCES

Provided upon request