

## REFERENCES

- Abeyundara, U. G. Y., Babel, S., & Gheewala, S. (2009). A matrix in life cycle perspective for selecting sustainable materials for buildings in Sri Lanka. *Building and Environment*, *44*(5), 997–1004. <https://doi.org/10.1016/j.buildenv.2008.07.005>
- Abhayawickrama, W. L. B. . (2017). *Strength characteristics of lightweight wall panels affecting construction loadbearing walls* [Unpublished bachelor's thesis]. University of Moratuwa.
- Aciu, C., Manea, D. L., Molnar, L. M., & Jumate, E. (2015). Recycling of Polystyrene Waste in the Composition of Ecological Mortars. *Procedia Technology*, *19*, 498–505. <https://doi.org/10.1016/j.protcy.2015.02.071>
- Akadiri, P. O., Olomolaiye, P. O., & Chinyio, E. A. (2013). Multi-criteria evaluation model for the selection of sustainable materials for building projects. *Automation in Construction*, *30*, 113–125. <https://doi.org/10.1016/j.autcon.2012.10.004>
- Alibaba, H. Z., & Özdeniz, M. B. (2004). A building elements selection system for architects. *Building and Environment*, *39*(3), 307–316. <https://doi.org/10.1016/j.buildenv.2003.09.010>
- Anastaselos, D., Giama, E., & Papadopoulos, A. M. (2009). An assessment tool for the energy, economic and environmental evaluation of thermal insulation solutions. *Energy and Buildings*, *41*(11), 1165–1171. <https://doi.org/10.1016/j.enbuild.2009.06.003>
- Arooz, F. R. (2019). *In-situ Mud-Concrete as a material for load-bearing walls and sustainable building practices* [Doctoral dissertation, University of Moratuwa]. Digital Library, University of Moratuwa. <http://dl.lib.mrt.ac.lk/handle/123/14906>
- Asan, H. (2006). Numerical computation of time lags and decrement factors for different building materials. *Building and Environment*, *41*(5), 615–620. <https://doi.org/10.1016/j.buildenv.2005.02.020>

- Asan, H., & Sancaktar, Y. S. (1998). Effects of wall's insulation thickness and position on time lag and decrement factor. *Energy and Buildings*, 28(3), 299–305. [https://doi.org/10.1016/s0378-7788\(98\)00030-9](https://doi.org/10.1016/s0378-7788(98)00030-9)
- Ayrilmis, N. (2007). Effect of fire retardants on internal bond strength and bond durability of structural fiberboard. *Building and Environment*, 42(3), 1200–1206. <https://doi.org/10.1016/j.buildenv.2005.11.017>
- Balaji, N. C., Mani, M., & Venkatarama Reddy, B. V. (2013). Thermal performance of the building walls. In *Preprints of the 1st IBPSA Italy conference* (pp. 1–7).
- Barker, T. J., & Zabinsky, Z. B. (2011). A multicriteria decision making model for reverse logistics using analytical hierarchy process. *Omega*, 39(5), 558–573. <https://doi.org/10.1016/j.omega.2010.12.002>
- Baskaran, K., Jayakody, J. R. U. C., & Sandaruwan, M. A. R. (2019). Study on Strength and Durability of Cellular Cement-Fly Ash Blocks. *MERCon 2019 - Proceedings, 5th International Multidisciplinary Moratuwa Engineering Research Conference*, 31–36. <https://doi.org/10.1109/MERCon.2019.8818683>
- Bhattacharjee, K., & Behera, B. (2018). Determinants of household vulnerability and adaptation to floods: Empirical evidence from the Indian State of West Bengal. *International Journal of Disaster Risk Reduction*, 31(January), 758–769. <https://doi.org/10.1016/j.ijdrr.2018.07.017>
- Cheng, V., Ng, E., & Givoni, B. (2005). Effect of envelope colour and thermal mass on indoor temperatures in hot humid climate. *Solar Energy*, 78(4 SPEC. ISS.), 528–534. <https://doi.org/10.1016/j.solener.2004.05.005>
- Chousidis, N., Rakanta, E., Ioannou, I., & Batis, G. (2015). Mechanical properties and durability performance of reinforced concrete containing fly ash. *Construction and Building Materials*, 101, 810–817. <https://doi.org/10.1016/j.conbuildmat.2015.10.127>
- Climate Change Secretariat of Sri Lanka. (2015). *National Adaptation Plan for Climate Change Impacts in Sri Lanka Climate Change*. Retrieved from

[https://www4.unfccc.int/sites/NAPC/Documents NAP/National Reports/National Adaptation Plan of Sri Lanka.pdf](https://www4.unfccc.int/sites/NAPC/Documents%20NAP/National%20Reports/National%20Adaptation%20Plan%20of%20Sri%20Lanka.pdf)

Coppola, B., Courard, L., Michel, F., Incarnato, L., & Di Maio, L. (2016). Investigation on the use of foamed plastic waste as natural aggregates replacement in lightweight mortar. *Composites Part B: Engineering*, 99, 75–83. <https://doi.org/10.1016/j.compositesb.2016.05.058>

D’Altri, A. M., Messali, F., Rots, J., Castellazzi, G., & de Miranda, S. (2019). A damaging block-based model for the analysis of the cyclic behaviour of full-scale masonry structures. *Engineering Fracture Mechanics*, 209(February), 423–448. <https://doi.org/10.1016/j.engfracmech.2018.11.046>

Dilhani, K. A. C., & Jayaweera, N. (2016). A study of flood risk mitigation strategies in vernacular dwellings of Rathnapura, Sri Lanka. *Built-Environment Sri Lanka*, 12(1), 1. <https://doi.org/10.4038/besl.v12i1.7611>

Dissanayake, D. M. K. W., & Jayasinghe, C. (2015). Embodied Energy Analysis of a Pre-cast Building System. *6th International Conference on Structural Engineering and Construction Management 2015*, (December).

Dissanayake, D. M. K. W., Jayasinghe, C., & Jayasinghe, M. T. R. (2017). A comparative embodied energy analysis of a house with recycled expanded polystyrene (EPS) based foam concrete wall panels. *Energy and Buildings*, 135, 85–94. <https://doi.org/10.1016/j.enbuild.2016.11.044>

Dixit, M. K., Fernández-Solís, J. L., Lavy, S., & Culp, C. H. (2010). Identification of parameters for embodied energy measurement: A literature review. *Energy and Buildings*, 42(8), 1238–1247. <https://doi.org/10.1016/j.enbuild.2010.02.016>

Duffin, R. J., & Knowles, G. (1984). Use of layered walls to reduce building temperature swings. *Solar Energy*. [https://doi.org/10.1016/0038-092X\(84\)90009-4](https://doi.org/10.1016/0038-092X(84)90009-4)

ElGawady, M. A., Lestuzzi, P., & Badoux, M. (2005). Aseismic retrofitting of unreinforced masonry walls using FRP. *Composites Part B: Engineering*, 37(2–3),

148–162.

Energy Statistics Division. (2005). *Energy Statistics–Manual*. International Energy Agency, Paris, France. <https://doi.org/10.1787/9789264033986-en>

Eric, T. B., Gunawardana, S. G. W., Hasalanka, H. H. H., Jayasinghe, M. T. R., & Damruwan, H. G. H. (2019). Rapidly constructed two storey thermally comfortable houses for tropical climates with light weight loadbearing concrete. In *International Conference on Civil Engineering and Applications*.

Erkal, A., D’Ayala, D., & Sequeira, L. (2012). Assessment of wind-driven rain impact, related surface erosion and surface strength reduction of historic building materials. *Building and Environment*, 57, 336–348. <https://doi.org/10.1016/j.buildenv.2012.05.004>

Fernando, P. L. N., Jayasinghe, M. T. R., & Jayasinghe, C. (2017). Structural feasibility of Expanded Polystyrene (EPS) based lightweight concrete sandwich wall panels. *Construction and Building Materials*, 139, 45–51. <https://doi.org/10.1016/j.conbuildmat.2017.02.027>

Franco, G., Sheth, A., & Meyer, M. (2013). *Recovery and Reconstruction in Sri Lanka following the December 26 , 2004 Tsunami*. Earthquake Engineering Research Institute (EERI).

Gunaratne, M., Jayasinghe, M. T. R., & Mallawaarachchi, R. . (2007). Failure modes of buildings in Tsunami and cost effective preventive measures for future. In *International Conference on Mitigation of the risk of natural hazards*. University of Peradeniya, Sri Lanka.

Gunawardana, S. G. W., Eric, T. B., & Jayasinghe, M. T. R. (2019). Three-storied apartment buildings constructed using lightweight eps concrete panels for tropical climatic regions. In *International Conference on Civil Engineering and Applications*. Moratuwa, Sri Lanka.

Hammond, G., & Jones, C. (2011). Inventory of carbon & energy (ICE) version 2.0.

*University of Bath.*

Hawkesbury-Nepean Floodplain Management Steering Committee. (2006). *Reducing Vulnerability of Buildings To Flood Damage*. Parramatta. Retrieved from [http://www.ses.nsw.gov.au/content/documents/pdf/resources/Building\\_Guidelines.pdf](http://www.ses.nsw.gov.au/content/documents/pdf/resources/Building_Guidelines.pdf)

Hieber, D. G., Wacker, J. M., Eberhard, M. O., & Stanton, J. F. (2005). *Precast Concrete Pier Systems for Rapid Construction of Bridges in Seismic Regions*. Seattle, Washington.

Honçuş, A. C. (2014). Comparative study on the choice of building materials for constructing a house. *Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development*, 14(4), 117–126.

Hussain, a. Z., & Mahendran, K. (2010). Disaster Resistant Rural House Design For Low Income People. *International Journal of Applied Engineering Research*, 1(1), 77–82.

Ireland, V. (1985). The role of managerial actions in the cost, time and quality performance of high-rise commercial building projects. *Construction Management and Economics*, 3(1), 59–87. <https://doi.org/10.1080/01446198500000006>

Jayasinghe, C., Fonseka, W. M. C. D. J., & Abeygunawardhene, Y. M. (2016). Load bearing properties of composite masonry constructed with recycled building demolition waste and cement stabilized rammed earth. *Construction and Building Materials*, 102, 471–477. <https://doi.org/10.1016/j.conbuildmat.2015.10.136>

Jayasinghe, M. T. R. (1998). Loadbearing Construction. *Engineer, Journal of Institute of Engineers, Sri Lanka*, 27(1), 49–57.

Jayasinghe, M. T. R. (1999). Foundation improvement techniques for brick wall structures. *Engineer, Journal of Institute of Engineers, Sri Lanka*, 30, 41–50.

Jayasinghe, M. T. R., Kulatilake, S. A. S., Alwis, K., Angammana, R. B., & Perera, G.

(1997). Earthquake design techniques for Sri Lanka. In *Research for Industry*. Moratuwa, Sri Lanka.

Jayawardane, A. K. W. (1992). Wastage on building construction sites-What the Sri Lankan contractors say. *Proceedings of the annual sessions of Institute of Engineers*, Sri Lanka.

Jin, X., Zhang, X., Cao, Y., & Wang, G. (2012). Thermal performance evaluation of the wall using heat flux time lag and decrement factor. *Energy and Buildings*, 47, 369–374. <https://doi.org/10.1016/j.enbuild.2011.12.010>

Kan, A., & Demirboğa, R. (2009a). A new technique of processing for waste-expanded polystyrene foams as aggregates. *Journal of Materials Processing Technology*, 209(6), 2994–3000. <https://doi.org/10.1016/j.jmatprotec.2008.07.017>

Kan, A., & Demirboğa, R. (2009b). A novel material for lightweight concrete production. *Cement and Concrete Composites*, 31(7), 489–495. <https://doi.org/10.1016/j.cemconcomp.2009.05.002>

Kariyawasam, K. K. G. K. D., & Jayasinghe, C. (2016). Cement stabilized rammed earth as a sustainable construction material. *Construction and Building Materials*, 105, 519–527. <https://doi.org/10.1016/j.conbuildmat.2015.12.189>

Kelman, I., & Spence, R. (2003). A Limit Analysis of Unreinforced Masonry Failing Under Flood Water Pressure. *Masonry International*. Retrieved from <http://www.ilankelman.org/abstracts/kelmanspence2003bi.pdf>

Khazai, B., Franco, G., Ingram, J. C., Del Rio, C. R., Dias, P., Dissanayake, R., ... Kanna, S. J. (2006). Post-December 2004 tsunami reconstruction in Sri Lanka and its potential impacts on future vulnerability. *Earthquake Spectra*, 22(SUPPL. 3), 829–844. <https://doi.org/10.1193/1.2204925>

Konthesingha, K. M. C., Jayasinghe, C., & Nanayakkara, S. M. A. (2007). Bond and Compressive Strength of Masonry for Locally Available Bricks. *Engineer: Journal of the Institution of Engineers, Sri Lanka*, 40(4), 7.

<https://doi.org/10.4038/engineer.v40i4.7148>

Mallawaarachchi, R. S., Jayasinghe, C., & Jayasinghe, M. T. . (2007). An integrated approach for disaster resistant elevated houses for Tsunami affected areas. In *International Conference on Mitigation of the risk of natural hazards*. University of Peradeniya, Sri Lanka.

Mendis, W. S. W., De Silva, S., & De Silva, G. (2014). Performance and Retrofitting of Unreinforced Masonry Buildings against Natural Disasters—A Review Study. *Engineer: Journal of the Institution of Engineers, Sri Lanka*, 47(3).

Ministry of Disaster Management. (2018). *National Disaster Relief Services Centre - Progress Report - 2018*. Retrieved from <http://www.ndrsc.gov.lk/web/>

Moussavi Nadoushani, Z. S., Akbarnezhad, A., Ferre Jornet, J., & Xiao, J. (2017). Multi-criteria selection of façade systems based on sustainability criteria. *Building and Environment*, 121, 67–78. <https://doi.org/10.1016/j.buildenv.2017.05.016>

Naoum, S. . (1991). *Procurement and project performance - a companion of management contracting and traditional contracting*. Occasional Paper No. 45. Ascot, UK.

Nassar, K., Thabet, W., & Beliveau, Y. (2003). A procedure for multi-criteria selection of building assemblies. *Automation in Construction*. [https://doi.org/10.1016/S0926-5805\(03\)00007-4](https://doi.org/10.1016/S0926-5805(03)00007-4)

Nielsen, C. V. (2008). Carbon Footprint of Concrete Buildings seen in the Life Cycle Perspective. In *NRMCA 2008 Concrete Technology Forum* (pp. 1–14).

Olanipekun, E. A., Olusola, K. O., & Ata, O. Ñ. (2006). A comparative study of concrete properties using coconut shell and palm kernel shell as coarse aggregates, 41, 297–301. <https://doi.org/10.1016/j.buildenv.2005.01.029>

Papanicolaou, C., Triantafillou, T., & Lekka, M. (2011). Externally bonded grids as strengthening and seismic retrofitting materials of masonry panels. *Construction and*

*Building Materials*, 25(2), 504–514.

Park, E., & Clair, S. (2009). *Energy efficiency in building construction - Embodied energy*. Dincel Construction System. [https://www.dincel.com.au/theme\\_dincel/static/documents/environment/emodied-energy.pdf](https://www.dincel.com.au/theme_dincel/static/documents/environment/emodied-energy.pdf).

Parra-Saldivar, M. L., & Batty, W. (2006). Thermal behaviour of adobe constructions. *Building and Environment*, 41(12), 1892–1904. <https://doi.org/10.1016/j.buildenv.2005.07.021>

Perera, B. V. A., Madhushanka, K. G. S., Subashi De Silva, G. H. M. J., & De Silva, G. S. . (2015). Effect of Rice Husk Ash (RHA) on structural properties of fired clay bricks. In *International Conference on Structural Engineering and Construction Management* (pp. 131–136). Kandy, Sri Lanka.

Ranasinghe, R. M. G. B., & Jayasinghe, C. (2019). Thermal performance of aerated concrete blocks. In *International Conference on Civil Engineering and Applications* (p. 78). Moratuwa, Sri Lanka.

Reza, B., Sadiq, R., & Hewage, K. (2011). Sustainability assessment of flooring systems in the city of Tehran: An AHP-based life cycle analysis. *Construction and Building Materials*. <https://doi.org/10.1016/j.conbuildmat.2010.11.041>

Rydock, J. P., & Gustavsen, A. (2007). A look at driving rain spells at three cities in Great Britain. *Building and Environment*, 42(3), 1386–1390. <https://doi.org/10.1016/j.buildenv.2005.11.020>

Saaty, T. . (1990). How to make a decision: The analytic Hierachy process. *European Journal of Operational Research*, 48, 9-26.

Saaty, T. L. (2008). Decision making with the Analytic Hierarchy Process. *International journal of services sciences*, 1(1), 83-98. <https://doi.org/10.1504/ijssci.2008.017590>



- Sanjaya, B. G. V, Srilal, W. M. S., Perera, W. W. P. K., & Sooriyaarachchi, H. P. (2015). Investigation on Improvement of Low Cost NERD Slab System. In *International Conference on Structural Engineering and Construction Management*. Kandy, Sri Lanka.
- Sansom, M., & Pope, R. J. (2012). A comparative embodied carbon assessment of commercial buildings. *Structural Engineer*, 2012, 38–49.
- Sayadi, A. A., Tapia, J. V., Neitzert, T. R., & Clifton, G. C. (2016). Effects of expanded polystyrene (EPS) particles on fire resistance, thermal conductivity and compressive strength of foamed concrete. *Construction and Building Materials*, 112, 716–724. <https://doi.org/10.1016/j.conbuildmat.2016.02.218>
- Sazedj, S., Morais, A., & Jalali, S. (2013). Comparison of Costs of Brick Construction and Concrete Structure Based on Functional Units. In *Contribution of Sustainable Building to meet EU 20-20-20 Targets*. Portugal SB13.
- Seron, V., & Suhoothi, A. C. M. (2017). Retrofitting Unreinforced Masonry Buildings against Flooding. *International Journal of Emerging Technology and Advanced Engineering*, 7(9), 157-168. <https://doi.org/10.13140/RG.2.2.36062.13122>.
- Shapira, A., & Goldenberg, M. (2005). AHP-based equipment selection model for construction projects. *Journal of Construction Engineering and Management*. [https://doi.org/10.1061/\(ASCE\)0733-9364\(2005\)131:12\(1263\)](https://doi.org/10.1061/(ASCE)0733-9364(2005)131:12(1263))
- Sidwell, A. C. (1982). *A critical study of project team organisational forms within the building process* [Doctoral dissertation, Aston University]. Aston University.
- Tabatabaei, S. A., Van Der Ham, W., Klein, M. C. A., & Treur, J. (2017). A data analysis technique to estimate the thermal characteristics of a house. *Energies*, 10(9), 1–19. <https://doi.org/10.3390/en10091358>
- Udawatta, U. K. D. L. T. (2010). *Work norm analysis for medium scale building projects: A case study* [Master's thesis, University of Moratuwa]. Digital Library, University of Moratuwa. <http://dl.lib.mrt.ac.lk/handle/123/913>

- Udawattha, C. (2018). *The effectiveness of alternative stabilizer for Mud Concrete Technology* [Doctoral dissertation, University of Moratuwa]. Digital Library, University of Moratuwa. <http://dl.lib.mrt.ac.lk/handle/123/14903>
- Udawattha, C., Galkanda, G. A. H. H., & Halwatura, R. U. (2018). A study on natural rain surface erosion of different walling materials in tropics. In *MERCon 2018 - 4th International Multidisciplinary Moratuwa Engineering Research Conference* (pp. 84–89). IEEE. <https://doi.org/10.1109/MERCon.2018.8421938>
- Udawattha, C., & Halwatura, R. (2016a). Embodied energy of mud concrete block (MCB) versus brick and cement blocks. *Energy and Buildings*, *126*, 28–35. <https://doi.org/10.1016/j.enbuild.2016.04.059>
- Udawattha, C., & Halwatura, R. (2016b). Thermal performance and structural cooling analysis of brick, cement block, and mud concrete block. *Advances in Building Energy Research*, *12*(2), 150–163. <https://doi.org/10.1080/17512549.2016.1257438>
- Venkatarama Reddy, B. V., & Prasanna Kumar, P. (2011). Cement stabilised rammed earth. Part A: Compaction characteristics and physical properties of compacted cement stabilised soils. *Materials and Structures/Materiaux et Constructions*, *44*(3), 681–693. <https://doi.org/10.1617/s11527-010-9658-9>
- Vishnu, P., Thilakarathna, P. S. M., Mendis, P. G. D. I., & Jayasinghe, M. T. R. (2017). The feasibility of using lightweight EPS based panels for staircases of apartments. In *8th International Conference on Structural Engineering and Construction Management*.
- Walker, D. H. T. (1995). An investigation into construction time performance. *Construction Management and Economics*, *13*(3), 263–274. <https://doi.org/10.1080/01446199500000030>
- Wiley, W. C., & McLaren, I. H. (1955). Time-of-flight mass spectrometer with improved resolution. *Review of Scientific Instruments*, *26*(12), 1150–1157. <https://doi.org/10.1063/1.1715212>

Yang, J., & Ogunkah, I. C. B. (2013). A multi-criteria decision support system for the selection of low-cost green building materials and components. *Journal of Building Construction and Planning Research*, 1(04), 89.

Zavadskas, E. K., Kaklauskas, A., Turskis, Z., & Tamošaitiene, J. (2008). Selection of the effective dwelling house walls by applying attributes values determined at intervals. *Journal of Civil Engineering and Management*. <https://doi.org/10.3846/1392-3730.2008.14.3>

Zavadskas, E. K., Turskis, Z., & Tamosaitiene, J. (2011). Selection of construction enterprises management strategy based on the SWOT and multi-criteria analysis. *Archives of Civil and Mechanical Engineering*. [https://doi.org/10.1016/s1644-9665\(12\)60096-x](https://doi.org/10.1016/s1644-9665(12)60096-x)