Viet Quoc Le, PhD

Engineer, Arup, Advanced Technology + Research

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Education

Doctor of Philosophy in Civil (Structural) Engineering - Northeastern University 2016-2020

· Dissertation: *A Performance-based Wind Engineering Framework for Vertical Structures Subjected to Nonstationary Wind Loads*

Master of Science in Civil (Structural) Engineering - University of Massachusetts Lowell 2015-2016

· Thesis: *Detection and Quantification of Damage from ASR Gels Using Multiphysical Nondestructive Evaluation*

Bachelor of Science in Civil & Environmental Engineering - University of Massachusetts Lowell 2011-2015

· Summa Cum Laude

Professional and Research Experience

Engineer - Arup, New York, NY 2020/09 - Present

· Specialize in wind engineering assessment of wind hazards, loads, and the resilience of the built environment
· Apply beyond code and leading-edge analytical methods to evaluate wind climate phenomena and their effects
· Employ computational fluid dynamics (CFD) simulation tools for wind comfort analysis, dispersion modeling, and aerodynamic and aeroelastic modeling of wind loads and structures

Structural Engineering Graduate Research Assistant - Northeastern University, Boston, MA 2016/09 - 2020/05

· Developed a performance-based engineering framework for the risk and life-cycle cost assessment of vertical structures subjected to wind loads from thunderstorm downbursts and tornadoes
· Conducted wind tunnel tests to simulate and analyze non-stationary wind outflows and their effects on a building model

Structural Engineering Graduate Teaching Assistant - Northeastern University, Boston, MA 2017/09-2020/05

· Provided assistance for Steel Design and for Materials and Measurements courses
· Graded homework and lab reports, led lectures and labs, and held office hours for students

Research Intern - GCP Applied Technologies, Cambridge, MA 2016/06-2016/08

· Performed image analysis and data clustering techniques for the improvement of quality control for concrete mixes

Structural Engineering Research Assistant - University of Massachusetts Lowell, Lowell, MA 2013/05-2016/05

· Involved in the multiphysical nondestructive evaluation of cementitious composites using microwave imaging radar, ultrasonic testing, dielectric measurements with a contact probe, and an unmanned aerial vehicle

Geoenvironmental Engineering Research Assistant - University of Massachusetts Lowell, Lowell, MA 2012/05-2012/09

· Worked in a multi-disciplinary research group for novel technology in geoenvironmental site characterization

Technical Skills

Proficient/Working Knowledge

· Python, OpenFOAM, Rhinoceros 3D, MATLAB, Microsoft Office, LaTeX

Basic Knowledge

· Grasshopper, ANSYS Fluent

Select Publications

Peer-reviewed Journal Papers and Technical Notes

· Le, V.; Caracoglia, L. (2021). "Life-cycle cost assessment of building and tower structures under nonstationary winds: Downburst vs. tornado loads", *Engineering Structures*. 243: 112515. Link.
· Le, V.; Caracoglia, L. (2020). "Experimental investigation of non-stationary wind loading effects generated with a multi-blade flow device", *Journal of Fluids and Structures*. 96: 103049. Link.
· Le, V.; Caracoglia, L. (2020). "A neural network surrogate model for the performance assessment of a vertical structure subjected to non-stationary, tornadic wind loads", *Computers & Structures*. 231: 106208. Link.

Memberships and Certifications

Fundamentals of Engineering Exam - Passed 2015/10
American Society of Civil Engineers (ASCE) - Associate Member (A.M.) Present
American Association for Wind Engineering (AAWE) - Member Present