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## Specializations

- Energy-Efficient Building Design
- Ventilation and Air Quality
- Urban Microclimate Study

## Educations

- Ph.D. in Architectural Engineering (Mechanical Option), The Pennsylvania State University, USA, 2014
- Master in Architecture, Thammasat University, 2005
- Bachelor of Science in Architecture (2<sup>nd</sup> Class Honors), Thammasat University, 2003

## Professional Experience

- Lecturer at Faculty of Architecture and Planning, Thammasat University (Rangsit campus) (2006-present)
- Research Assistant, ASHARE RP-1596 project “Ventilation and Indoor Air Quality in Retail Stores” (2011-2012)
- Research Assistant, Faculty of Architecture and Planning, Thammasat University (2004-2006)

## Publications

International Journal (Online in Scopus/ISI databases)

- Srivanit M., Jareemit D., Liu J. (2022) A Classification Urban Precinct Ventilation Zones Using Key Indicators of Spatial Form: Case Study in Bangkok. In: Proceedings of 2021 4th International Conference on Civil Engineering and Architecture. Lecture Notes in Civil Engineering, vol 201. Springer, Singapore. [https://doi.org/10.1007/978-981-16-6932-3\\_39](https://doi.org/10.1007/978-981-16-6932-3_39)
- An, F., Liu, J., Lu, W. & Jareemit, D. (2022). Comparison of exposure to traffic-related pollutants on different commuting routes to a primary school in Jinan, China. Environ Sci Pollut Res. <https://doi.org/10.1007/s11356-021-18362-w>
- An, F., Liu, J., Lu, W., & Jareemit, D. (2021). A review of the effect of traffic-related air pollution around schools on student health and its mitigation. Journal of Transport & Health, 23, 101249. <https://doi.org/10.1016/j.jth.2021.101249>
- Lohwanitchai K, & Jareemit D. (2021) Modeling Energy Efficiency Performance and Cost-Benefit Analysis Achieving Net-Zero Energy Building Design: Case Studies of Three Representative Offices in Thailand. *Sustainability*. 2021; 13(9):5201. <https://doi.org/10.3390/su13095201>

## Publications

International Journal (Online in Scopus/ISI databases)

- Jareemit, D., & Canyookt, P. (2021). Residential cluster design and potential improvement for maximum energy performance and outdoor thermal comfort on a hot summer in Thailand. *International Journal of Low-Carbon Technologies*, 16(2), 592-603. <https://doi.org/10.1093/ijlct/ctaa091>
- Inprom, N., & Jareemit, D. (2021). Efficient Envelope Designs to Maximize Residential Cooling Energy Savings in Bangkok Neighborhoods . *Nakhara : Journal of Environmental Design and Planning*, 20, Article 103. Retrieved from <https://ph01.tci-thaijo.org/index.php/nakhara/article/view/239912>
- Srivanit, M., & Jareemit, D. (2020). Modeling the influences of layouts of residential townhouses and tree-planting patterns on outdoor thermal comfort in Bangkok suburb. *Journal of Building Engineering*, 101262. <https://doi.org/10.1016/j.jobee.2020.101262>
- Jareemit, D. and Limmeechokchai, B. (2019) Impact of homeowner's behaviours on residential energy consumption in Bangkok, Thailand. *Journal of Building Engineering*, 21, pp. 328-335
- Jareemit, D. and Srebric, J. (2015). A characterization of time-dependent air infiltration rates in retail stores using calibrated multi-zone model. *Science and Technology for the Built Environment* 21 (4), pp. 420-428.
- Zaatari, M., Nirlo, E., Jareemit, D., Crain, N., Srebric, J., and Siegel, J. (2014). Ventilation and indoor air quality in retail stores: A critical review (RP 1596). *HVAC and R Research*, 20(2), pp. 276-294. <https://doi:10.1080/10789669.2013.869126>

National Journal (Online in Thai journal: <https://tci-thaijo.org/>)

- Inprom, N., & Jareemit, D. (2021). Efficient Envelope Designs to Maximize Residential Cooling Energy Savings in Bangkok Neighborhoods . *Nakhara : Journal of Environmental Design and Planning*, 20, Article 103. Retrieved from <https://ph01.tci-thaijo.org/index.php/nakhara/article/view/239912>
- Sukseeda, J. and Jareemit, D. (2019). Guideline for investment in building enclosure retrofit to improve home energy efficiency based on Thailand energy and environmental assessment method. *Journal of Architectural/ Planning Research and Studies*, Vol.16(1), pp. 69-81.
- Jareemit, D. (2018). Numerical Simulation of moisture transfer behaviors in residential walls in hot and humid region. *Journal of Architectural/ Planning Research and Studies*, Vol.15(2), pp. 153-172.
- Jareemit, D. Julpanwattana, P., and Choruengwiwat, J. (2017) Impact of outdoor air exchange rates on sleep quality and the next-day performance with application of energy recovery ventilator. *Journal of Architectural/ Planning Research and Studies*, Vol.14 (1), pp. 21-32.
- Jareemit, D. A calculation of air exchange rate for modern Thai houses. (2015) *Journal of Architectural/ Planning Research and Studies*, Vol.12 (2)2, pp. 39-51.
- Jareemit, D. and Inprom, N. (2015). Significant parameters in building energy simulation: A review. *Journal of Architectural/ Planning Research and Studies*, Vol.12 (1)2, pp. 1-14.

## Publications

National Journal (Online in Thai journal: <https://tci-thaijo.org/>)

- Tantasavasdi, C., Jareemit, D., Suwanchaiskul, A., & Naklada, T. (2007). Evaluation and design of natural ventilation for houses in Thailand. *Journal of Architectural/Planning Research and Studies*, Vol.5(1), pp. 85-98.
- Jareemit, D. Shu, S. and Srebric, J. (2014). A field investigation of air infiltration rates through automatic entrance doors in retail buildings. *BUILT Journal* Vol.4. pp. 51-59.
- Jareemit, D. and Shu, S. (2014). An investigation of the impact of building entrance vestibule on indoor humidity using a calibrated multi-zone model. *BUILT Journal* Vol.3. pp. 23-31.
- จิฉิพร วงศ์วิชรโพนุลย์ อรรถจัน เศรษฐบุตร เฉลิมวัฒน์ ดันตสวัสดิ์ ดารณี จาริมิตร และ สุดาภรณ์ ชู่งลู่. (2552). ศักยภาพการระบายอากาศของปล่องแสงอาทิตย์ในประเทศไทย. *วารสารวิจัยพลังงาน*, ปีที่ 6 ฉบับที่ 2552/1, หน้า 92-105.
- Jareemit, D., Sreshthaputra, A., Yimprayoon, C., & Tantasavasdi, C. (2006). 'Respiratory diseases:' the fatal risk caused by inappropriate design & operation of office buildings (in Thai). *Journal of Architectural Research and Studies*, Vol.4(2). pp. 1-19.
- Tantasavasdi, C., & Jareemit, D. (2005). Natural ventilation: Planning design guidelines for residential high-rises (in Thai). *Journal of Architectural Research and Studies*, Vol.3. pp. 21-36.

Conference Paper

- Srivanit M., Jareemit D., Liu J. (2022) A Classification Urban Precinct Ventilation Zones Using Key Indicators of Spatial Form: Case Study in Bangkok. In: *Proceedings of 2021 4th International Conference on Civil Engineering and Architecture. Lecture Notes in Civil Engineering*, vol 201. Springer, Singapore. [https://doi.org/10.1007/978-981-16-6932-3\\_39](https://doi.org/10.1007/978-981-16-6932-3_39)
- Supudomkul, B., Jareemit, D., Khanchaitit, P., Janjamla, T. (2020). A Readiness of Areas and Space Planning in Houses Supporting Emergency Services for Fall Injuries in The Elderly, *IOP Conf. Ser.: Mater. Sci. Eng.* 910 012017
- Lohwanitchai, K., Jareemit, D. (2020) Analysis in Integrated Design Potentials Achieving Nearly Zero Energy in Office Buildings in Bangkok Neighbourhood. *IOP Conference Series: Materials Science and Engineering* 910 (1), 012016
- Srivanit, M., & Jareemit, D. (2020). A comparison of diurnal variation of pavement albedo between vertical and horizontal surfaces under tropical climatic condition of Thailand. *IOP Conference Series: Materials Science and Engineering* 910 (1), 012011
- Jareemit, D., & Srivanit, M. (2020). Sensitivity Analysis of Designs of Row House Planning Influencing on Local Microclimate and Building's Cooling Energy Consumption in A Tropical City. *IOP Conference Series: Materials Science and Engineering* 910 (1), 012022
- Jareemit, D., & Srivanit, M. (2019). Effect of Street Canyon Configurations and Orientations on Urban Wind Velocity in Bangkok Suburb Areas. *IOP Conference Series: Materials Science and Engineering*, 690, 012006. <https://doi.org/10.1088/1757-899X/690/1/012006>

## Publications

### Conference Paper

- Srivanit, M. and Jareemit, D. (2019). Modelling the urban microclimate effects of street configurations on thermal environment in the residential townhouse of Bangkok. Proceeding of 1<sup>st</sup> International Congress on Recent Advances in Sciences and Technology, February 20-22, Koala Lumpur, Malaysia.
- Jareemit, D. (2017). A study on relationship among resident's energy saving habits and electricity bills in Thai households. Proceeding of Behavior, Energy & Climate Change Conference 2017 (BECC 2017). October 15-18. USA.
- Julpanwattana, P., Jareemit, D., and Choruenwiwat, J. (2017). Impact of energy recovery ventilation on the ventilation and CO<sub>2</sub> concentration in one bedroom condominium in Thailand. Proceeding of World Sustainable Built Environment Conference 2017. June 4-7. Hong Kong.
- Jareemit, D. and Limmeechokchai, B. (2017) Understanding resident's perception of energy saving habits in households in Bangkok. Energy Procedia 138, pp.247-252.
- Jareemit, D. and Limmeechokchai, B. (2017) Influence of changing behavior and high efficient appliances on household energy consumption in Thailand. Energy Procedia 138, pp, 241-246.
- Srivanit, M. and Jareemit, D. (2016). Human thermal perception and outdoor thermal comfort under shaded conditions in summer: A field study in an institutional campus. Proceeding of 6th International Conference on Sustainable Energy and Environment, Bangkok, Thailand.
- Jareemit, D., Inprom, N., and Sukseeda, J. (2016). Uncertainty distributions in architectural design parameters for detached houses located in Bangkok neighborhoods. Proceeding of ASHRAE and IBPSA-USA SimBuild 2016 Building Performance Modeling Conference, Salt Lake City, Utah, USA.
- Inprom, N., and Jareemit, D. (2016). Sensitivity index of building envelope on energy consumption for space cooling in Thai detached houses. Proceeding of Built Environment Research Associates Conference: BERAC7, Pathumthani, Thailand. 107-114.
- Sukseeda, J., and Jareemit, D. (2016). A relationship analysis between energy performance and achieving home energy rating system of detached house. Proceeding of Built Environment Research Associates Conference: BERAC7, Pathumthani, Thailand. 157-164.
- Jareemit, D., Shu, S., Howard-Reed, C., Alhafi, Z., and Srebric, J. (2014). Investigation of air exchange and occupancy rates in big-box retail buildings. Indoor Air 2014 -13<sup>th</sup> International Conference on Indoor Air Quality and Climate, pp. 219-226.
- Liu, J., Heidarinejad, M., Gracik, S., Jareemit, D., & Srebric, J. (2014). The impact of surface convective heat transfer coefficients on the simulated building energy consumption and surface temperatures. Indoor Air 2014 -13<sup>th</sup> International Conference on Indoor Air Quality and Climate, pp. 256-264.
- Jareemit, D., Shu, S., Heidarinejad, M., Kim, Y.S., Liu, J., Alhafi, Z. and Srebric, J. (2013). Evaluation of indoor mold growth relative to indoor humidity using a multi-zone modeling. Proceeding of the CLIMA 2013, Prague, Czech Republic.
- Jareemit, D., Sreshthaputra, A., Tantasavasdi, C., & Yimprayoon, C. (2006). Office building design guidelines for preventing airborne diseases. Poster presented at The 8th Symposium on Graduate Research, Khon Kaen University, Thailand.

## Research Projects

### Conference Paper

- Tantasavasdi, C., & Jareemit, D. (2006). Guidelines for evaluation and design of natural ventilation for houses.

### Current Projects

- Promoting Urban Ventilation and Air Quality by Urban Geometries Design (2020-present). แหล่งทุน ทุนรัฐบาลทางด้านวิทยาศาสตร์และเทคโนโลยี สำนักงานพัฒนาวิทยาศาสตร์และเทคโนโลยีแห่งชาติ
- Field Measurements and Modeling Microclimate Impacts of Urban Pavement Surfaces on Outdoor Thermal Comfort of an Institutional Campus แหล่งทุน กองทุนวิจัย มหาวิทยาลัยธรรมศาสตร์ ประจำปีงบประมาณ 2562
- A Comparison of Cooling Effectiveness of Different Shading Materials in Hot and Humid Climate (2019-present). แหล่งทุน กองทุนวิจัยคณะสถาปัตยกรรมศาสตร์และการผังเมือง มหาวิทยาลัยธรรมศาสตร์ ทุนวิจัยเพื่อมุ่งความเป็นเลิศทางวิชาการ ประจำปีงบประมาณ 2562

### Archived Projects

- Urban Planning and Environmental Design Strategies for Encouraging Transit-Oriented Development (TOD) (January 2015 - 1 December 2016) (Co-researcher)
- An Investigation of Moisture-Related Problems in Residential Wall Systems in Thailand (2017-2018) แหล่งทุน เงินกองทุนวิจัยงบประมาณแผ่นดิน มหาวิทยาลัยธรรมศาสตร์ ประจำปีงบประมาณ 2559
- An Evaluation a Cost-Effective and Energy-Efficient Retrofit in Thai Detached Houses (2016-2018) แหล่งทุน กองทุนวิจัยคณะสถาปัตยกรรมศาสตร์และการผังเมือง มหาวิทยาลัยธรรมศาสตร์ ทุนวิจัยเพื่อมุ่งความเป็นเลิศทางวิชาการ ประจำปีงบประมาณ 2558
- Crain, N., Nirlo, E., Zaatari, M., Hoisington, A., Urquidi, J., Shu, S., Kim, Y. S., Jareemit, D., Siegel, J. A., and Srebric, J. (2012). Ventilation and indoor air quality in retail stores. A Report for ASHARE No. RP-1596. University of Texas-Austin and Pennsylvania State University. (Co-researcher)
- An Investigation of Moisture-Related Problems in Residential Wall Systems in Thailand (2016-2018)
- An Evaluation a Cost-Effective and Energy-Efficient Retrofit in Thai Detached Houses (2016-2018)
- Future Home Project (2017)
- Urban Planning and Environmental Design Strategies for Encouraging Transit-Oriented Development (TOD) (2016)
- Make-Up Air Ventilation through ERV Unit to Improve Air Quality in One Bedroom Condominium (2016)
- Numerical Investigation of Air Infiltration Rates in Thai Detached Houses (2015)
- ASHARE RP-1596 project "Ventilation and Indoor Air Quality in Retail Stores" Be responsible in indoor CO2 concentration and ventilation rate assessment (2011-2012)
- Guidelines for Evaluation and Design of Natural Ventilation for Houses (2006)