



SRIET Profile:

Sri Ranganathar Institute of Engineering and Technology (SRIET) came into existence in 2011, out of an ardent desire of Dr. V. Narayanasamy to contribute manifold to the society that nurtured him. SRIET is an Innovative Educational Institution where the curiosity, creativity and intellectual joy of students all drive to academic excellence. Our Institution provides complex problem-solving skill and imbibes service to the public good. SRIET is defined by strong association and working in ways that excel in traditional boundaries.

SRIET's academic excellence is rooted in a student-centred model of learning. The Curriculum is an accurate approach to education that pushes the students to be creative thinkers, intellectual risk-takers and entrepreneurial problem-solvers. SRIET leaves students prepared to thrive as independent and innovative leaders and equipped with the tools they need to become the next generation of leaders in their respective fields.

VISION:

To enable our students to have a higher degree of competence in enhancing efficiency in energizing the world and maximizing green energy.

MISSION:

Our Mission is to Facilitate Students with Harmonious Teaching and Experiential Learning by Integrating Industrial and Societal Needs with Curriculum, Providing Requisite Infrastructure Facilities and Imbibing Ethical Values.

PRINCIPAL'S DESK :

"Welcome to our SRIET, on behalf of all of our faculty, staff and students... In today's competitive global world, a skilled technical education is becoming increasingly important for future success.As Principal, I am extremely proud of our college's rich tradition of providing valuable, experience-based engineering education since its inception. Our programs prepare students to become leaders with the moral depth and intellectual rigor required to meet the challenges of a critical societal transition. We offer individualized, high-quality

education delivered by an experienced and well-qualified faculty who bring objectivity and a practical focus to their classrooms. We attract students from a wide range of ethnic and cultural backgrounds, resulting in a vibrant and stimulating classroom environment. With this message, I'd like to wish all

of our students, alumni, and future students a very positive and effective experience together."

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Warm regards, Dr. H.Ganeshan, M.E., Ph. D., Principal

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SREJ/Magazine/EEE/2022-23

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ABOUT THE DEPARTMENT:

Electrical engineers synthesize science, mathematics, technology, and application-oriented designs into world-class consumer products, timely microprocessors, state-of-the-art computers, advanced electronic components, and much more. From cutting-edge technology revolutions to real life applications, the innovations of electrical engineers continue to lead the future and elevate the standards in the marketplace. With a shortage of electrical engineering talent in the job market, the demand for graduates with an electrical engineering degree remains at an all-time high.

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VISION OF THE DEPARTMENT:

To enable our students to have a higher degree of competence in enhancing efficiency in energizing the world and maximizing green energy.

MISSION OF THE DEPARTMENT:

- To facilitate students to adept latest technology in addressing the challenges in transmission and distribution of electricity.
- > To engage and collaborate with education and experience towards building unified technology.
- To kindle the students to innovate in designing and developing new products and process that add value to customers.
- > To inculcate the need of green energy in the minds of students to sustain Mother nature.

HOD'S DESK :

I believe my role as an educator is to guide and nurture the next generation to

establish skills to achieve health, respect, prosperity and fulfilment.

The ability to be innovative and creative is important to me.

I enjoy being challenged and inspired by the people around me. I am an avoid supporter of effective and innovative professional



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Dr. J MAALMARUGAN M.E., Ph.D., Professor, HOD Email: maalmarugan@sriet.ac.in Mobile: 84899 29865

development that encourages teachers to be reflective and to continuously examine our practice to provide quality teaching and learning for each student. My role as head of the department is to keep up with latest trends and research and be an active partner in the college's professional development.



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PROGRAM OUTCOMES (PO) PO1: Engineering knowledge

Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

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PO2: Problem analysis

Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/ development of solutions

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability

Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

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Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSO) PSO1

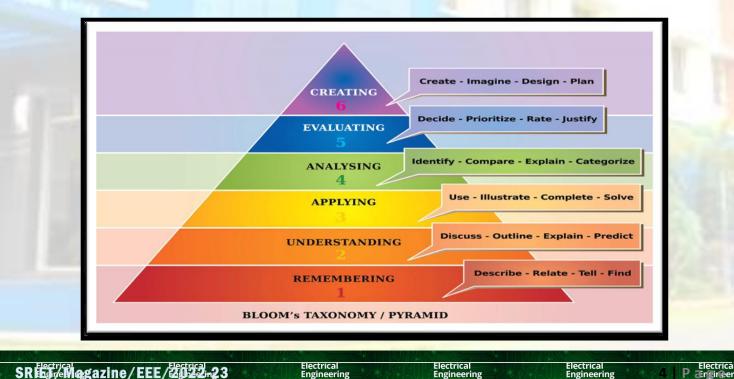
Capable to provide socially acceptable technical solutions to complex electrical engineering problems with the application of modern and appropriate techniques for sustainable development.

PSO₂

Comprehend, analyses and design products in core domains namely power, control and energy to meet the ever-changing demands of industry and society.

Bloom's taxonomy

Bloom's taxonomy was developed to provide a common language for teachers to discuss and exchange learning and assessment methods. Specific learning outcomes can be derived from the taxonomy, though it is most commonly used to assess learning on a variety of cognitive levels.



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Power Electronics and Drives Laboratory

It consists of different kinds of demo kits such as SCR characteristics, study kit for D.C motor control using chopper and necessary simulation software.

The lab is equipped with all the power electronic converters, DSP and FPGA based DC and AC Drives, Digital Integrated kits, Power supplies.



Electrical Machines Laboratory

Imparts the knowledge about characteristics and behaviour of the DC and AC Machines.

Well established with all kinds of motors, generators and latest Drives.



Electrical Engineering Electrical Engineering



Well established with instrumentation kits like LVDT, strain guage, thermistor and thermocouple kit

Provides an opportunity for the students to implement the control system concepts



Power System Simulation Laboratory

Furnished with high speed internet facilities in all the systems.

Software like ETABS in this lab interface the mathematical computing visualization and a powerful language to provide a flexible environment for technical computing in the areas of power electronics, control system, power system and electronic circuits.



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To impart the practical knowledge to the students about the Domestic Appliances, wiring, transformers DC machines, AC machines and basic electronic circuits.

Established with the basic tools, machines and accessories to provide service to all first year students



Renewable Energy Laboratory

The Renewable energy laboratory is equipped with solar photovoltaic training and research system, solar thermal training system, solar concentrator training system and wind energy training system.



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Students Participation Details Seminar/ Internship/ Other **Academic Year** Conference Workshop Paper Training **Events** presentation 20 CAY (2022-2023) 10 12 6 15

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- AJAY K, DHINESHWARAN S, DIVYA R from IV EEE submitted a project proposal on "Home Automation and Security System using Telegram"
- ATHIBAN S, HARIHARAN P, MANIVASAGAN P from IV EEE submitted a project proposal on IoT Based Smart Grid Using Renewable Energy System
- BRINDHA M, JEEVARATHINASAMY M, DURAI M from IV EEE submitted a project proposal on IoT Based Drip Monitoring System in Hospitals
- AKASH S, KARTHICK R, SANJAY M from IV EEE submitted a project proposal on IoT Based Smart Agriculture Monitoring System to TNSCST
- KRISHNAMOORTHI A, RAHUL R, VAISHNAVI K R from IV EEE submitted a project proposal on Smart Trolley Billing System
- ASWIN PRABHU K, KAMALE R, SEBASTIAN V from IV EEE submitted a project proposal on High Secured Universal Smart Card for Multiple Access
- MANIKANDAN S, THAYALAN M, KATHIRVELRAJA B from IV EEE submitted a project proposal on IoT Based Automatic Engine Locking for Automobiles with Alcohol Detection System
- SWETHA C, VIGNESHWARAN M, PRAMOD KUMAR PANDA from IV EEE submitted a project proposal on Implementation of Smart Glove for Dumb and Deaf Peoples
- Siranjeevi S from III EEE participated in the Online Quiz series-38 & 39 on "Energy Management and Auditing"
- Aswinprabhu K, Vaishnavi K R from IV EEE participated in ORU PAKKA KATHAI, a short story writing competition in Tamil organized by Rotary eClub of Coimbatore Changemakers and Arivukkeni
- Siranjeevi S from III EEE participated and scored 50% in the Online Quiz series-42 on "Energy Management and Auditing"
- Siranjeevi S from III EEE participated in online Basic Electrical and Electronics Engineering Quiz Series - 04

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Akash S, Sanjay M from IV EEE and Aresh M, Mugunthan M, Balaji N from III EEE Donated blood voluntarily organized by "Swami Vivekananda Blood Centre"

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Prajithakumari P from III EEE participated in the Online Quiz series-49, 50 on "Energy Management and Auditing"

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- Prajithakumari P from III EEE participated in online "Basic Electrical and Electronics Engineering" Quiz Series – 16, 17
- Prajithakumari P from III EEE participated in online "Basic Electrical and Electronics Engineering" Quiz Series – 16, 17
- Prajithakumari P, Siranjeevi S from III EEE participated in the Online Quiz series-51 on "Energy Management and Auditing"
- > Rajarajan R from II EEE and Siranjeevi S from III EEE participated in the Orientation Program
- Amerunisha M from III EEE successfully completed NPTEL 8 weeks course on "Developing Soft Skills and Personality"
- Radhakrishnan J, Selvapandi P, Mohinthbabu J, Raja M, Jerin Titus, Balaji N, Siddharth A, Thashin K, Amerunisha M, Prajithakumari P, Vignesh C N, Sriram S and Priyadharshini K from III EEE successfully completed industrial training at "Enbest Pumps (India) Private Limited"
- Rajaperumal from III EEE successfully completed industrial training at "Compass India Support Services Private Limited"
- Gopi P from III EEE successfully completed industrial training at "Sabari Industrial Corporation"
- Priyadharshini K from III EEE Successfully completed NPTEL Online Certificate 8-week course on "Design, Technology and Innovation"
- Sriram S from III EEE Successfully completed NPTEL Online Certificate 8-week course on "Design, Technology and Innovation"
- Lavanya K from IV EEE Successfully completed NPTEL Online Certificate 8-week course on "Design, Technology and Innovation"
- Ishwarya S from III EEE successfully completed Internship training on "Internet of Things" at Adventure Technology Solutions Pvt Ltd,
- Shanmugapriya S from IV EEE Successfully completed NPTEL Online Certificate 8-week course on "Design, Technology and Innovation"
- Balaji N from III EEE Successfully completed NPTEL Online Certificate 8-week course on "Design, Technology and Innovation"

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Student's Achievements:



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Program Organized:

Dr K Bagyalakshmi III EEE students went to industrial visit at "Krish Tech"

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Dr K Bagyalakshmi organized One day seminar on "Recent Trends in IoT and its Applications"

Electrical

- > Mrs D Nivea organized One day seminar on "Training on Employability Skills"
- Mrs M Malathi organized One day seminar on "Advancement in Renewable Energy Systems"
- Mr D Palanivel organized One day seminar on "Role of Technical Skills and Effective Communication in Entrepreneurial Development"
- Dr K Bagyalakshmi Arranged an On-Campus drive for IV Mechanical students through the company "Orient Body Shop Solution"
- Mr K Muthuraj organized One day National Level Workshop on "Design Thinking and Innovation"
- Mr. Alex George organized One day workshop on "Advancement in Electrical Machines"
- Mrs D Nivea organized online webinar on "Current Trends on E-Vehicle and Retrofit Technology"
- Dr J Maalmarugan and Mrs D Nivea co-ordinally organized NAAC sponsored two days national level seminar on "Role of NAAC with NEP as a Quality Tool for Higher Education"



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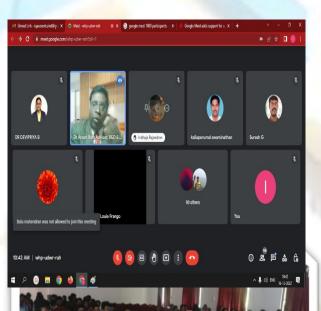
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Journal Publication Details:

> Dr.J.Maalmarugan Prof/Head/EEE has published an international journal titled on "Synthesis, studies of 2-benzyl-amino-4-p-tolyl-6,7-di-hydro 5H-cyclo-penta-[b]pyridine-3 carbo-nitrile (BAPTDHCPCN) crystals for optical, photonic and mechano-electronic uses" Journal Name: Journal of Materials Science: Materials in Electronics Indexed by Springer

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> Dr.J.Maalmarugan Prof/Head/EEE has published an international journal titled on "Growth, mechanical hardness, stiffness, tribological, morphological, electrical and electronic studies of inorganic tri caesium di-molybdate (VI) bromide -TCDMB crystals of versatile scales for mechano-electronic engineering and photonic uses"

Springer: Journal of Materials

Science: Materials in Electronics

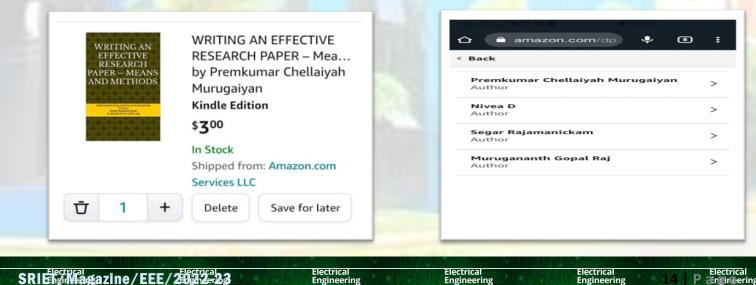
DOI: https://doi.org/10.1007/s10854-022-09505-x

> Dr K Bagyalakshmi has published an international journal titled on "Deep Learning Techniques for Exoticism Mining from Visual Content Based Image Retrieval" during Feb - 2023.

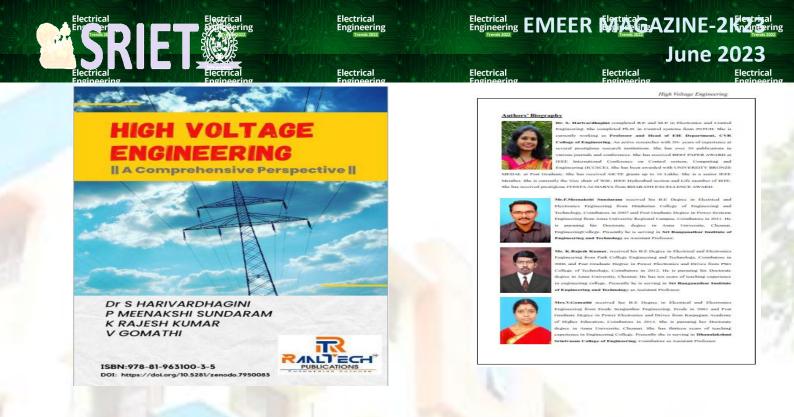
Journal Name: Journal of Pharmaceutical Negative Results (Volume 14) DOI: 10.47750/pnr.2023.14.S01.130

Book Publication Details:

- Mrs D Nivea published a book in Amazon Kindle edition under the title "Writing an effective research paper - means and Methods".
- > Mr P Meenakshi Sundaram, Mr K Rajeshkumar published a book in RAALTECH **PUBLICATIONS** under the title "HIGH VOLTAGE ENGINEERING".
- > Mrs D Nivea published a book in Amazon Kindle edition under the title "Writing an effective research paper – means and Methods".



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Conference Presented (National/International):

- Dr J Maalmarugan Presented a paper titled on "A New Cascaded H-Bridge 65 Level Multilevel inverter with a reduced switch count" organized by IEEE sponsored 3rd international conference on "power, energy, control and transmission system"
- Mr. Alex George Presented a paper titled on "IoT Based Voice Controllable Wheelchair"
- Dr J Maalmarugan and Mr D Palanivel presented conference titled on "ARK Ansys Academic Innovation Conference 2022"

Coimbatore Event-E Certificates (External) Inbox ×			Ð	Ø
Megha Pawar ⊲megha,pawar@arkinfo.in⊳ to Meoha, Visweswaran, Amit, Prasanna ❤	Sep 22, 2022, 10:36 AM	☆	¢	:
Dear All,				
Thank you everyone for your active participation in ARK Ansys Academic Innovation Conference 2022.				
We appreciate for bringing your expertise and experience around the table and engaging in fruitful, constru-	uctive and open exchanges through	out the se	essior	i.
Your continuous engagement and high quality of the debate encouraged us to cover the various work stream	ams.			
Attached herewith your Participation E-Certificates for the event.				
Coimbatore Event-E participation Certificate				
Thanks & Regards				
Megha Pawar Senior Sales Coordinator (HE Division)				
Senior Sales Coordinator (ITE Division)				

FDP/STTP/Seminar/workshops:

- Dr K Bagyalakshmi Participated in 3days International faculty development programme on "Disruptive Technologies for Next Gen Computing"
- Mr D Palanivel, Mrs D Participated in 6 days FDP on "Awareness of Electronic Tools for System Design"
- Mrs M Malathi Participated in International level virtual faculty development programme on "Research Advancements in Intelligent Computing Technologies

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- Mr D Palanivel participated in six days FDP on "Recent Trends on Healthcare Applications using Machine Learning"
- Mr P Meenakshisundaram participated in two days National level seminar on "Introduction to Cyber Security Issues and Unit Commitment Problems in Power Systems"





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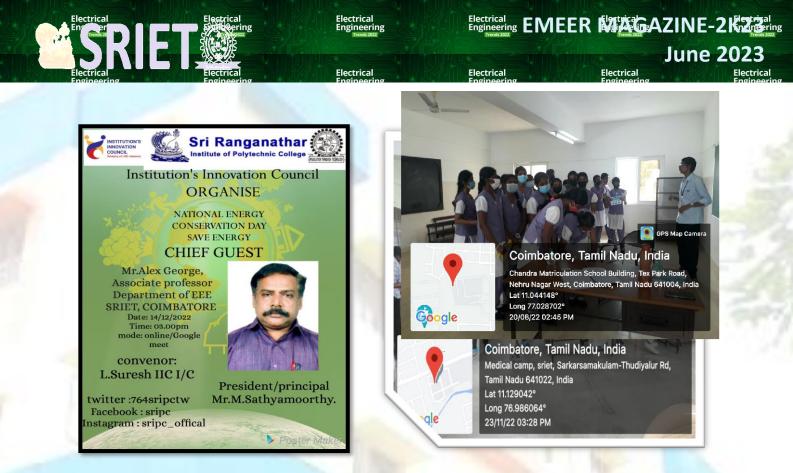
Interaction with outside world:

- Mr.P.Meenakshi Sundaram delivered Guest Lecturer on "Important of Higher Studies"
- Mr. K.Rajesh Kumar in Career Guidance Fair 2022 at Chandra Matriculation Higher Secondary School
- Mrs D Nivea, Mr K Muthuraj conducted UBA activity on account of Children's Day Celebration – Motivational Program at Government Middle School, Kunnathur
- Mrs K Bagyalakshmi organized Medical Camp for students and faculty members in associated with "Lotus Eye Hospital"
- Mr. Alex George represents as a Chief Guest in National energy Conservation Day on "Save Energy"
- Dr K Bagyalakshmi represents as a Chief Guest in "EEE department Association Inauguration"
- > Mr P Meenakshi Sundaram represents as a Examiner "Staff Selection Panel Member 2022-23"
- Mr Muthuraj K delivered Guest Lecturer "State level FDP on Recent trends in Electrical Technology"

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Mr. Alex George delivered Jury "State level Technical Symposium and Science exhibition"









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Extension Activities:

3rd and Final year EEE students Visited "Panapatti Sub-Station, Suzlon Wind plant, CV green energy" Coimbatore, on 06.08.2022.

Industrial Visit for 2nd year EEE students to "Radio Astronomy Centre", Udhagamandalam, TN on 29.09.2022.



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Technical Message:

Electric vehicles in India:

The electric vehicle industry in India is a growing industry. The central and state governments have launched schemes and incentives to **promote electric mobility** in the country and some regulations and standards are also in place. While the country stands to benefit in a large way by switching its transport from IC



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engines to electric motor-powered, there are challenges like lack of charging infrastructure, high initial cost and lack of electricity produced from renewable energy. Still, e-commerce companies, car manufacturers, app-based transportation network companies and mobility solution providers have entered the sector and are slowly building up electric car capacity and visibility.

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Go Electric campaign:

The government launched the Go Electric campaign in the start of 2021 to encourage the adoption of electric mobility vehicles and electric cooking appliances and to ensure energy security in the country. Road Transport and Highways Minister Nitin Gadkari launched the campaign, saying Go Electric is a future for India that will promote low-cost, environmentally friendly and indigenous electrical



products. He expressed concern about the huge cost of importing fossil fuels and said CO2 emissions from transportation vehicles are a major challenge. The country must encourage the use of vehicles that run on alternative fuels such as electric batteries, CNG and biofuels.

The Government to suspend the registration fee for EVs will persuade states also to give tax breaks.

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Why Choose an Electrical Engineering Degree?

JOBS IN PUBLIC SECTORS

JOBS IN PRIVATE SECTORS

OPPORTUNITY TO WORK WITH MNCS

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VARIOUS CAREER OPTIONS



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