

MARGUERITE JEANSONNE PINTO, P.E.

Senior Principal



Summary

Marguerite Pinto specializes in structural analysis and investigations. She has broad experience with a variety of structural types, including long-span roofs and trusses, industrial facilities, temporary structures and historic structures. Her work has included cause and origin investigations, emergency response, and the retrofit and repair of structures. Ms. Pinto is an expert in vibration analysis, both in design and as a tool in structural health monitoring. She has also worked with contractors in the design of temporary structures and emergency site response.

Areas of Technical Expertise

- Forensic and Structural Analysis
- Vibration Analysis
- Structural Health Monitoring

Education

- Professional Degree in Civil Engineering, 2002, Columbia University
- M.S., Civil Engineering, 2001, Columbia University
- B.S., Civil Engineering, 2000, The Johns Hopkins University
- Certificate in Historic Preservation, 2022, New York University

Registrations

- Licensed Professional Engineer in LA, MS, NJ, NY, PA, TN, TX, and VA

Professional Activities

- Member, American Society of Civil Engineers (ASCE)
- Structural Health Monitoring Committee Member, Engineering Mechanics Institute (EMI), 2019-2024

Select Project Experience

Forensic and Structural Analysis

Confidential Utility Investigation, Jersey City, NY. Cause and origin investigation into the failure of a buried utility. Investigation included documentation of data during response and repair, metallurgical and geotechnical analysis, and advanced impact modeling. Investigation included evaluation of river pier supported of wooden piles and the standards for pier maintenance and repair. Produced expert report used in litigation.

Confidential Medical Center, Columbus OH. Emergency response to a structural failure during construction. Worked with project team to develop stabilization and repair plan. Reviewed impact of failure on building systems to mitigate and avoid any long term effects on building performance.

PS 419, Queens, NY. Emergency response and stabilization of a school building damaged by flash flood event.

323 2nd Street, Charlottesville, VA. Emergency response to partial crane collapse at new development.

Helena Chemical, Rosedale, MS. Investigation of collapsed conveyor truss at port facility. Designed new replacement span and reinforcement of remaining structure.

Confidential Project, New Orleans, LA. Investigation and repair of fabrication errors in welded connections of a 150-foot-tall steel canopy.

Indiana State Fair Commission Collapse, Indianapolis, IN. Structural engineering investigation related to an independent cause and origin opinion regarding the failure of a ground-supported temporary entertainment rigging structure on the evening of August 13, 2011.

I-35 West Bridge Collapse, Minneapolis, MN. Forensic investigation of vehicular bridge collapse, on behalf of a consortium of attorneys representing the victims.

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Cathedral Damage, New York, NY. Forensic investigation to determine the cause of the cathedral damage in the wake of seismic and/or CAT-90 Sandy events on behalf of the insurer.

Vibration Analysis

NASA Fluid Harmonic Disruptor, Atlantic Yards B2 Building, Brooklyn, NY. Design of a Fluid Harmonic Disruptor for the building in conjunction with NASA to reduce accelerations under wind excitation.

Confidential Sports Facility Vibration Study, New York, NY. Structural peer review services for sports facility renovation, including investigation of vibrations during and outside events and recommendations for mitigating vibration in the future.

Liberty Property Trust, Philadelphia, PA. Investigation of floor vibrations in a high-rise office tower.

Litigation

Highway Bridge, Metairie, LA. Evaluation of the standard of care exercised by the engineer of record in an Equal to Analysis of a proposed bridge rail design.

CalPortland, Oro Grande, CA. Evaluation of structural documents issued as part of the cement plant construction.

The Higgins Hotel, New Orleans, LA. Evaluation of issued design documents and the performance of the engineer of record for a new hotel.

Confidential Project, Clarksville, TN. Litigation support to evaluate claims change orders stemming from the construction of a steel frame industrial plant.

GWB Bus Station, New York, NY. Litigation support which reviewed the completeness of design document for the renovation of an existing structure.

Confidential Project, Charleston, TN. Litigation support to evaluate change orders from major industrial facility construction.

Petersen Events Center, Pittsburgh, PA. Investigation of the existing condition of long-span roof trusses for conformance with industry standards. Expert report used in trial.

United States Embassy Compound, Astana, KAZ. Litigation support and review of the pile foundation design of a new embassy building.

Sworn Testimony

Deposition, Dynamics Sys. v. Skanska, et al regarding the standard of care of the Engineer of Record, New York, NY. October 13, 2023.

Deposition, Asset Integrity Mgmt. Sol. v. Bourgeois, regarding standard of care exercised by an engineer in an Equal to Analysis of a proposed bridge rail design. Baton Rouge, LA. October 13, 2022.

Arbitration and Deposition, Indus. Co. v. ThyssenKrupp Indus. Sol. USA, Inc. regarding the standard of care of issued design documents for a cement plant. Boulder, CO. December 15, 2020.

Deposition, World War II Theatre, Inc. v. DeSimone Consulting Eng'g Grp., LLC, et al regarding the standard of care of issued design documents for a hotel structure. New York, NY. March 5, 2020.

Patents

Title of Invention: Tuned Liquid Damper with a Membrane Liquid-Gas Interface. Attorney Docket No. 029468.00146. Confirmation No. 4832. Filed on February 23, 2018.

Papers, Lectures and Publications

"Advanced Analysis of a Pedestrian Bridge and Considerations on Crowd-structure Interaction," IABSE Symposium, May 2022 (co-author)

"Innovative Tuned Liquid-Gas Damper for Wind-Induced Building Vibrations," ASCE Engineering Mechanics Institute Conference, May 2021 (co-author)

"Field Vibration Testing of a Footbridge Subjected to Crowds," ASCE Engineering Mechanics Institute International Conference, March 2021 (co-author)

"Application of Modular Air-Tuned Damper Systems in High-Rise Buildings," Proceedings of the 2019 IABSE Congress, New York, NY, September 2019 (co-author)

"Integrated Approach for Unreinforced Masonry Stabilization in Historic Buildings of New York City," Proceedings of the 13th North American Masonry Conference, Salt Lake City, Utah, June 2019 (co-presenter)

"Rails in Retractable Roofs: Overview of the Design Methodology and a Case Study," Proceedings of the 8th Forensics Engineering Congress, Austin, TX, November 2018 (co-author)

"No-Touch Inspections: Challenges in Non-Destructive Evaluation of Subjects that Are Buried and Underwater," Proceedings of the 8th Forensics Engineering Congress, Austin, TX, November 2018 (co-author)

"Remediation of Wind-Induced Building Vibrations with Modular Tuned Liquid Damper System," Proceedings of the 8th Forensics Engineering Congress, Austin, TX, November 2018 (co-author)

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"Innovative Tuned Liquid Damper System," Proceedings of the 19th IABSE Congress, Stockholm, Sweden, September 2016 (co-author)

"Modeling Failure Progression in Structures Informed by Demolition," CFRAC 2015, the Fourth International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, Paris, France, June 3-5, 2015 (co-author)

"Forensic Investigation in the Age of the Internet of Things," Proceedings of the 37th IABSE Symposium, Madrid, Spain, September 2014 (co-presenter)

"The Debut of FIM," Civil Engineering Magazine, January 2014 (co-author)

"Calculating Collapse: Analytical Approaches for Investigating the Cause of the I-35 West Bridge Failure," Proceedings of the 5th International Conference on Forensic Engineering 2013, London, UK, April 2013 (presenter)

"The Indiana State Fair Collapse Incident: Anatomy of a Failure," ASCE 6th Congress on Forensics Engineering, November 2012 (co-author)

"Challenges of FEA Modeling the Performance of Concrete Substructures under Blast Loading," American Concrete Institute, November 2010 (co-author)

CONTACT

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