


**Name of the Department: Electrical and Electronics Engineering**

Name of the Faculty		Dr. R. KARPAGAM			
Designation		Associate Professor			
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Qualification		UG	B.E	Electrical and Electronics Engineering	
		PG	M.E	Power Electronics and drives	
		Ph.D.		Nanotechnology	
Specialization/ Major areas of Research		Understanding the surface condition and space charge behaviour of Epoxy Nanocomposites			
Experience		Teaching: 16.2 Years	Industry: Nil	Research: 4 Years	
Professional Memberships		IET,IEEE,ACES,ISC			
Papers Published in Journals		International : 20		National : Nil	
Papers Presented in Conferences		International : 16		National : 10	
Citations : 132		h-index : 7		i-10 index : 5	
Awards / Achievements / Funded Projects / Consultancy					
<b>Awards</b>					
S.No.	Name of Award	Award Agency		Year	
i.	University rank	Anna university		2005	
ii.	Fellowship for 4 years	Indian Institute of Technology Madras		2009	
iii.	Fellowship	SERB TARE		2022	
iv	Publication award	Easwari Engineering college		2023	
v	Research Award	Easwari Engineering college		2023	

**Funded Projects**

S. No.	Title of the Project	Amount (in Lakhs)	Funding Agency	Reference No.
i.	Condition monitoring of Power apparatus for Smart Grid	18.30	SERB TARE	TAR/2022/000385
ii.	Biological Validation of Non-Thermal Plasma Treated Fluorophosphate based Bioactive glass and Glass-Ceramics for Enhanced Bone Tissue Regeneration	38.2	DBT	LOI Accepted
iii	Batteries replaced electric vehicles using Nanofiller Embedded High Energy density capacitor	0.075	TNSCST	TNSCST/SPS/AR/2019-2020

**Patent Published**

S.No.	Patent Title	Name of Applicant	Patent No.	Award Date	National/International	Status
i.	A hybrid electrical vehicles using bidirectional dc dc conversion apparatus	R.Karpagam	202141004471	12/2/2021	National	Published
ii	E-Commerce Sales Prediction and Boosting Using Machine Learning	R.Karpagam	2021100829	7/4/2021	International	Granted
iii	Ultrafast Lithium ion battery charging for electric vehicles using hybrid power source	R.Karpagam	202241023199	13/5/2022	National	Published

**Books Published**

S.No.	Title	Author's Name	Publisher	Year of Publication
i.	Design and Fabrication of High Gain Microstrip Patch Antenna using Perovskite added Polymer Epoxy resin for Multiple input and Multiple output	<b>R. Karpagam,</b> V. Megala, G. Rajkumar, K. Sakthipandi, GK. Sathishkumar	CRC Press ISBN 9780367554385	2021

**Referred SCI journal**

S.No.	Authors	Title	Name of Journal	Vol.	Page	Year
i.	Suganthi, S, <b>R. Karpagam*</b>	Dynamic performance improvement of PMSM drive using fuzzy-based adaptive control strategy for EV applications	Journal Power Electronics	23	550	<b>2023</b>
ii.	J Vishnupriyan, SK ChayaDevi, V Megala, <b>R. Karpagam</b>	Design and Qualitative Analysis of 5-nm Nanowire TFET with Spacer Engineering	Journal of Electronic Materials	52	2094	<b>2023</b>
iii.	J. Lydia, <b>R. Karpagam*</b> R. Murugan	A Novel Technique for Dynamic Analysis of an Electromagnetic Rail Launcher using FEM Coupled with Simpler	The Applied Computational Electromagnetics Society Journal (ACES)	37	229	<b>2022</b>
iv.	V. Dhivya, G. Rajkumar S. Mahalaxmi <b>R. Karpagam*</b> K. Sakthipandi	Impact of silver on fluorophosphate glasses to improve <i>in vitro</i> bioactivity and antibacterial efficacy	Ceramics International	48	25346	<b>2022</b>
v.	G.K. Sathishkumar, G. Gautham G. Rajkumar, <b>R. Karpagam,</b> V. Dhivya	Influence of lignite fly ash on the structural and mechanical properties of banana fiber containing epoxy polymer matrix composite	Polymer Bulletin	79	285	<b>2022</b>
vi.	G.K. Sathishkumar G. Rajkumar, <b>R. Karpagam</b>	Experimental and Finite Element Analysis of Lignite Fly Ash on the Mechanical Properties of Sisal-added PMC	J Natural Fibers	19	7008	<b>2022</b>
vii.	G. Rajkumar, G.K. Sathishkumar, <b>R. Karpagam,</b> K.Sakthipandi	Structural and mechanical properties of lignite fly ash and flax-added polypropylene polymer matrix composite	J Natural Fibers	19	6534	<b>2022</b>
viii.	G.K.Sathishkumar, Mohamed Ibrahim, G. Rajkumar, B. Gopinath, <b>R. Karpagam</b>	Synthesis and Mechanical Properties of Natural Fiber Reinforced Epoxy/Polyester/ Polypropylene Composites: A Review	J Natural Fibers	19	3718	<b>2022</b>
ix.	V. Dhivya, G. Rajkumar S. Mahalaxmi <b>R. Karpagam,</b> K. Sakthipandi	Impact of silver on fluorophosphate glasses to improve <i>in vitro</i> bioactivity and antibacterial efficacy	Ceramics International	48	25346	<b>2022</b>
xi.	T. Thandapani, Paramasivam Shanmugam, <b>R. Karpagam</b>	Modelling and control of VIENNA rectifier a single phase approach	IET Power Electronics	8	12	<b>2015</b>
x.	T. Thandapani, <b>R. Karpagam,</b> S. Paramasivam	Comparative studies on Vienna rectifier topologies	International Journal of Power Electronics	7	18	<b>2015</b>

xi.	R.Sarathi, <b>R.Karpagam</b> , Ajay Pratap Singh and T.Tanaka	Understanding discharges initiated by water droplet on epoxy nanocomposites under DC voltages adopting UHF technique	IEEJ	187	6	<b>2013</b>
xii.	<b>R.Karpagam</b> , R.Sarathi and T. Tanaka	Understanding the impact of gamma ray irradiation on electrical and mechanical properties of Epoxy nanocomposites	Journal of Applied Polymer Science	125	9	<b>2011</b>

#### PhD Guided/Awarded

S.NO	PhD Guided/Awarded	Research Domain	Status
i	Mr.T.Thandapani 10910421066	A simplified approach to modeling, analysis and control of Vienna Rectifier	Completed Ph.D
ii	Mr.S. Jayandiran 1612399182	Finite elements analysis of V shaped BLDC machine using Epoxy Composite	Provisional Registration Confirmed
iii	Uthirapathi D 1614599124	Finite Elements analysis of microstrip patch antenna design	Provisional Registration Confirmed
iv	Ms.S. Suganthi 17243991227	Finite Element analysis of Permanent magnet motor drive system using Epoxy composite	Provisional Registration Confirmed
v	Mrs.J.Lydia 18243991259	Electromagnetic Analysis of various Rail gun geometries using Finite Element Method using HV Pulse.	Provisional Registration Confirmed
vi	Mr.Emmanuel 21144997315	Design of slotted multiband microstrip patch antenna for satellite applications	course work registration
vii	Mr.K.Sashidar 211449997396	Optimal cluster head selection in large scale wireless sensor network	course work registration