REFERENCES

- Yann-Chang Huang, Chao-Ming Huang, Kun-Yuan Huang, and Chien-Yuan Liu, "Energy Optimization Approaches for Smart Home Applications," International conference on Artificial Inteligence and Soft Commputing, Lecture Notes in Information Technology, Vol.12, 2012.
- 2. Y. Agarwal, B. Balaji, R. Gupta, J. Lyles, M. Wei, and T. Weng, "Occupancy-driven Energy Management for Smart Building Automation," in Proceedings of the 2Nd ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Building, New York, NY, USA, 2010, pp. 1–6.
- 3. M. Brenna, M. C. Falvo, F. Foiadelli, L. Martirano, F. Massaro, D. Poli, and A. Vaccaro, "Challenges in energy systems for the smart-cities of the future," in Energy Conference and Exhibition (ENERGYCON), 2012 IEEE International, 2012, pp. 755–762.
- 4. M. Kovatsch, M. Weiss, and D. Guinard, "Embedding internet technology for home automation," in Emerging Technologies and Factory Automation (ETFA), 2010 IEEE Conference on, 2010, pp. 1–8.
- 5. Ceylon Electricity Board, "Statistical Digest 2013," Colombo, Sri Lanaka, 2013.
- "Building Services Engineering." [Online]. Available: http://www.blc.lsbu.ac.uk/webcreatif/BES/ [17] The Lighting Handbook, 4th ed. Zumtobel Lighting GmbH, Oct. 2013.
- 7. Osterlind, Fredrik, et al. "Integrating building automation systems and wireless sensor networks." Emerging Technologies and Factory Automation, 2007. ETFA. IEEE Conference on. IEEE, 2007.
- Bader M.O. Al-thobaiti, Iman I.M. Abosolaiman, Mahdi H. M. Alzahrani, Sami H.A. Almalki, and Mohamed S. Soliman, "Design and Implimentation of a Relible Wireless Real-Time Home Automation System Based on Arduino Uno Single-Board Microcontroller," International Journal of Control Automation and Systems, Vol.3, No.3, July 2014.
- 9. L. Wang, Z. Wang, and R. Yang, "Intelligent multiagent control system for energy and comfort management in smart and sustainable buildings," IEEE Trans. Smart Grid, vol. 3, no. 2, pp. 605–617, 201

- 10. Zhi-Hao Lin, and Li-Chen Fu, "Milti-user Preference Model and Service Provision in a Smart Home Environment," IEEE conference on Automation Science and Engineering, Scottsdale, AZ, USA, MoRP-B04.6, Spe 2007.
- 11. M.B.I Reaz, "Artificial Inteligence Technique for Adavanced Smart Home Impolimentation," ACTA TECHNICA CORVINIENSIS- Bulletin of Engineering, ISSN 2067-3809, 2013.
- 12. R.A.Ramlee, K.A.A.Aziz, M.H.Leong, M.A.Othman, and H.ASulaiman, "Wireless Controlled Methods via Voice and Internet (e-mail) for Home Automation system," International Journal of Engineering and Technology (IJET), ISSN: 0975-4024, Vol 5. No 4, 2013.
- 13. Shaishav Pandya, Om Kale, Nazim Shaikh, and Skanda Vishwanath, "Interactive Home Automation System using Speech Recognition," International Journal of Engineering & Technology (IJERT), ISSN: 2278-0181, Vol. 3 Issue 4, April 2014.
- 14. Lee Sang-Hyum, Jeong-Gi Lee, and Moon Kyung, "Smart Home Security Using Muliple ANFIS," International Jourbal of Smart Home, Vol. 7, No. 3, May, 2013.
- 15. Y. Agarwal, B. Balaji, R. Gupta, J. Lyles, M. Wei, and T. Weng, "Occupancy-driven Energy Management for Smart Building Automation," in Proceedings of the 2Nd ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Building, New York, NY, USA, 2010, pp. 1–6.
- 16. Ekwevugbe, Tobore, Neil Brown, and Denis Fan. "A design model for building occupancy detection using sensor fusion." Digital Ecosystems Technologies (DEST), 2012 6th IEEE International Conference on. IEEE, 2012.
- 17. L. Martirano, "A smart lighting control to save energy," in Proceedings of the 6th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems, vol. 1, Sep. 2011, pp. 132–138.
- 18. Cziker, M. Chindris, and A. Miron, "Fuzzy Controller for Indoor Lighting System with Daylighting Contribution," 2008.
- M. Trobec Lah, B. Zupani, J. Peternelj, and A. Krainer, "Daylight illuminance control with fuzzy logic," Solar Energy, vol. 80, no. 3, pp. 307–321, Mar. 2006.
 [Online]. Available: http://www.sciencedirect.com/science/article/pii/S0038092X0 5000733

- 20. P. W. Mutua and M. Mbuthia, "Intelligent Lighting System Design with Fuzzy Logic Controller," InternatIonal Journal of electronIcs & communicatIon technology, vol. 6, no. 2, pp. 10–14, Jun. 2015.
- 21. P. W. Mutua, "Intelligent multi-coloured lighting system design with fuzzy logic controller," Thesis, University of Nairobi, 2015. [Online]. Available: http://erepository.uonbi.ac.ke:8080/xmlui/handle/11295/90692
- 22. Xinping, Z. Guanglei, and Z. Jichuan, "Illuminance and Color Temperature Control in Intelligent Lighting System." Ricoh Software Research Center (Beijing) Co., Ltd, Jan. 2014.
- 23. M.-L. Jin and M.-C. Ho, "Labview-Based Fuzzy Controller Design of A Lighting Control System," Journal of Marine Science and Technology, vol. 17, no. 2, pp. 116–121, 2009.
- 24. P. Jaya Muruga Raja and V. Meenakshi, "Illuminance Control Of A LED Lighting Network Using Back Propagated Neural Network," International Journal of Innovative Trends and Emerging Technologies, vol. 1, no. 2, Mar. 2015.
- 25. Hartoyo, "Development of Automation System for Room Lighting-Based on Fuzzy logic Controller," International Journal of Information and Electronics Engineering, 2012. [Online]. Available: http://www.ijiee.org/show-34-200-1.html
- Pandharipande and D. Caicedo, "Daylight integrated illumination control of LED systems based on enhanced presence sensing," Energy and Buildings, vol. 43, no.
 pp. 944–950, Apr. 2011. [Online]. Available: http://www.sciencedirect.com/science/article/pii/S0378778810004597
- 27. Pavankumar, R. Shinde, and R. Gunabalan, "DC-DC Double PWM Converter for Dimmable LED Lighting," ser. 16, vol. 9. I J C T A, 2016, pp. 8333–8339.
- 28. Anikta Gupta, and Sharmemee Thanngjam, "AVR Based Temprature Monitiring and Controlling Using ZigBee in Matlab," International Jornal of Enginnering Research & Technology (IJERT), ISSN:2278-0181, vol 1 Issue 3, May -2012.
- 29. M. Noga, A. Ożadowicz, J. Grela, and G. Hayduk, "Active Consumers in Smart Grid Systems-Applications of the Building Automation Technologies," Przegląd Elektrotechniczny, vol. 89, no. 6, pp. 227–233, 2013.
- 30. D. Green, "Advantages and disadvantages of Solar Photovoltaic Quick Pros and Cons of Solar PV," 19 December 2012. [Online]. Available:

- http://blog.renewableenergyworld.com/ugc/blogs /2012/ 12/advantages-and-disadvantages-of-solar-photovoltaic-quickpros- and-cons-of-solar-pv.html. [Accessed 12 January 2016].
- 31. Jager-Waldau, "Photovoltaics and renewable energies in Europe," Renewable and Sustainable Energy Reviews, vol. XI, no. 7, pp. 1414-1437, 2007. C. Schillings, R. Mayer and F. Trieb, "High Resolution Solar Radiation Assessment for Sri Lanka," DLR Deutsches Zentrum für Luft- und Raumfahrt, Stuttgart, October 2004.
- 32. T. A. Wickramasinghe and M. Narayana, "Solar and Wind Resources Assessment in Sri Lanka," Colombo, 2014.
- 33. S. Sendanayake and M. T. Jayasinghe, "Estimating Incident Solar Radiation in Tropical Islands with Short Term Weather Data," in SAITM Research Symposium on Engineering Advancements, Colombo, 2012.
- 34. T. D. M. A. Samuel and R. Srikanthan, "Solar Radiation Estimation for Sri Lanka," in Second International Symposium on Non- Conventional Energy, Trieste, Italy, 1981.
- 35. Z. M. Tahboud and M. Chiesa, "Understanding the Factors that Affect the Utilization of Photovoltaics in High Atmospheric Dust Concentration Region," Masdar Institute of Science and Technology, 2013.
- 36. T. Podobnikar, Z. Klemen and K. Ostir, "Solar radiation modelling," Computers and Geosciences, vol. 31, no. 2, pp. 233-244, 2005.
- 37. D. Renne, R. George, B. Marion and D. Heimiller, "Solar Resource Assessment for Sri Lanka and Maldives," National Renewable Energy Laboratory, Colorado, August 2003.
- 38. Z. Sen and A. D. Sahin, "Spatial Interpolation and Estimation of Solar Irradiation by Cumulative Semivariograms," Solar Energy, vol. 71, no. 1, pp. 11-21, 2001.
- 39. "Better Generation: Power Predictor 2.0; User Guide," 2012. [Online]. Available: http://www.bettergeneration.co.uk/powerpredictor/ user-guides.html. [Accessed 22 January 2016].
- 40. M. Borewell, "Solar angle calculator; Solar Electricity Handbook," 2015. [Online]. Available: http://www.solarelectricityhandbook .com/solar-angle-calculator.html. [Accessed 16 January 2016].

- 41. L. A. Dobrzanski, M. Szczesna, M. Szindler and A. Drygala, "Electrical properties mono- and polycrystalline silicon solar cells," Journal of Achievements in Materials and Manufacturing Engineering, vol. 59, no. 2, pp. 67-74, 2013.
- 42. P. Burgess, "Variation in Light Intensity at Different Latitudes and Seasons, Effects of Cloud Cover, and the Amounts of Direct and Diffused Light," in Continuous Cover Forestry Group (CCFG) Scientific Meeting, Gloucestershire, September 2009.
- 43. Schwanengel, "Comparison of techniques for measuring luminous intensity distribution overall and across segments," [Online]. Available:
- 44. V. B. Omubo-Pepple, I. C. Cookey and G. I. Alaminokuma, "Effects of Temperature, Solar Flux and Relative Humidity on the Efficient Conversion of Solar Energy to Electricity," European Journal of Scientific Research, vol. 35, no. 2, pp. 173-180, 2009.
- 45. Parisa Rashidi, and Diane J.Cook, "Adapting to Resident Preferences in Smart Environments," washington State University, Pullman, WA,USA,2007.
- 46. S. Ahmad, "Smart metering and home automation solutions for the next decade," in Emerging Trends in Networks and Computer Communications (ETNCC), 2011 International Conference on, 2011, pp. 200–204.
- 47. S.-W. Luan, J.-H. Teng, S.-Y. Chan, and L.-C. Hwang, "Development of a smart power meter for AMI based on ZigBee communication," in 2009 International Conference on Power Electronics and Drive Systems (PEDS), 2009, pp. 661–665.
- 48. H.-Y. Huang, J.-Y. Yen, S.-L. Chen, and F.-C. Ou, "Development of an intelligent energy management network for building automation," IEEE Trans. Autom. Sci. Eng., vol. 1, no. 1, pp. 14–25, 2004.
- 49. J. Byun and S. Park, "Development of a self-adapting intelligent system for building energy saving and context-aware smart services," IEEE Trans. Consum. Electron., vol. 57, no. 1, pp. 90–98, 2011.
- 50. L. Martirano, "A smart lighting control to save energy," in Intelligent Data Acquisition and Advanced Computing Systems (IDAACS), 2011 IEEE 6th International Conference on, 2011, vol. 1, pp. 132–138.
- 51. C. Pang, V. Vyatkin, Y. Deng, and M. Sorouri, "Virtual smart metering in automation and simulation of energy-efficient lighting system," in 2013 IEEE 18th

- Conference on Emerging Technologies & Factory Automation (ETFA), 2013, pp. 1–8.
- 52. L. Wang, Z. Wang, and R. Yang, "Intelligent multiagent control system for energy and comfort management in smart and sustainable buildings," IEEE Trans. Smart Grid, vol. 3, no. 2, pp. 605–617, 2012.
- 53. S.-W. Luan, J.-H. Teng, S.-Y. Chan, and L.-C. Hwang, "Development of a smart power meter for AMI based on ZigBee communication," in 2009 International Conference on Power Electronics and Drive Systems (PEDS), 2009, pp. 661–665.
- 54. Amod Kumar, Divya Kamboj, Jyoti Choudhary, Nisha Yadav, and Vineet Batra, "GUI Based Device Controller Using MATLAB," International Jornal of Scientific & Enginnering Research, ISSN 2229-5518, Volume 4, Issue 6, June-2013.
- 55. L. Schor, P. Sommer, and R. Wattenhofer, "Towards a zero-configuration wireless sensor network architecture for smart buildings," in Proceedings of the First ACM Workshop on Embedded Sensing Systems for Energy- Efficiency in Buildings, 2009, pp. 31–36.
- 56. H. Adeli, "Smart structures and building automation in the 21st century," in International Symposium on Automation in Construction, 2008, vol. 25, pp. 5–10.