



## Associate Professor Chalermwat Tantasavadi

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## Specializations

- Energy-efficient and environmentally friendly design
- Passive cooling and natural ventilation
- Adaptive and flexible generic building design
- Sustainable development and design for climate change

## Educations

- Master of Science in Architecture Studies (SMArchS), Massachusetts Institute of Technology, USA, 1998
- Bachelor of Architecture (B. Arch), Chulalongkorn University, Thailand, 1993

## Professional Experience

- Faculty of Architecture and Planning, Thammasat University, Thailand (2000 - Present)
- Architect, Hewitt Architects, Seattle, USA (1999 - 2000)
- Architect, Terra Co. Ltd., Bangkok, Thailand (1993 - 1995)

## Publications

### ● In International Refereed Journal

- Tantasavadi, C., Srisuwan, W., & Inprom, N. (2021). Effect of opening on environmental conditions of a naturally ventilated stable in Thailand. *Building and Environment*, 200, 107984.
- Tantasavadi, C., & Inprom, N. (2021). Impact of design features on natural ventilation of open-air malls in Thailand. *International Journal of Low-Carbon Technologies*, 16(2), 488-501.
- Tantasavadi, C., Srebric, J., & Chen, Q. (2001). Natural ventilation for suburban houses in Thailand. *Energy and Buildings*, 33, 815-824.

### ● In Refereed Journal

- Tantasavadi, C., & Inprom, N. (2019). Image perception of future tropical houses in Thailand. *BUILT*, 14, 17-25.
- Wankanapon, P., Chindapol, S., & Tantasavadi, C. (2013). Environmental impact assessment for typical and innovative housing construction materials in Thailand. *BUILT*, 2, 43-53.
- Wankanapon, P., Suwanchaiskul, A., Srisuwan, P., & Tantasavadi, C. (2012). ประโยชน์ของการใช้แผงเซลล์แสงอาทิตย์แบบติดตั้งบนหลังคา: กรณีศึกษาอาคารที่พักอาศัยต้นทุนต่ำ [Benefits of roof-mounted solar cells for low-cost residential buildings]. *Journal of Architectural/Planning Research and Studies*, 9(2), 49-61.
- Tantasavadi, C., Chenvidyakarn, T., & Pichaisak, M. (2011). Integrative passive design for climate change: A new approach for tropical house design in the 21st century. *BUILT*, 1, 5-12.

## Publications

### ● In Refereed Journal (cont.)

- Tantasavasdi, C., Sreshthaputra, A., Suwanchaiskul, A., & Pichaisak, M. (2009). Predicting airflow in naturally-ventilated generic houses. *Journal of Architectural/Planning Research and Studies*, 6(1), 33-46.
- Tantasavasdi, C., Jareemit, D., Suwanchaiskul, A., & Naklada, T. (2008). Evaluation and design of natural ventilation for houses in Thailand. *Journal of Architectural/Planning Research and Studies*, 5(1), 85-98.
- Wanabongse, P., Srisuwan, T., Tantasavasdi, C., Boonyakiat, J., & Bavornkitti, S. (2007). การปล่อยแก๊สเรดอนจากวัสดุก่อสร้าง [Emission of radon gas from building materials]. *Thammasat Medical Journal*, 7(1), 19-22.
- Jareemit, D., Sreshthaputra, A., Yimprayoon, C., & Tantasavasdi, C. (2006). โรคระบบทางเดินหายใจ: ความเสี่ยงร้ายแรงจากการออกแบบและจัดการอาคารสำนักงานที่ไม่เหมาะสม [Respiratory disease: The fatal risk caused by inappropriate design & operation of office buildings]. *Journal of Architectural/Planning Research and Studies*, 4(2), 3-19.
- Tantasavasdi, C., & Jareemit, D. (2005). การระบายอากาศโดยวิธีธรรมชาติ: แนวทางการออกแบบผังอาคารชุดพักอาศัยประเภทอาคารสูง [Natural ventilation: Planning design guidelines for residential high-rises]. *Journal of Architectural/Planning Research and Studies*, 3, 23-36.
- Tantasavasdi, C. (2002). การคำนวณพลศาสตร์ของไหลเพื่อการออกแบบการระบายอากาศโดยวิธีธรรมชาติ: แนวทางสำหรับบ้านในประเทศไทย [CFD approach towards natural ventilation design: Guidelines for houses in Thailand]. *Journal of Architectural Research and Studies*, 1, 45-63.

### ● In Refereed Conference Proceedings

- Arttamart, S., & Tantasavasdi, C. (2020). การระบายอากาศโดยวิธีทางธรรมชาติด้วยท่อดักลม ร่วมกับการระบายอากาศแบบข้ามฟากในอาคารแถว [Natural ventilation with wind catchers combined with cross ventilation in row buildings]. *BERAC 11: Built Environment Research Associates Conference*, (pp. 876-883). Pathumthani, Thailand: Thammasat University.
- Udomlap, P., & Tantasavasdi, C. (2020). รูปแบบของอาคารที่มีผลต่อการไหลเวียนของอากาศบริเวณสถานีรถไฟ [Effect of building configurations on the airflow around elevated train stations]. *BERAC 11: Built Environment Research Associates Conference*, (pp. 884-891). Pathumthani, Thailand: Thammasat University.
- Phromtan, S., & Tantasavasdi, C. (2019). อิทธิพลของลักษณะต้นไม้ต่อความเข้มข้นของ PM2.5 [The impact of tree morphology on outdoor PM2.5 concentration]. *BERAC 10: Built Environment Research Associates Conference*, (pp. 478-484). Pathumthani, Thailand: Thammasat University.
- Srisuwan, W., & Tantasavasdi, C. (2018). การออกแบบโรงเรือนเลี้ยงม้าเพื่อความสบายเชิงอุณหภูมิภาพ [Stable design for horse thermal comfort]. *BERAC 9: Built Environment Research Associates Conference*, (pp. 134-140). Pathumthani, Thailand: Thammasat University.

## Publications

### ● In Refereed Conference Proceedings (cont.)

- Sakchalathorn, J., & Tantasavasdi, C. (2017). การศึกษาเชิงตัวเลขของฝนที่ถูกลมพัดเพื่อออกแบบเปลือกอาคาร [Numerical study of wind-driven rain for façade design]. *BERAC 8: Built Environment Research Associates Conference*, (pp. 101-110). Pathumthani, Thailand: Thammasat University.
- Yoksap, K., & Tantasavasdi, C. (2016). การระบายอากาศธรรมชาติในหอผู้ป่วยรวมของโรงพยาบาล [Natural ventilation in multiple-beds ward of hospital]. *BERAC 7: Built Environment Research Associates Conference*, (pp. 11-17). Pathumthani, Thailand: Thammasat University.
- Tienchutima, C., Chungloo, S., Tantasavasdi, C., & Srisutapan, A. (2009). A design guideline for high-rise condominium with natural ventilation. *Proceedings of ISACS 2009 Symposium* [CD-ROM]. Chiang Mai, Thailand.
- Wongwatcharapaiboon, J., Sreshthaputra, A., Tantasavasdi, C., Jareemit, D., & Chungloo, S. (2008). ประสิทธิภาพของปล่องแสงอาทิตย์ [Efficiency of solar chimney]. *Proceedings of the 4th Conference on Network of Thailand* [CD-ROM]. Nakornpathom, Thailand.
- Tantasavasdi, C., Jareemit, D., Suwanchaiskul, A., & Naklada, T. (2007). Natural ventilation: Evaluation and design of houses in Thailand. *Proceedings of the 3rd Conference on Network of Thailand* [CD-ROM]. Bangkok, Thailand.
- Tantasavasdi, C. (2003). Water: Element for physical and psychological cooling in modern Thai architecture. In R. King, O. Panin, & C. Parin (Eds.), *Proceedings of an International Symposium*, (pp. 249-255). Bangkok, Thailand: Kasetsart University Press.

### ● Other Publications

- Tantasavasdi, C. (2013). บ้านประหยัดพลังงานแห่งอนาคต: ทบทวนวิถีธรรมชาติจากอดีต [Future energy-efficient house: Reconsidering passive approach from the past]. *Journal of Government Housing Bank*, 72, 98-103. Bangkok, Thailand, Government Housing Bank.
- Tantasavasdi, C. (2011). การออกแบบที่พึ่งพาธรรมชาติเพื่อรองรับการเปลี่ยนแปลงทางสภาพภูมิอากาศ: โรงเรียนอนุรักษ์พลังงานแห่งอนาคต [Passive design for climate change: Future energy efficient]. Pathumthani, Thailand: Thammasat University
- Tantasavasdi, C. (2011). นวัตกรรมและผลิตภัณฑ์ที่เป็นมิตรต่อสิ่งแวดล้อม [Environmental-friendly innovation and products]. *House and City*, 12, 33-37. Bangkok, Thailand: National Housing Authority.
- Tantasavasdi, C. (2008). การออกแบบโดยวิถีธรรมชาติและแนวความคิดอาคารสีเขียว [Passive design and green building concept]. *ASA*, 10:51-11:51, 92-99. Bangkok, Thailand: Association of Siamese Architects.
- Tantasavasdi, C., & Arkaraprasertkul, N. (Eds.). (2004). *Architectural engineering: Towards practical integration*. Bangkok, Thailand: Conform.
- Tantasavasdi, C. (2004). เครื่องช่วย (สลาย) ฝันสถาปนิก: การคำนวณพลศาสตร์ของไหล [Eliminating architects' (day) dream: Computational fluid dynamic]. *Pleasant Built*. Bangkok, Thailand: Association of Siamese Architects, 8-1 - 8-10.

## PROJECTS

### ● Research Projects

- *Passive cooling for semi-outdoor commercial space.* (research fund from Thammasat Design School, Thailand), 2020.
- *Innovative house for the future.* (research fund from Supalai Public Company Limited, Thailand), 2017.
- *Relocation of governmental office.* (research fund from the Treasury Department, Thailand), 2015.
- *Energy efficient and low cost house measurement and solar cell installment.* (research fund from the National Housing Authority, Thailand), 2013.
- *Solar energy as an alternative and renewable energy source for electricity production in the water treatment system of an NHA project.* (research fund from the National Housing Authority, Thailand), 2012.
- *Environmentally friendly innovation and finished goods applications to support NHA's future housing development business model.* (research fund from the National Housing Authority, Thailand), 2011.
- *Energy conservation measures in commercial buildings for climate change.* (research fund from the Energy Policy and Planning Office, Thailand), 2011.
- *The synthesis of knowledge related to the housing design and construction technology for application to NHA's projects.* (research fund from the National Housing Authority, Thailand), 2010.
- *Low-cost energy-efficient house for living in global warming conditions.* (research fund from the National Housing Authority, Thailand), 2010.
- *Guidelines for evaluation and design of natural ventilation for houses.* (research fund from the Department of Alternative Energy Development and Efficiency, Thailand), 2006.
- *Creating design guidelines for safe and healthy buildings in Thailand.* (research fund from the Commission on Higher Education, Thailand), 2005.

### ● Consultancy Projects

- Energy/passive design consultant for
  - *Central Village Outlet Mall Project*, Bangkok, Thailand, 2018.
  - *Minus-5 Housing Project*, Bangkok, Thailand, 2018.
  - *Saladaeng Outdoor Shopping Mall Project*, Bangkok, Thailand, 2015.
  - *Central Eastville Outdoor Shopping Mall Project*, Bangkok, Thailand, 2014.
  - *Central Srinakarin Outdoor Shopping Mall Project*, Bangkok, Thailand, 2008.
- Environmental impact consultant for
  - *Noble around Ari Project*, Bangkok, Thailand, 2019.
  - *Noble State 39 Project*, Bangkok, Thailand, 2019.
- Head of the consulting team, *Energy-efficient and Environmentally Friendly Buildings Labeling Project*, Department of Alternative Energy Development and Efficiency (DEDE), Thailand, 2008-2009.