


<b>Name of the Teaching staff</b>	Dr. A. Johny Renoald			
<b>Designation</b>	Professor (Research)			
<b>Department /School</b>	Robotics Engineering			
<b>Qualification</b>	<b>Degree</b>	<b>Brach/Specialization</b>	<b>University</b>	<b>Month &amp; Year of passing</b>
	Ph.D.,	Electrical and Electronics Engineering	Anna university, Chennai.	April 2021
	M.E.,	Power Electronics and Drives	Anna university, Coimbatore.	June 2012
	B.E.,	Electrical and Electronics Engineering	Anna university, Chennai.	April 2009
<b>Subject Teaching</b>	<b>Under Graduate</b>		<b>Post Graduate</b>	
	<ul style="list-style-type: none"> <li>▪ Basics of Electrical and Electronics Engineering</li> <li>▪ Power Electronics</li> <li>▪ Renewable energy</li> <li>▪ Electrical Machines/ Protection and switchgear</li> <li>▪ Power system/ Electric Drives/Control System</li> <li>▪ Special Electrical machines</li> <li>▪ Digital Principles and system Design</li> </ul>		<ul style="list-style-type: none"> <li>▪ Solid State AC and DC Drives</li> <li>▪ Advanced Power Semiconductor Devices</li> <li>▪ Analysis of Electrical Machines</li> <li>▪ Analysis and Design of Power Converters</li> <li>▪ Analysis and Design of Inverters</li> <li>▪ Power Electronics for Renewable Energy Systems</li> <li>▪ Wind Energy Conversion System</li> </ul>	
<b>Research Interest</b>	Energy, power electronics, power system analysis, power quality, information and communication technologies, artificial engineering and image processing, and Renewable Energy Resources.			
<b>Area of Specialization</b>	Power Electronics for Renewable Energy Systems, Energy Forecasting			
<b>Total Teaching Experience</b>	<b>Teaching</b>	<b>Industry</b>	<b>Research</b>	
	16 Years	10months	6 years	
<b>Papers Published</b>	National	-	International	60
<b>Papers Presented in Conference</b>	National	-	International	8
<b>Conferences /Symposiums / Seminars / Workshops Participated</b>	National	-	International	6

<b>FDP / STTP / MDP / Summer / Winter School attended</b>	<b>FDP / STTP / MDP /</b>	<b>Title</b>	<b>Date &amp; Venue</b>
	FDP	Electronic Devices and Circuits	02 to 08 /06/2014 & Conducted by Anna University, Chennai.
	FDP	Discrete Time Systems and Signal Processing	11 to 12/09/2014 & Conducted by Anna University, Chennai.
	FDP	Discrete Time Systems	18/12/2014 to 24/12/2014 & Vivekanandha Institute of Engineering and Technology for women, Namakkal.
	FDP	Teaching Pedagogy & ICT	21& 22/12/ 2015/8 & 9.01.2016 & Vivekanandha Institute of Engineering and Technology for women, Namakkal.
	FDP	On Power System Transients	05 /01/2016 to 11/01/2016 & Conducted by Anna University, Chennai.
	FDP	Electrical machines-I	19th to 24th & 26th Dec 2016, in Vivekanandha institute of Engg & technology for women, Namakkal.
<b>M.Phil. / Ph.D. Guide ship</b>	Field		University
	Electrical and Electronics		Anna University, Chennai.
<b>Professional Memberships</b>	<ol style="list-style-type: none"> <li>1. ISSE –Indian Society of systems for Science &amp; Engineering/ Life time membership (LM04911)</li> <li>2. IAENG – International Association Engineers/ Life time membership No-(221361)</li> <li>3. ISTE- Member of Indian Society for Technical Education/ Life Time Membership No.(LM129791)</li> </ol>		
<b>Consultancy Activities</b>	-		
<b>Awards &amp; Honours</b>	Best paper award 2021-IET Circuits, Devices & Systems		
<b>Grants Fetched</b>	-		
<b>Interaction with Professional Institutions</b>	-		

<b>Educational</b>	<ul style="list-style-type: none"> <li>• Ph.D., Electrical and Electronics 2021</li> <li>• M.E., Power electronics and drives 2012</li> </ul>		
<b>Details</b>	<ul style="list-style-type: none"> <li>• B.E. Electrical and Electronics 2009</li> </ul>		
<b>Experience</b>	<ul style="list-style-type: none"> <li>• Worked as lecturer in Erode Kongu Polytechnic College (2010 to 2012).</li> <li>• Worked as Assistant professor in Vivekanandha College of Technology for Women (2012 to 2013).</li> <li>• Worked as Assistant professor in Vivekananda Institute of Engineering and Technology for Women (2013 to 2017).</li> <li>• Worked as Assistant professor in Vivekananda College of Engineering for Women (Autonomous) (2017 to 2021).</li> <li>• Working as Professor in Karunya Institute of Technology &amp; Sciences, Coimbatore (05/01/2026 till date).</li> </ul>		
<b>Contact Details</b>	Dr A.Johny Renoald Division of Robotics Engineering Karunya Institute of Technology and Sciences Coimbatore – 641 114.		
<b>Papers presented in conferences</b>	<b>Conference Details</b>	<b>Paper Title</b>	<b>Date &amp; Venue</b>
	International Conference on Computing, Communication and Applications (ICCCA – 2012).	Transformer less high efficiency MOSFET inverter with H6-type configuration for photovoltaic ac module application	PSNA engineering and technology, Dindugal February 22 – 24, 2012.
	International Conference on Intelligent system and control(ISCO-2018)	A photovoltaic systemarchitecture of double lift Luoconverter with a single sourced super-lift MLI using water pump Irrigation system.	05 <sup>th</sup> &6 <sup>th</sup> January 2018 Karpagam College of Engineering, Coimbatore.
	International Conference on information and computationalscience- ICICS“ 18	Real time speed control of three phase induction motor by using LABVIEW with fuzzy logic	23 <sup>th</sup> March 2018, K.S.R College of engineering. Tiruchengode.
	3 <sup>rd</sup> International Conference on Electrical, electronics and computer engineering- ICEECE “2017”.	Study of hybrid split capacitor and split inductors applied in photovoltaic super-lift inverters	08 &09 <sup>th</sup> March 2017, Vivekanandha college of engineering for women. Tiruchengode.
	International Conference on Recent trends in engineering, computers, information technology and Application – ICRTECITA- 2018.	Design and investigation of super-lift converter DC/ACinverter using for solar-PVapplication	4 <sup>th</sup> and 5 <sup>th</sup> April 2014 PSNA college of engineering and technology
	International Conference on innovations and research in marine electrical and electronics Engineering, ICIRMEEE 2018.	A novel approach of 7 level modified multilevel inverter using for water pump irrigation system	27 & 28 <sup>th</sup> Sep 2018, AMET Deemed to be University, Chennai.

6 <sup>th</sup> International conference on “Electrical, Electronics, Instrumentation and computer communication (EEICC)-2019”	Power quality improvement using Pseudo-Random multicarrier PWM for Cascade Multilevel Inverter.	24 <sup>th</sup> Jan 2020, Karpagam college of engineering.
6 <sup>th</sup> International conference on Engineering and technology ICET-2020.	Smart energy meter with specialized features.	04 <sup>th</sup> & 5 <sup>th</sup> March 2020, Selvam college of technology association with The institution of Engineers (India).
IEEE MysuruCon-2021.	Experimental Validation and Integration of Solar PV Fed Modular Multilevel Inverter (MMI) and Flywheel Storage System.	NAVKIS College of Engineering, Hassan during 24 <sup>th</sup> & 25 <sup>th</sup> October 2021.
Green, sustainable innovations in electrical, electronics and biomedical engineering (GSIEEB’ 25)	Alarm detector for drive	Vivekananda College of Engineering for Women (Autonomous) 9 <sup>th</sup> April 2025.
6 <sup>TH</sup> International conference on computational intelligence and industry 5.0 –ICCII 2025	IoT based real time monitoring and fault isolation system for streetlight.	Velammal institute of technology. 21 to 22 march 2025.
2 <sup>nd</sup> International conference on intelligent and sustainable power and energy systems – ICISPES 2025	Real time monitoring and alert system for earthing integrity in electrical installations.	Dayananda Sagar College of Engineering, 13 & 14 Dec 2025.

Patents		
	<b>Title of the invention</b>	<b>Application No &amp; Journal No.</b>
	Railway Track Safety Monitoring and Control System Using IoT.	202041048829 A & 47/2020
	An Apparatus and a Method for the Automatic Segregation and Recycling of Waste Material. <b>(Granted)</b>	202141018763 A & 19/2021
	Smart Climate Forecasting Robot <b>(Granted)</b>	428180-001 26/08/2024
		<b>Date of filing of Application &amp; Publication Date</b>
		09/11/2020 & 20/11/2020
		23/04/2021 & 07/05/2021
		20/08/2024 & 03/10/2024

Journals
<ol style="list-style-type: none"> <li>1. Albert, J.R. and Stonier, A.A. (2020), Design and development of symmetrical super-lift DC–AC converter using firefly algorithm for solar-photovoltaic applications. IET Circuits Devices Syst., 14(3): pp.261-269. <a href="https://doi.org/10.1049/iet-cds.2018.5292">https://doi.org/10.1049/iet-cds.2018.5292</a>.</li> <li>2. Karthikeyan Saravanan &amp; Johny Renoald Albert (2023) Optimizing Energy Utilization in the Weaving Industry: Advanced Electro-kinetic Solutions with Modified Piezo Matrix and Super Lift Luo Converter, Electric Power Components and Systems, DOI: <a href="https://doi.org/10.1080/15325008.2023.2262458">10.1080/15325008.2023.2262458</a></li> <li>3. Shunmugam Vanaja, D, Albert, JR, Stonier, AA. An Experimental Investigation on solar PV fed modular STATCOM in WECS using Intelligent controller. Int Trans Electr Energ Syst. 31(5), 2021; e12845. <a href="https://doi.org/10.1002/2050-7038.12845">https://doi.org/10.1002/2050-7038.12845</a>.</li> <li>4. Murugesan, Malathi; Kaliannan, Kalaiselvi; Balraj, Shankarlal; Singaram, Kokila; Kaliannan, Thenmalar; Albert, Johny Renoald. ‘A Hybrid Deep Learning Model for Effective Segmentation and Classification of Lung Nodules from CT Images’,</li> </ol>

Journal of intelligent and fuzzy system, vol. 42, no. 3, pp. 2667-26791, 2021. DOI: [10.3233/JIFS-212189](https://doi.org/10.3233/JIFS-212189).

5. Albert, J.R et.al,” Investigation on load harmonic reduction through solar-power utilization in intermittent SSFI using particle swarm, genetic, and modified firefly optimization algorithms,” Journal of Intelligent and fuzzy system, Vol.42, no.4, 2022, pp.4117-4133. DOI:[10.3233/JIFS-212559](https://doi.org/10.3233/JIFS-212559).
6. Vanchinathan, K, Valluvan, KR, Gnanavel, C, Gokul, C, Albert, JR. An improved incipient whale optimization algorithm based robust fault detection and diagnosis for sensorless brushless DC motor drive under external disturbances. Int Trans Electr Energ Syst. 2021; 31(12): e13251. DOI: [10.1002/2050-7038.13251](https://doi.org/10.1002/2050-7038.13251).
7. Ramaraju, Satish Kumar et al. (2022), ‘Design and Experimental Investigation on VL-MLI Intended for Half Height (H-H) Method to Improve Power Quality Using Modified Particle Swarm Optimization (MPSO) Algorithm’. J. Intell. Fuzzy Syst, Vol. 42(6), pp.5939 – 5956. DOI: [10.3233/JIFS-212583](https://doi.org/10.3233/JIFS-212583).
8. Logeswaran Thangamuthu Albert, J.R, Kalaivanan Chinnan, and Banu Gnanavel. 2022. Design and development of extract maximum power from single-double diode PV model for different environmental condition using BAT optimization algorithm. J. Intell. Fuzzy Syst. 43, 1 (2022), 1091–1102. <https://doi.org/10.3233/JIFS-213241>.
9. M.R. Sundarakumar, Ravi Sharma, S.K. Fathima, V. Gokul Rajan, J. Dhayanithi, M. Marimuthu, G. Mohanraj, Aditi Sharma, and A. Johny Renoald. 2023. Improving Data Processing Speed on Large Datasets in a Hadoop Multi-node Cluster using Enhanced Apriori Algorithm. J. Intell. Fuzzy Syst. 45, 4 (2023), 6161–6177. <https://doi.org/10.3233/JIFS-232048>.
10. Albert, J.R et al. ‘An Advanced Electrical Vehicle Charging Station Using Adaptive Hybrid Particle Swarm Optimization Intended for Renewable Energy System for Simultaneous Distributions’, Journal of Intelligent and fuzzy system, 43(4), 2022, pp. 4395 – 4407. DOI: [10.3233/JIFS-220089](https://doi.org/10.3233/JIFS-220089).
11. Palanisamy, Rajarathinam, Govindaraj, Vijayakumar, Siddhan, Saravanan, Albert, J.R,’ Experimental Investigation and Comparative Harmonic Optimization of AMLI Incorporate Modified Genetic Algorithm Using for Power Quality Improvement’. Journal of Intelligent and fuzzy system, 43(1), pp. 1163-1176, 2022, DOI: [10.3233/JIFS-212668](https://doi.org/10.3233/JIFS-212668).
12. Albert, J.R. Design and Investigation of Solar PV Fed Single-Source Voltage-Lift Multilevel Inverter Using Intelligent Controllers. J Control Autom Electr Syst 33, 1537–1562 (2022). <https://doi.org/10.1007/s40313-021-00892-w>.
13. Gnanavel. C, Muruganatham. P, Vanchinathan. K and JR Albert, "Experimental Validation and Integration of Solar PV Fed Modular Multilevel Inverter (MMI) and Flywheel Storage System," 2021 IEEE Mysore Sub Section International Conference, 2021, pp. 147-153, DOI: [10.1109/MysuruCon52639.2021.9641650](https://doi.org/10.1109/MysuruCon52639.2021.9641650).
14. Albert, J. R., Stonier, A. A., & Vanchinathan, K. (2022). Testing and performance evaluation of water pump irrigation system using voltage-lift multilevel inverter. International Journal of Ambient Energy, 43(1), 8162–8175. <https://doi.org/10.1080/01430750.2022.2092773>
15. Babypriya, B. Renoald, A. Johny, Shyamalagowri, M. Kannan, R. ‘An Experimental Simulation Testing of Single-diode PV Integrated MPPT Grid-tied Optimized Control Using Grey Wolf Algorithm’. Journal of Intelligent and fuzzy system, vol. 43, no. 5, pp. 5877-5896, 2022, DOI: [10.3233/JIFS-213259](https://doi.org/10.3233/JIFS-213259).
16. Madhumathi Periasamy et.al, Various PSO methods investigation in renewable and nonrenewable sources, International Journal of Power Electronics and Drive Systems, Vol. 13, No. 4, December 2022, pp. 2498~2505, DOI: [10.11591/ijpeds.v13.i4.pp2498-2505](https://doi.org/10.11591/ijpeds.v13.i4.pp2498-2505).
17. Albert, J.R, Thenmalar Kaliannan, Gopinath Singaram, Fantin Irudaya Raj Edward Sehar, Madhumathi Periasamy, Selvakumar Kuppusamy, A Remote Diagnosis

Using Variable Fractional Order with Reinforcement Controller for Solar-MPPT Intelligent System, Photovoltaic Systems, pp.45-64, Publisher: CRC press. <https://doi.org/10.1201/9781003202288>.

18. Albert, J.R., Ramasamy, K., Joseph Michael Jerard, V. *et al.* A Symmetric Solar Photovoltaic Inverter to Improve Power Quality Using Digital Pulsewidth Modulation Approach. *Wireless Pers Commun* **130**, 2059–2097 (2023). <https://doi.org/10.1007/s11277-023-10372-w>.
19. C Gnanavel, Albert, J.R, S Saravanan, K Vanchinathan, An Experimental Investigation of Fuzzy-Based Voltage-Lift Multilevel Inverter Using Solar Photovoltaic Application, Smart Grids and Green Energy Systems, pp. 59-74, Wiley publication, <https://doi.org/10.1002/9781119872061.ch5>.
20. Albert, J.R, Premkumar, K. Vanchinathan, K. Nazar Ali, A. Sagayaraj, R.Saravanan, T.S. Investigation of Super-Lift Multilevel Inverter Using Water Pump Irrigation System, Smart Grids and Green Energy Systems, 247, Wiley publication. pp. 247-262, <https://doi.org/10.1002/9781119872061.ch16>.
21. Hemalatha S, Albert, J.R, Banu G, Indirajith K, Design and investigation of PV string/central architecture for bayesian fusion technique using grey wolf optimization and flower pollination optimized algorithm, Energy Conversion and Management, Vol.286, 2023, 117078, <https://doi.org/10.1016/j.enconman.2023.117078>.
22. Rajasekaran P, DuraiPandian M, Johny Renoald Albert, (2025), Privacy-enhanced data compression using quantum zk-SNARKs and variational auto-encoders in cloud-IoT based healthcare sensor data for medical applications. *AIP Advances* 1 October 2025; 15 (10): 105131. <https://doi.org/10.1063/5.0301716/>
23. Saravanan, K., Albert, J. R., & S, A. A. (2025), Enhancing energy efficiency in power looms: utilizing regression machine learning for electro-kinetic energy assessment. *The Journal of The Textile Institute*, 116(6), 1036–1061. <https://doi.org/10.1080/00405000.2024.2365753>.
24. K. J. Sinu, Johny Renoald Albert et.al (2025), An Advanced Energy Consumption Predictive Method for Artificial Intelligence-Based Hybrid Electric Vehicle to Improve Vehicle Battery Efficiency for Sustainable Development *Journal of Circuits, Systems and Computers*, <https://doi.org/10.1142/S0218126626500271>.
25. Pavunkumar Devaraj, Santhosh Babu A. V., Johny Renoald Albert (2026), Hybrid deep learning framework for enhancing real-time driver safety systems. *AIP Advances* 1 January 2026; 16 (1): 015024. <https://doi.org/10.1063/5.0310353>.
26. Saravanan, K., Albert, J. R., & S, A. A. (2025), Enhancing energy efficiency in power looms: utilizing regression machine learning for electro-kinetic energy assessment. *The Journal of The Textile Institute*, 116(6), 1036–1061. <https://doi.org/10.1080/00405000.2024.2365753>.
27. Tamilselvan Kesavan, Aruna Sankaralingam, Johny Renoald Albert, Kumar Rengasamy; Optimizing cloud service cryptography via fuzzy graph theory neural networks: A data model perspective. *AIP Advances* 1 October 2025; 15 (10): 105318. <https://doi.org/10.1063/5.0300303>.
28. R A. Johny et.al,” Real-Time Monitoring and Alert System for Earthing Integrity in Electrical Installations, Chapter 20, *Intelligent and Sustainable Power and Energy Systems*, 1st edition, CRC Press, pp- 177-184, <https://doi.org/10.1201/9781003654469>.
29. Krishnamoorthy, M., Albert, J.R. Electricity theft detection in IoT-based smart grids using a parameter-tuned bidirectional LSTM with pre-trained feature learning mechanism. *Electr Eng* 106, 5987–6001 (2024). <https://doi.org/10.1007/s00202-024-02342-7>.
30. Saravanan, K., & Albert, J. R. (2023). Optimizing Energy Utilization in the Weaving Industry: Advanced Electrokinetic Solutions with Modified Piezo Matrix and Super

Lift Luo Converter. Electric Power Components and Systems, 1–27. <https://doi.org/10.1080/15325008.2023.2262458>.

31. Sundarakumar MR, Salangai Nayagi D, Vinodhini V, et al. (2023), A Heuristic Approach to Improve the Data Processing in Big Data using Enhanced Salp Swarm Algorithm (ESSA) and MK-means Algorithm. Journal of Intelligent & Fuzzy Systems: Applications in Engineering and Technology. 45(2):2625-2640. DOI: 10.3233/JIFS-231389.
32. Albert, J.R, Kannan. R, Karthick. S, Selvan. P, Sivakumar. A Gnanavel .C,” An Experimental and Investigation on Asymmetric Modular Multilevel Inverter an Approach with Reduced Number of Semiconductor Devices, J. Electrical Systems, 2022, Vol. 18, Issues 3, pp. 318-330.
33. Albert, J.R., Sinu, K.J., Karthikeyan, K., Gnanamurugan, S. (2026). PSO Tuned Reactive Power Compensation in Unbalanced Grid Network Using Double Boost-Modified Dual Controller. In: Subirats, L., Gurung, S., Ningombam, D., Banerji, N. (eds) Advanced Computational and Communication Paradigms. ICACCP 2025. Lecture Notes in Networks and Systems, vol 1761. Springer, Cham. [https://doi.org/10.1007/978-3-032-13555-1\\_1](https://doi.org/10.1007/978-3-032-13555-1_1).
34. Jamuna R et.al, (2026), AI- and ML-driven Multimodal Analysis of Nanoparticle Morphology, Composition, and Dynamics, J. Environ. Nanotechnol. Volume 15, No 1 (2026) pp. 445-458. DOI: 10.13074/jent.2026.03.2612028.

**Books/Book Chapters**

Book Title	Book Chapter Title/ Publisher	ISBN Published Date
Solar Cells – Theory, Materials and Recent Advances	Solar Energy Assessment in Various Regions of Indian Subcontinent/ ( <b>Intech Open – U.K</b> )	<b>DOI: 10.5772/intechopen.95118</b> , ISBN: 978-1-83881-017-7 Print ISBN: 978-1-83881-016-0 eBook (PDF) ISBN: 978-1-83881-024-5.
Taylor & Francis– CRC publication. ( <b>Scopus Index</b> ) Book Chapter.	A Remote Diagnosis Using Variable Fractional Order with Reinforcement Controller for Solar-MPPT Intelligent System.	<a href="https://doi.org/10.1201/9781003202288">https://doi.org/10.1201/9781003202288</a> . eBook ISBN: 9781003202288
AkiNik Publication (Delhi).	Optimization Methods for Electric Power Systems.	<b>DOI:</b> <a href="https://doi.org/10.22271/ed.book.1194">https://doi.org/10.22271/ed.book.1194</a> , ISBN: 978-93-90846-22-1 Published: April 2021.
Smart Grids and Green Energy Systems ( <b>Scopus Index</b> )	Investigation of Super-Lift Multilevel Inverter Using Water Pump Irrigation System, (Wiley Publication Book Chapter).	<a href="https://doi.org/10.1002/9781119872061.ch16">https://doi.org/10.1002/9781119872061.ch16</a>
Smart Grids and Green Energy Systems ( <b>Scopus Index</b> )	An Experimental Investigation of Fuzzy-Based Voltage-Lift Multilevel Inverter Using Solar Photovoltaic Application, (Wiley Publication Book Chapter).	<a href="https://doi.org/10.1002/9781119872061.ch5">https://doi.org/10.1002/9781119872061.ch5</a> .

	Intelligent and Sustainable Power and Energy Systems <b>(Scopus Index)</b>	Real-Time Monitoring and Alert System for Earthing Integrity in Electrical Installations	<a href="https://doi.org/10.1201/9781003654469">https://doi.org/10.1201/9781003654469</a> , eBook ISBN9781003654469
	Solar Cells – Theory, Materials and Recent Advances	Solar Energy Assessment in Various Regions of Indian Subcontinent/ (Intech Open – U.K)	DOI: 10.5772/intechopen.95118 ISBN: 978-1-83881-017-7 Print ISBN:978-1-83881-016-0