Dr. C. Umayal

Associate Professor, School of Electrical Engineering VIT University, Chennai Campus Vandalur Kelambakkam Road, Chennai-600127 Mobile:9003035785, Email: umayal.c@vit.ac.in

PUBLICATIONS

INTERNATIONAL JOURNALS:

- 1 Roy, A.D. and Umayal, C., 2020. Performance Analysis of a Half Bridge Cell Based Asymmetrical Multilevel Inverter Topology with Minimum Components. Recent Advances in Electrical & Electronic Engineering (Formerly Recent Patents on Electrical & Electronic Engineering), 13(4), pp.531-545.
- **2** Roy, A.D. and Umayal, C., 2020. Performance and Reliability Analysis of 13-Level Asymmetrical Inverter with Reduced Devices. In Advances in Smart Grid Technology (pp. 323-335). Springer, Singapore.
- 3 S.Bhagyashri, Kanimozhi.G, Umayal.C, Xiao-Zhi Gao ," Symptomatic Influence of Advancement inTechnology and an Indicative Effect on Human Health "International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-7 Issue-5, January 2019
- **4** AbeeraDuttRoyandChandrahasanUmayal, "Performance Analysis of a Half Bridge Cell Based Asymmetrical Multilevel Inverter Topology with minimum components", Recent Advances in Electrical & Electronic Engineering, 2019, Vol. 12, No. 1, Bentham SciencePublishers.
- 5. O.Felix and C.Umayal, "Low Voltage Ride—Through Capability Enhancement of DFIG Wind Turbine Using STATCOM And Supercapacitor Energy Storage", International Journal of Pure and Applied Mathematics, Vol. 118 No. 17, 2018, 975-985.
- **6** K Bhavya Sri, Komal Sachdeva, Sai Nikita, C.Umayal, "Border Security Robot using IoT", International Journal of Advanced Research Methodology in Engineering & Technology, ISSN 2456-6446, Volume 2, Issue 3, May2018.
- 7. Gaidhani, S., Singh, T., Verma, Y., &Umayal, C. (2018). IoT-Based Home Automation System: A Smart Way to Conserve Energy. International Journal of Engineering Sciences & Research Technology, 7(7), 194-198. ISSN: 2277-9655. http://www.ijesrt.com/issues%20pdf%20file/Archive- 2018/July-2018/24.pdf.
- **&** Muthu Periasamy, ChandrahasanUmayal, "Improved Time Responses of PI & FL Controlled SEPIC Converter based Series Resonant Inverter-fed Induction Heating System", International Journal of PowerElectronics and Drive Systems

- (IJPEDS), vol.9, no.1, March 2018, pp.305-315.DOI: 10.11591/ijpeds.v9n1.pp305-315.
- 9. Kamalapathi, K.; Priyadarshi, N.; Padmanaban, S.; Holm-Nielsen, J.B.; Azam, F.; Umayal, C.; Ramachandaramurthy, V.K. A Hybrid Moth-Flame Fuzzy Logic Controller Based Integrated Cuk Converter Fed Brushless DC Motor for Power Factor Correction. Electronics 2018, 7, 288. Nov2018
- 10. Parandhaman Balamurugan and ChandrahasanUmayal, 2017, Hardware Implementation of PFC Buck-Boost Converter Driven PMBLDC Motor Drive for Mining Applications", ARPN Journal of Engineering and Applied Sciences, Vol. 12, No. 1, Jan 2017,pp.130-139.(14)
- 11. Muthu Periasamy, ChandrahasanUmayal, "Improved Dynamic Response of PFC-SEPIC Converter Based On Induction Heater Using FOPID Controlled System", International Journal of Engineering and Technology (IJET), Vol 9 No 6 Dec2017
- P.Muthu, C. Umayal, M.Jagannath, K.Adalarasu, 2016, "SEPIC Converter for Power Factor Correction in Free Biomass Induction Heating System", International Journal of Bio Sciences and Engineering, Vol 3(1), 15-36, August 2016. ISSN-23495200.
- 13. AbhishekKumarYadav,Umayal C, Atul Fartiyal, 2016, 'Simulation and Hardware Implementation of Interleaved Technique Based DC-DC Buck-Boost Converter", International Journal of Engineering Sciences&Research Technology, pp.588-601. September 2016. ISSN:2277-9655.
- 14. AbeeraDutt Roy & and C.Umayal, 2016, Opal-RT based Analysis and Implementation of Single Phase Cascaded Multilevel Inverter with Minimum Number of Switches", Indian Journal of Science and Technology, Vol 9 S(1), DOI: 10.17485/ijst/2016/v9iS(1)/97744 December 2016, pp.1-6.(13)
- **15.** Saranya, C &Umayal, C 2015, Fuzzy Logic Based Direct Torque Control of B4 Inverter fed BLDC Motor Drive", International Journal of Applied Engineering Research, India, ISSN 0973-4562 vol 10, no 9, pp. 9099- 9105.(10)
- **16.** Umayal, C & Rama Reddy, S 2014, "Embedded controlled power factor correction zeta converter fed permanent magnet brushless DC motor for mining applications", Australian Journal of Electrical & Electronics Engineering, Australia, vol.11, no.2, pp.226-238.(9)
- 17. Umayal, C & Saranya Devi, D 2013, "Modeling and Simulation of PFC SEPIC Converter fed PMBLDC drive for mining application", Int J of Advanced trends in Computer Science and Engineering, vol.2. no.2, pp.203-208.
- 18 Umayal, C & Rama Reddy, S 2013, "Implementation of Closed Loop Controlled PFC Cuk Converter fed PMBLDC motor in Mining Applications", International Review on Modelling and Simulations (IREMOS), Italy, vol. 6, no.4, pp.1088-1096.(8)

National Journal

 Umayal, C & Rama Reddy, S 2010, "Simulation Results of PF Correction Converter fed PMBLDC Motor", National Journal of Technology, PSG College of Tech, Coimbatore, India, vol 6, no.3, pp.15-21.

International Conference

- 1. Divya, P &Umayal, C 2014, "Design and Implementation of PFC Interleaved Boost converter fed PMBLDC Motor Drive", Proc of the International Conf on Science and Innovative Engineering, 5-6, April, 2014, Jawahar Engineering College, Chennai,
- 2 Saranya, C&Umayal, C 2015, "Fuzzy Logic Based Direct Torque Control of B4 Inverter fed BLDC Motor Drive", International Conference on Engineering Technology and Science (ICETS"15) 5-6, March, 2015, Muthayammal College of Engineering, Rasipuram.
- 3. K. N. L. Priya, R. Sruthi, S. Shruthi, S. Sweata &C. Umayal, 2015, "A PV Power Based Integrated MPPT To Supply a BLDC Motor With a Fuzzy PID Controller", Proceedings of International Conference on Computing, Communication and Energy Systems (CESCON-2015), pp. 112-118. April, 2015, Hindustan Institute of Technology and Science, Chennai.
- 4. C.Madhumita, S.Madhunisha, S. Madhanagopal, A. Manish &C. Umayal, 2105,Arduino Based Sensorless Speed Control of BLDC Motor Using GSM", 2015 International Conference On Computation Of Power, Energy, Information And Communication, Adhiparasakti Engineering College, 22-23, April,Chennai.
- 5. B.V.Aishwarya, G.Archana&C.Umayal, 2015, "Agriculture Robotic Vehicle Based Pesticide Sprayer With Efficiency Optimization", IEEE International Conference on Technological Innovations In ICT For Agriculture and Rural Development (TIAR 2015) July 10 12, 2015, Easwari Engineering College, Chennai.
- 6. AbeeraDutt Roy &C.Umayal, 2016, "Real time simulation and analysis of single phase seven level cascaded H-bridge Multilevel inverter topology with reduced power electronic components", "International Conference on Recent Trends in Engineering and Material Sciences" (ICEMS-2016), Jaipur National University, Jaipur. March2016.
- 7. AbeeraDutt Roy&C.Umayal, "Design and Implementation of Single Phase Cascaded Multilevel Inverter ued in medium Voltage Applications ",3rd International Conference on Engineering Technology and Science(ICETS

- 2016), Muthayammal Engineering College, March2016.
- 8. O.Felix&C.Umayal, 2017, "Low Voltage Ride—Through Capability Enhancement of DFIG Wind Turbine Using STATCOM And Supercapacitor EnergyStorage" "JointInternationalConferenceonArtificialIntelligence and Evolutionary Computations in Engineering Systems (ICAIECES-2017) & Power, Circuit and Information Technologies(ICPCIT-2017), April 27-29, 2017, Madanapalle Institute of Technology & Science, (MITS), Madanapalle,India.
- **9.** K Bhavya Sri, Komal Sachdeva, Sai Nikita, C.Umayal, "Border Security Robot Using IoT", International Journal of Advanced Research Methodology in Engineering & Technology, Vol. 2, Issue.3, May 2018,2456-6446.
- 10. AbeeraDutt Roy, ChandrahasanUmayal, "A review of various multilevel inverter topologies with reduced component count", 2018 IEEE International Conference on Recent Trends in Electrical, Control and Communication (RTECC), Crescent Institute of Science and Technology, Chennai, Mar.20-22nd 2018,pp.234-239.

National Conferences

- S.Anoo,B.Bipin, DurgaRaghavendran, Devani Charinigia Bordoloi, C. Umayal, "Power Factor Correction of PMB DC Motor using Flyback Converter", Proc. of National Conference on Methods Enriching Power and Energy Developments. (MEPED-13), April 2013, Jeppiar Engineering College, Chennai.
- 2. T.Rakesh, V.Raakesh, D.Sharath, C.Umayal, "Improvement of Power Factor of PMBL DC motor using a Push-Pull Converter", Proc. Of National Conference on Smart Advancements in Green energy (SAGE-13), April 2013, Sri Muthukumaran Institute of Technology, Chennai.
- 3. P.Divya, C.Umayal, "Performance Analysis of PFC Interleaved Boost Converter fed PMBLDC Motor Drive", Proc. of Fourth National Conference- TAPSPEE "14, April 2014, Easwari Engineering College, Chennai.