LAUREN MILLMAN, PH.D., P.E.

Vice President



Summary

Dr. Lauren Millman joined Thornton Tomasetti in 2013 and currently resides in Fort Lauderdale, Florida. She is a licensed Professional Engineer specializing in forensic structural and materials engineering. Dr. Millman's projects have included litigation support for design and construction defect projects in Florida, New York and New Jersey, demolition sequencing for Rockefeller University's expansion over Franklin D. Roosevelt Drive, and emergency response for many structures in New York City. She has performed protective design engineering for high-profile new and existing structures located in New York and New Orleans. Prior to attending graduate school for her masters and doctorate degrees, Dr. Millman worked for a not-for-profit housing developer building single-family and multi-family homes in the south Florida area. Dr. Millman lectures at the University of Miami co-teaching the course Forensic Engineering and Law.

Areas of Technical Expertise

- Structural Engineering
- Protective Design Engineering
- Material Analysis and Building Envelope Systems

Education

- Ph.D., Civil Engineering, 2013, University of Miami
- M.S., Civil Engineering, 2011, University of Miami
- B.S., Civil Engineering, 2005, University of Florida

Registrations

- Licensed Professional Engineer in CA and FL

Professional Activities

- Adjunct Professor, University of Miami, Department of Civil, Architectural and Environmental Engineering, 2019-present
- Mentor, Thornton Tomasetti, Mentoring Program, 2021-present
- Fellow, University of Miami, Coral Gables, FL, 2010-2013
- Research Assistant, University of Miami, National Science Foundation (NSF) Funded Project, BRIDGE: An Exploration into Concrete Surface Preparation Using Dry Ice Bombardment, University of Miami, Coral Gables, FL, 2010-2013

Select Project Experience

Litigation

1515 Sunset, Coral Gables, FL. Investigations into waterproofing, stucco, precast cladding, expansion joints, and concrete shell installations.

Aria, Longboat Key, FL. Investigations into pavers, drains, tiles, waterproofing, stucco and protective coating failures.

3315 Tower Condominium, Miami Beach, FL. Investigations into balcony waterproofing, tile, guardrails, safety glazing and stucco installations.

Campus Gator, Gainesville, FL. Stucco installation issues.

Summer Key, Jacksonville, FL. Stucco installation issues.

Champlain Towers South, Surfside, FL. Investigation into the sudden collapse of the condominium.

3621 South Ocean, Miami, FL. Investigations into windows, sliding glass doors, waterproofing, stucco, tile systems and other building components.

Crescent Riverwalk, Tampa, FL. Peer review of remediation and partial reconstruction of parking garage corner settlement.

De Soleil Hotel Balcony, Miami Beach, FL. Design and testing of existing railing.

Fireproofing Investigation, Florham Park, NJ. Debonded sprayed fire-resistive material (SFRM) installation issues.

One Thousand Ocean Residences, Boca Raton, FL. Issues involved post-tensioned (PT) anchors, driveway, stucco, sunshades, efflorescence, dissimilar materials, coating failures, and wall tile.

Adagio, Fort Lauderdale, FL. Deficiencies in roofing, glazing, stucco, and waterproofing systems.

Warren Henry Auto, Aventura, FL. Structural deficiencies in the precast concrete facility.

WEBSITE SAMPLE

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Dr. Phillips Center for the Performing Arts, Orlando, FL. Structural engineering standard of care, steel and concrete structure with construction and erection sequence issues.

Hyde Resort & Residence, Hollywood, FL. Investigations of PT slabs, stucco, waterproofing, fenestration, and balcony railing.

Portofino, Orlando, FL. Stucco deficiencies and water intrusion.

Joe DiMaggio Children's Health Specialty Center, Wellington, FL. Moisture intrusion, windows, metal canopies, and cladding deficiencies.

Vue Condo & Westin Hotel, Sarasota, FL. Deficiencies in the concrete shell.

The Ritz-Carlton, Fort Lauderdale, FL. PT anchor inspection and evaluation for remaining service life based on chloride intrusion.

Various Sinkhole Investigations, throughout central Florida. Single-family homes' structural damage and sinkhole activity.

Emergency Response

261 Madison Avenue, New York, NY. 30-story office tower with damage to façade and several stories after a 30-ton chiller fell while being replaced.

215 Flatbush Avenue, Brooklyn, NY. Excavations caused significant movement of adjacent structures.

Structural Engineering and Material Analysis

Plaza of Bal Harbour Residence, Miami Beach, FL. Concrete restoration peer review of work to parking garage and pool deck.

New York Aquarium, Shark Exhibit, Bronx, NY. Multi-level concrete structure with tanks to house an exhibit.

1 Seventh Avenue, New York, NY. Construction fence.

Henry Hudson Bridge Skewbacks, New York, NY. 1937 bridge's rehabilitation.

NYU Kimmel, New York, NY. Peer review and inspection of the construction hoist towers at the Kimmel Pavilion.

Demolition Sequencing

Rockefeller University Expansion Demolition, New York, NY. Expansion over Franklin D. Roosevelt (FDR) Drive. Buildings constructed in 1914, 1928 and 1982. Temporary construction and final supports for penetrations to connect modular additions.

Protective Design

30 Hudson Yards, New York, NY. 90-story, supertall office tower with podium and observation deck. Footprint over the LIRR.

Dixie Brewery Research Building, New Orleans, LA. 1907 brewery renovation into an advanced research facility.

Hudson Yards Platform, New York, NY. Platform bridges the Long Island Railroad (LIRR), and supports apartment, office and retail space.

Select Papers, Lectures and Publications

"Surfside Collapse Investigation Initial Findings," ASCE Forensic Engineering 10th Congress, ASCE, November 2024 (co-author)

"Design Considerations for Aluminum Structures in South Florida," Structures Magazine, January 2024 (co-author)

"Aluminum Interaction with Cementitious Materials in a Coastal Environment," ASCE Forensic Engineering 9th Congress, ASCE, November 2022 (co-author and presenter)

"Performance of Building Envelope Systems in South Florida: Case Studies," ASCE Forensic Engineering 9th Congress, ASCE, November 2022 (co-author)

"The Deleterious Situation of the Pool Structure," Construction Specifier Magazine and In Pool and Spa Marketing, Kenilworth Media, Inc., 2021 (co-author)

"Sinkhole Activity: Case Studies," ASCE Forensic Engineering 8th Congress, ASCE, November 2018 (author and presenter)

"ASCE Engineer For a Day," High School Students, December 2018, May 2018, May 2017 (presenter)

"Balcony Railing—The 411," Florida Community Association Journal, September 2017 (author)

"Investigation of Sprayed Fire-Resistive Material and In Situ Bond Failure," ASCE Forensic Engineering 7th Congress, ASCE, December 2015 (co-author and presenter)

"Women at TT Day of Discovery - Blast Design," High School Students, October 2015, August 2015, October 2014 (presenter)

"ASCE Engineer For a Day—Blast Design," College Students, March 2015 (presenter)

"A Novel Bearing Swivel Joint and a Universal Joint for Concrete Pull-off Testing Using a Material Testing Machine," Journal of Testing and Evaluation, ASTM, January 2014 (co-author)

"Three-Dimensional Optical Profilometry Analysis of the International Concrete Repair Institute Concrete Surface Profiles," ACI Materials Journal, January 2013 (co-author)

"Environmental Evaluation of Abrasive Blasting with Sand, Water, and Dry Ice," International Journal of Architecture Engineering and Construction, September 2012 (co-author)

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CONTACT

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