

THANH DO, PH.D., P.E.

Associate



Summary

Dr. Thanh Do is an experienced structural failure analyst and investigator. He has assisted attorneys, insurance professionals, general contractors, and design professionals to investigate the root cause of alleged failures and to help resolve construction disputes. Dr. Do specializes in Design-Build project delivery, advanced analytics, collapse investigations, standard of care assessments, construction defects and design errors/omissions evaluations. In addition to his investigative work, Dr. Do manages the Forensic Visualization group at TT, which produces graphics and physics-based animations for construction litigation. Dr. Do is also experienced in the design of new structures and seismic retrofits of existing structures. He is a frequent speaker and writer on matters related to construction law, dispute resolutions, risk mitigation, damage assessments and advanced simulations of structural failures.

Areas of Technical Expertise

- Forensic Structural Engineering
- Design-Build Project Delivery
- Physics-based Forensic Animation

Education

- Ph.D., Structural Engineering, Computational Mechanics, Mathematics, 2017, University of California, Berkeley
- M.S., Structural Engineering, 2013, University of California, Berkeley
- B.S., Civil Engineering, 2012, University of the Pacific

Registrations

- Licensed Civil Engineer in CA
- Safety Assessment Program Evaluator, California Governor's Office of Emergency Services

Teaching Experience

- Adjunct Professor, Structural Engineering, University of California, Berkeley, 2017-2018
- Courses taught: "Structural Analysis" and "Nonlinear Structural Analysis"

Professional Activities

- Member, Structural Engineers Association of California
- Member, Orange County Bar Association
- Committee Member, American Bar Association, Division 4: Project Delivery and Construction Technology
- Editor, "The Dispute Resolver", American Bar Association, Division 1: Construction Litigation and Dispute Resolution

Select Project Experience

Investigations and Litigation Support

Confidential Design-Build Aviation, Hub Airport, Confidential Location, U.S. Investigated into significant material quantity overruns and other alleged design defects for a Design-Build project at this hub airport. Structures include elevated guideways, pedestrian bridges, and station buildings.

Confidential Design-Build Transportation, Confidential Location, U.S. Investigated into significant material quantity overruns and other alleged design defects for a Design-Build public infrastructure project. Structures include aerial structures, at-grade and below-grade station buildings, tunnels, and support-of-excavation systems.

Confidential Structural Collapse Investigation, LA. Forensic evaluation and progressive collapse simulations to investigate the cause of collapse of a high-rise structure under construction.

Confidential Water Intrusion Investigation, CA. Investigated into cause and origin of water intrusion damage of 81 detached single-family houses in the housing development.

Confidential, Condominium Construction Claim Investigation, Atlanta, GA. Forensic investigation to determine multiple construction claim issues including post-tensioned tendon failures, balcony cracking and tile delamination, and roof membrane and water intrusion.

Confidential Pavement Slab Cracking Investigation, WA. Forensic investigation of a cracked concrete pavement slab for a Design-Build project at a military facility.

Confidential Parking Garage Evaluation, CA. Forensic investigation of a below-grade reinforced concrete parking garage that experienced slab deflection and cracking.

Confidential Crane Collapse Investigation, Confidential location, US. Forensic investigation of a tower crane collapse.

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Confidential Slope Failure Investigation, CA. Investigated into cause and origin of a slope failure and related damage to structures and foundations, including residential buildings, decks, and seawall.

Confidential Deep Foundation Evaluation, San Francisco, CA. Investigation of the integrity of a deep foundation system supporting a high-rise building as part of an insurance dispute.

Cathedral of Christ the Light, Oakland, CA. Forensics evaluation of the Cathedral and Dependency Building to verify the adequacy of the structural systems including the base isolated Cathedral lateral system.

Oil Search, Papua New Guinea. Damage evaluation and assessment of repair alternatives for refineries, buildings, processing plants and bridges after an earthquake.

Port of Santa Cruz, CA. Investigated into tsunami-driven damage to the port infrastructure and opined on scope of repair.

Structural Design and Seismic Retrofit

Richards Boulevard State Office Complex, Sacramento, CA. Structural engineering services for a Design-Build delivery of a new office complex on a 17-acre state-owned site. The 1.25-million-gross-square-foot development includes three mid-rise office buildings and a high-rise office building consisting of a 5-story podium and a 24-story office tower.

Mission Rock, San Francisco, CA. Structural engineering for two office towers totaling nearly 600,000 square feet. Parcel B incorporates outdoor terraces and rooms to allow for an indoor and outdoor work environment.

144 Townsend Retrofit, San Francisco, CA. Seismic retrofit of a historic concrete warehouse undergoing adaptive reuse to office space.

City College of San Francisco, Alemany Campus, San Francisco, CA. Seismic retrofit and renovation of a 3-story, 40,000-square-foot classroom building. Scope included evaluation of the existing structure and design of a new reinforced concrete pile cap and micropile foundation system.

Select Papers, Lectures and Publications

"Compelling Storytelling Using Forensic Engineering Visualization in Complex Construction Cases," Construction Super Conference, Hollywood, FL, November 2023 (co-presenter)

"Home Remodeling Claims: Legal and Technical Considerations," Orange County Bar Association webinar, May 3, 2023 (co-presenter)

"Evaluation of Seismic Demand on Bridge Nonstructural Components Using ASCE 7," Fifth International Workshop on the Seismic Performance of Non-Structural Elements (SPONSE) Proceedings, Palo Alto, CA, December 2022 (co-author)

"Learning from Design-Busts: Thoughts on Risk Mitigation for the Design Consultant in the Design-Build Arena," 2022 ASCE Forensic Congress, Denver, CO, November 2022 (co-presenter)

"Lessons Learned from Recent Design-Build Disputes & Risk Mitigation Strategies for Contractors and Designers," 2022 DBIA Convention, Las Vegas, NV, November 2022 (co-presenter)

"Design-Build Standard of Care," ABA Construction Law Division 1 Toolbox Talk Series, October 2022 (panelist)

"Rethinking the Role of Technical Experts in Pre-Litigation Dispute Resolution," Forum on Construction Law, American Bar Association, June 2022 (co-author)

"Adjacent Construction Claims—Technical and Legal Framework in California," Orange County Bar Association webinar, October 2021 (co-presenter)

"Adjacent Construction Damage: Overview, Code Requirements, and Best Practices," 2021 SEAOC Convention, San Diego, CA, September 2021 (co-author and presenter)

"A Versatile Numerical Model for the Nonlinear Analysis of Squat-to-Tall Reinforced Concrete Shear Walls," Engineering Structures, September 2021 (co-author)

"Lessons Learned from Building Performance and Earthquake Response and Recovery from 2018 Anchorage, AK Earthquake," 2019 National Council of Structural Engineers Association (NCSEA), Structural Engineering Summit, Anaheim, CA, November 2019 (co-presenter)

"A Damage-Plasticity Approach for Deterioration Modeling of Steel Components," 11th National Conference on Earthquake Engineering, Los Angeles, CA, June 2018 (presenter)

"Deterioration Modeling of Steel Columns Under Variable Axial Forces," Structures Congress 2018, Fort Worth, TX, April 2018 (author and presenter)

"A Damage Model for Structures with Degrading Response," Earthquake Engineering and Structural Dynamics, August 2017 (author)

"Damage Assessment and Collapse Simulation of Structures under Extreme Loading Conditions," Doctoral Thesis, University of California, Berkeley, May 2017 (author)

"A Damage Model for the Simulation and Assessment of Structures with Degrading Element Behavior," Structures Congress, April 2017 (author and presenter)

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"Earthquake Response Evaluation with a New Hysteretic Model," 16th World Conference on Earthquake Engineering, Santiago, CHL, January 2017 (co-author)

"Diseño Sísmico de Edificios Resilientes: Aplicaciones de un Nuevo Modelo de Daño" (in Spanish), 24th Argentine Structural Engineering Conference, Buenos Aires, Argentina, September 2016 (co-author)

Website Sample

CONTACT

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