

KAMARAJ

COLLEGE OF ENGINEERING & TECHNOLOGY



(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

S.P.G.Chidambara Nadar - C.Nagammal Campus

S.P.G.C. Nagar, K.Vellakulam - 625 701 (Near VIRUDHUNAGAR).

Faculty

Achievements



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Student Faculty Ratio

2023-2024

No. of Professors	1
No. of Associate Professors	0
No. of Assistant Professors	6
No. of Ph.D. holders in department	4
No. of Faculty doing Ph.D.	3

2024-2025

No. of Professors	1
No. of Associate Professors	1
No. of Assistant Professors	4
No. of Ph.D. holders in department	3
No. of Faculty doing Ph.D.	3

2025-2026

No. of Professors	1
No. of Associate Professors	1
No. of Assistant Professors	4
No. of Ph.D. holders in department	3
No. of Faculty doing Ph.D.	3



Current Student Strength - 150

Student Strength - 114

Student Strength - 111

Faculty strength – 7

Faculty strength – 6

Faculty strength – 6

Faculty Research Details



Total Faculty Count - 6

Faculty With Ph.D., - 4

Faculty Pursing Ph.D., - 2

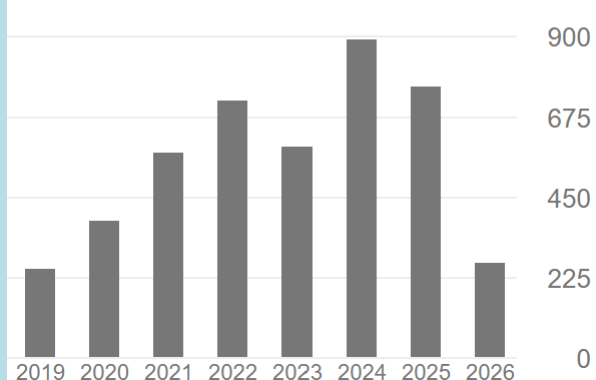
Faculty with Ph.D., Guideship - 3

Google Scholar Citations (as on 13th May 2026)

Dr. D. Prince Winston



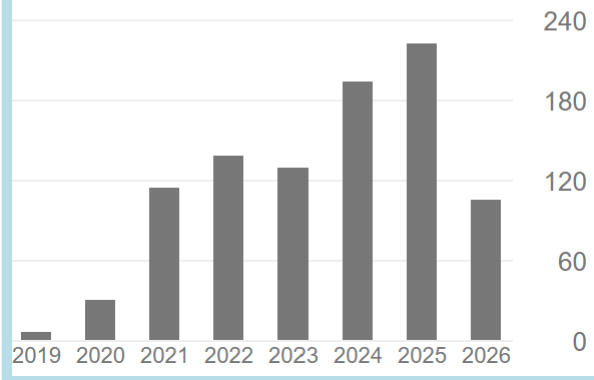
	All	Since 2021
Citations	4650	3817
h-index	37	35
i10-index	87	80



Dr. B. Gurukarthik Babu



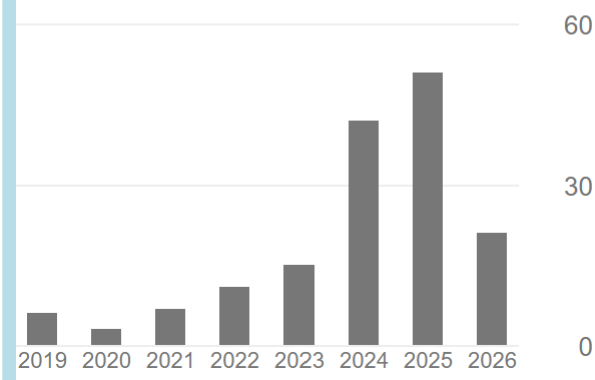
	All	Since 2021
Citations	967	907
h-index	13	13
i10-index	19	18



Dr. G. Sakthivel



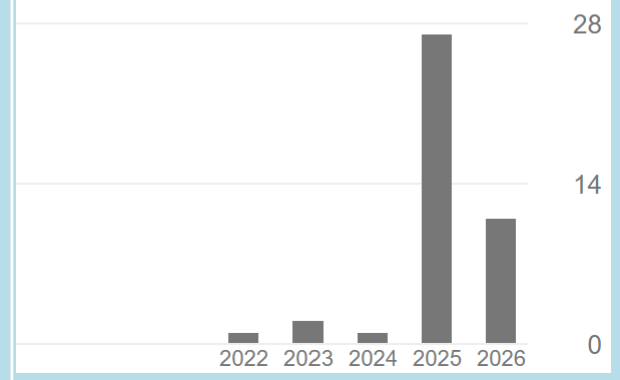
	All	Since 2021
Citations	304	149
h-index	9	6
i10-index	9	5



Dr. R. Ganesan



	All	Since 2021
Citations	42	42
h-index	4	4
i10-index	2	2



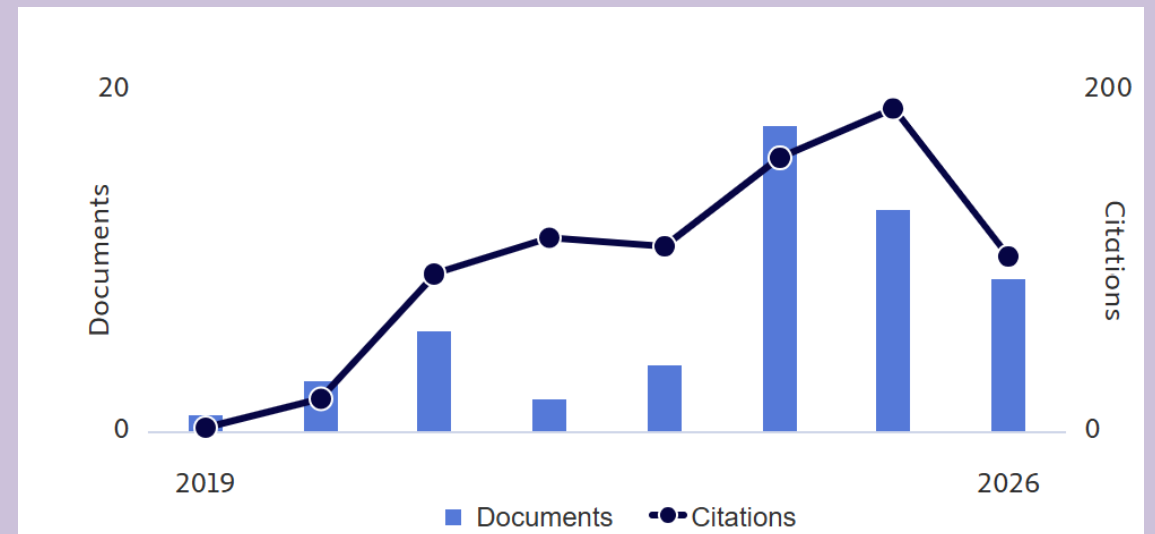
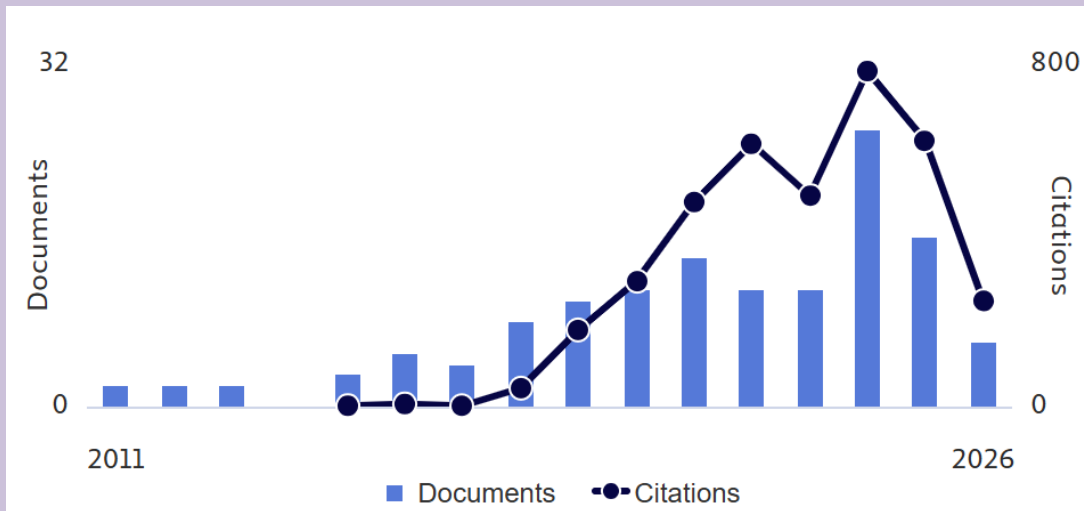
Scopus Citations (as on 13th May 2026)



Dr. D. Prince Winston



Dr. B. Gurukarthik Babu



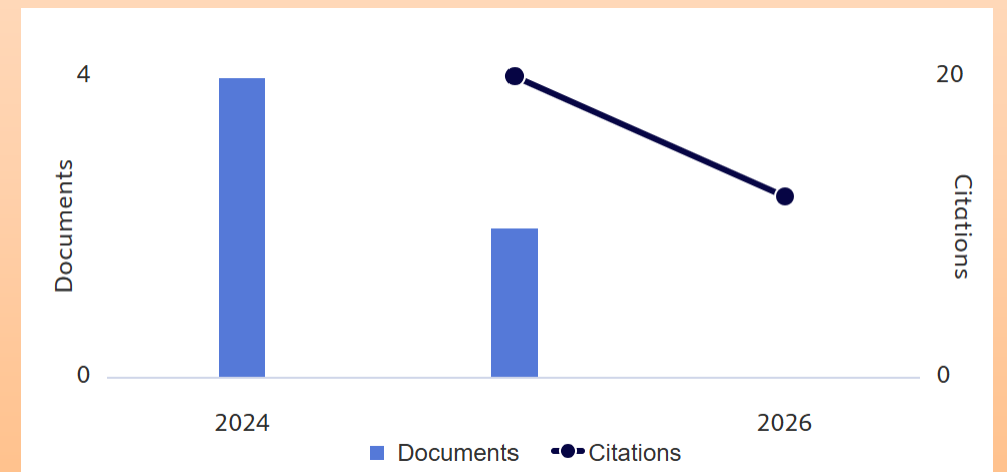
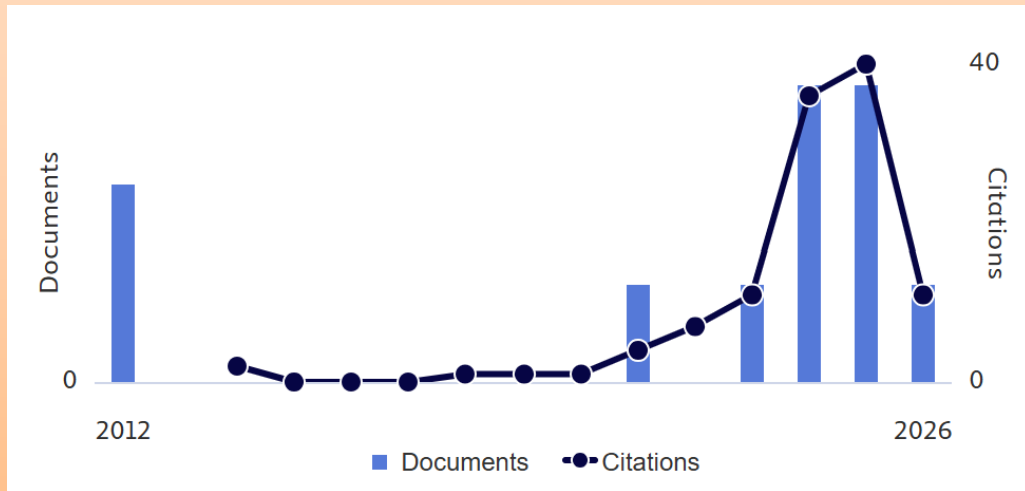
Scopus Citations (as on 13th May 2026)



Dr. G. Sakthivel

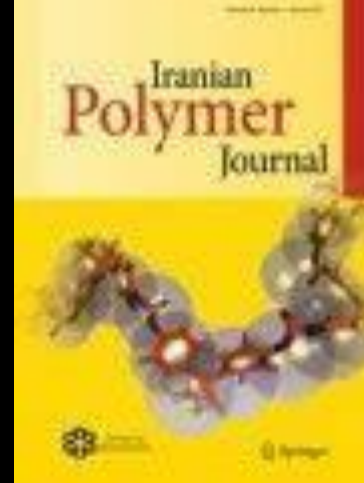
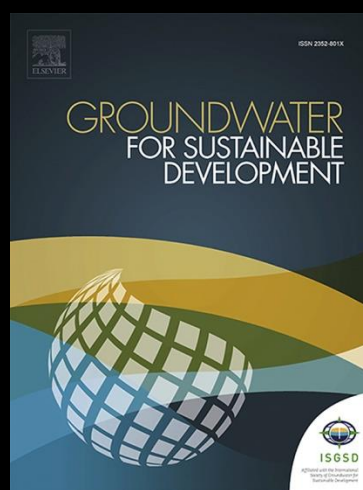
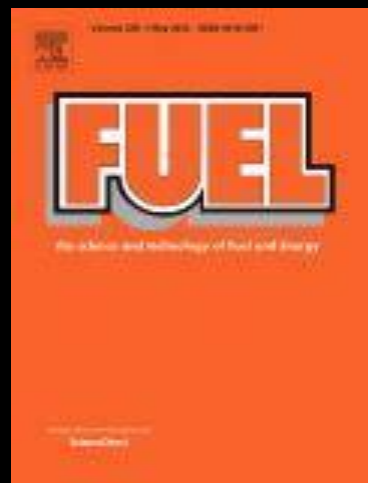
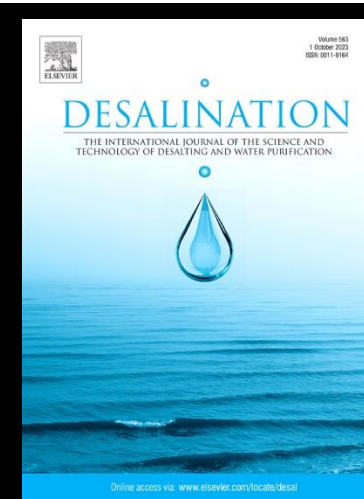
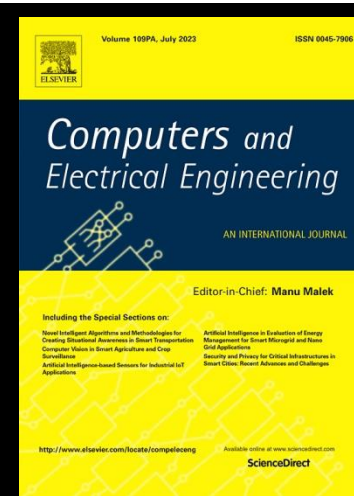
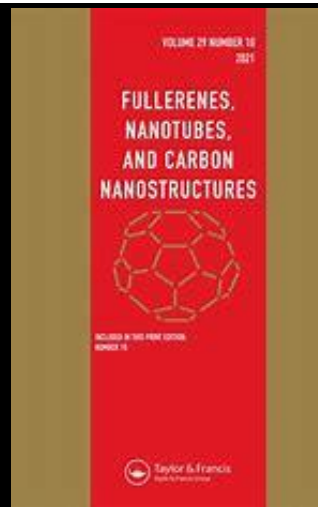
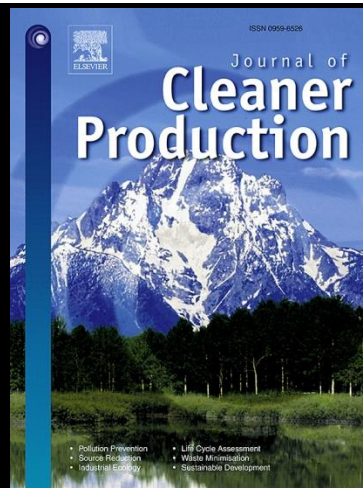
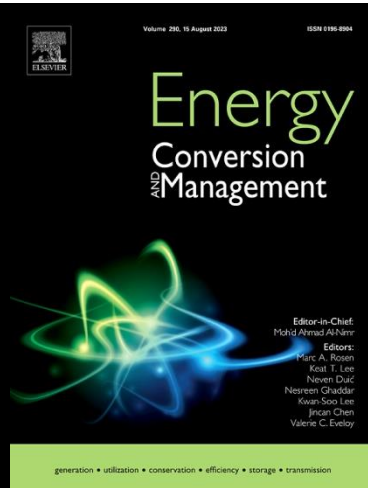


Dr. R. Ganesan



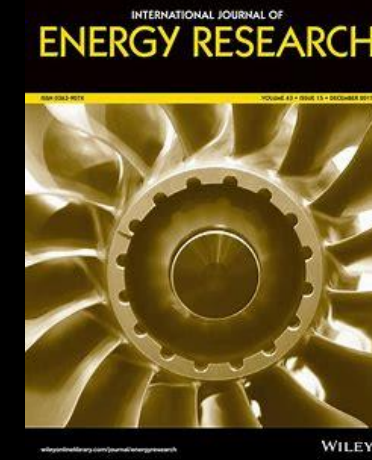
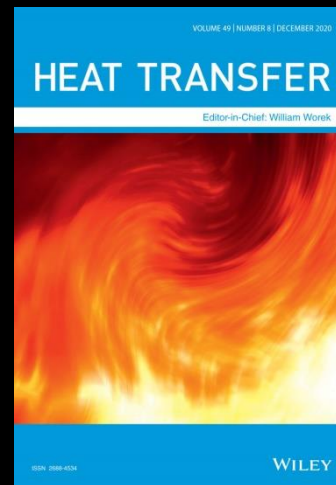
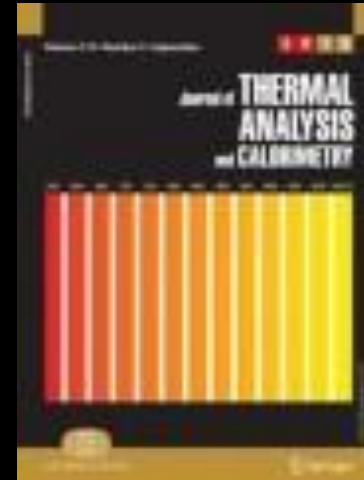
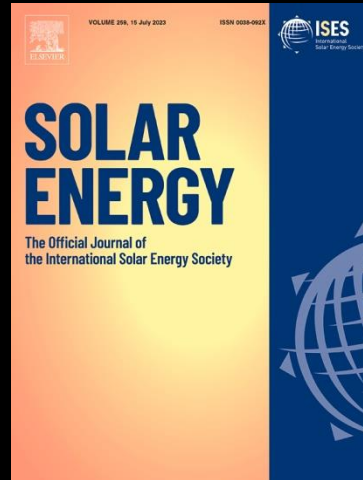
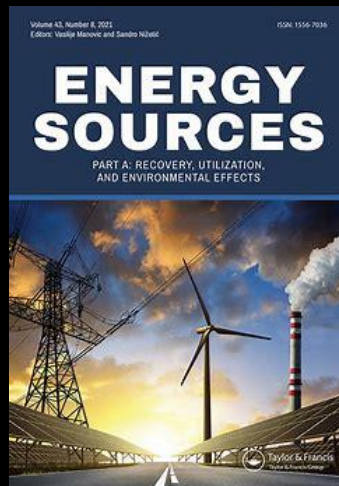
Faculty Publications in reputed Journals

7



Faculty Publications in reputed Journals

7



Faculty Publications (July 2024 to June 2025)

4

S. No.	Title of the Paper	Journal Name	Authors Name	Vol No.	Issue No.	Page No	Month	Year
1	<u>Study on photovoltaic/thermal application for water desalination and electricity power generation using high thermal conducting materials</u>	Applied Thermal Engineering	Gurukarthik Babu Balachandran, Vishnu Karan Baskaran, Prince Winston David	249	NA	123435	July	2024
2	Next generation road safety solutions:IoT-driven accident prevention for smart riders	Journal of Industrial Information Integration	Santhiya Ravindran, Gurukarthik Babu Balachandran	44	NA	100804	March	2025
3	Automobile safety innovations and road crash trends: A data-driven analytical approach	Proceedings of the Institution of Mechanical Engineers-Part D, (Journal of Automobile Engineering)	Santhiya Ravindran, Gurukarthik Babu Balachandran, Devisri Priyadharshini Muthu venkatraman, Muthu Eshwaran Ramachandran	-			April	2025
4	Measurement and analysis of heterogeneous road transport parameters using Smart Traffic Analyzer and SUMO Simulator:An experimental approach	Measurement	Santhiya Ravindran, Gurukarthik Babu Balachandran, Prince Winston David	242	NA	116233	January	2025
5	Optimizing solar still performance: A response surface methodology approach to evaporation and condensation enhancement	Proceedings of the Institution of Mechanical Engineers-Part E (Journal of Process Mechanical Engineering)	Santhiya Ravindran, Gurukarthik Babu Balachandran, Hariharasudhan Thangaraj and Vishnukaran Baskaran	-			December	2024

Faculty Publications (July 2024 to June 2025)

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S. No.	Title of the Paper	Journal Name	Authors Name	Vol No.	Issue No.	Page No	Month	Year
6	A novel reconfiguration technique for solar PV based microgrid system	Renewable Energy	Palpandian Murugesan, Hariharasudhan Thangaraj, Prince Winston David, Pravin Murugesan	243	NA	122573	January	2025
7	Power enhancement of PV arrays in different configurations under different partial shaded condition	Scientific Reports	Sakthivel Ganesan, Prince Winston David, Hariharasudhan Thangaraj, Praveen Kumar Balachandran & Shitharth Selvarajan	15	NA	6963	February	2025
8	Exergy and energy analysis on the performance of high thermal conductivity material in PV/T system: An experimental approach	Energy	Gurukarthik Babu Balachandran, Vishnu Karan Baskaran, Abirami Chidambaram, Prince Winston David	311	NA	133358	December	2024
9	Experimental Investigations on the Comparison of Multi-Objective Design for High Thermal Energy Applications: An Insight into Response Surface Methodology	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects	Gurukarthik Babu Balachandran, Vishnu Karan Baskaran, Hariharasudhan Thangaraj, Prince Winston David	46	1	30	October	2024
10	Breakthroughs in high thermal applications: Implication of chlorinated polyvinyl chloride with N-methyl-2 pyrrolidone	Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science	Selva Kumar Shanmugaya Pandian, Gurukarthikbabu Balachandran, Hariharasudhan Thangaraj	-			April	2025

Faculty Publications (July 2024 to June 2025)

S. No.	Title of the Paper	Journal Name	Authors Name	Vol No.	Issue No.	Page No	Month	Year
11	Modelling and optimisation of thermal expansion and thermal conductivity using face-centred central composite design-based response surface methodology: An experimental approach	<u>Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering</u>	Gurukarthik Babu Balachandran, Vishnu Karan Baskaran, Hariharasudhan Thangaraj, Prince Winston David	-	NA	NA	October	2024
12	<u>Performance analysis of hybrid PV/T systems: Exploring synergistic effects of aluminium, copper, and pristine graphene as high-thermal-conductivity materials</u>	Thermal Science and Engineering Progress	Vishnu Karan Baskaran, Abirami Chidambaram, Gurukarthik Babu Balachandran	62	NA	103598	June	2025
13	10E analysis and certain investigation on the performance of high-thermal-conductivity material in PV/T system: an experimental approach	Journal of Thermal Analysis and Calorimetry	Gurukarthik Babu Balachandran, Vishnu Karan Baskaran, Abirami Chidambaram, Prince Winston David	150	NA	1509	December	2024
14	From carbon inspiration to energy innovation: epoxy nano-composites for thermal and dielectric excellence	International Journal of Polymer Analysis and Characterization	Gurukarthik Babu Balachandran, Muthu Eshwaran Ramachandran, Hariharasudhan Thangaraj & Anandha Balaji Alexander	30	4	377-392	February	2025
15	Unleashing the future of wind energy systems using SiO ₂ and TiO ₂ based insulation: A deep dive into Artificial Intelligence and Response Surface Methodology	Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science	Gurukarthik Babu Balachandran, Muthu Eshwaran Ramachandran, Hariharasudhan Thangaraj & Pravin Murugesan	-	NA	954406 225132 7800	April	2025

Faculty Publications (July 2024 to June 2025)

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S. No.	Title of the Paper	Journal Name	Authors Name	Vol No.	Issue No.	Page No	Month	Year
16	Experimental optimization of stacked solar PV panels: Strategic positioning and reduced footprint for power maximization	Renewable Energy	Gurukarthik Babu Balachandran, Muthu Eshwaran Ramachandran, M. Palpandian & Prince Winston David	248	NA	123099	April	2025
17	Optimizing Photovoltaic Array Performance Under Partial Shading Using a Golden Ratio-Based Configuration: A Comparative Analysis of 16 Configurational Variants	IEEE Access	Sakthivel Ganesan, Hariharasudhan Thangaraj, Prince Winston David, Devakirubakaran Samithas, Praveen Kumar Balachandran, & Muhammadammirulatiqi Mohdzainuri	13		23795 - 23815	February	2025
18	Analysis of ludo-shaped configuration of PV arrays under different partial shaded configuration	Electrical Engineering	Sakthivel Ganesan, Prince Winston David, Hariharasudhan Thangaraj, Praveen Kumar Balachandran, Ilhami Colak	-			November	2024
19	Performance improvement of partial shaded solar PV system using Unbalanced Adaptive Dynamic Reconfiguration technique	Renewable Energy	Nithya Kalyani Solaisamy, Prince Winston David, Devakirubakaran S, Palpandian Murugesan	246	NA	123883	June	2025
20	Performance evaluation of a bifacial floating standalone photovoltaic system with different water bodies: An experimental investigation of 10E analysis	Environmental Progress & Sustainable Energy	Ganesan Rathinavel Pandian, Gurukarthik Babu Balachandran, Prince Winston David & Hariharasudhan Thangaraj	43	6	14487	Nov	2024

Faculty Publications (July 2024 to June 2025)

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S. No.	Title of the Paper	Journal Name	Authors Name	Vol No.	Issue No.	Page No	Month	Year
21	Performance analysis of floating bifacial stand-alone photovoltaic module in tropical freshwater systems of Southern Asia: An experimental study	Scientific Reports	Ganesan R, Balachandran, GB, David, Prince Winston David & Sangeetha, K	14	1	20352	Sep	2024
22	Optimization strategies for bifacial floating photovoltaic systems on different water bodies: A 10E performance evaluation	Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering	Ganesan R, Balachandran, GB, David, PW & Thangaraj, H	-	-	-	Sep	2024
23	Comparative analysis on the impact of various depths of different water bodies on standalone bifacial solar photovoltaic panels: An experimental approach	Iranian Journal of Chemistry and Chemical Engineering	Ganesan R, Gurukarthik Babu B, Savithiri Vembu, Muthu Manokar A	43	9	3438-3453	Sep	2024
24	Optimizing PID control for maximum power point tracking in photovoltaic systems under variable and partial shading conditions	Renewable Energy	C Karuppasamy, CS Kumar, R Ganesan, P Elamparithi	246	-	122930	June	2025

Faculty Publications (July 2023 to June 2024)

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S. No.	Title of the Paper	Journal Name	Authors Name	Vol No.	Issue No.	Page No	Month	Year
1	Solar Photovoltaic system performance improvement using a new fault identification technique	Electric Power Components and Systems	Sakthivel Ganesan, Prince Winston David, Pravin Murugesan, Praveen Kumar Balachandran	-	-	-	July	2023
2	Investigation under different particle size effects of chitin with vinyl ester on mechanical behavior	Biomass Conversion and Biorefinery	R. Baskaran, M.G. Sribala, Gurukarthik Babu Balachandran, S Gandhi	-	-	-	Sep	2023
3	Harnessing the Potential of Bellamy eburnea Shell-Derived Nanoparticles Through Electro-mechanical Optimization in the Performance of PCL Bio-composites: A Green Insulation Revolution	Waste and Biomass Valorization	Gurukarthik Babu Balachandran, Anandha Balaji Alexander, Pravin Murugesan, Prince Winston David, Karthi Keyan Shanmugasundaram, Karthikeyan Sankarraaj, Thiruppathy Ramachandran, Muthu Eshwaran Ramachandran, Ponprapakaran Kasi	-	-	-	Sep	2023
4	Comparative analysis of Hybrid, conventional and staircase static reconfiguration methods to mitigate partial shading effects: Unveiling the superiority of two-step staircase (2SS) reconfiguration	Solar Energy	S. Sugumar, D. Prince Winston, K. Ganesan, M. Pravin	264	-	112029	Sep	2023
5	Output power enhancement of a bifacial solar photovoltaic with upside down installation during module defects	Applied Energy	S. Sugumar, D. Prince Winston, J Jeslin Drusila Nesamalar, M. Pravin	353	-	122070	Oct	2023

Faculty Publications (July 2023 to June 2024)

S. No.	Title of the Paper	Journal Name	Authors Name	Vol No.	Issue No.	Page No	Month	Year
6	Maximum power enhancement in solar PV modules through modified TCT interconnection method	Sustainable Energy Technologies and Assessments	S. Suriya kala , D. Prince winston * , M. Pravin , G. Sakthivel	60	-	103462	Oct	2023
7	<u>One-step adaptive reconfiguration technique for partial shaded photovoltaic array</u>	Solar Energy	Palpandian Murugesan, Prince Winston David, Pravin Murugesan, Nithya Kalyani Solaisamy	263	-	111949	Oct	2023
8	Performance Analysis of Novel Solar PV Array Configurations with Reduced Tie Interconnection to Extract Maximum Power under Partial Shading	Electric Power Components and Systems	Pandimuni Pandian, Prince Winston David, Palpandian Murugesan & Pravin Murugesan				Nov	2023
9	Multi-analytical investigation of the physical, chemical, morphological, tensile, and structural properties of Indian mulberry (Morinda tinctoria) bark fibers	Heliyon	Gurukarthik Babu Balachandran, P. Narayanasamy, Anandha Balaji Alexander, Prince Winston David, Rajesh Kannan Mariappan, Muthu Eshwaran Ramachandran, Suyambulingam Indran, Sanjay Mavinkere Rangappa, Suchart Siengchin	9	-	e21239	Oct	2023
10	Extensive Energy, Exergy, Economic, Exergoeconomic, Enviroeconomic, and Energy Payback Time Analysis and Investigation on Bifacial Solar Photovoltaic Module with Nonbiodegradable Waste as Reflectors	Energy Technology	Hariharasudhan Thangaraj, Prince Winston David, Marshal Raj, and Gurukarthik Babu Balachandran	12	1	2300829	Jan	2024

Faculty Publications (July 2023 to June 2024)

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S. No.	Title of the Paper	Journal Name	Authors Name	Vol No.	Issue No.	Page No	Month	Year
11	Performance evaluation of natural <i>Olea europaea</i> (olive oil)-based blended esters with butylated hydroxyanisole and butylated hydroxytoluene: optimization using response surface methodology	Environmental Science and Pollution Research	Hariharasudhan Thangaraj · Prince Winston David · Gurukarthik Babu Balachandran, Gowthama Kannan Sivasekar	31	-	4985–5000	December	2023
12	Performance of stand-alone bifacial photovoltaic module using non-biodegradable waste as reflectors for tropical climatic region of southern India: An experimental approach	Solar energy	Hariharasudhan Thangaraj , Prince Winston David , Marshal Raj Gurukarthik Babu Balachandran	268	-	112302	Jan	2024
13	Performance analysis of winnowing dynamic reconfiguration in partially shaded solar photovoltaic system	Solar energy	Kavitha Suresh Kumar, Prince Winston David	268	-	112309	Jan	2024
14	Novel Active Battery Balancing Methodologies for Lithium Batteries: An Experimental Comparative Analysis	Energy Technology	Pandimuni Pandian, Prince Winston David, Palpandian Murugesan, and Pravin Murugesan			2301050	Jan	2024
15	Power enhancement in PV arrays under partial shaded conditions with different array configuration	Heliyon	Sakthivel Ganesan , Prince Winston David , Praveen Kumar Balachandran, Ilhami Colak	10	2	e23992	Jan	2024

Faculty Publications (July 2023 to June 2024)

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S. No.	Title of the Paper	Journal Name	Authors Name	Vol No.	Issue No.	Page No	Month	Year
16	Energy, Exergy, Economic, Environmental, Exergoenvironmental, Exergoeconomic, and Enviroeconomic Analysis of Photovoltaic/Thermal System with Double-Fan Arrangement for Effective Condensation and Evaporation: An Experimental Approach	Energy Technology	Santhiya Ravindran, Gurukarthik Babu Balachandran, Pravin Murugesan, and Prince Winston David	10	1	2300836	feb	2024
17	Optimal battery based electrical reconfiguration technique for partial shaded PV system	Applied Energy	Aravind P, Prince Winston D, Sugumar S, M. Pravin	353	-	122942	Feb	2024
18	Performance investigation of n-type PERT bifacial solar photovoltaic module installed at different elevations	Renewable Energy	K. Ganesan, D. Prince Winston, S. Sugumar , T. Hari Prasath	227	-	120526	April	2024
19	Tie failure detection technique for total cross tied solar photovoltaic system	Engineering Failure Analysis	Ramesh Prabhu Srinivasan, Jayanta Deb Mondol, Prince Winston David, Pravin Murugesan	161	-	108271	April	2024
20	A selective cross-tied array configuration technique for partial shaded solar PV system	Electrical Engineering	Pandimuni Pandian, Prince Winston David, Pravin Murugesan, Praveen Kumar Balachandran				January	2024
21	Selection of performance indicators on dielectric strength and viscosity for chlorinated polyvinyl chloride with N-Methyl-2-pyrrolidone: Optimization using central composite design-response surface methodology	Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering	Selva Kumar Shanmugaya Pandian, Gurukarthikbabu Balachandran, Hariharasudhan Thangaraj, Mariaamalraj Samykannu				April	2024

Faculty Publications (July 2023 to June 2024)

S. No.	Title of the Paper	Journal Name	Authors Name	Vol No.	Issue No.	Page No	Month	Year
22	Comparative investigation of imaging techniques, pre-processing and visual fault diagnosis using artificial intelligence models for solar photovoltaic system – A comprehensive review	Measurement	Gurukarthik Babu Balachandran, M. Devisridhivyadharshini, Muthu Eshwaran Ramachandran, R. Santhiya	232	-	114683	April	2024
23	A novel Global maximum power extraction technique for partial shaded solar PV system	Energy Conversion and Management	Meenatchi Sundaram Palanisamy, Prince Winston David, Palpandian Murugesan, Hariharasudhan Thangaraj	313	-	118595	May	2024
24	Performance evaluation of PI and FLC controller for shunt active power filters	Electrical Engineering	Arulkumar Annamalaichamy, Prince Winston David, Praveen Kumar Balachandran, Ilhami Colak				June	2024
25	Comparative Analysis of Various Reconfiguration Techniques for Partial Shading Conditions in Solar Photovoltaic Systems	International Journal of Scientific Research in Engineering and Management (IJSREM)	M. Devisridhivyadharshini, B. Guru Karthik Babu, D. Prince Winston and G. Sakthivel	8	5		May	2024
26	Performance enhancement of partial shaded photovoltaic system with novel technique	International Journal of Scientific Research in Engineering and Management (IJSREM)	Dona Mol A S, Prince Winston D, Sakthivel G	8	4		April	2024

Faculty Publications (July 2022 to June 2023)

S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
1	Fullerenes, Nanotubes and Carbon Nanostructures	A. R. Sivakumar, R. Baskaran, B. Gurukarthik Babu & A. Murugesan	Synergistic effect of fast extrusion furnace (FEF) black on viscosity and rheological properties of ethylene propylene diene monomer vulcanizate	31	2	168-175	October	2022
2	IEEE Canadian Journal of Electrical and Computer Engineering	MM Shobini, DP Winston, SS Kumar, M Pravin, AG Aakash, BG Babu	S-Connected Ladder Fashion Multilevel Topology With Reduced Device Count Topology	45	3	285-292	August	2022
3	Iranian Journal of Science and Technology, Transactions of Electrical Engineering	Singh, O.J., Winston, D.P.	Enhanced Method of Mitigating Voltage Sags and Swells Using Optimized Fuzzy Controlled DVR	47	-	147-158	October	2022
4	Energy Conversion and Management	T. Hariharasudhan, D. Prince Winston, M. Palpandi, M. Pravin	A comparative analysis of polycrystalline and bifacial photovoltaic module under various partial shading condition	270	-	116223	October	2022
5	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects	Suriya Kala Shakthivel, Prince Winston David, S Periya Backiyam, MS Murugan	Square dynamic reconfiguration for the partial shaded photovoltaic system– simulation and experimental analysis	44	3	6868-6885	July	2022

Faculty Publications (July 2022 to June 2023)

S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
6	International Transactions on Electrical Energy Systems	Tamilselvi Selvaraj, Ramasubbu Rengaraj, GiriRajanbabu Venkata krishnan, Soundhariya Ganesan Sounda rarajan, Karupppiah Natarajan, Praveen Kumar Balachandran, Prince Winston David,and Shitharth Selvarajan	Environmental Fault Diagnosis of Solar Panels Using Solar Thermal Images in Multiple Convolutional Neural Networks	2	-	1-16	September	2022
7	Solar Energy	K. Ganesan, D. Prince Winston, S. Sugumar, S. Jegan	Performance analysis of n-type PERT bifacial solar PV module under diverse albedo conditions	252	-	81-90	March	2023
8	Energy	Palpandian Murugesan, Prince Winston David, Pravin Murugesan, Pounraj Periyasamy	Battery based mismatch reduction technique for partial shaded solar PV system	272	1	127063	June	2023
9	Automatika	Stalin M. & Kalyani S.	A novel approach to predict competency and the hidden risk factor by using various machine learning classifiers	64	3	550-564	April	2023
10	Journal of Electrical Engineering & Technology	Devie Paramasivam Mohan & Kalyani Sundaram	Non-Intrusive Residential Load Monitoring System Using Appliance: Based Energy Disaggregation Models				April	2023

Faculty Publications (July 2022 to June 2023)

S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
11	Electrical Engineering	Sakthivel Ganesan, Prince Winston David, Praveen Kumar Balachandran, Tomonobu Senjyu	Fault identification scheme for solar photovoltaic array in bridge and honeycomb configuration	105	4	2443-2460	April	2023
12	Materials Research Express	Ganesh Prabhu Parvathi kumar, Gurukarthik Babu Balachandran and Brintha Sahadevan	Performance of green concrete paving block imbibed with industrial scrap steel mill scale for sustainable construction	10	3	035505	March	2023
13	Environmental Science and Pollution Research	Hariharasudhan Thangaraj, Prince Winston David, Gurukarthik Babu Balachandran and Pravin Murugesan	Experimental study of bifacial photovoltaic module with waste polyvinyl chloride flex and acrylonitrile butadiene styrene road side safety sticker as an alternative reflector: optimization using response surface methodology	30	-	83873-83887	June	2023
14	Energy	Palpandian Murugesan, Prince Winston David, Pravin Murugesan, Pounraj Periyasamy	Battery based mismatch reduction technique for partial shaded solar PV system	272	-	127063	February	2023

Faculty Publications (July 2021 to June 2022)

S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
1	Energy	Charles Raja S, Vijaya Kumar N M, Senthil Kumar J, Jeslin Drusila Nesamalar J	Enhancing System Reliability By Optimally Integrating Phev Charging Station And Renewable Distributed Generators: A Bi-Level Programming Approach	229	-	12074 6	August	2021
2	IEEE ACCESS	A. Srinivasan, S. Devakirubakaran, B. Meenakshi Sundaram, Praveen Kumar Balachandran, Santhan Kumar Cherukuri, D. Prince Winston, Thanikanti Sudhakar Babu, Hassan Haes Alhelou	L-Shape Propagated Array Configuration With Dynamic Reconfiguration Algorithm For Enhancing Energy Conversion Rate Of Partial Shaded Photovoltaic Systems	9	-	97661- 97674	July	2021
3	Solar Energy	S. Sugumar, D. Prince Winston, M. Pravin	A Novel On-Time Partial Shading Detection Technique For Electrical Reconfiguration In Solar Pv System	225	-	1009- 1025	July	2021
4	Energy Conversion And Management	J. Jeslin Drusila Nesamalara, S. Suruthia, S. Charles Raja, Karthick Tamilarasu	Techno-Economic Analysis Of Both On-Grid And Off-Grid Hybrid Energy System With Sensitivity Analysis For An Educational Institution	239	-	0196- 8904	July	2021

Faculty Publications (July 2021 to June 2022)

S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
5	IEEE ACCESS	Prince Winston David, Karthikeyan Ganesan, Palpandian Murugesan, Pravin Murugesan, Ganesan Jeyakodi, Praveen Kumar Balachandran , Santhan Kumar Cherukuri, Thanikanti Sudhakar Babu And Hassan Haes Alhelou	A New Alternate Method To Reuse Rehashed Edible Oil For The Betterment Of Society - Dual Benefit Approach In Photovoltaic Modules	9	-	12843 4- 12844 1	September	2021
6	IEEE ACCESS	David Prince Winston, Madhu Shobini Murugan, Rajvikram Madurai Elavarasan, Rishi Pugazhendhi, O. Jeba Singh, Pravin Murugesan, M. Gurudhachanamoorthy, And Eklas Hossain	Solar PV's Micro Crack And Hotspots Detection Technique Using NN AND SVM	9	-	12725 9- 12726 9	September	2021
7	International Journal Of Energy Research	Jayasankar Nishanthi, Sathiasamuel Charles Raja, Thangavel Praveen, Joseph Jeslin Drusila Nesamalar, Paramasivam Venkatesh	Techno-Economic Analysis Of A Hybrid Solar Wind Electricvehicle Charging Station In Highway Roads	46	6	7883- 7903	January	2022
8	Energy Sources, Part A: Recovery, Utilization, And Environmental Effects	Dhakshinamoorthy, Mariappan, Kalyani Sundaram, Pravin Murugesan, And Prince Winston David. "Bypass Diode And Photovoltaic Module Failure Analysis Of 1.5 Kw Solar Pv Array."	Bypass Diode And Photovoltaic Module Failure Analysis Of 1.5 Kw Solar Pv Array	44	2	4000- 4015	May	2022

Faculty Publications (July 2021 to June 2022)

S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
9	Energy Sources, Part A: Recovery, Utilization, And Environmental Effects	Karthikeyan Ganesan, David Prince Winston, Sathyamurthy Ravishankar, Suresh Muthusamy	Investigational Study On Improving The Yield From Hybrid Pv/T Modified Conventional Solar Still With Enhanced Evaporation And Condensation Technique-An Experimental Approach	44	2	5267-5286	June	2022
10	Sustainability	JS Oliver, PW David, PK Balachandran, L Mihet-Popa	Analysis Of Grid-Interactive PV-Fed BLDC Pump Using Optimized MPPT in DC-DC Converters	14	12	7205	June	2022
11	Journal Of Natural Fibers	B Gurukarthik Babu, D Prince Winston, Pv Aravind Bhaskar, R Baskaran, P Narayanasamy	Exploration Of Electrical, Thermal, And Mechanical Properties Of Phaseolus Vulgaris Fiber/Unsaturated Polyester Resin Composite Filled With Nano-SiO ₂	18	12	2156-2172	02-12-21	2021
12	Iranian Polymer Journal	Gurukarthik Babu Balachandran, Prince Winston David, Anandha Balaji Alexander, Rajesh Kannan Mariappan, P Balasundar, Bk Parrthipan, Ss Saravanakumar, P Senthamarai Kannan	Saccharum Barberi Grass Bagasse Ash-Based Silicone Rubber Composites For Electrical Insulator Applications	30	12	1285-1296	2021/12	2021

Faculty Publications (July 2020 to June 2021)

S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
1	Soft Computing	R. Shanthi, S. Kalyani, P. M. Devie	Design and performance analysis of adaptive neuro-fuzzy controller for speed control of permanent magnet synchronous motor drive	-			August	2020
2	Soft Computing	E. Muthukumar, S. Kalyani	Development of smart controller for demand side management in smart grid using reactive power optimization				August	2020
3	Environmental Science and Pollution Research	Gurukarthik Babu Balachandran, Prince Winston David, Aravind Bhaskar Panayilvedu Vijayakumar, Muthu Manokar Athikesavan, Ravishankar Sathyamurthy	Enhancement of PV/T-integrated single slope solar desalination still productivity using water film cooling and hybrid composite insulation	27	26	32179-32190	Sep	2020
4	Heat Transfer	A Muthu Manokar, M Vimala, D Prince Winston, DR Rajendran, Ravishankar Sathyamurthy, AE Kabeel	Year around distilled water production, energy, and economic analysis of solar stills—A comparative study	49	6	3651-3662		

Faculty Publications (July 2020 to June 2021)

S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
5	Solar Energy	D. Prince Winston, G. Karthikeyan, M. Pravin, O. JebaSingh, A.G. Akash, S. Nithish, S. Kabilan	Parallel power extraction technique for maximizing the output of solar PV array	213		102-117	October	2020
6	Heat Transfer	A Muthu Manokar, M Vimala, D Prince Winston, DR Rajendran, Ravishankar Sathyamurthy, AE Kabeel	A comparative study of 3E (energy, exergy, and economy) analysis of various solar stills	49	8	4394 - 4409	December	2020
7	Energies	Sakthivel Ganesan , PrinceWinston David , Praveen Kumar Balachandran and Devakirubakaran Samithas	Intelligent Starting Current-Based Fault Identification of an Induction Motor Operating under Various Power Quality Issues	14	2	1010 222	January	2021
8	Environment al Science and Pollution Research	Gurukarthik Babu Balachandran &Prince Winston David & Vignesh Radhakrishnan & Mohamed Nasrulla Akbar Ali &Vishnu Karan Baskaran & Dhanasekaran Virumandi &Muthu Manokar Athikesavan & Ravishankar Sathyamurthy	Investigation on the performance enhancement of single-slope solarstill using green fibre insulation derived from Artocarpusheterophyllusrags reinforced with Azadirachta indicagum				February	2021

Faculty Publications (July 2020 to June 2021)

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S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
9	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects	Madhu Shobini Murugan, Prince Winston David & Pravin Murugesan	Analysis of voltage/current mismatch in solar photovoltaic power plants during fault panel replacement			1-18	April	2021
10	Sādhanā (Springer)	V Saranya, S Kalyani & V Ramachandran	Fuzzy decision analysis for regional contextualization of global educational frameworks	46	92	4394 - 4409	April	2021
11	Energy Conversion and Management	J Jeslin Drusila Nesamalar, S Suruthi, S Charles Raja, Karthick Tamilarasu	Techno-economic analysis of both on-grid and off-grid hybrid energy system with sensitivity analysis for an educational institution	239		114188	July	2021

Faculty Publications (July 2020 to June 2021)

S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
12	Energies	Karthick Tamilarasu, Charles Raja Sathiasamuel, Jeslin Drusila Nesamalar Joseph, Rajvikram Madurai Elavarasan, Lucian Mihet-Popa	Reinforced Demand Side Management for Educational Institution with Incorporation of User's Comfort	14	10	2855	May	2021
13	Environmental Science and Pollution Research	Gurukarthik Babu Balachandran & Prince Winston David & Anandha Balaji Alexander & Muthu Manokar Athikesavan & Padmanaban Velayudha perumal Chellam & Krishna Kumar Sasi Kumar & Vinothkumar Palanichamy & Abd Elnaby Kabeel & Ravishankar Sathyamurthy & Fausto Pedro Garcia Marquez	A relative study on energy and exergy analysis between conventional single slope and novel stepped absorbable plate solar stills			1-17	June	2021
14	IEEE Access	Murugesan palpandian , David prince winston , balachandran praveen kumar , cherukuri santhan kumar , thanikanti sudhakar babu, and hassan haes alhelou	A New Ken-Ken Puzzle Pattern Based Reconfiguration Technique for Maximum Power Extraction in Partial Shaded Solar PV Array	9		1141 88	May	2021

Faculty Publications (July 2019 to June 2020)

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S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
1	Environmental Science and Pollution Research	Gurukarthik Babu Balachandran & Prince Winston David, Aravind Bhaskar Panayilvedu Vijayakumar, Abd Elnaby Kabeel & Muthu Manokar Athikesavan & Ravishankar Sathyamurthy	Enhancement of PV/T-integrated single slope solar desalination still productivity using water film cooling and hybrid composite insulation				August	2019
2	Environmental Science and Pollution Research	Gurukarthik Babu Balachandran, Prince Winston David, Rajesh kannan Mariappan, Abd Elnaby Kabeel, Muthu Manokar Athikesavan & Ravishankar Sathyamurthy	Improvising the Efficiency of Single Slope Solar Still using Thermally Conductive Nano Ferric Oxide				September	2019
3	IEEE Transactions on Devices and Material Reliability	David prince winston	Efficient Output Power Enhancement and Protection Technique for Hot Spotted Solar Photovoltaic Modules	19	4	664-670	September	2019

Faculty Publications (July 2019 to June 2020)

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S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
4	Journal of Natural Fibers	B Gurukarthik Babu, D Prince Winston, P SenthamaraiKannan, SS Saravanakumar, MR Sanjay	Study on characterization and physicochemical properties of new natural fiber from Phaseolus vulgaris	16	7	1035 - 1042	October	2019
5	Journal of Natural Fibers	Gurukarthik Babu, D Princewinston, VC Padmanaban, G Abdul Lathief Sherief, M Kiruba Sankar, PV Aravind Bhaskar	Optimization Studies on Improving the Dielectric Properties of Alkali Treated Fibers from Phaseolus Vulgaris Reinforced Polyester Composites by Central Composite Design				December	2020
6	Journal of Thermal Analysis and Calorimetry	Hitesh Panchal, Ravishankar Sathyamurthy, AE Kabeel, SA El-Agouz, DSilva Rufus, T Arunkumar, A Muthu Manokar, D Prince Winston, Atul Sharma, Nishant Thakar, Kishor Kumar Sadasivuni	Annual performance analysis of adding different nanofluids in stepped solar still			3175 - 3182	December	2020

Faculty Publications (July 2019 to June 2020)

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S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
7	Solar Energy	D.Prince Winston S.KumaravelB.Praveen Kumar S.Devakirubakarand	Performance improvement of solar PV array topologies during various partial shading conditions	196		228-242	January	2020
8	IEEE Transactions on Components, Packaging and Manufacturing Technology	D. Prince Winston	Design of Sustainable PV Module for Efficient Power Generation during Faults	10	3		December	2020
9	Journal of Natural Fibers	B. GurukarthikBabu, D. Prince Winston, P. V. AravindBhaskar, R. Baskaran& P. Narayanasamy	Exploration of Electrical, Thermal, and Mechanical Properties of Phaseolus vulgaris Fiber/Unsaturated Polyester Resin Composite Filled with Nano-SiO2				February	2020

Faculty Publications (July 2019 to June 2020)

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S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
10	Fuel	GurukarthikBabu Balachandran, Prince Winston David, Padmanaban Velayudhaperumal Chellam, Mohamed Nasrulla Akbar Ali, Vignesh Radhakrishnana, Ramkumar Balamurugan, A. Muthu Manokar	Rehash of cooked oil for the palatable water production using single slope solar still				March	2020
11	Journal of Thermal Analysis and Calorimetry	C Sasikumar, A Muthu Manokar, M Vimala, D Prince Winston, AE Kabeel, Ravishankar Sathyamurthy, Ali J Chamkha	Experimental studies on passive inclined solar panel absorber solar still	139	6		March	2020
12	Journal of Natural Fibers	B. GurukarthikBabu, D. Princewinston, S.S. Saravanakumar, Anish Khan, P.V. AravindBhaskar, S. Indran& D. Divya	Investigation on the Physicochemical and Mechanical Properties of Novel Alkali-treated Phaseolus vulgaris Fibers				May	2020

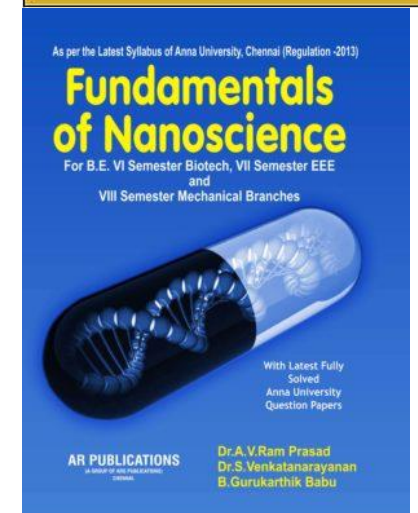
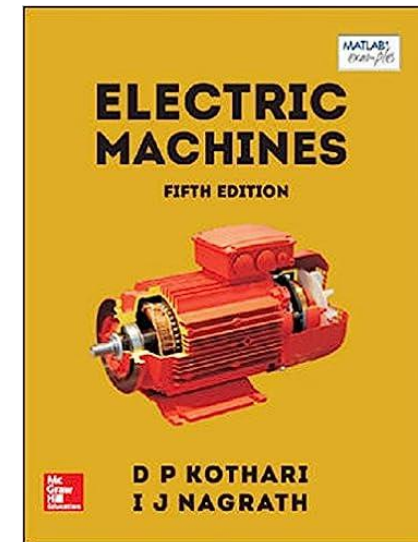
Faculty Publications (July 2019 to June 2020)

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S. No.	Journal Name	All Authors Name	Title of The Paper	Vol. No.	Issue No.	Page No.	Month of Publication	Year of Publication
13	Environment, Development and Sustainability	A. Muthu Manokar, M. Vimala, Ravishankar Sathyamurthy, A. E. Kabeel, D. Prince Winston, Ali J. Chamkha	Enhancement of potable water production from an inclined photovoltaic panel absorber solar still by integrating with flat-plate collector				March	2020
14	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects	David Prince Winston , Karthikeyan Ganesan , Praveen Kumar B, Deva kirubakaran Samitha & Chitti Babu Baladhanautham	Experimental investigation on output power enhancement of partial shaded solar photovoltaic system				March	2020
15	Environmental Science and Pollution Research	Gurukarthik Babu Balachandran, Prince Winston David, Gokul Rajendran, Mohamed Nasrulla Akbar Ali, Vignesh Radhakrishnan, Ramkumar Balamurugan, Muthu Manokar Athikesavan, Ravishankar Sathyamurthy	Investigation Of Performance Enhancement Of Solar Still Incorporated With Gallus Gallus Domesticus Cascara As Sensible Heat Storage Material				June	2020

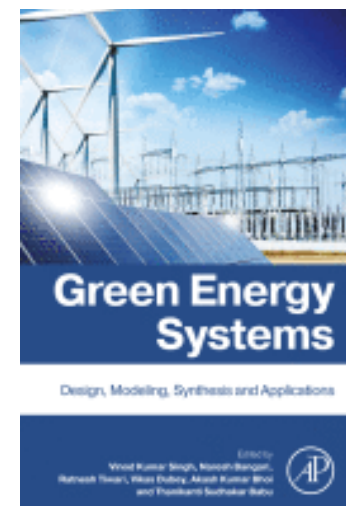
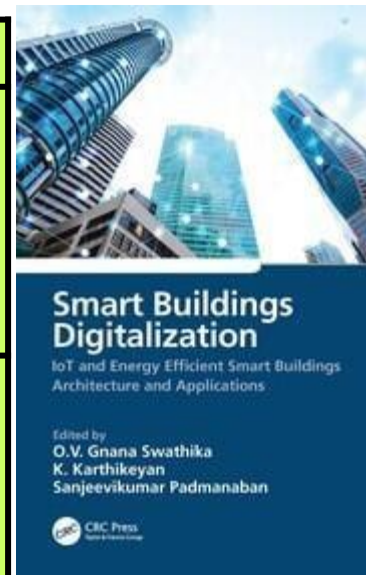
Book Chapters Published

S. No.	Name of the faculty	Book Chapter Details
1	Dr. S. Kalyani	Monograph on 'Power System Analysis' Revamping of chapter 1,3,4 and 7 in "Electric Machine, 5 th Edition , Kothari" 2018
2	Dr. S. Kalyani, Dr. Shanthi Swarap K	Title of the paper: Pattern recognition techniques for power system security assessment and classification Title of the Book: IoT - Based Smart Grids: A perspective in renewable energy (CRC Press), Aug 2021
3	Dr. D. Prince winston Dr. S.Venkatanarayanan, Dr. A.S.S.Murugan	Electrical Engineering And Instrumentation, 978-93-84608-42-2 , June 2017 ARS Publications, Chennai
4	Dr. B. Gurukarthik Babu Dr. A.V. Ram Prasad Dr. S. Venkatanarayanan	Fundamentals of Nanoscience 978-93-84634-49-0 , June 2017 ARS Publications, Chennai
5	EEE faculty members	* Conceptual Learning booklet * Course materials for Value Added Courses on MATLAB

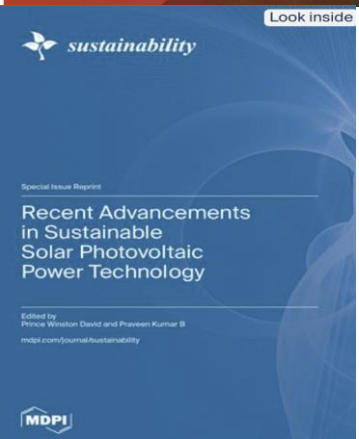
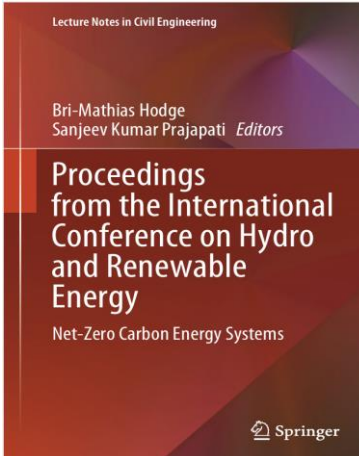


Book Chapters Published

S. No.	Name of the faculty	Book Chapter Details
6	J.Nishanthy S.Charles Raja J.Jeslin Drusila Nesamalar	Title of the paper: Design of a hybrid photovoltaic and battery energy storage system using HOMER software Title of the Book: Smart Buildings Digitalization: IoT and Energy Efficient Smart Buildings Architecture and Applications, Pg. No. 275-281
7	Palpandian Murugesan, Prince Winston David, Rajvikram Madurai Elavarasan, G.M. Shafiullah, Praveen Kumar Balachandran and Thanikanti Sudhakar Babu	Title of the paper: A jigsaw puzzle-based reconfiguration technique for enhancing maximum power in partially shaded hybrid photovoltaic array-methodology Title of the Book: Green Energy Systems. Chapter: 10, Page No: 207-221, Year : 2023 DoI: https://doi.org/10.1016/B978-0-323-95108-1.00011-2
8	Palpandian Murugesan, Prince Winston David, Rajvikram Madurai Elavarasan, G.M. Shafiullah and Praveen Kumar Balachandran	Title of the paper: A jigsaw puzzle-based reconfiguration technique for enhancing maximum power in partially shaded hybrid photovoltaic array-Implementation Title of the Book: Green Energy Systems. Chapter: 11, Page No: 222-243, Year : 2023 DoI: https://doi.org/10.1016/B978-0-323-95108-1.00011-2

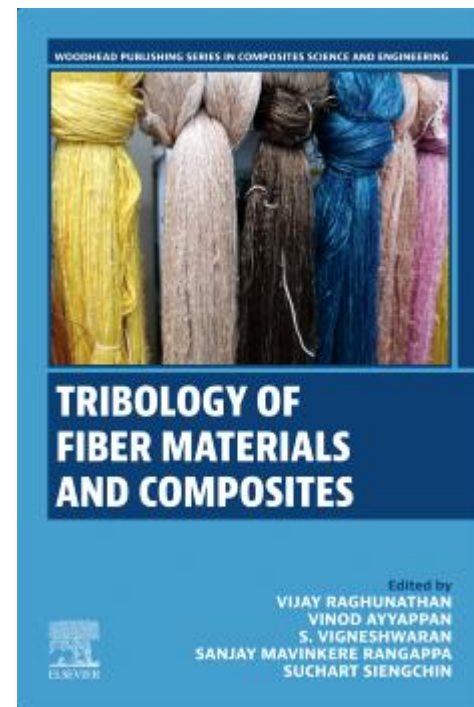


Book Chapters Published



S. No.	Name of the faculty	Book Chapter Details
9	M. Palpandian, D. Prince Winston, B. Praveen Kumar and T. Sudhakar Babu	<p>Title of the paper: Anatomization of dry and wet cleaning methods for general to rural and remote installed of solar photovoltaic modules</p> <p>Title of the Book: Digital Technologies for Solar Photovoltaic Systems (From general to rural and remote installations) - The Institution of Engineering and Technology - Publisher, London, United Kingdom, Chapter 11, Pg. No. 301-314, Year : 2024</p>
10	Jeyaraj Uma Maheswari and Solaimalai Jeyadevi	<p>Title of the paper: Cloud-Based Fault Monitoring of Solar Panels Using LabVIEW.</p> <p>Title of the Book: Proceedings from the International Conference on Hydro and Renewable Energy, Lecture Notes in Civil Engineering, Volume 391, Springer - Publisher, Page No: 1-10, Year : 2024</p> <p>DoI: https://doi.org/10.1007/978-981-99-6616-5_1</p>
11	Prince Winston David and Praveen Kumar Balachandran	<p>Book title : Recent Advancements in Sustainable Solar Photovoltaic Power Technology Edited by Prince Winston David and Praveen Kumar B</p> <p>Year : October 2023, 404 pages, Publisher : Sustainability, MDPI</p> <p>ISBN 978-3-0365-8955-8 (Hardback)</p> <p>ISBN 978-3-0365-8954-1 (PDF)</p>

Book Chapters Published



S. No.	Name of the faculty	Book Chapter Details
12	G Sakthivel, D Prince Winston, B Gurukarthik Babu and M Gokila	<p>Title of the paper: Applications of possible renewable energy sources to electric vehicle powering</p> <p>Title of the Book: Renewable Energy for Plug-In Electric Vehicles</p> <p>Publisher: Elsevier, Chapter No.: 14, Pg. No. 227-234, Year : 2024</p> <p>DOI: https://doi.org/10.1016/B978-0-443-28955-2.00014-7</p>
13	Gurukarthik Babu Balachandran, Petchithai Velladurai, and Muthu Eshwaran Ramachandran	<p>Title of the paper: Optimization and troubleshooting of tribological performance of fiber-reinforced composites</p> <p>Title of the Book: Tribology of Fiber Materials and Composites</p> <p>Publisher: Elsevier, Chapter No.: 12, Pg. No. 227-234, Year : 2026,</p> <p>DOI: https://doi.org/10.1016/B978-0-443-33162-6.00020-5</p>

Patent /Copyright



S. No.	Category of IPR (Copyright / Patent / Design)	Name of the Inventor(s)	Title of the IPR	Application No. /Cbr No.	Date of Filing	Status (Applied/Published/Granted)	Date of Publication
1	Copyright	Mr. S. Alwin Rajiv, Ms. P. Ramalakshmi, Ganesan K, Ganesan R, Hari Prasath T	A Laboratory Manual for Engineering Practices Laboratory (Electrical & Electronics)	L-130611/2023	7-Jun-22	Granted	25-Jul-23
2	Copyright	Ganesan R, Velumani D, M Subhakar, P Ponkarthikeyan, T Hariprasath	Formation of Bus Admittance Matrix (Y Bus) in Power System Analysis: Step by Step Guide with MATLAB Implementation	5855/2025-CO/L	20-Feb-25	Registered	20-Feb-25
3	Patent (Utility)	Dr. G. Karthikeyan, Dr. D. Prince winston, Dr. B. Praveen Kumar, Dr. S. Kalyani & Dr. S. Cynthia Christabel	Couple Matching and Current Injection based PV Circuit for Partially Shaded PV Systems	534498	22-May-18	Granted	23-Apr-24
4	Patent (Design)	Velumani Dhoddannan, P. Ponkarthikeyan, M. Subakar, N. Jegan Durai, R. Ganesan, S. Muthu Natarajan	Tree Root Foundation	449412-001	26-Feb-25	Filed	26-Feb-25
5	Patent (Design)	B. Gurukarthik babu, S. Benjamin Deva Sakayam, R. Santhiya, R. Muthu Eshwaran, V. Petchi Thai, D. Prince Winston, B. K. Parrthipan, M. Surya prakash kumar, K. Jayabalaguru, A. Joseph Amal Raj	Printed Circuit Board	465163-001	10-Jul-25	Filed	10-Jul-25
6	Patent (Design)	S. Thanga Kasi Rajan, M. Dinesh Karthick, G. Anand, P. Thirumurugan, K. Subramani Pandi, M. Aravind Kumar, B. K. Parrthipan, K. Murugananthan, R. Sakthivel Murugan, S. Senthil, Dr. D. Prince Winston, R. Suresh Babu	Four Wheel Electric Vehicle with Treadmill	432343-001	30-Sep-24	Filed	23-Jan-25
7	Patent (Design)	Dr.S.Thanga Kasi Rajan, Mr.G Anand, Mr.M. Dinesh Karthick, Mr. P. Thirumurugan, Mr. B.K.Parrthipan, Dr.J.Rajesh Babu, Dr. P. Sureshkumar, Mr. S.Alwyn Rajiv, Dr. S.Senthil, Dr. S.Gandhi, Dr. R.Suresh Babu, Dr. D. Prince Winston	Luggage rack with foldable solar panel for E-Vehicle	408543-001	23-Feb-24	Granted	9-May-24

Patent /Copyright



S. No.	Category of IPR (Copyright / Patent / Design)	Name of the Inventor(s)	Title of the IPR	Application No. /Cbr No.	Date of Filing	Status (Applied/Publi shed/Granted)	Date of Publication
8	Patent (Design)	Dr. D. Prince Winston, Dr. B. Gurukarthik Babu, Mr. S. Ramesh Prabhu, Mr. M. Pravin (Student), Mr. R. Sakthivel Murugan, Mr. R. Marshal, Mr. P. Pandimuni (Ph.d Scholar), Mr. P.Aravind, Ms. S. Kavitha	Design of Flippable Solar Panel	390540-001	13-Jul-2023	Granted	15-Sep-25
9	Copyright	Dr. A. Rajavel & Er. J. Uma Maheswari	Comprehensive Material for Embedded System	L-161678/2025	09-May-2023	Registered	28-Feb-25
10	Copyright	Mr. S. Ramesh Prabhu, Dr. G. Sakthivel, Dr. D. Prince Winston, Dr. B. Gurukarthik Babu, Ms. S. Kavitha, Dr. S. Rajesh Babu	Power Electronics Hands on Laboratory Document	9168/2025-CO/L	14-Mar-2025	Applied	14-Mar-2025
11	Copyright	Dr. D. Prince Winston, Dr. B. Gurukarthik Babu, Mr. S. Ramesh Prabhu, Dr. T. Hariharasudhan	Chair Person Analysis Report	11380/2022-CO/L	20-May-22	Registered	31-May-22
12	Patent (Design)	B. Gurukarthik Babu, D. Prince Winston, B. K. Parrthipan, M. Sivakutti, S. Abdul Malick, S. Prasanna, R. Dilipan, A. Nanthakumar, S. Saravana Bhavan, R. Vishal	Power Transformer Bushing	478209-001	28-Oct-25	Granted	28-Oct-25
13	Patent (Design)	B. Gurukarthik Babu, G. Sakthivel, B. K. Parrthipan, A. Joseph Amalraj, M. Raguram, M. Siva Pardeepan, B. Sasikhanth, C. Sanjay, U. Madhavan, K. Jayabalaguru	Insulator	477599-001	20-Oct-25	Granted	20-Oct-25
14	Patent (Utility)	B. Gurukarthik Babu, S. Benjamin Deva Sakayam, R. Santhiya, Karl Joseph Samuel, D.Prince Winston, R. Muthu Eshwaran, B. K. Parrthipan, M. Prithviraj, M. Surya Prakash Kumar, K. Jayabalaguru	Hydrogel Synthesis from Biodegradable Waste and IoT Integration for Enhanced Agricultural Water Retention and Related Methods		19-Sep-2025	Filed	19-Sep-2025

Funded Projects - A Gist



Sponsored Funding Events

Rs.3,00,000/-

S. No.	Project/Event Title	Funding agency	Faculty Involved	Duration	Period	Amount (Rs.)
1	National Conference on “Viksit Bharat 2047: Innovations in Clean Energy for a Sustainable Future and Resilient India”	AICTE - VAANI	Dr. D. Prince Winston & Dr. B. Gurukarthik Babu	2 Day	2025- 2026	2,00,000
2	Six Day Online FDP on “Navigating the Green Revolution: Integrating Electric Vehicles and Hydrogen fuel technologies for Sustainable Mobility”	AICTE Training & Learning (ATAL) Programme	Dr. D. Prince Winston & Dr. B. Gurukarthik Babu	6 Day	2024- 2025	1,00,000




Funded Research Projects

S. No.	Project/Event Title	Funding agency	Faculty Involved	Duration	Period	Amount (Rs.)
1	Naan Mudhalvan Green Mission: Allelopathy-based Hyacinth Control for Fertilizer Production	Naan Mudhalvan Niral Thiruvizha 3.0	Dr. B. Gurukarthik Babu	3 Month	2025- 2026	15,000
2	EcoWrap Solar: Reusing PET Waste for Intelligent Waterless Cleaning and PV Efficiency Enhancement	Naan Mudhalvan Niral Thiruvizha 3.0	Dr. D. Prince Winston	3 Month	2025- 2026	15,000
3	Design and Development of an Ergonomic Adjustable Hand Fork for Waste Segregation	Naan Mudhalvan Niral Thiruvizha 3.0	Dr. R. Ganesan	3 Month	2025- 2026	15,000
4	Design and Development of a Boat-Mounted Plug-and-Play Cold Storage Unit Using Hybrid Solar - Sea Wave Energy for 24x7 Fish Preservation to Support the Vision of PMMSY Scheme in Coastal India	MSME Idea Hackathon 5.0	Dr. D. Prince Winston	12 Month	2025- 2026	15,00,000
5	Quintessential Solution for Poverty-Stricken Farmers of Aspirational Districts: Smart Solar IoT Appliances Powered by Machine Learning	IE (India)	Dr. B. Gurukarthik Babu & Dr. D. Prince Winston	3 Month	2025- 2026	49,900
6	Making PM Vishwakarma's Vision a Reality: Fabricating Eco-Fishing Nets from Brown Seaweed (Phaeophyceae) Waste Enabled by IoT	MSME IDH4.0	Dr. B. Gurukarthik Babu	12 Month	2025- 2026	14,95,000
7	Sustainable Recycling and Reuse of Solar PV Panels and Lithium-ion Batteries	TNSDDO	Dr. D. Prince Winston & Shree Nachiaar K P	3 Month	2024- 2025	10,000
8	IoT based Smart Water Monitoring System	TNSDDO	Ms. S. Kavitha	3 Month	2024- 2025	10,000







Funded Research Projects

S. No.	Project/Event Title	Funding agency	Faculty Involved	Duration	Period	Amount (Rs.)
1	An IoT-enabled Eco-friendly Approach for the Retention of Water in Drought Agricultural Field using Superabsorbent Polymers Made from Waste Pineapple (Ananascmosus) Peel	MSME IDH2.0	Dr. B.Gurukarthik Babu	12 Month	2023-2024	6,00,000
2	Development of Hardware Interface to generate Electric Power from Parked Electric Vehicle	MSME IDH2.0	Dr. D. Prince Winston	12 Month	2023-2024	11,75,600
3	Development of Eco-friendly Battery Balancing Kit for Electric vehicle Applications	MSME IDH2.0	Dr. D. Prince Winston	12 Month	2023-2024	10,50,000
4	An IoT Enhanced Daylighting System by utilizing Industrial and Electronic Waste for Eco-friendly Clean Power Generation	TNSDDO	Dr. B.Gurukarthik Babu	3 Month	2023-2024	10,000
5	An IoT Enhanced Daylighting System by utilizing Industrial and Electronic Waste for Eco-friendly Clean Power Generation	TNSCST	Dr. B. Gurukarthik Babu	3 Month	2023-2024	7,500
6	An Empirical Based Intelligent Safety Approach for Reducing Two-Wheeler Crashes in Urban Area	IE (India)	Dr. B. Gurukarthik Babu	6 Month	2023-2024	66,000
7	Development of eco-friendly battery balancing kit for Electrical vehicle applications	TNSCST	Dr. D. Prince Winston	3 Month	2022-2023	7,500
8	IoT Supervised Machine Learning Module for Palatable Water Production in PV/T System using Industrial Sludges and Nautical	IE (India)	Dr. B. Gurukarthik Babu	3 Month	2022-2023	47,750

Anna University Recognized Supervisors

Name of the Supervisor Recognition no.	Areas of specialization	
Dr. D. Prince Winston 2330170	<ul style="list-style-type: none">➤ Electrical Energy Conservation<ul style="list-style-type: none">➤ Power Electronics➤ Motor Drives	
Dr. B. Gurukarthik Babu 3830007	<ul style="list-style-type: none">➤ Power Systems, High Voltage Engineering<ul style="list-style-type: none">➤ Dielectric Materials➤ Nano technology & Desalination	
Dr. G. Sakthivel 4330013	<ul style="list-style-type: none">➤ Power Electronics➤ Renewable Energy➤ Energy Conservation, Electrical Drives	







Ph.D's Produced in KCET-EEE Research Centre

Name of the Supervisor	Research Scholar	Title of the thesis	Category	Date of Viva voce	Photo
Dr.D.Prince Winston	S.Shitharth	An Optimization Framework For intrusion detection in SCADA system	Full time	14.05.2018	
Dr.D.Prince Winston	B.Praveen Kumar	Investigations on Maximum Power Extraction Techniques in Renewable Energy Systems	Full time	29.04.2019	
Dr.D.Prince Winston	P.Pounraj	Investigations on Better Energy Utilization methods for Solar Photovoltaic systems	Part time	29.04.2019	
Dr.D.Prince Winston	O. Jeba Singh	Certain Investigations on Detection and Mitigation of Power Quality Disturbances in Distribution systems	Full time	09.08.2019	
Dr.D.Prince Winston	A. MuthuManokar	Performance Studies of Passive and Active solar distillation on inclined pyramid type solar still.	Full time	14.08.2019	
Dr. S.Kalyani	S.Chellam	Optimal Tracing based Transmission Pricing and Transmission Congestion Pricing in Deregulated Power Market	Part time	30.10.2019	

Ph.D's Produced in KCET-EEE Research Centre

RESEARCH SCHOLAR	PHOTO	TITLE	SUPERVISOR	DATE OF VIVA
Mr.Palpandian M, 1214389768		Investigation on maximum power extraction for a partially shaded photovoltaic array	Dr.D.Prince Winston, Prof/EEE	16.03.2020
Mrs. M. Raja Gomathi 1424389160		Exploring scientific evidences for the role of Acupuncture and Acupressure in treating diseases	Dr. S.Jeyadevi, Prof /EEE	23.07.2020
Mr. B. Gurukarthik Babu 1414389706		Development and Testing of Nano Composite Based Insulating Material using Green Fibre	Dr.D.Prince Winston, Prof/EEE	14.08.2020
Mrs. M. Rajalakshmi 1324389725		Nonlinear Modeling of PH control in sugar industry	Dr. S.Jeyadevi, Prof /EEE	11.09.2020
Mr. G. Karthikeyan 16134897242		Development of energy efficient technologies for improving the performance of solar pv system	Dr.D.Prince Winston, Prof/EEE	18.08.2021
Mrs. R.Shanthi 1324389732		Sensorless speed control of permanent magnet synchronous motor using intelligent controller	Dr. S.Kalyani, Prof /EEE	13.10.2021



Ph.D's Produced in KCET-EEE Research Centre

RESEARCH SCHOLAR	PHOTO	TITLE	SUPERVISOR	DATE OF VIVA
V.Saranya 17234197634		Predictive assessment of learning assessments	Dr. S.Kalyani, Prof /EEE	07.01.2022
E.Muthukumaran 1414389132		Optimal sizing with cost analysis of distributed energy resources in smart grid environment	Dr. S.Kalyani, Prof /EEE	10.01.2022
G.Sakthivel 1414389743		Certain Investigation on Fault Diagnosis of an induction motor for various industrial application	Dr.D.Prince Winston, Prof/EEE	08.03.2022
M.Madhu Sobini, 1524319727		Performance Enhancement of Various BOS of Solar Photovoltaic System	Dr.D.Prince Winston, Prof/EEE	22.07.2022
D.Mariappan, 1514489176		Investigations on Performance Enhancement of Grid Connected Photovoltaic System	Dr. S.Kalyani, Prof /EEE	20.01.2023
C. Rajeswari, 1324489240		Certain Investigations on High Gain DC-DC Converters using Programmable N-level Step Generator for Solar PV Systems	Dr.D.Prince Winston, Prof/EEE	12.07.2023

Ph.D's Produced in KCET-EEE Research Centre

RESEARCH SCHOLAR	PHOTO	TITLE	SUPERVISOR	DATE OF VIVA
K. Ganesan 20143891154		Performance enhancement of Bifacial Solar Photovoltaic System	Dr. D.Prince Winston	23.01.2024
T. Hariharasudhan 21133897235		Development of various Power Enhancement techniques for Solar Photovoltaic systems	Dr. D.Prince Winston	18.04.2024
S. Sukumar 20143891162		Development of Power Enhancement techniques for Renewable Energy Systems	Dr. D.Prince Winston	16.05.2024
S. Suriya Kala 21243897114		Certain Investigation on Maximum Energy Extraction Techniques for Bifacial and Monofacial Solar PV Systems	Dr. D.Prince Winston	19.07.2024
R Santhiya 19243891116		Exploration of AI Algorithms for Road Accident Analysis and Performance Evaluation of Hybrid System for Road Transport	Dr. B. Gurukarthik Babu	25.04.2025

Ph.D's Produced in KCET-EEE Research Centre

RESEARCH SCHOLAR	PHOTO	TITLE	SUPERVISOR	DATE OF VIVA
R Ganesan 18143891211		Optimization and performance Analysis of Bifacial Solar Photovoltaic System	Dr. B. Gurukarthik Babu	21.11.2025
P Pandimuni 22133797113		Investigations on Reconfiguration based Energy Extraction and Management Techniques for Solar Photovoltaic Power System	Dr. D.Prince Winston	24-01-2026

Faculty Awards - Stars of



Aca. Yr.	Name of the Faculty	Name of Course Passed	Course Offered by (agency)	Grade obtained if any
2024-25	Er. T. Hariprasath	Air Pollution and Control	IIT Roorkee	82
2024-25	Dr. A. Rajavel	Embedded System Design with ARM	IIT Kharagpur	81
2024-25	Dr. D. Prince Winston	Facts Devices	IIT Roorkee	75
2024-25	Er. J. Uma Maheswari	Embedded System Design with ARM	IIT Madras	75
2024-25	Dr. B. Gurukarthik Babu	Applied Accelerated Artificial Intelligence	IIT Palakkad	54
2024-25	Er. J. Uma Maheswari	Problem Solving Through Programming in C	IIT Kharagpur	63
2023-24	Dr. D. Prince Winston	DC Microgrid and Control Systems	IIT Roorkee	57
2023-24	Dr. B. Gurukarthik Babu	Deep Learning	IIT Madras	49
2023-24	Er. J. Uma Maheswari	Entrepreneurship	IIT Madras	83
2023-24	Er. R. Ganesan	Deep Learning	IIT Madras	58
2023-24	Er. R. Ganesan	Python for Data Science	IIT Madras	58
2023-24	Er. T. Hariprasath	Industrial Safety Engineering	IIT Kharagpur	69
2023-24	Dr. B. Gurukarthik Babu	Foundation of Cloud IoT Edge ML	IIT Kanpur	78
2023-24	Dr. B. Gurukarthik Babu	Introduction to Machine learning	IIT Kharagpur	63
2022-23	Dr. B. Gurukarthik Babu	Non-Conventional Energy Sources	IIT Madras	61
2022-23	Dr. S. Kalyani	Soft Skills	IIT Madras	79

Faculty Achievements



Dr. D. Prince Winston - World top2% scientist 2023, 2024, 2025 - Elsevier Stanford University, San Francisco, USA



Rankings for Scientist

University, Subject,
Country, Region, World

World Scientist and University Rankings



Dr. D. Prince Winston - World Scientist and University Rankings 2024, 25 - AD Scientific Index



Rankings for Scientist

University, Subject,
Country, Region, World

World Scientist and University Rankings



Dr. B. Gurukarthik Babu - World Scientist and University Rankings 2024, 25 - AD Scientific Index