



## DAFTAR PUSTAKA

- Allegrini, J., Dorer, V., & Carmeliet, J. (2012). Influence of the urban microclimate in street canyons on the energy demand for space cooling and heating of buildings. *Energy and Buildings*, 55, 823–832. <https://doi.org/10.1016/j.enbuild.2012.10.013>
- Braulio-Gonzalo, M., Bovea, M. D., & Ruá, M. J. (2015). Sustainability on the urban scale: Proposal of a structure of indicators for the Spanish context. *Environmental Impact Assessment Review*, 53, 16–30. <https://doi.org/10.1016/j.eiar.2015.03.002>
- Bruno bueno, Leslie norford, Julia hidalgo, G. P. (2012). The urban weather generator. *Journal of Building Performance Simulation*. <https://doi.org/https://doi.org/10.1080/19401493.2012.718797>
- Bueno, B., Roth, M., Norford, L., & Li, R. (2014). Computationally efficient prediction of canopy level urban air temperature at the neighbourhood scale. *Urban Climate*, 9, 35–53. <https://doi.org/10.1016/j.uclim.2014.05.005>
- Cai, Z., Demuzere, M., Tang, Y., & Wan, Y. (2022). The characteristic and transformation of 3D urban morphology in three Chinese mega-cities. *Cities*, 131(September), 103988. <https://doi.org/10.1016/j.cities.2022.103988>
- Chen, A., Yao, X. A., Sun, R., & Chen, L. (2014). Effect of urban green patterns on surface urban cool islands and its seasonal variations. *Urban Forestry and Urban Greening*, 13(4), 646–654. <https://doi.org/10.1016/j.ufug.2014.07.006>
- Clifton, K., Ewing, R., Knaap, G. J., & Song, Y. (2008). Quantitative analysis of urban form: A multidisciplinary review. *Journal of Urbanism*, 1(1), 17–45. <https://doi.org/10.1080/17549170801903496>
- Elinur. (2010). Perkembangan Konsumsi dan Penyediaan Energi dalam Perekonomian Indonesia. *Indonesian Journal of Agricultural Economics*, 1(1), 19–38.
- Gago, E. J., Roldan, J., Pacheco-Torres, R., & Ordóñez, J. (2013). The city and urban heat islands: A review of strategies to mitigate adverse effects. *Renewable and Sustainable Energy Reviews*, 25, 749–758. <https://doi.org/10.1016/j.rser.2013.05.057>
- Groat, L. N., & Wang, D. (2013). Architectural Research Methods (2 ed). John Wiley & Sons. <https://www.ptonline.com/articles/how-to-get-better-mfi-results>
- IEA. (2017). *World Energy Outlook 2017*. <https://doi.org/10.1787/weo-2017-en>
- Janesonia, K. I. (2018). Kajian Penyusunan Prinsip Perancangan dari Aspek Kenyamanan Termal pada Iklim Lembab Tropis Studi Kasus : Kota Surabaya pada Tipe Area Highrise Building, Midrise Building Dan Lowrise Building. *Institut Teknologi Bandung*.
- Javanroodi, K., Mahdavinejad, M., & Nik, V. M. (2018). Impacts of urban morphology on reducing cooling load and increasing ventilation potential in hot-arid climate. *Applied Energy*, 231(April), 714–746. <https://doi.org/10.1016/j.apenergy.2018.09.116>
- Javanroodi, K., Nik, V. M., & Mahdavinejad, M. (2019). A novel design-based optimization framework for enhancing the energy efficiency of high-rise office buildings in urban areas. *Sustainable Cities and Society*, 49(May), 101597. <https://doi.org/10.1016/j.scs.2019.101597>
- Jing, R., Wang, M., Zhang, R., Li, N., & Zhao, Y. (2017). A study on energy performance of 30 commercial office buildings in Hong Kong. *Energy and Buildings*, 144, 117–128. <https://doi.org/10.1016/j.enbuild.2017.03.042>
- Kavgic, M., Mavrogianni, A., Mumovic, D., Summerfield, A., Stevanovic, Z., & Djurovic-Petrovic, M. (2010). A review of bottom-up building stock models for



UNIVERSITAS  
GADJAH MADA

PENGARUH PARAMETER DENSITAS PERKOTAAN DAN GEOMETRI BANGUNAN PADA MORFOLOGI  
BLOK PERKOTAAN TERHADAP  
INTENSITAS PENGGUNAAN ENERGI

Neyman Pearson Tanari, Dr. Eng. Nedyomukti Imam Syafii, ST, M.Sc

Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

- energy consumption in the residential sector. *Building and Environment*, 45(7), 1683–1697. <https://doi.org/10.1016/j.buildenv.2010.01.021>
- Koch-Nielsen, H. (2002). *Stay Cool - A design Guide for The Built Environmnet in Hot Climates*. United Kingdom: THe Cromwell Press.
- Lee, G., & Jeong, Y. (2017). Impact of urban and building form and microclimate on the energy consumption of buildings: Based on statistical analysis. *Journal of Asian Architecture and Building Engineering*, 16(3), 565–572. <https://doi.org/10.3130/jaabe.16.565>
- Leng, H., Chen, X., Ma, Y., Wong, N. H., & Ming, T. (2020). Urban morphology and building heating energy consumption: Evidence from Harbin, a severe cold region city. *Energy and Buildings*, 224, 110143. <https://doi.org/10.1016/j.enbuild.2020.110143>
- Li, J., Wang, Y., & Xia, Y. (2022a). *A novel geometric parameter to evaluate the effects of block form on solar radiation towards sustainable urban design*. 84(February).
- Li, J., Wang, Y., & Xia, Y. (2022b). A novel geometric parameter to evaluate the effects of block form on solar radiation towards sustainable urban design. *Sustainable Cities and Society*, 84(June), 104001. <https://doi.org/10.1016/j.scs.2022.104001>
- Li, Y., Wang, D., Li, S., & Gao, W. (2021). Impact analysis of urban morphology on residential district heat energy demand and microclimate based on field measurement data. *Sustainability (Switzerland)*, 13(4), 1–17. <https://doi.org/10.3390/su13042070>
- Lima, I., Scalco, V., & Lamberts, R. (2019). Energy & Buildings Estimating the impact of urban densification on high-rise office building cooling loads in a hot and humid climate. *Energy & Buildings*, 182, 30–44. <https://doi.org/10.1016/j.enbuild.2018.10.019>
- Liu, K., Xu, X., Zhang, R., Kong, L., Wang, W., & Deng, W. (2023). Impact of urban form on building energy consumption and solar energy potential: A case study of residential blocks in Jianhu, China. *Energy and Buildings*, 280, 112727. <https://doi.org/10.1016/j.enbuild.2022.112727>
- Mangan, S. D., Koclar Oral, G., Erdemir Kocagil, I., & Sozen, I. (2021). The impact of urban form on building energy and cost efficiency in temperate-humid zones. *Journal of Building Engineering*, 33(May 2020), 101626. <https://doi.org/10.1016/j.jobe.2020.101626>
- Mao, J., Fu, Y., Afshari, A., Armstrong, P. R., & Norford, L. K. (2018). Optimization-aided calibration of an urban microclimate model under uncertainty. *Building and Environment*, 143(July), 390–403. <https://doi.org/10.1016/j.buildenv.2018.07.034>
- Marciotto, E. R., Oliveira, A. P., & Hanna, S. R. (2010). Modeling study of the aspect ratio influence on urban canopy energy fluxes with a modified wall-canyon energy budget scheme. *Building and Environment*, 45(11), 2497–2505. <https://doi.org/10.1016/j.buildenv.2010.05.012>
- Merlier, L., Kuznik, F., Rusaouën, G., & Salat, S. (2018). Derivation of generic typologies for microscale urban airflow studies. *Sustainable Cities and Society*, 36(September 2017), 71–80. <https://doi.org/https://doi.org/10.1016/j.scs.2017.09.017>
- Mirzabeigi, S., & Razkenari, M. (2022). Design optimization of urban typologies: A framework for evaluating building energy performance and outdoor thermal comfort. *Sustainable Cities and Society*, 76(April 2021), 103515. <https://doi.org/10.1016/j.scs.2021.103515>
- Natanian, J., & Auer, T. (2018). Balancing urban density, energy performance and environmental quality in the Mediterranean: A typological evaluation based on



UNIVERSITAS  
GADJAH MADA

PENGARUH PARAMETER DENSITAS PERKOTAAN DAN GEOMETRI BANGUNAN PADA MORFOLOGI  
BLOK PERKOTAAN TERHADAP  
INTENSITAS PENGGUNAAN ENERGI

Neyman Pearson Tanari, Dr. Eng. Nedyomukti Imam Syafii, ST, M.Sc

Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>  
photovoltaic potential. *Energy Procedia*, 152, 1103–1108.  
<https://doi.org/10.1016/j.egypro.2018.09.133>

Oh, M., Jang, K. M., & Kim, Y. (2021). Empirical analysis of building energy consumption and urban form in a large city: A case of Seoul, South Korea. *Energy and Buildings*, 245, 111046. <https://doi.org/10.1016/j.enbuild.2021.111046>

Oke, T. R. (1976). The distinction between canopy and boundary-layer urban heat Islands. *Atmosphere*, 14(4), 268–277.  
<https://doi.org/10.1080/00046973.1976.9648422>

Pichierri, M., Bonafoni, S., & Biondi, R. (2012). Satellite air temperature estimation for monitoring the canopy layer heat island of Milan. *Remote Sensing of Environment*, 127, 130–138. <https://doi.org/10.1016/j.rse.2012.08.025>

Purbandini, R. A. (2016). *Model Bangunan Rumah Tinggal Nyaman Termal di Madinatul Quran Jonggol, Bogor*. Universitas Gadjah Mada.

Rasyid, T. H. (2010). Perkembangan Konsumsi Dan Penyediaan Energi Dalam Perekonomian Indonesia\*. In *Indonesian Journal of Agricultural Economics* (Vol. 1, Issue 1, pp. 19–38).

Ratti, C., Baker, N., & Steemers, K. (2005). Energy consumption and urban texture. *Energy and Buildings*, 37(7), 762–776.  
<https://doi.org/10.1016/j.enbuild.2004.10.010>

Robinson, D., Haldi, F., Kämpf, J., Leroux, P., Perez, D., Rasheed, A., & Wilke, U. (2009). Citysim: Comprehensive micro-simulation of resource flows for sustainable urban planning. *IBPSA 2009 - International Building Performance Simulation Association 2009, July*, 1083–1090.

Roudsari, M. S., & Pak, M. (2013). Ladybug: A parametric environmental plugin for grasshopper to help designers create an environmentally-conscious design. *Proceedings of BS 2013: 13th Conference of the International Building Performance Simulation Association, December*, 3128–3135.  
<https://doi.org/10.26868/25222708.2013.2499>

Salvati, Agnese & Coch, H. (2021a). Urban climate and building energy performance in compact cities in Mediterranean climate, in: M. Palme, A. Salvati (Eds.), *Urban Microclim. Model. Comf. Energy Stud., Springer International Publishing*, 105–135. [https://doi.org/https://doi.org/10.1007/978-3-030-65421-4\\_6](https://doi.org/https://doi.org/10.1007/978-3-030-65421-4_6)

Salvati, Agnese & Coch, H. (2021b). Urban Climate and Building Energy Performance in Compact Cities in Mediterranean Climate. *Urban Microclimate Modelling for Comfort and Energy Studies*, 105–135. [https://doi.org/https://doi.org/10.1007/978-3-030-65421-4\\_6](https://doi.org/https://doi.org/10.1007/978-3-030-65421-4_6).

Sarbu, I., & Adam, M. (2014). Experimental and numerical investigations of the energy efficiency of conventional air conditioning systems in cooling mode and comfort assurance in office buildings. *Energy and Buildings*, 85, 45–58.  
<https://doi.org/10.1016/j.enbuild.2014.09.022>

Schirmer, P. M., & Axhausen, K. W. (2016). A multiscale classification of urban morphology. *Journal of Transport and Land Use*, 9(1), 101–130.  
<https://doi.org/10.5198/jtlu.2015.667>

Shareef, S. (2021). The impact of urban morphology and building's height diversity on energy consumption at urban scale. The case study of Dubai. *Building and Environment*, 194(November 2020), 107675.  
<https://doi.org/10.1016/j.buildenv.2021.107675>

Shareef, S., & Altan, H. (2022). Urban block configuration and the impact on energy consumption: A case study of sinuous morphology. *Renewable and Sustainable Energy Reviews*, 163(May), 112507. <https://doi.org/10.1016/j.rser.2022.112507>



**PENGARUH PARAMETER DENSITAS PERKOTAAN DAN GEOMETRI BANGUNAN PADA MORFOLOGI  
BLOK PERKOTAAN TERHADAP  
INTENSITAS PENGGUNAAN ENERGI**

UNIVERSITAS  
GADJAH MADA

Neyman Pearson Tanari, Dr. Eng. Nedyomukti Imam Syafii, ST, M.Sc

Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

- Steemers, K. (1907). Energy and the city: density, buildings and transport. *Journal of the American Medical Association*, XLIX(2), 107–110. <https://doi.org/10.1001/jama.1907.25320020011001c>
- Strømann-Andersen, J., & Sattrup, P. A. (2011). The urban canyon and building energy use: Urban density versus daylight and passive solar gains. *Energy and Buildings*, 43, 2011–2020. <https://doi.org/10.1016/j.enbuild.2011.04.007>
- Sugangga, M. (2018). Design Review Dengan Pendekatan Climate Sensitive Urban Design Studi Kasus : Terminal Terpadu Gedebage Teknopolis, Bandung. *Institut Teknologi Bandung*.
- Sugini. (2014). Kenyamanan Termal Ruang, Konsep dan Penerapan pada Desain. *Yogyakarta: Graha Ilmu*.
- Taleghani, M., Tenpierik, M., Van Den Dobbelen, A., & De Dear, R. (2013). Energy use impact of and thermal comfort in different urban block types in the Netherlands. *Energy and Buildings*, 67, 166–175. <https://doi.org/10.1016/j.enbuild.2013.08.024>
- Van Esch, M. M. E., Looman, R. H. J., & De Bruin-Hordijk, G. J. (2012). The effects of urban and building design parameters on solar access to the urban canyon and the potential for direct passive solar heating strategies. *Energy and Buildings*, 47, 189–200. <https://doi.org/10.1016/j.enbuild.2011.11.042>
- Wei, R., Song, D., Wong, N. H., & Martin, M. (2016). Impact of Urban Morphology Parameters on Microclimate. *Procedia Engineering*, 169, 142–149. <https://doi.org/10.1016/j.proeng.2016.10.017>
- Wong, N. H., Jusuf, S. K., Syafii, N. I., Chen, Y., Hajadi, N., Sathyanarayanan, H., & Manickavasagam, Y. V. (2011). Evaluation of the impact of the surrounding urban morphology on building energy consumption. *Solar Energy*, 85(1), 57–71. <https://doi.org/10.1016/j.solener.2010.11.002>
- Xu, G., Zhao, H., Li, J., Shi, Y., Feng, X., & Zhang, Y. (2023). Multivariate thermal environment data extraction and evaluation: A neighborhood scale case in Guangzhou, China. *Building and Environment*, 234(January), 110190. <https://doi.org/10.1016/j.buildenv.2023.110190>
- Xu, S., Li, G., Zhang, H., Xie, M., Mendis, T., & Du, H. (2023). Effect of Block Morphology on Building Energy Consumption of Office Blocks: A Case of Wuhan, China. *Buildings*, 13(3). <https://doi.org/10.3390/buildings13030768>
- Zhang, Q., Tian, Z., Ding, Y., Lu, Y., & Niu, J. (2019). Development and evaluation of cooling load prediction models for a factory workshop. *Journal of Cleaner Production*, 230, 622–633. <https://doi.org/10.1016/j.jclepro.2019.05.085>