



Assoc. Prof. Daranee Jareemit, Ph.D.

Faculty of Architecture and Planning, Thammasat University

www.tds.tu.ac.th

T. +66 (0) 2986 9434, +66 (0) 2986 9605-6

F. +66 (0) 2986 8067

E. jdaranee@gmail.com

 <https://orcid.org/0000-0001-9312-0367>

ScopusID: 56038729300

Specializations

- Energy-Efficient Building Design
- Ventilation and Air Quality
- Microclimate Responsive Design

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 (2nd 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)

- Leetongin, P., Inprom, N., Srivanit, M. & Jareemit, D. (in Press). Numerical Analysis on Effects of the Design Combinations of Surface Materials and Plants on Outdoor Thermal Conditions during Summer around a Single-Detached House, Nakhara : Journal of Environmental Design and Planning.
- Jareemit, D., Suwanchaisakul, A., & Limmeechokchai, B. (2022). Assessment of key financial supports for promoting zero energy office buildings investment in Thailand using sensitivity analysis. Energy Reports, 8, 1144-1153. Scopus. <https://doi.org/10.1016/j.egy.2022.07.086>
- Jareemit, D., & Srivanit, M. (2022). A Comparative Study of Cooling Performance and Thermal Comfort under Street Market Shades and Tree Canopies in Tropical Savanna Climate. Sustainability, 14(8), 4653. <https://doi.org/10.3390/su14084653>
- 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
- 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>

Publications

International Journal (Online in Scopus/ISI databases)

- 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>
- 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.jobe.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/>)

- Leetongin, P., Inprom, N., Srivanit, M. & Jareemit, D. (in Press). Numerical Analysis on Effects of the Design Combinations of Surface Materials and Plants on Outdoor Thermal Conditions during Summer around a Single-Detached House, *Nakhara : Journal of Environmental Design and Planning*.
- 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.

Publications

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

- 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)3. 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)3. pp. 1-14.
- 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.
- จิรัฐพร วงศ์วัชรไพบูลย์ อรรถจัน เศรษฐบุตร เฉลิมวัฒน์ ดันตสวัสดิ์ ดารณี จาริมิตร และ สุดาภรณ์ ชุ้งตุ้. (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
- Supudomkul, B., Jareemit, D., Khanchaitit, P., Janjamlha, 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

Publications

Conference Paper

- 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>
- 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 1st 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 CO₂ 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 -13th 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 -13th 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.

Research Projects

Conference Paper

- 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.
- 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)