

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	3
No. of Faculty doing Ph.D.	4

2022-2023

No. of Professors	2
No. of Associate Professors	1
No. of Assistant Professors	6
No. of Ph.D. holders in department	4
No. of Faculty doing Ph.D.	5

2021-2022

No. of Professors	2
No. of Associate Professors	0
No. of Assistant Professors	14
No. of Ph.D. holders in department	5
No. of Faculty doing Ph.D.	11

2020-2021

No. of Professors	2
No. of Associate Professors	0
No. of Assistant Professors	16
No. of Ph.D. holders in department	4
No. of Faculty doing Ph.D.	12

Current Student Strength - 154

Faculty strength – 7

Student Strength - 223

Faculty strength – 9

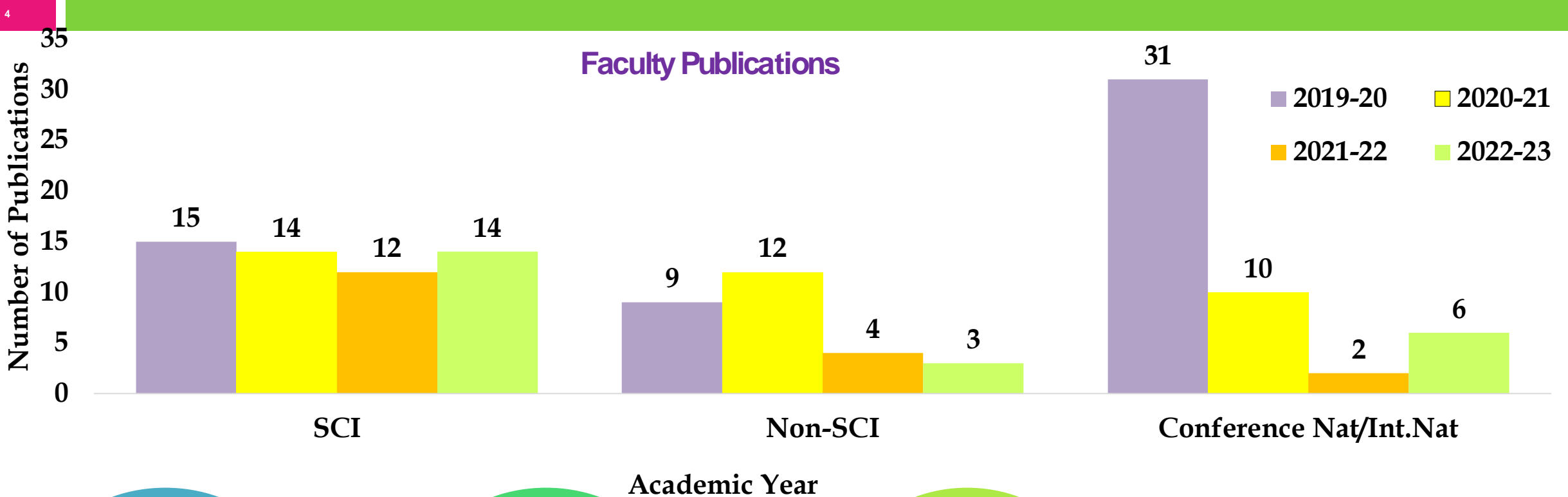
Student Strength - 312

Faculty strength – 16

Student Strength - 312

Faculty strength – 16

Faculty Research Details



Total Faculty Count - 7

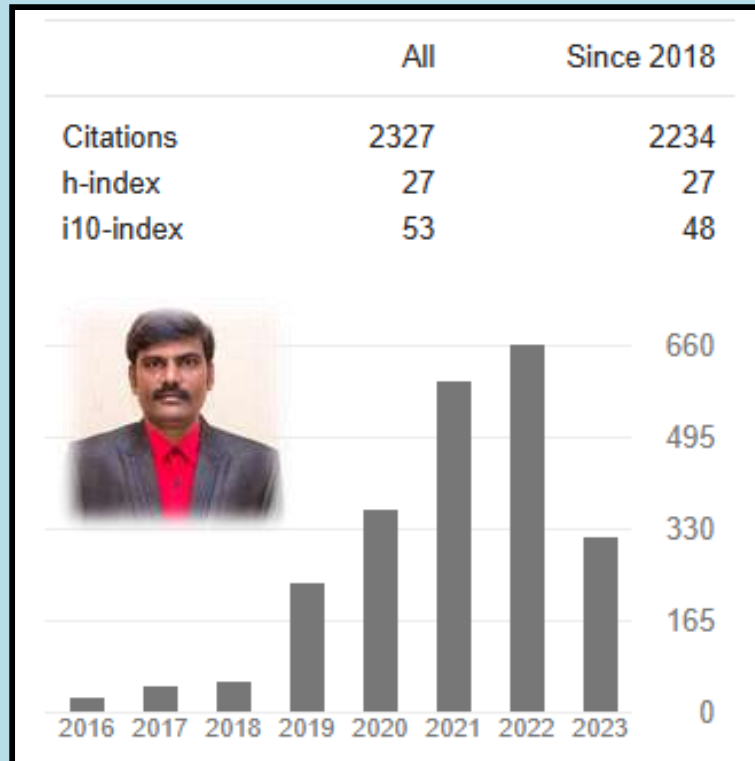
Faculty With Ph.D., - 3

Faculty Pursuing Ph.D., - 4

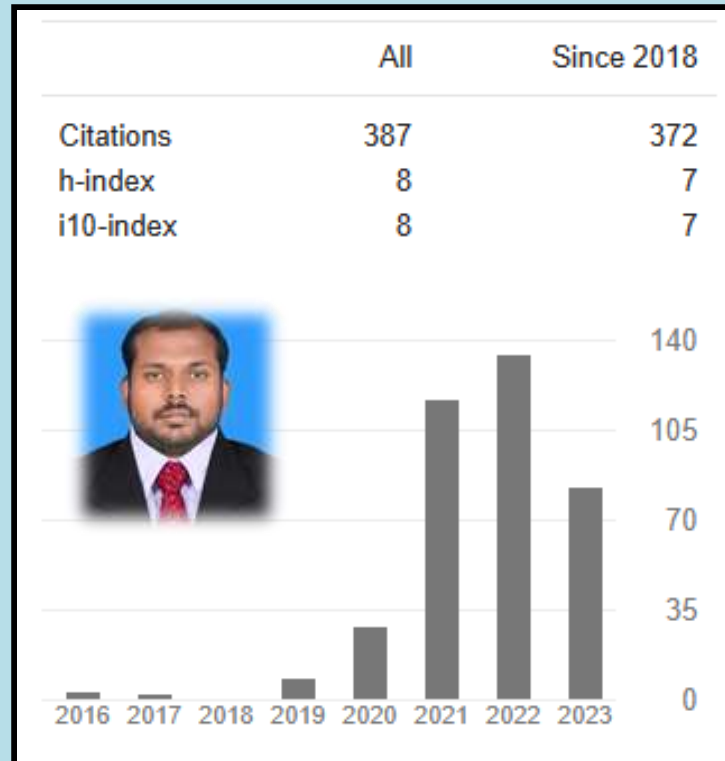
Faculty with Ph.D., Guideship - 2

Google Scholar Citations (as on 21st July 2023)

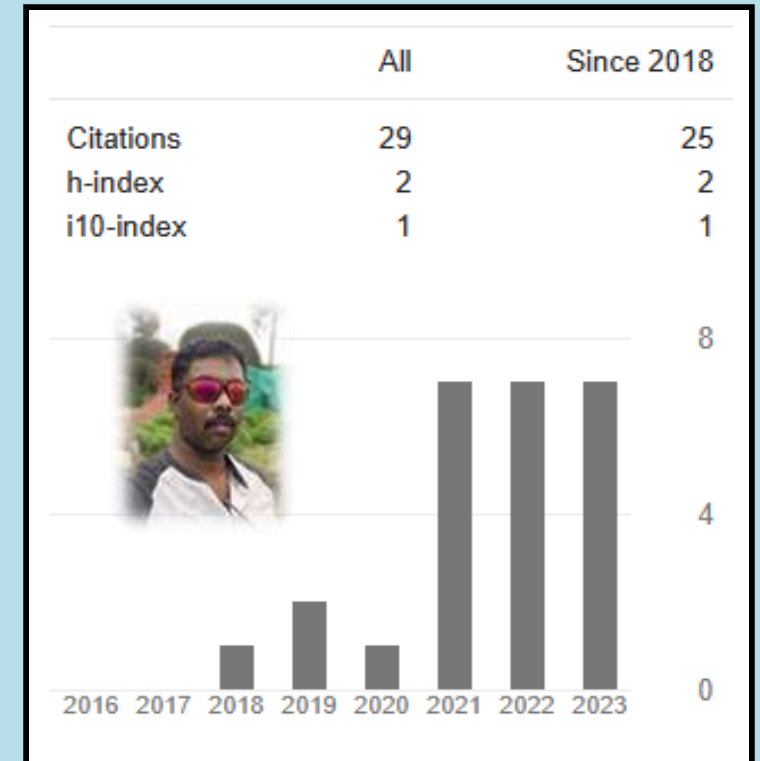
Dr. D. Prince Winston



Dr. B. Gurukarthik Babu



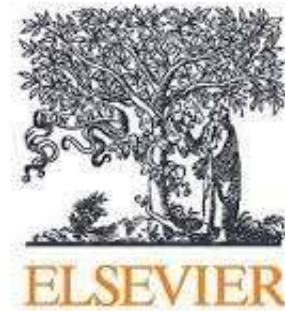
Dr. G. Sakthivel



Scopus Citations (as on 21st July 2023)



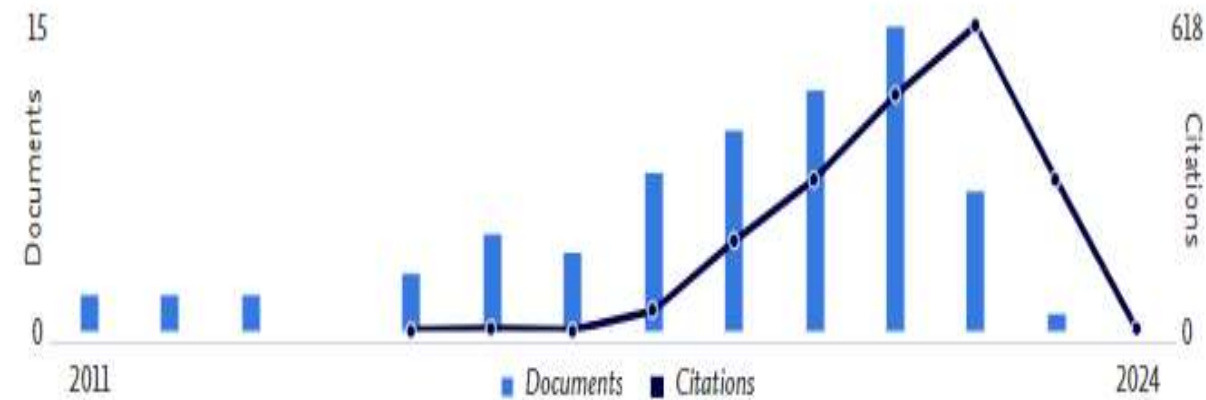
Dr. D. Prince Winston



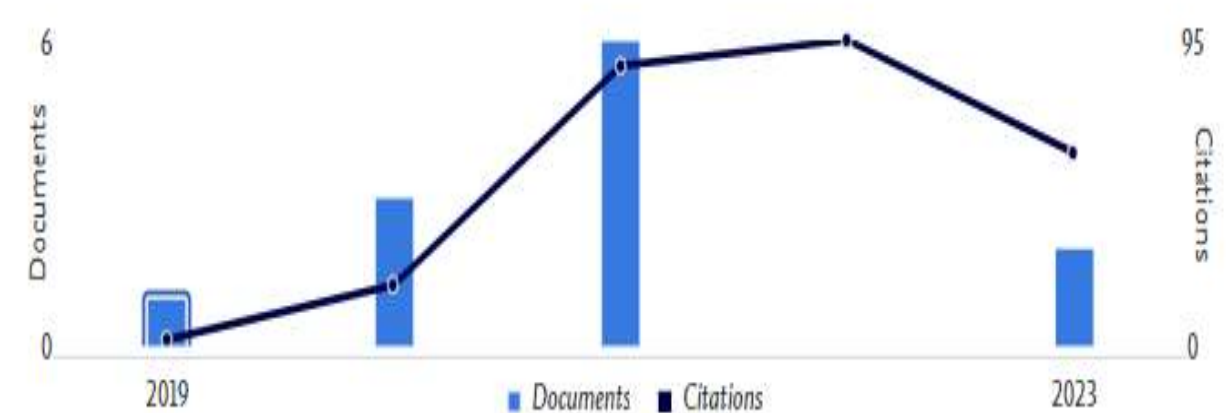
Dr. B. Gurukarthik Babu



Document & citation trends

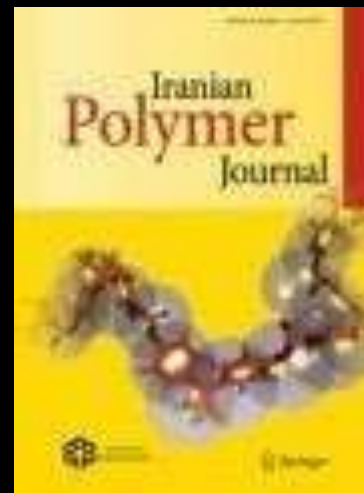
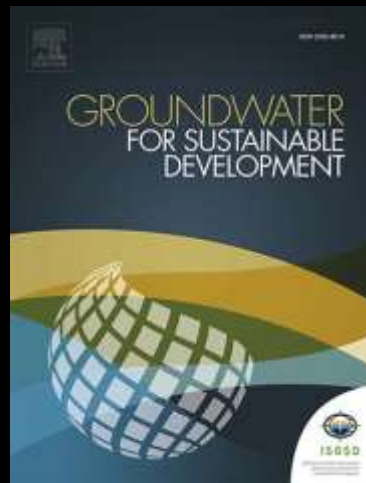
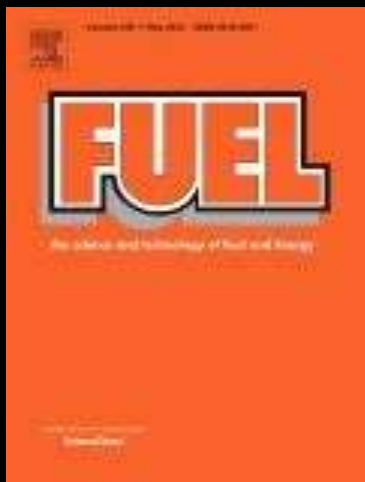
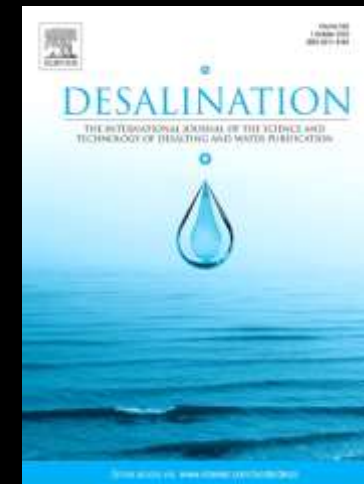
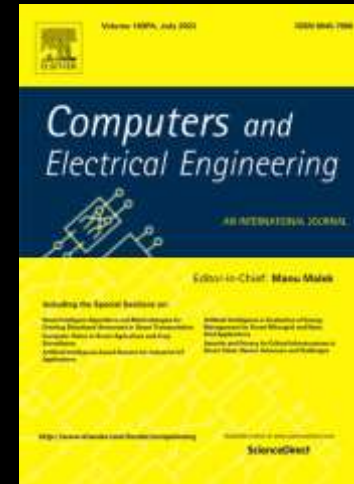
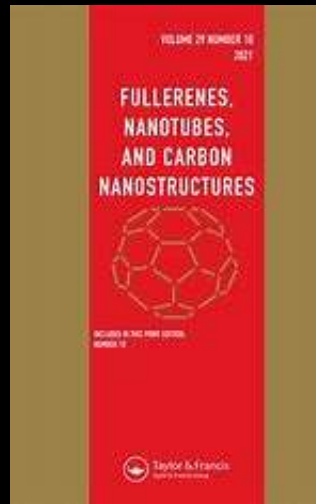
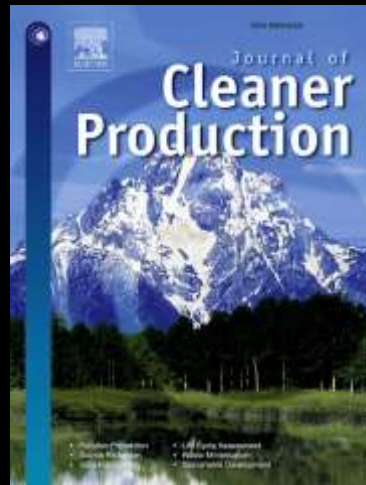
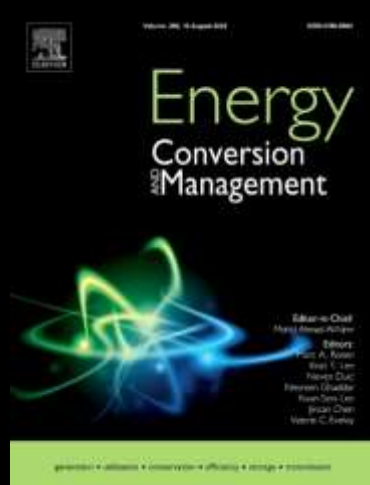


Document & citation trends



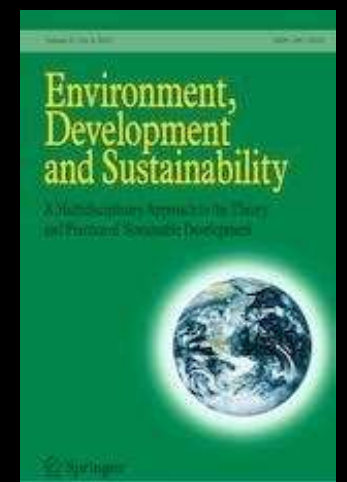
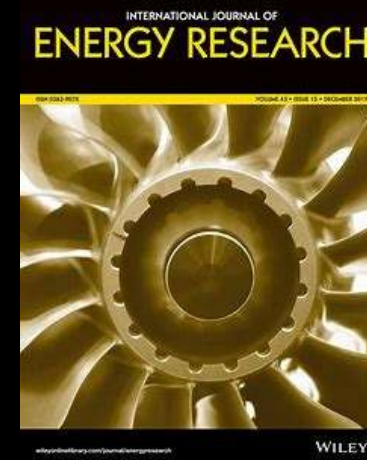
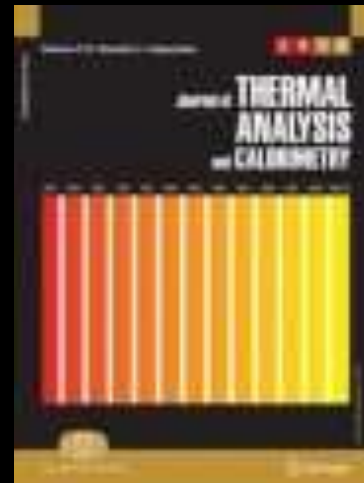
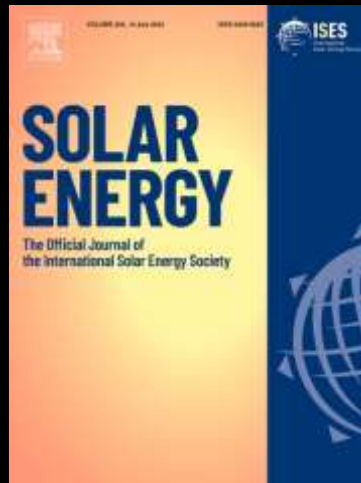
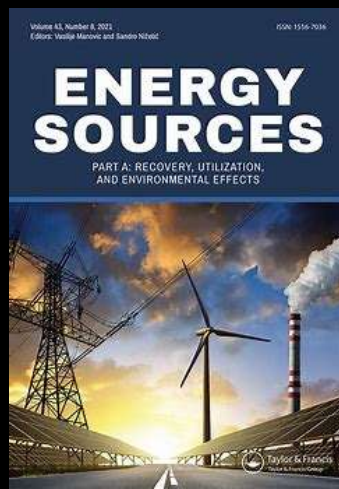
Faculty Publications in reputed Journals

7

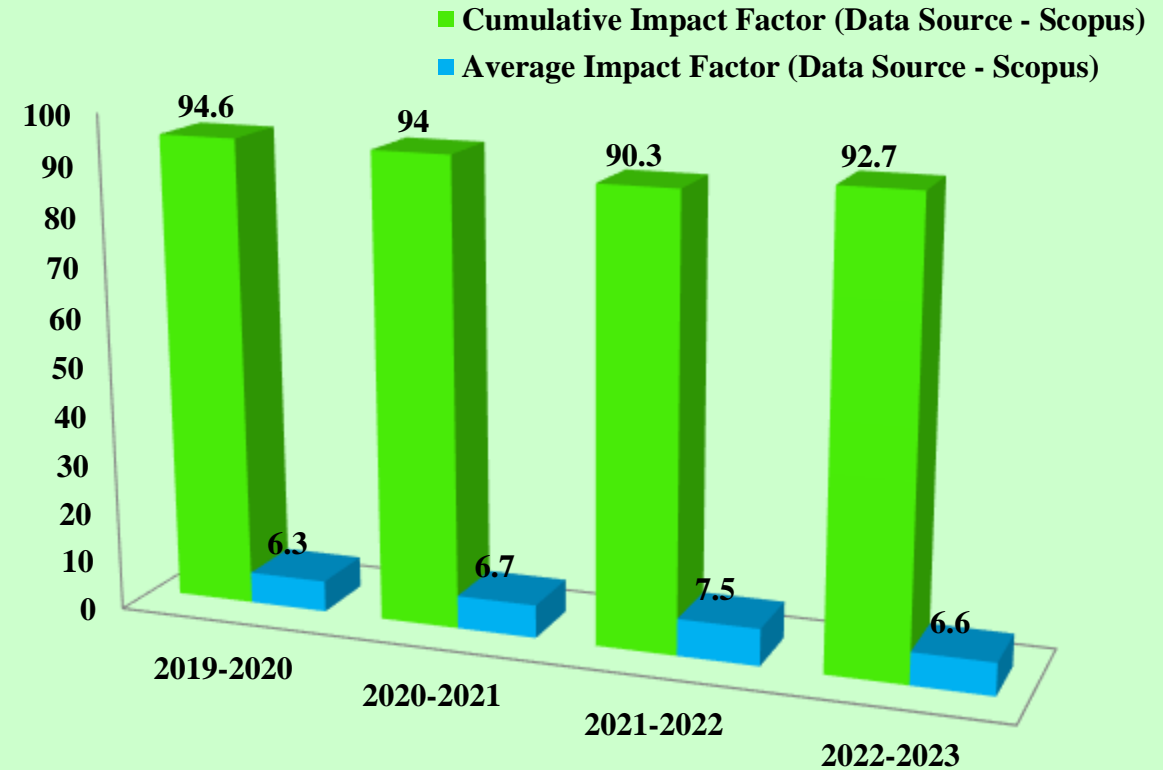
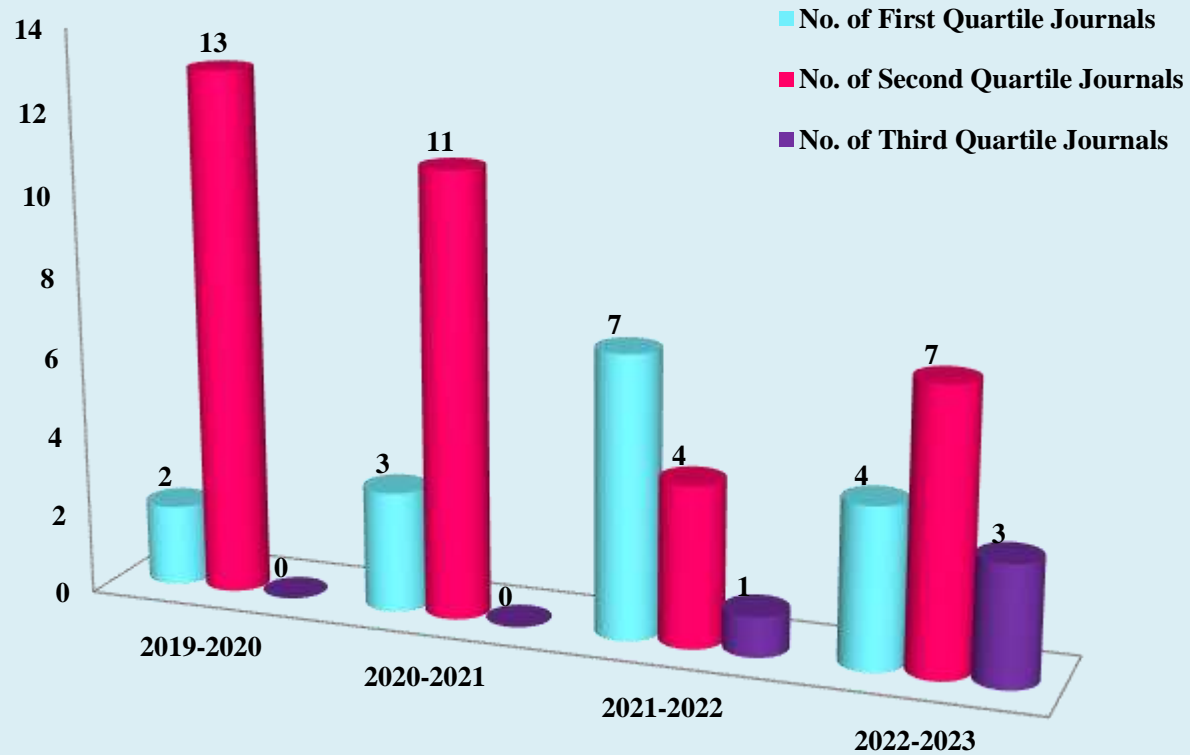


Faculty Publications in reputed Journals

7



SCI Journal Publications – Digest



Quartile

Impact Factor

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, Karuppiah 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 imbided 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				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	Februray	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)

4

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)

4

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)

4

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)

4

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-SiO ₂				February	2020

Faculty Publications (July 2019 to June 2020)

4

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

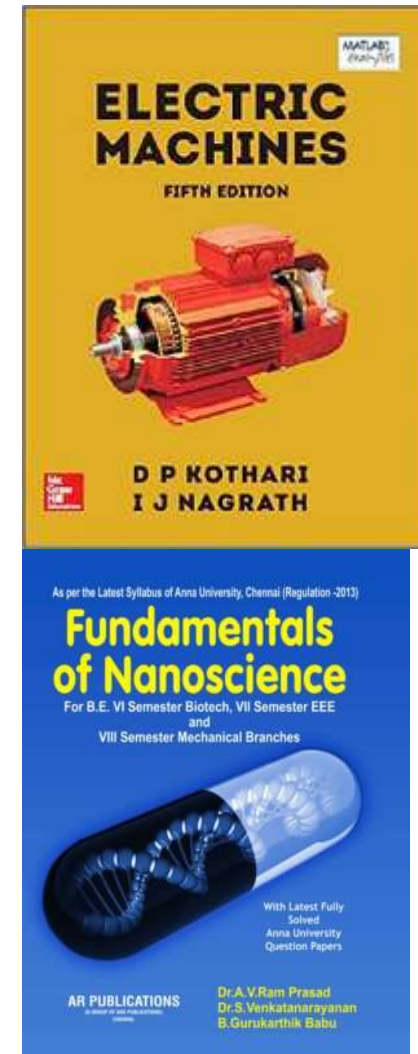
Faculty Publications (July 2019 to June 2020)

4

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

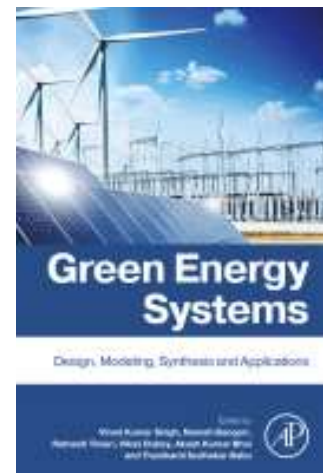
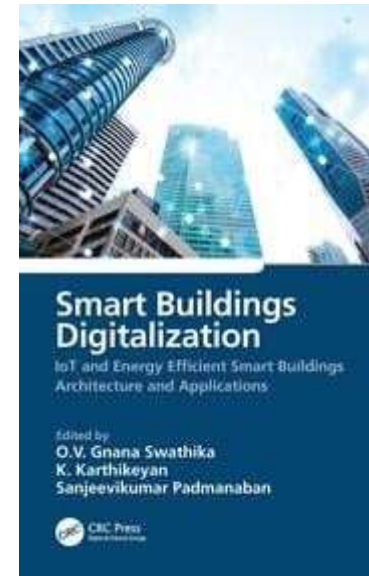
Book Chapters Published

S. No.	Name of the faculty	Book Chapters
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 Chapters
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 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 DoI: https://doi.org/10.1016/B978-0-323-95108-1.00011-2



Patent Published



S. No.	Staff name	Dept.	Patent / Appln. No.	Date of filing	Title of the innovation	Indian / int. Nat.	Self / insti.	Status (published/ awarded)
1	Dr. D. Prince winston, Dr. S. Kalyani	EEE	201841019063	22/5/2018	A novel method for early detection of power quality disturbances using arduino	Indian	Self	Published
2	Dr. D. Prince winston	EEE	201841019065	22/5/2018	Reduced leg voltage mismatch method for temporary or permanent faulted pv systems	Indian	Self	Published
3	Dr. D. Prince Winston, Dr. S. Kalyani	EEE	201841019073	22/5/2018	Couple matching and current injection based pv circuit for partially shaded pv systems	Indian	Self	Published
4	Dr. D. Prince Winston	EEE	201941022566	7/6/2019	Fabrication of multi junction box pv modules for power enhancement during faulty conditions	Indian	Self	Published
5	Dr. D. Prince Winston	EEE	202041010211	10/03/2020	System and method to generate electric power from parked electric vehicles	Indian	Self	Published
6	Dr. D. Prince Winston	EEE	202041031036	21/7/2020	A circuit arrangement and a method for generating power using solar pv	Indian	Self	Published

Patent Published



S. No.	Staff name	Dept.	Patent / Appln. No.	Date of filing	Title of the innovation	Indian / int. Nat.	Self / insti.	Status (published/ awarded)
7	Dr. D. Prince Winston, Dr. S. Kalyani	EEE	201841019064	22/5/2018	Power enhancement in solar pv systems by coconut coir and waste polyethylene bags	Indian	Self	Published
8	Dr.M.Sudalaimani Mr.R.Ganesan Mr.K.Ganesan Mr.A.Karthikeyan Mr.S.Jegan	EEE	202241016757	24/3/2022	Smart pulse meter with audible reading for patients with visual impairments	Indian	Self	Published
9	Dr. M. Sudalaimani, Dr.S.Gandhi, Dr.R.Baskaram, Dr.M.G.Sribala	EEE	202241019849	01/04/2022	Usage of pet bottle filled with environmental waste as bricks for constructing wall	Indian	Self	Published
10	Dr. J. Jeslin Drusila Nesamalar, Dr. S. Kalyani, Dr. S. Charles Raja, Dr. T. Karthick	EEE	202241003822	01/05/2022	Smart air conditioner controller	Indian	Self	Published
11	Dr. J. Jeslin Drusila Nesamalar, Mr. T. Aathinarayanan, Dr. S. Charles Raja, Dr. T. Karthick	EEE	202241003825	01/05/2022	Intelligent cyber security system for smart meters	Indian	Self	Published

Copyrights Filed



21



Dr.S.Kalyani, Dr.S.Jeyadevi, S.Jegan
No: 12522/2022-CO/L
Class: Literary
Title: Basics of MATLAB



Dr.Prince Winston D, Dr. B. Gurukarthik Babu
No: 11380/2022-CO/L
Class: Literary/ Dramatic
Title: Chairperson Analysis Report



Ganesan K, Ganesan R, Hari Prasath T
No: 12555/2022-CO/L
Class: Literary/ Dramatic
Title: A Laboratory Manual for Engineering Practices Laboratory (Electrical & Electronics)

Funded Projects - A Gist



Funded Research Projects



सत्यमेव जयते

MSME

MICRO, SMALL & MEDIUM ENTERPRISES

सूक्ष्म, लघु एवं मध्यम उद्यम

Rs. 28,25,000/-



Dr. Prince Winston D, Er. Pravin, M
Amount: 11,75,600/-
Title: Development of Hardware Interface to generate Electric Power from Parked Electric Vehicle



Dr. Prince Winston D, Ms. D. Shalini and Team
Amount: 10,50,000/-
Title: Development of Eco-friendly Battery Balancing Kit for Electric vehicle Applications



Dr. B. Gurukarthik Babu & Er. S. Benjamin Deva Sagayam
Amount: Rs. 6,00,000/-
Title: An IoT-enabled Eco-friendly Approach For The Retention of Water In Drought Agricultural Fields Using Superabsorbent Polymers Made From Waste Pineapple (Ananascmosus) Peel

Funded Research Projects

Rs. 28,64,400/-



DST - SERB- Start
Up Research
Grant (2020-22)



**Dr. J. Jeslin Drusila
Nesamalar, Asst.
Prof./ EEE**

“Optimal Design and Development of Machine Learning Model for Remote Monitoring and Control of Hybrid Microgrid in Educational Institutions using Smart Sensor Network and IoT” Rs. 28,64,400

Funded Research Projects

Rs. 14,04,600/-

NCSTC-
DST (2023-
24)



NATIONAL CHILDREN'S SCIENCE CONGRESS
A PROGRAM OF NCSTC, DEPARTMENT OF SCIENCE & TECHNOLOGY,
GOVERNMENT OF INDIA



राविप्रौसंग NCSTC
SUPPORTED & CATALYSED BY NCSTC, DST,
GOVT. OF INDIA



सत्यमेव जयते

Department of Science and Technology (DST)

DST



**Dr. D. Prince Winston,
Prof. & Head/EEE**

“Children Centric Outreach Programme” Rs. 14,04,600.

Funded Research Projects

Rs. 9,00,000/-



Dr. S. Kalyani, Prof. / EEE

AICTE-
MODROBS
(2019-21)



**“Modernization and Removal Of Obsolescence of Power System Simulation
Laboratory” Rs. 9,00,000.**

Funded Research Projects

Rs. 1,50,000/-



Dr. D. Prince Winston,
Prof. & Head/EEE

AICTE -RPS
(2019-22)



“Improvement of Power Generation in a 20kW Solar PV Power Plant through Bypass Diode Scanning Algorithm and Modified Couple Matching Algorithm” Rs. 1,50,000.

Funded Research Projects

Rs. 66,600/-



Er. R. Santhiya, Full
time Scholar - EEE

Institute of
Engineers,
India (2023-24)



Dr. B. Gurukarthik Babu,
AP/EEE



Dr. D. Prince Winston,
Prof. & Head / EEE

“An Empirical Based Intelligent Safety Approach for Reducing Two Wheeler Crashes in Urban Area” Rs. 66,000.

Funded Research Projects

Rs. 47,750/-



Er. A. Sivabalan,
PG/PSE

Institute of
Engineers,
India (2022-23)



Dr. B. Gurukarthik Babu,
AP/EEE



Dr. D. Prince Winston,
Prof. & Head / EEE

“IoT Supervised Machine Learning Module for Palatable Water Production in PV/T System using Industrial Sludges and Nautical Husks” Rs. 47,750.

Funded Research Projects

Rs. 16,000/-



Mr. S. Vignesh,
UG/EEE

Institute of
Engineers,
India (2019-20)



Dr. B. Gurukarthik Babu,
AP/EEE



Dr. S. Kalyani,
Prof./EEE

“Renewable Energy Based Atmospheric Water Harvesters for the production of Palatable Water” Rs. 16,000.

Funded Research Projects

Rs. 7,500/-



Er. M. Pravin, PG/PSE



Dr. D. Prince Winston,
Prof. & Head/EEE



“Development of eco-friendly battery balancing kit for Electrical vehicle applications” Rs. 7,500.

Funded Research Projects

Rs. 7,500/-



Mr. P. Pothiraj,
UG/EEE



Dr. B. Gurukarthik Babu,
AP/EEE

“Eco-friendly technique for palatable water generation from atmospheric air using Industrial sludges and aquatic husks in PV/T module imbued with Random forest technique and IoT analytics” Rs. 7,500.

Funded Research Projects

Rs. 7,500/-



Mr. S. Vignesh,
UG/EEE



Dr. B. Gurukarthik Babu,
AP/EEE



**“Eco friendly based water generation technique to harvest palatable water
from green source” Rs. 7,500.**

Funded Research Projects

Rs. 7,000/-



Mr. A. Ameer Raja,
UG/EEE



Dr. C. Nagadevi, AP/EEE

"Graphene Battery" Rs. 7,000.

Funded Research Projects

Rs.25,000/-



Er. K. Ganesan AP/EEE

KAMARAJ-Seed Money Grant 2022



Dr. D. Prince Winston,
Prof. & Head/ EEE

“Performance Investigation of Bifacial Solar Photovoltaic Module Installed with Single Axis Tracking System” Rs. 25,000.

Funded Research Projects

Rs.25,000/-



Dr. B. Gurukarthik Babu,
AP/EEE

KAMARAJ-Seed Money Grant 2022



Dr. D. Prince Winston,
Prof. & Head/EEE

“Design and Fabrication of Flippy Bifacial Solar PV Module” Rs. 25,000.

Funded Research Projects

Rs.25,000/-



Dr. S. Kalyani, Prof./EEE

KAMARAJ-Seed Money Grant 2022



Dr. R. Baskaran, ASP/BT

“Fabrication of Polymer Nanocomposites for Insulation Windings in Electrical Machines used for High Power Applications” Rs. 25,000.

Sponsored Funding Events

Rs.12,61,092/-

- Short Term Training Program on “Electric Cars Technologies and Modern Power System”

AICTE-STTP



- Grant for Organizing Conference on “Advanced Technologies in Electrical Engineering-2019”

AICTE-GoC



- FDP on “Applications of Machine Learning and deep learning in Electrical Engineering”

AICTE-FDP



- FDP on “Design and development of machine learning model for remote monitoring and control of hybrid micro grid in educational institutions using smart sensor network and IoT”

DST - SERB



**Dr. D. Prince Winston
(Rs. 3,00,000/-)**

**Dr. S. Kalyani
(Rs. 5,00,000/-)**

**Dr. S. Kalyani
(Rs. 4,36,092/-)**

**Dr. J.Jeslin (Rs.
25,000/-)**

Sponsored Funding Events

Rs.12,61,092/-

S. No.	Project Title	Funding agency	Faculty Involved	Duration/ Period	Amount (Rs.)	Status
1	Short Term Training Program on “Electric Cars Technologies and Modern Power System”	AICTE-STTP	Dr. D. Prince Winston	6 days / 2020-2021	3,00,000	Completed & UC Submitted
2	Grant for Organizing Conference on “Advanced Technologies in Electrical Engineering-2019”	AICTE-GoC	Dr. S. Kalyani	2 days / 2019-2020	5,00,000	Completed & UC Submitted
3	FDP on “Applications of Machine Learning and deep learning in Electrical Engineering”	AICTE-FDP	Dr. S. Kalyani	2 Week / 2020-2021	4,36,092	Completed & UC Submitted
4	FDP on “Design and development of machine learning model for remote monitoring and control of hybrid micro grid in educational institutions using smart sensor network and IoT”	DST - SERB	Dr. J.Jeslin Drusila Nesar malar	2 Days / 2022-2023	25,000	Completed & UC Submitted

Funded Research Projects

Rs.83,03,850/-

S. No.	Project Title	Funding agency	Faculty Involved	Duration/ Period	Amount (Rs.)	Status
1	Optimal Design and Development of Machine Learning Model for Remote Monitoring and Control of Hybrid Microgrid in Educational Institutions using Smart Sensor Network and IoT	DST - SERB- StartUp Research Grant	Dr. J.Jeslin Drusila Nesa malar	2 years / 2020-2022	28,64,400	Completed & UC Submitted
2	Children Centric Outreach Programme	NCSTC - DST	Dr. D. Prince Winston	6 Months/ 2023-2024	14,04,600	Sanctioned
3	An IoT-enabled Eco-friendly Approach For The Retention of Water In Drought Agricultural Fields Using Superabsorbent Polymers Made From Waste Pineapple (Ananascmosus) Peel	MSME	Dr. B.Guru Karthik Babu	3 Months/ 2023-2024	6,00,000	Sanctioned
4	Development of Hardware Interface to generate Electric Power from Parked Electric Vehicle	MSME	Dr. D. Prince Winston	3 Months/ 2023-2024	11,75,600	Sanctioned
5	Development of Eco-friendly Battery Balancing Kit for Electric vehicle Applications	MSME	Dr. D. Prince Winston	3 Months/ 2023-2024	10,50,000	Sanctioned

Funded Research Projects

Rs.83,03,850/-

S. No.	Project Title	Funding agency	Faculty Involved	Duration/ Period	Amount (Rs.)	Status
6	Modernization and Removal Of Obsolescence of Power System Simulation Laboratory	AICTE-MODROBS	Dr. S. Kalyani	2 years / 2019-2021	9,00,000	Completed & UC Submitted
7	Improvement of Power Generation in a 20kW Solar PV Power Plant through Bypass Diode Scanning Algorithm and Modified Couple Matching Algorithm	AICTE - RPS	Dr. D. Prince Winston	3 years / 2019-2022	1,50,000	Completed & UC Submitted
8	An Empirical Based Intelligent Safety Approach for Reducing Two Wheeler Crashes in Urban Area	IE (India)	Dr. B.Guru Karthik Babu & Dr. D. Prince Winston	6 Months/ 2023-2024	66,000	Sanctioned
9	IoT Supervised Machine Learning Module for Palatable Water Production in PV/T System using Industrial Sludges and Nautical Husks	IE (India)	Dr. B.Guru Karthik Babu	3 Months/ 2022-2023	47,750	Completed & UC Submitted
10	Renewable Energy Based Atmospheric Water Harvesters for the production of Palatable Water	IE (India)	Dr. B.Guru Karthik Babu	3 Months/ 2019-2020	16,000	Completed & UC Submitted



Funded Research Projects

Rs.83,03,850/-

S. No.	Project Title	Funding agency	Faculty Involved	Duration/ Period	Amount (Rs.)	Status
11	Development of eco-friendly battery balancing kit for Electrical vehicle applications	TNSCST	Dr. B.Gurukarthik Babu	3 Months/2022-2023	7,500	Completed & UC Submitted
12	Eco-friendly technique for palatable water generation from atmospheric air using Industrial sludges and aquatic husks in PV/T module imbided with Random forest technique and IoT analytics	TNSCST	Dr. B.Gurukarthik Babu	3 Months/2021-2022	7,500	Completed & UC Submitted
13	Eco friendly based water generation technique to harvest palatable water from green source	TNSCST	Dr. B.Gurukarthik Babu	3 Months/ 2019-2020	7,500	Completed & UC Submitted
14	Graphene Battery	TNSCST	Mrs. C. Nagadevi	3 Months/ 2019-2020	7,000	Completed & UC Submitted

Anna University Recognized Supervisors

KCET EEE - AU Research Centre
(4495908) valid up to June 2024

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➤ Dielectric Materials➤ Nano technology & Desalination	





Ph.D. Pursuing in KCET- EEE – AU - Research Centre

Ph.D., Current
Status

Full
Time - 4

Part
Time -
12

Total 16

S. No.	Name of the Supervisor	Research Scholar's Name	Photo	Research Title	Category	Status
1	Dr. B. Gurukarthik Babu	R. Ganesan		Application of Optimization Techniques for Automatic Generation Control in Deregulated Environment	Part – Time	Confirmati on
2	Dr. D.Prince Winston	P. Pandimuni		Investigation on energy extraction and management techniques for renewable energy systems	Part – Time	Course Work
3	Dr. D. Prince Winston	Nithya Kalyani S		Design and Development of Efficient Solar PV System	Full – Time	Course Work
4	Dr. B. Gurukarthik Babu	Selva Kumar.S		Studies on Polymer nano composite membrane for Fuel cell application	Part – Time	Confirmati on





Ph.D. Pursuing in KCET- EEE – AU - Research Centre

**Ph.D., Current
Status**

Full
Time - 4

Part
Time -
12

Total 16

S. No.	Name of the Supervisor	Research Scholar's Name	Photo	Research Title	Category	Status
5	Dr. B. Gurukarthik Babu	Prasanth S		Electrical Load Prediction Using Machine Learning Algorithms	Part – Time	Course Work
6	Dr. D. Prince Winston	Guna A		Performance enhancement of Electrical System by implementing effective Energy management Strategies	Part – Time	Course Work
7	Dr. D.Prince Winston	P.Aravind		Design and development of sustainable technologies for renewable energy system	Part – Time	Course Work
8	Dr. B. Gurukarthik Babu	R. Santhiya		Vehicle tracking and Collision Management for Intelligent Transportation system with optimized response time	Full – Time	Confirmati on





Ph.D. Pursuing in KCET- EEE – AU - Research Centre

**Ph.D., Current
Status**

Full
Time - 4

Part
Time -
12

Total 16

S. No.	Name of the Supervisor	Research Scholar's Name	Photo	Research Title	Category	Status
9	Dr. D.Prince Winston	S. Kavitha		Performance Enhancement of Various Devices used in Renewable systems	Part – Time	Course Work
10	Dr. D. Prince Winston	P. Meenatchi Sundaram		Investigation on power enhancement of renewable energy systems and energy storage systems	Part – Time	Course Work
11	Dr. D.Prince Winston	T. Hariharasudhan		Investigation on power enhancement techniques in non-conventional energy system	Full – Time	Synopsis Submitted
12	Dr. D.Prince Winston	S. Suriya Kala		Maximum energy extraction in renewable energy sources	Part – Time	Synopsis Submitted





Ph.D. Pursuing in KCET- EEE – AU - Research Centre

**Ph.D., Current
Status**







Full
Time - 4

Part
Time -
12

Total 16

S. No.	Name of the Supervisor	Research Scholar's Name	Photo	Research Title	Category	Status
13	Dr. D.Prince Winston	K.Ganesan		Performance enhancement of distributed energy resources based micro grid	Part – Time	Thesis Submitted
14	Dr. D. Prince Winston	S.Sukumar		Development of power enhancement techniques for renewable energy systems	Part – Time	Thesis Submitted
15	Dr. D.Prince Winston	A.Arulkumar		Performance analysis of renewable and distributed energy systems	Full – Time	Confirmation
16	Dr. D.Prince Winston	S. Ramesh Prabhu		Performance analysis of converters for renewable energy sources	Part – Time	Confirmation







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	14.5.2018	
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	4.08.2019	
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

Faculty Awards - NPTEL STARS

**NPTEL Elite with Silver 2022
Air Pollution and Control**



**Dr. B. Gurukarthik Babu,
AP/EEE**

**NPTEL ELITE
(SOFTSKILLS) 2022**



**Dr. S. Kalyani,
Prof./EEE**

**NPTEL ELITE 2023
Non-Conventional Enrgy Resources**



**Dr. B. Gurukarthik Babu,
AP/EEE**



Faculty Achievements



**Dr. D. Prince Winston - World top2% scientist 2022 - Elsevier
Stanford University, San Francisco, USA**



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**Dr. S. Kalyani - National Inspiring Research Supervisor
Award 2022 - Madras Journal Series Private Limited, Chennai**



Rankings for Scientist

University, Subject,
Country, Region, World

World Scientist and University Rankings

**Dr. D. Prince Winston - World Scientist and University
Rankings 2023 - 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 2023 - AD Scientific Index**

