



Professor Dr. Pusit Lertwattanakul

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Specializations

- Creative industrial waste management
- Use of industrial by-products in construction and building materials
- Concrete technology and cementitious materials
- Building design and building technology

Education

- Ph.D. in Civil Engineering, New Jersey Institute of Technology, USA, 1999
- MBA, Thammasat University, Thailand, 2006
- Bachelor of Engineering, Chulalongkorn University, Thailand, 1992

Professional Experience

- Thornton Tomasetti Inc., New York, USA (1999-2003)
- Asian Engineering Consultants Co., Ltd., Thailand (1995)
- Siphya Construction Co., Ltd., Thailand (1992-1993)

Publications

Book

- Lertwattanakul, P. and Makul, N. (2017). *Innovative Cement and Concrete in Modern Construction*. Thammasat University Press, Bangkok.
- Lertwattanakul, P. (2008). *Fracture Properties of Concrete: Evaluation Based on Bend Beam Method*. Thammasat University Press, Bangkok.

Journal Articles

- Masuwan, K., Lertwattanakul, P. (2021). A comparison of innovative building design with implementation of Form-Based Codes: Case studies of Denver (USA), Hong Kong (HKSAR) and Phuket (Thailand). *Journal of Architecture/ Planning Research and Studies (JARS)*, 18(1), 21-40.
- Masuwan, K., Lertwattanakul, P. (2020). Incorporating Form-Based Codes into the design-based approach to historic building conservation in Phuket, Thailand. *Sustainability*, 12(9), 3859-3875.
- Park, C., Tantiyasawasdikul, K., Evans, S., Lertwattanakul, P. (2019). Innovation catalysts for industrial waste challenges: Sri Lankan and Thai cases. *Procedia Manufacturing*, 33, 570-577.
- Lertwattanakul, P., Sua-iam, G., Makul, N. (2018). Effects of calcium carbonate powder on the fresh and hardened properties of self-consolidating concrete incorporating untreated rice husk ash. *Journal of Cleaner Production*, 172, 3265- 3278.

Journal Articles (cont.)

- Pokawanavit, T., Lertwattanakruk, P. (2017). Properties of composite panel made from waste paper and glass fiber for applications in building. *KMUTT Research and Development Journal*, 40(2), 203-216.
- Lertwattanakruk, P., Suntijio, A. (2015). Properties of natural fiber cement materials containing coconut coir and oil palm fibers for residential building applications. *Construction and Building Materials*, 94, 664-669.
- Lertwattanakruk, P., Masuwan, K. (2015). Investigation of sound insulation properties of fiber cement board containing natural fibers. *KMUTT Research and Development Journal*, 38(1), 71-86.
- Photchananuwat, N., Lertwattanakruk, P. (2015). Design guidelines of temporary prefabricated house for disaster rehabilitation in Thailand. *Journal of KMUTNB*, 25 (2), 191-202.
- Chatveera, B., Lertwattanakruk P. (2014). Evaluation of nitric and acetic acid resistance of cement mortars containing high-volume black rice husk ash. *Journal of Environmental Management*, 113, 365-373.
- Lertwattanakruk, P., Makul, N. (2014). Sound absorption property of cement block containing rice husk ash. *KMUTT Research and Development Journal*, 37(1), 17-32.
- Lertwattanakruk, P., Makul, N., Siripattarapivat, C. (2012). Utilization of ground waste seashells in cement mortars for masonry and plastering. *Journal of Environmental Management*, 111, 133-141.
- Kittiwarat, S., Lertwattanakruk, P. (2012). Strategies for construction waste reduction in small residential buildings. *Journal of Architecture/Planning Research and Studies (JARS)*, 9(2), 81-94.
- Lertwattanakruk, P., Suntijitto, A. (2012). Properties of natural fiber cement materials containing coconut coir and oil palm fibers for manufacture of building materials. *Journal of Architecture/Planning Research and Studies (JARS)*, 9(1), 113-124.
- Lertwattanakruk, P., Choksiriwanna, J. (2011). The physical and thermal properties of adobe brick containing bagasse for earth construction. *International Journal of Building, Urban, Interior and Landscape Technology (BUILT)*, 1(1), 53-62.
- Chatveera, B., Lertwattanakruk, P. (2011). Durability of conventional concretes containing black rice husk ash. *Journal of Environmental Management*, 92(1), 59-66.
- Lertwattanakruk, P., Kieatkongmanee, N. (2010). Utilization of sound absorbing materials to mitigate road traffic noise below the Bangkok mass transit system (BTS) skytrain. *Research and Development Journal of the Engineering Institute of Thailand*, 21(4), 46-56.

Journal Articles (cont.)

- Lertwattanakruk, P., Siripattarapivat, C. (2010). Compressive strength and drying shrinkage properties of masonry mortar containing ground seashells. *Research and Development Journal of the Engineering Institute of Thailand*, 21(4), 18-27.
- Chatveera, B., Lertwattanakruk, P. (2009). Use of ready-mixed concrete plant sludge water in concrete containing an additive or admixture. *Journal of Environmental Management*, 90(5),1901-1908.
- Chatveera, B., Lertwattanakruk, P. (2009). Evaluation of sulfate resistance of cement mortars containing black rice husk ash. *Journal of Environmental Management*, 90(3),1435-1441.
- Chatveera, B., Lertwattanakruk, P. (2008). Properties of lightweight plastering cement containing biomass ash. *Research and Development Journal of the Engineering Institute of Thailand*, 19(1), 9-16.
- Lertwattanakruk, P., Tungsirisakul, J. (2007). Effect of natural materials on properties of adobe brick for earth construction. *Journal of Architecture/Planning Research and Studies (JARS)*, 5(1), 185-199.
- Lertwattanakruk, P. (2007). Bend beam method for determining fracture properties of concrete: II. Performance of the fracture models. *Research and Development Journal of the Engineering Institute of Thailand*, 18(4), 17-31.
- Chatveera, B., Lertwattanakruk, P., Makul, N. (2006). Effects of sludge water from ready-Mixed concrete plant on properties and durability of concrete. *Cement and Concrete Composites*, 28(5), 441-450.
- Lertwattanakruk, P. (2006). Bend beam method for determining fracture properties of concrete: I. Nonlinear fracture mechanics model," *Research and Development Journal of the Engineering Institute of Thailand*, 17(1), 39-51.

Professional Projects

- Shanghai Plaza 66, Pu Xi, Shanghai, China (2000). The mixed-use project consisted of one 66-story, 285-meter office tower, one 48-story office tower and a 5-story retail podium for a total of 280,000 square meters.
- Bank of America Trading Facility, Charlotte, North Carolina (2000). In this project, the 160-foot transfer trusses, using the king posts and tensioned cables, pick up a roof and mezzanine to create a 180-foot by 160-foot clear span trading floor.
- Harborside Financial Center Plaza 7, Jersey City, New Jersey (2000). The project consists of 55-story steel-framed, 800-foot high office tower including office space with 6 levels of podium parking in a total of 2 million square feet.
- Computer Associates Headquarters, Islandia, New York (2001). The project consists of 8-story office building, 2-story cafeteria and reception center, and bridges.
- 300 Madison Avenue, New York, New York (2001). A 38-story steel-framed office building, peer review and specialized analyses.
- 55 Water Street, New York, New York (2001). A rehabilitation and renovation project of the existing 12-story steel framed building.
- Harborside Financial Center Plaza 4, Jersey City, New Jersey (2001). A 38-story steel-framed office tower including six levels of parking in 1.2 million square feet.
- The University of Northern Iowa Stadium, Cedar Falls, Iowa (2002). Rehabilitation of the steel-truss domed football arena, peer review and specialized analyses.
- Long Island Jewish Hospital, Glen Oaks, New York (2002). This project consists of two 3-story steel-framed buildings, Activity Therapy Center and In-Patient building.
- Xi Zhi Meng Complex, Beijing, China (2002). The mixed-use project consists of three 29-story concrete-framed office towers, one 19-story hotel, a 7-story retail podium with atrium above grade and 3 levels of below-grade parking, for a total area of approximately 2.4 million square feet.
- Guangzhou Cultural Plaza, Guangzhou, China (2003). The 4.9 million square-foot complex includes two office towers of 43 and 27 stories, a 31-story hotel tower and a 6-story podium. The podium, with two stories above grade and four below, is comprised of a retail area and a cultural area featuring a library, a theater and a public arts center.
- West Midtown Intermodal Ferry Terminal, New York, New York (2003). A 28,000 square feet ferry terminal on Pier 79 at 39th Street, wrapping around the ventilating towers of the Lincoln Tunnel.
- Green Thammasat University Project Phase 1-2, Thammasat University, Prachan Campus, Bangkok, Thailand (2005). Campus renovation project. Structural design of landscape elements, civil engineering works and infrastructure systems.