

PUBLICATIONS

Books- Published

1. **Karuppanan Pitchai**, Vishnu Shankar and Raj Kumar “Basic Truncated and MultiModulus Multiplier” published by Lambert Academic Publishing, July-2015 (ISBN: 9783659759109)
2. **P Karuppanan** “Active Power Line Conditioner” published by Lambert Academic Publishing, Aug-2014 (ISBN: 978-3-659-59318-5)

Book Chapter- Published

1. Vipin Das, **P. Karuppanan**, V. Karthikeyan, S. Rajasekar, Asheesh Kumar Singh “Energy Grid Management, Optimization and Economic Analysis of Microgrid” book Series: Green Energy and Technology, Springer International Publishing, 2017 (ISBN: 978-3-319-50196-3)
2. V. Karthikeyan, S. Rajasekar, Vipin Das, **P. Karuppanan**, Asheesh Kumar Singh “Grid-Connected and Off-Grid Solar Photovoltaic System” book Series: Green Energy and Technology, Springer International Publishing, 2017 (ISBN: 978-3-319-50196-3)

Lecture Notes (Scopus indexed)

1. Dinesh kumar, Vikas Kumar and **Dr. P. Karuppanan**, “ Study and Analysis of Three-Stage Single-Miller CMOS – OTA”, VLSI, Communication, and Signal Processing, Lecture Notes in Electrical Engineering Vol. 1024, Springer 2022; ISBN: 978-981-99-0972-8; DOI: https://doi.org/10.1007/978-981-99-0973-5_8.
2. Sandhya Kanoujia, Rishav Kumar and **P. Karuppanan**, “Low Power Radix-4 Booth Multiplier Design using Pass Transistor Logic”, VLSI, Communication, and Signal Processing, Lecture Notes in Electrical Engineering Vol. 1024, Springer 2022; ISBN: 978-981-99-0972-8; DOI: https://doi.org/10.1007/978-981-99-0973-5_26.
3. M Suryavanshi, **P. Karuppanan**, A K Gautam, and S R Kotha “A Temperature Dependent Modified TEAM Model” Advances in VLSI, Communication, and Signal Processing, Lecture Notes in Electrical Engineering Vol. 911, Springer 2021; ISBN: 978-981-19-2630-3; DOI: https://doi.org/10.1007/978-981-19-2631-0_32
4. R K Kushwaha, **P. Karuppanan**, P Asthana, and N Kishore “Design of Tapered Vivaldi Antenna for Milli-meter Waves Applications” Advances in VLSI, Communication, and Signal Processing, Lecture Notes in Electrical Engineering Vol. 911, Springer 2021; ISBN: 978-981-19-2630-3; DOI: https://doi.org/10.1007/978-981-19-2631-0_63

5. Pawar Dhiraj Kumar, Ritesh Kumar Kushwaha, **P Karuppanan**, "Design and Analysis of Low Power SRAM", *Advances in VLSI, Communication, and Signal Processing. Lecture Notes in Electrical Engineering*, vol 683. Springer 2020; ISBN: 978-981-15-6839-8, DOI: https://doi.org/10.1007/978-981-15-6840-4_4
6. Ritesh Kumar Kushwaha, Prem Kumar, and **P. Karuppanan**. "Study and Analysis of Low Power Dynamic Comparator." *Advances in VLSI, Communication, and Signal Processing. Lecture Notes in Electrical Engineering*, vol 587, pp 435-449, Springer 2019; ISBN: 978-981-32-9774-6; DOI: https://doi.org/10.1007/978-981-32-9775-3_40

SCI-Journals

1. P Kumar, V Das, AK Singh, **P Karuppanan** "Levelized Cost of Energy-Based Economic Analysis of Microgrid Equipped with Multi Energy Storage System" *Distributed Generation & Alternative Energy Journal*, Vol.38, Pp. 1331-1356, May-2023; doi: <https://doi.org/10.13052/dgaej2156-3306.38411>
2. RK Kushwaha and **P. Karuppanan** "Proximity-coupled high gain graphene patch antenna using holey dielectric superstrate for terahertz applications" *Optik - International Journal for Light and Electron Optics*, Vol.240, Pp. 1-12, Aug-2021; ISSN. 0030-4026; doi: <https://doi.org/10.1016/j.ijleo.2021.166793>
3. Ritesh Kumar Kushwaha & P. Karuppanan "Investigation and design of microstrip patch antenna employed on PCs substrates in THz regime" *Australian Journal of Electrical and Electronics Engineering*, Vol.18, No.2, Pp. 118-125, June-2021, DOI: 10.1080/1448837X.2021.1936779
4. RK Kushwaha, P Karuppanan & N Kishore "High-gain patch antenna design using PRS and ground plane reflector for THz band applications" *Optik - International Journal for Light and Electron Optics*, Vol. 232, April-2021; ISSN: 0030-4026; doi: <https://doi.org/10.1016/j.ijleo.2021.166559>
5. RK Kushwaha, **P. Karuppanan** and RK Dewang. "Design of a SIW On-chip Antenna using 0.18- μm CMOS Process Technology at 0.4 THz", *Optik - International Journal for Light and Electron Optics*, Vol. 223, Dec-2020; ISSN: 0030-4026; doi: <https://doi.org/10.1016/j.ijleo.2018.08.139>.
6. RK Kushwaha and **P. Karuppanan** "Enhanced radiation characteristics of graphene-based patch antenna array employing photonic crystals and dielectric grating for THz applications" *Optik - International Journal for Light and Electron Optics*, Vol.200, Jan-2020; ISSN. 0030-4026; doi: <https://doi.org/10.1016/j.ijleo.2019.163422>

7. RK Kushwaha and **P Karuppanan** “Parasitic-coupled high-gain graphene antenna employed on PBG dielectric grating substrate for THz applications” *Microwave and Optical Technology Letters*, Vol.62, No.1, Sept-2019; ISSN.0895-2477; DOI:10.1002/mop.32033
8. RK Kushwaha and **P Karuppanan** “Design and analysis of Vivaldi antenna with enhanced radiation characteristics for mm-wave and THz applications” *Optical and Quantum Electronics*, Vol.51, No.9, Sept-2019; ISSN.0306-8919; doi.org/10.1007/s11082-019-2032-4
9. RK Kushwaha and **P Karuppanan**, Yogesh Srivastava “Proximity feed multiband patch antenna array with SRR and PBG for THz applications” *Optik - International Journal for Light and Electron Optics*, Vol.175, pp. 78-86, Dec-2018; ISSN.0030-4026; doi:10.1016/j.ijleo.2018.08.139
10. RK Kushwaha and **P Karuppanan** and L.D.Malviya ‘Design and analysis of novel microstrip patch antenna on photonic crystal in THz’ *Physica B: Condensed Matter*, Vol.545, No.15, pp. 107-112, Sept-2018; doi.org/10.1016/j.physb.2018.05.045
11. **P Karuppanan**, Kamran Khan and Soumya Ranjan Ghosh ‘Dynamic gate and substrate control charge pump circuits: a review’ *Analog Integrated Circuits Signal Process, Springer Netherland*, Vol.83, No.2, pp.257–270, April-2015; ISSN:0925-1030, doi:10.1007/s10470-015-0521-3
12. **Karuppanan P** and Kamala Kanta Mahapatra ‘Active harmonic current compensation to enhance power quality’ *International Journal of Electrical Power & Energy Systems, Elsevier England*, Vol.62, No. 9, pp.144-151, Nov-2014; ISSN:0142-0615, doi:10.1016/j.ijepes.2014.04.018
13. **Karuppanan P** and Kamala Kanta Mahapatra ‘Digital Non-Linear Controller based Active Power Filter for Harmonic Compensation’ *IETE Journal of Research*, Taylor & Francis India, Vol.59, No.4, pp.302-311, Aug-2013; ISSN:0377-2063, doi: 10.4103/0377-2063.118003
14. **Karuppanan P** and Kamala Kanta Mahapatra ‘PI and fuzzy logic controllers for shunt active power filter — A report’ *ISA Transactions, Elsevier United States*, Vo.51, No.1, pp.163–169, Jan-2012; ISSN:0019-0578, doi: 10.1016/j.isatra.2011.09.004

Scopus- Journals

15. Sreeteja R K, **Karuppanan P**, A K Gautam and Manmath S "A 0.25-V Three-stage State Feedback Bulk-driven OTA for Wide Range Load Applications” *Journal of Integrated Circuits and Systems*, Vol. 16, No. 3, Dec- 2021; Doi: 10.29292/jics.v16i3.498

16. Vipin Das, **Pitchai Karuppanan**, A K Singh & P Thakur “Optimal Sizing and Control of Solar PV-PEMFC Hybrid Power Systems” *International Journal of Mathematical, Engineering and Management Sciences* Vol. 6, No. 4, pp.1137-1156, 2021 doi: <https://doi.org/10.33889/IJMEMS.2021.6.4.068>
17. **Karuppanan P** ‘Active Power Filter using a Novel Adaptive Fuzzy Hysteresis Current Controller’ *International Journal of Power Electronics*, Vol. 10, No. 4, April-2019; DOI: 10.1504/IJPELEC.2019.102503
18. P. Vipin Das, **P. Karuppanan**, Asheesh Kumar Singh & B. Chitti Babu “Modelling, simulation and analysis of high step up DC-DC converter using coupled inductor and voltage multiplier cell using PSCAD, *International Journal of Modelling and Simulation*, Vol.40, No., Pp 29-36 Oct- 2018; DOI:10.1080/02286203.2018.1517494
19. **Karuppanan P** and Anuradha Kumari ‘Study and analysis of a simple self cascode RGC amplifier’ *IJE TRANSACTIONS C: Aspects*, Vol. 31, No. 9, pp. 1226-1234, Sept- 2018; ISSN:2423-7167; doi.10.5829/IJE.2018.31.10A.04
20. **P Karuppanan** ‘Field Programmable Gate Array Based Three-Phase Cascaded Multilevel Voltage Source Inverter, *Journal of Electrical Engineering*, Vol.17, No.4, pp.1-9, Dec-2017; ISSN:1582-4594
21. **Karuppanan P**, Ghosh Soumya Ranjan, Khan Kamran ‘A Fully Differential Operational Amplifier with Slew Rate Enhancer and Adaptive Bias for Ultra Low Power’ *Journal of Low Power Electronics*, American Scientific Publisher, Vol. 13, No.1, pp. 67-75, March-2017; ISSN.15461998, <https://doi.org/10.1166/jolpe.2017.1467>
22. Pavankumar Bikki and **P Karuppanan**, ‘Analysis of Low power and Small swing self-biasing CMOS design’ *Far east journal of electronics and communication*, Pushpa Publishing House, Vol. 3, No.1, pp. 245-261, Oct-2016 ; ISSN: 0973-7006, doi: [10.17654/ECSV3PI16245](https://doi.org/10.17654/ECSV3PI16245).
23. **Karuppanan P** and Kamala Kanta Mahapatra ‘Active Power Line Conditioners for Power Quality Enhancement’ *International Journal of Power Electronics, Inderscience*, Vol.5, No.3/4, pp.262-279, Oct-2013; ISSN: 1756-6398 doi: [10.1504/IJPELEC.2013.057049](https://doi.org/10.1504/IJPELEC.2013.057049)
24. **Karuppanan P**, Ayas Kanta Swain, Kamala Kanta Mahapatra “FPGA based Single-phase Cascaded Multilevel Voltage Source Inverter Fed ASD Applications” *Journal of Electrical Engineering*, Vol.11, No.3, pp.102-107, Oct-2011; ISSN:1582-4594
25. **Karuppanan P** and Kamala Kanta Mahapatra “Adaptive-Fuzzy Controller Based Shunt Active Filter for Power Line Conditioners” *TELKOMNIKA Journal of Electrical*

Engineering, Vol. 9, No.2, pp. 201-208, Aug-2011; ISSN:1693-6930, doi:
[10.12928/telkomnika.v9i2.688](https://doi.org/10.12928/telkomnika.v9i2.688)

Prestigious Academic Journals

26. Vipin Das, Asheesh K. Singh, **P Karuppanan**, Pradeep K, S N Singh, and V G Agelidis. "Energy management and economic analysis of multiple energy storage systems in solar PV/PEMFC hybrid power systems. "Energy Conversion and Economics Vol. 1, No. 2. pp.124-140, July-2020; doi: 10.1049/enc2.12011
27. Pavankumar Bikki and **P Karuppanan**, 'SRAM Cell Leakage Control Techniques for Ultra Low Power Application: A Survey' *Circuits and Systems, Scientific Research Publishing, Vol. 8, pp.23-52, Feb-2017; ISSN:2153-1293, doi:10.4236/cs.2017.82003.*
28. **Karuppanan P** and Kamala Kanta Mahapatra "PI, PID and Fuzzy Logic Controlled Cascaded Voltage Source Inverter based Active Filter for Power Line Conditioners" *WSEAS Transaction on Power Systems*, Vol.6, No.4, pp.100-109, Oct-2011; ISSN: 1790-5060
29. **Karuppanan P**, Kamala Kanta Mahapatra, Jeraldine Viji and Bhuyan Kanhu Charan "Sinusoidal Extraction Control Strategy based Shunt Active Power Line Conditioners for Enhancing Power Quality" *Journal of Electrical and Electronics Engineering*, Vol.4, No.2, pp.83-88, Oct-2011; ISSN 1844-6035.
30. **Karuppanan P**, Rajasekar S and Kamala Kanta Mahapatra "Cascaded Multilevel Voltage Source Inverter based active power filter for Harmonics and Reactive power compensation" *International Journal of Applied Engineering Research*, Vol. 1, No 4, pp.661-674, June-2011; ISSN 09764259.
31. **Karuppanan P** and Kamala Kanta Mahapatra "PI with Fuzzy Logic Controller based Active Power Line Conditioners" *Asian Power Electronics Journal*, Vol.5, No.1, pp.13-18, Aug-2011.
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33. **PitchaiVijaya Karuppanan**, Mahapatra Kamala Kanta "A Novel PLL with Fuzzy Logic Controller based Shunt Active Power Line Conditioners" *Journal of Electrical and Electronics Engineering*, Romania Vol.3, No.2, pp. 153-158.Oct-2010; ISSN:1844-6035
34. **Karuppanan P**, Sushant Kumar Pattnaik and Kamala Kanta Mahapatra "Fuzzy Logic Controller based Active Power Line Conditioners for Compensating Reactive Power and

Harmonics” *ICTACT-Journal on Soft Computing*, Vol.1, No.1 pp.49-53 July-2010; ISSN 2229-6956, doi: [10.21917/ijsc.2010.0008](https://doi.org/10.21917/ijsc.2010.0008)

35. **Karuppanan P** and Kamala Kanta Mahapatra “PI, PID and Fuzzy logic controller for Reactive Power and Harmonic Compensation” *ACEEE Int. J. on Electrical and Power Engineering*, Vol. 01, No. 03, Dec 2010

International Conference

1. RK Kushwaha; D Shukla; Y Tripathi & **P. Karuppanan** “Design and Investigation of graphene based 2×2 CPW feed Vivaldi MIMO Antenna for THz Applications” 2023 IEEE International Conference on Device Intelligence, Computing and Communication Technologies, (DICCT); ISBN:978-1-6654-7491-7; DOI: 10.1109/DICCT56244.2023.10110122
2. Mohd Rafik and **Karuppanan Pitchai** “Design and analysis of XOR-XNOR Circuit based Modified Hybrid Full Adder” 2022 IEEE Delhi Section Conference (DELCON); ISBN:978-1-6654-5883-2; DOI: 10.1109/DELCON54057.2022.9752792
3. M Singh, **Karuppanan Pitchai** and Dinesh K “Relative Performance Analysis of Different FullAdder Using FINFET Technology” 2022 IEEE Delhi Section Conference (DELCON); ISBN:978-1-6654-5883-2; doi: 10.1109/DELCON54057.2022.9753309
4. Manmath Suryavanshi, **P Karuppanan**, Abhay K Gautam, Sreeteja Reddy Kotha, Ankit Mishra “Implementation and Parametric Analysis of Memristor Models – Comparative Study” IEEE International Conference on Nascent Technologies in Engineering (ICNTE 2021), ISBN:978-1-7281-9061-7; doi: 10.1109/ICNTE51185.2021.9487680
5. Sreeteja Reddy Kotha, **Karuppanan P**, Abhay K Gautam and Manamath Suryavanshi, "Study and Analysis of GEIF and TIF Subthreshold Voltage Bulk-driven OTAs," IEEE International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT 2021), ISBN:978-1-7281-9061-7; doi: 10.1109/ICAECT49130.2021.9392596.
6. K. Gautam, **K. Paruppanan**, S. K. Reddy and M. Suryavanshi, "Comparative Performance analysis of XOR-XNOR cell used in Hybrid Logic based Full adder," IEEE International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT 2021), ISBN:978-1-7281-5791-7; doi: 10.1109/ICAECT49130.2021.9392544.
7. Ankit Mishra, Sushil C and **P. Karuppanan** ‘PV based Shunt Active Harmonic Filter for Power Quality improvement’ IEEE International Conference on Computing, Communication,

- and Intelligent Systems (ICCCIS 2021), ISBN:978-1-7281-8529-3; doi: 10.1109/ICCCIS51004.2021.9397214
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 9. Lopamudra Samal, **P. Karuppanan**, Prem Kumar and Sauvagya Ranjan Sahoo ‘Study and analysis of Low Power Dynamic Comparator for IOT Application’ *IEEE Bombay Section Signature Conference (IBSSC)-2019*, ISBN:978-1-5386-7401-7; DOI: [10.1109/IBSSC47189.2019.8973040](https://doi.org/10.1109/IBSSC47189.2019.8973040)
 10. Abhishek A, Dinesh C, Rajasekar S, A K Singh, **P. Karuppanan**, Ajay-D-Vimal Raj ‘An Improved PSO Approach for Optimal Tuning of PI Controller for Shunt Active Power Filter using FPGA with Hardware Co-Simulation’, *IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)-2016*;
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 13. **Karuppanan P**, Rajesh Kumar Patjoshi, Kamalakanta Mahapatra and Ajay-D-Vimalraj ‘Sinusoidal Extraction Controller based on Cascaded VSI for Active Power Filter’ *IEEE-INDICON-2011*; doi: [10.1109/INDCON.2011.6139524](https://doi.org/10.1109/INDCON.2011.6139524).
 14. **Karuppanan P**, Smrtuti Ranjan Prusty and Kamala Kanta Mahapatra ‘Adaptive-Hysteresis Current Controller based Active Power Filter for Power Quality Enhancement’ *IET International Conference on Sustainable Energy and Intelligent System(SEISCON) -2011*; ISBN: 978-9-38043-000-3, doi: [10.1049/cp.2011.0325](https://doi.org/10.1049/cp.2011.0325).
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19. **Karuppanan P** and Kamala kanta Mahapatra ‘A Novel SRF Based Cascaded Multilevel Active Filter for Power Line Conditioners’ *IEEE-INDICON 2010*;
20. **Karuppanan P** and Kamala Kanta Mahapatra ‘Shunt Active Power Line Conditioners for Compensating Harmonics and Reactive Power’ *IEEE International Conference on Environment and Electrical Engineering (EEEIC)-Poland, pp.277-280, 2010*;
21. **Karuppanan P** and Kamala Kanta Mahapatra ‘FPGA based Cascaded Multilevel Pulse Width Modulation for Single Phase Inverter’ *IEEE International Conference on Environment and Electrical Engineering (EEEIC)-Poland, pp.273-276, 2010*; DOI: [10.1109/EEEIC.2010.5489988](https://doi.org/10.1109/EEEIC.2010.5489988) (presented by remote session mode)
22. **Karuppanan P** and Kamala Kanta Mahapatra ‘A Novel Control Strategy based Shunt APLC for Power Quality Improvements’ *IEEE International Conference on Power, Control and Embedded Systems (ICPCES) – 2010*;
23. **Karuppanan P**, Rajasekar S and Kamala Kanta Mahapatra ‘Five-Level Cascaded Active Filter for Power Line Conditioners’ *IEEE International Conference on Power, Control and Embedded Systems (ICPCES) – 2010*; DOI: [10.1109/ICPCES.2010.5698612](https://doi.org/10.1109/ICPCES.2010.5698612).

National Conference

24. **Karuppanan P**, Kamala kanta Mahapatra, Kanhu Charan Bhuyan and Rajesh Kumar Patjoshi ‘Cascaded Voltage Source Inverter based Active Power Line Conditioners’ *National Systems Conference (NSC) 2011*
25. **Karuppanan P** and Kamala Kanta Mahapatra ‘A Control Strategy for Shunt Active Power Line Conditioners’ *National Conference on Power Electronics (NPEC)-2010*.
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