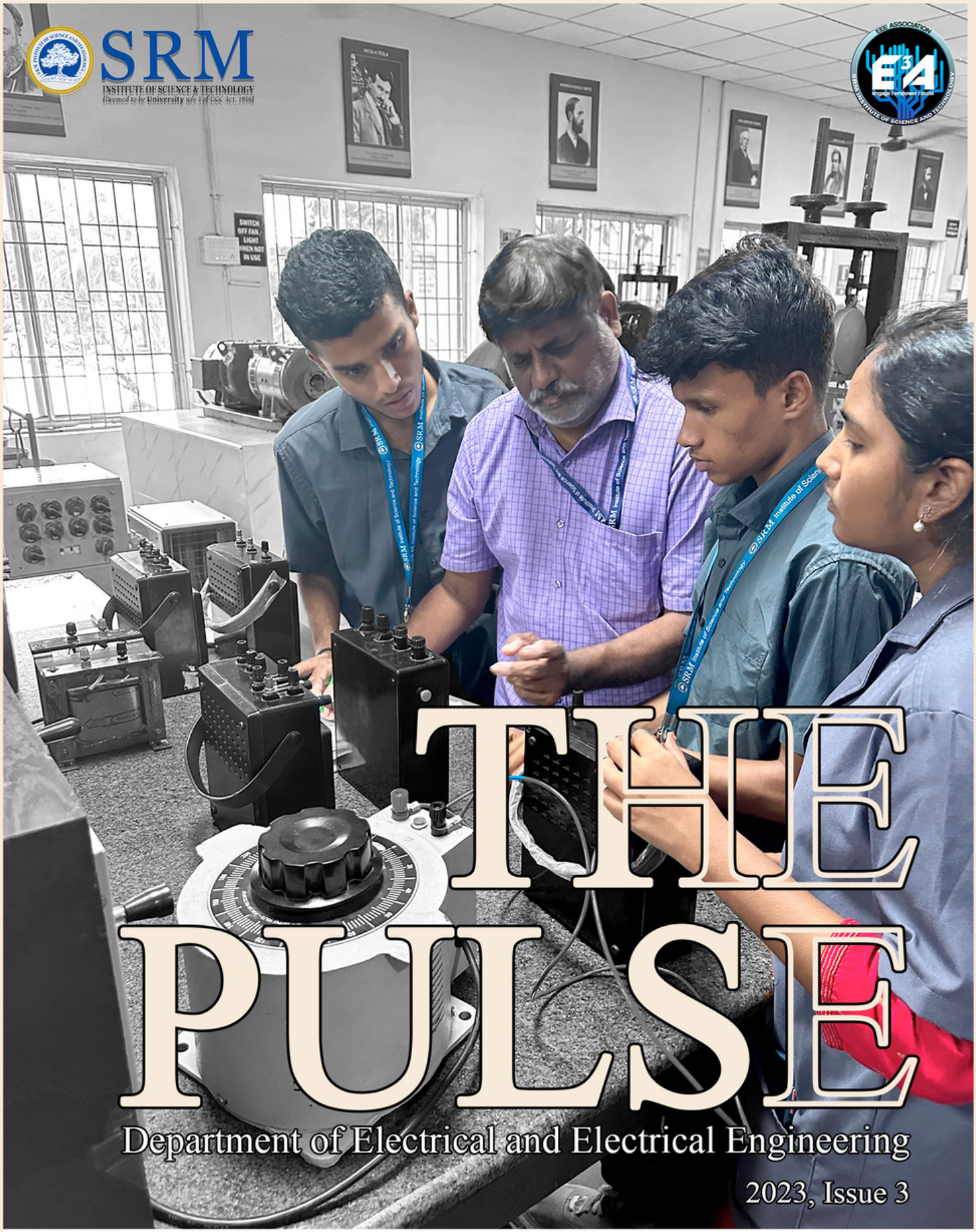
SRM
INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University u/s 3 of UGC Act, 1956)



THE PULSE

Department of Electrical and Electrical Engineering

2023, Issue 3

NAAC		nirf	QS	THE WORLD UNIVERSITY RANKINGS	ARIIA	SHANGHAI RANKING
A++	Category 1 with 128 Status	(2022) Ranked 19th University	(2023) World Ranking one among 41 Indian Universities	(2023) World Ranking one among 75 Indian Universities	(2021) Ranked 4th	(2023) World Ranking one among 14 Indian Universities

CONTENTS

About the Department

Dr.K.Vijayakumar
HOD
Electrical and Electronics Engineering

Dear Readers,

The Department has a team of highly qualified faculty, holding Ph.D and post-doctoral credentials. This team is actively involved in research, contributing to scholarly articles in peer-reviewed journals and developing patents that leverage advanced technologies to turn innovative ideas into tangible products. The regularly hosts adjunct and visiting professors, as well as industry specialists from prestigious organizations worldwide, to deliver courses that are closely aligned with industry needs. The B.Tech in Electrical and Electronics Engineering programme at Kattankulathur Campus is accredited by Engineering Accreditation Commission of ABET, and the National Board of Accreditation (NBA).

Programs offered

Undergraduate

- Electrical and Electronics Engineering
- Electric Vehicle Technology

Postgraduate

- Power Electronics and Drives
- Power Systems

Editorial Desk

Dr. PRADEEP V
Faculty Mentor

Dr. SURESH P
Faculty Mentor

DINESH KUMAR S
III Year, EEE

GIDEON STEVE B
II Year, EEE

AJAY AKSANTH J
III Year, EEE

NITHISH J
II Year, EEE

Dear Readers,

We are delighted to present the fourth issue of the first volume of THE PULSE, encapsulating the dynamic activities and noteworthy achievements of the students and faculty over the past three months (January 2023 - March 2023).

This magazine serves as a testament to the relentless dedication and excellence displayed by the students and faculty in various domains, including teaching, research, and other pivotal activities. Within these pages, a comprehensive overview of the contributions made by the members of the academic community is portrayed.

THE PULSE spotlights the myriad accomplishments of our department, showcasing achievements such as research article publications, successful grant acquisitions, fellowships, and advancements in patenting and intellectual property rights.

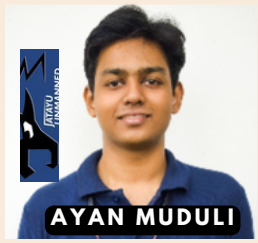
The team extend heartfelt gratitude to the Dean of the School of Electrical Engineering and the Head of the Department, along with the entire staff and student body of Electrical and Electronic Engineering department. The unwavering contributions and support have played a pivotal role in shaping the content and success of the magazine.

Thank you for your continued support, and we hope you enjoy this insightful journey through the vibrant tapestry of achievements within our academic community.

Sincerely,
Team Newsletter.

PLACEMENT RECORDS

CONGRATULATIONS



PARTICIPATIONS

Dr.J.Preetha Roselyn received "John P Craven Mentor award-International award" from Marine Technology Society, USA.

Dr.R.Ramya delivered a lecture on the topic of Virtual Laboratory for Power System in Saranathan College of Engineering, Trichy

Dr.A.Geetha delivered a lecture on the topic of "Applications of Electrical Machines Design in Modern Industries" in Francis Xavier Engineering College.

Dr.K.Subhasharmini attended a faculty development program titled "VLSI to System Design-Silicon to End Application Approach," from 31-07-2023 to 04-08-2023 organised by AICTE.

Dr.K.Subhasharmini attended a faculty development program titled "Programming for Problem Solving-21CSS101J," from 27-07-2023 to 01-08-2023 organised by SRMIST.

Dr.P.U.Poornima attended a faculty development program titled "Programming for Problem Solving-21CSS101J," from 27-07-2023 to 01-08-2023 organised by SRMIST.

Dr.P.U.Poornima attended a faculty development program titled "Mobilizing Renewable Energy For Battery Swapping ,G2V And V2G Charging Stations," from 21-07-2023 to 22-07-2023 organised by SRMIST.

Dr.P.U.Poornima attended a faculty development program titled "Art Of Real Time Data Acquisition For Electrical And Electronics Engineering," from 07-08-2023 to 12-08-2023 organised by SRMIST.

Dr.Y.Jeyashree attended a faculty development program titled "Sustainable Development Goals: Challenges and Oppertunities," from 18-09-2023 to 22-09-2023 organised by AICTE.

Dr.Y.Jeyashree attended a faculty development program titled "Smart Grid and integration of distrubuted Generation," from 28-08-2023 to 09-01-2023 organised by NITTTR.

Dr.Y.Jeyashree attended a faculty development program titled "ANSYS-EM for Electrical Engineering Application," from 17-07-2023 to 21-07-2023 organised by NITTTR.

Dr.C.Anuradha attended a faculty development program titled "Programming for Problem Solving-21CSS101J," from 27-07-2023 to 01-08-2023 organised by SRMIST.

Dr.R.SenthilKumar attended a faculty development program titled "Programming for Problem Solving - 21CSS101J," from 27-07-2023 to 01-08-2023 organised by SRMIST.

B.Vinothkumar attended a faculty development program titled "Programming for Problem Solving-21CSS101J," from 27-07-2023 to 01-08-2023 organised by SRMIST.

Dr.S.Vijayalakshmi attended a faculty development program titled "Programming for Problem Solving-21CSS101J," from 27-07-2023 to 01-08-2023 organised by .

Dr.R.C.Ilambirai attended a faculty development program titled "Programming for Problem Solving-21CSS101J," from 27-07-2023 to 01-08-2023 organised by SRMIST.

PARTICIPATIONS

Dr.R.C.Ilambirai attended a faculty development program titled "Mobilizing Renewable Energy For Battery Swapping ,G2V And V2G Charging Stations," from 21-07-2023 to 22-07-2023 organised by SRMIST.

Dr.S.Lourdu Jame attended a faculty development program titled "Programming for Problem Solving-21CSS101J," from 27-07-2023 to 01-08-2023 organised by SRMIST

Dr.S.Lourdu Jame attended a faculty development program titled "Mobilizing Renewable Energy For Battery Swapping ,G2V And V2G Charging Stations," from 21-07-2023 to 22-07-2023 organised by SRMIST.

Dr.R.Femi attended a faculty development program titled "FDP on Cloud Infrastructure (AWS)," from 21-08-2023 to 25-08-2023 organised by SRMIST.

Dr.S.Shanmugapriya attended a faculty development program titled "Programming for Problem Solving-21CSS101J," from 27-07-2023 to 01-08-2023 organised by SRMIST.

Dr.S.Shanmugapriya attended a faculty development program titled "Mobilizing Renewable Energy For Battery Swapping ,G2V And V2G Charging Stations," from 21-07-2023 to 22-07-2023 .

Dr.C.Balaji attended a faculty development program titled "Programming for Problem Solving-21CSS101J," from 27-07-2023 to 01-08-2023 organised by SRMIST.

Dr.C.S.Boopathi attended a faculty development program titled "AI for Building Speech Vision Application using Python," from 21-08-2023 to 25-08-2023

Dr.C.Balaji attended a faculty development program titled "Programming for Problem Solving-21CSS101J," from 27-07-2023 to 01-08-2023 organised by SRMIST.

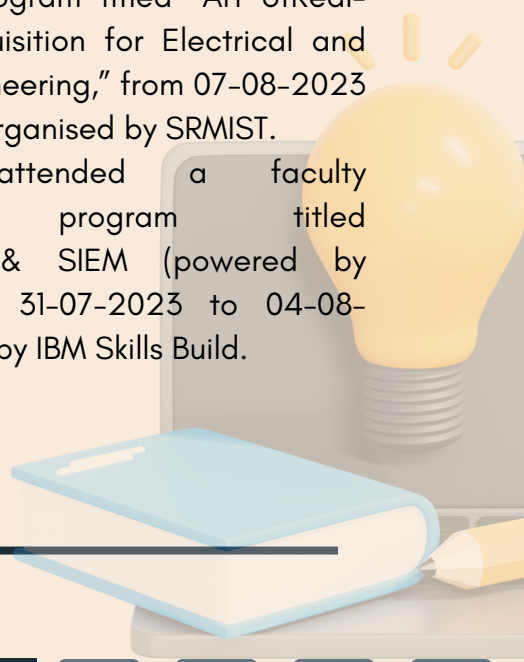
Dr.S.Geethanjali attended a faculty development program titled "Electric Vehicles Fault Diagnosis,Service and Maintenance," from 12-07-2023 to 13-07-2023 organised by SRMIST.

Dr.S.Geethanjali attended a faculty development program titled "Mobilizing Renewable Energy for Battery Swapping,G2V and V2G charging stations in India," from 21-07-2023 to 22-07-2023 organised by SRMIST.

Dr.S.Geethanjali attended a faculty development program titled "Programming for Problem Solving-21CSS101J," from 27-07-2023 to 01-08-2023 organised by SRMIST.

Dr.S.Geethanjali attended a faculty development program titled "Art ofReal-Time Data Acquisition for Electrical and Electronics Engineering," from 07-08-2023 to 12-08-2023 organised by SRMIST.

Dr.R.Ramya attended a faculty development program titled "Cybersecurity & SIEM (powered by QRadar)," from 31-07-2023 to 04-08-2023 organised by IBM Skills Build.



PUBLICATIONS

A. Sivapriya and N. Kalaiarasi, "A novel enhanced deep learning-based fault diagnosis approach for cascaded multilevel inverter," e-Prime - Adv. Electr. Eng. Electron. Energy, vol. 5, 2023, doi: 10.1016/j.prime.2023.100253.

A. Geetha, R. Sridhar, P. Suresh, S. Usha, and T. M. T. Thentral, "Design of Controller for Bidirectional Non-isolated High Gain Converter in EV Application," J. Nano- Electron. Phys., vol. 15, no. 4, 2023, doi: 10.21272/jnep.15(4).04008.

R. Krishnamoorthy, B. Chokkalingam, and J. L. Munda, "Design of Fault-Tolerant Automotive Gateway Architecture Using MC9S12XDP512 Microcontroller Device," Energies, vol. 16, no. 16, 2023, doi: 10.3390/en16165923.

C. Nithya, J. Preetha Roselyn, and D. Devaraj, "Investigation of Transient Stability in Power System with Improved FRT Capable Solar PV Inverters," Electr. Power Components Syst., 2023, doi: 10.1080/15325008.2023.2246971.

C. Valuva and S. Chinnamuthu, "Performance Analysis of Marine-Predator-Algorithm-Based Optimum PI Controller with Unified Power Flow Controller for Loss Reduction in Wind-Solar Integrated System," Energies, vol. 16, no. 17, 2023, doi: 10.3390/en16176157.

P. K. Chittoor and B. Chokkalingam, "Wireless Electrification System for Photovoltaic Powered Autonomous Drone Charging," IEEE Trans. Transp. Electrif., 2023, doi: 10.1109/TTE.2023.3305022.

C. Valuva, S. Chinnamuthu, T. Khurshaid, and K. C. Kim, "A Comprehensive Review on the Modelling and Significance of Stability Indices in Power System Instability Problems," Energies, vol. 16, no. 18. 2023. doi: 10.3390/en16186718.

M. A. Ravindran and K. Nallathambi, "A CryStAl-RDF technique-based integrated circuit topology for fast charging station of electric vehicle (EV)," Electr. Eng., 2023, doi: 10.1007/s00202-023-01998-x.

S. Suhaib Gul and D. Suchitra, "A multistage coupon incentive-based demand response in energy market," Ain Shams Eng. J., vol. 15, no. 3, 2024, doi: 10.1016/j.asej.2023.102468.

R. J. et al., "A review on resonant inductive coupling pad design for wireless electric vehicle charging application," Energy Reports, vol. 10. 2023. doi: 10.1016/j.egyr.2023.08.067.

PUBLICATIONS

J. D. Navamani, K. Boopathi, M. J. Sathik, A. Lavanya, Kitmo, and P. Vishnuram, "Analysis of Higher Dimensional Converter Using Graphical Approach," IEEE Access, vol. 11, 2023, doi: 10.1109/ACCESS.2023.3295996.

P. S. Kulasekaran and S. Dasarathan, "Design and Analysis of Interleaved High-Gain Bi-Directional DC-DC Converter for Microgrid Application Integrated with Photovoltaic Systems," Energies, vol. 16, no. 13, 2023, doi: 10.3390/en16135135.

G. Vedulla and A. Geetha, "DUST ACCUMULATION ON SOLAR PHOTOVOLTAIC PANELS An Investigation Study on Power Loss and Efficiency Reduction," Therm. Sci., vol. 27, no. 4, 2023, doi: 10.2298/TSCI221103112V.

H. KB et al., "Effects of machining parameters on H13 die steel using CNC drilling machine," Compos. Adv. Mater., vol. 32, 2023, doi: 10.1177/26349833231189296.

A. Sivapriya, N. Kalaiarasi, R. Verma, B. Chokkalingam, and J. L. Munda, "Fault Diagnosis of Cascaded Multilevel Inverter Using Multiscale Kernel Convolutional Neural Network," IEEE Access, vol. 11, 2023, doi: 10.1109/ACCESS.2023.3299852.

S. Usha, T. M. ThamizhThentral, R. Palanisamy, A. Geetha, P. Geetha, and Kitmo, "Mitigation of circulating current and common mode voltage in grid-connected induction motor drive using modified PID-fuzzy controller," Multiscale Multidiscip. Model. Exp. Des., 2023, doi: 10.1007/s41939-023-00192-7.

A. R. Thelkar et al., "Modeling And Performance Analysis of FOPID Controller for Interacting Coupled Tank System," FME Trans., vol. 51, no. 3, 2023, doi: 10.5937/fme2303362T.

M. Dhananjaya, J. S. M. Ali, D. Potnuru, and S. Mekhilef, "Multi-input multi-output converter for simultaneous buck and boost voltage conversion," Int. J. Circuit Theory Appl., vol. 51, no. 12, 2023, doi: 10.1002/cta.3695.

S. Usha, A. Geetha, T. M. T. Thentral, and C. S. Boopathi, "Robust speed control of induction motor drive for electric traction application," Int. J. Heavy Veh. Syst., vol. 30, no. 1, 2023, doi: 10.1504/IJHVS.2023.131978.

V. Kubendran, Y. Mohamed Shuaib, S. Vidyasagar, V. Kalyanasundaram, and K. Saravanan, "The development of a generalized multilevel inverter for symmetrical and asymmetrical dc sources with a minimized ON state switch," Ain Shams Eng. J., vol. 15, no. 2, 2024, doi: 10.1016/j.asej.2023.102358.

PUBLISHED

PATENTS

- **Dr.C.Bharatiraja** received a patent grant for the title, " Microgrid Application Integrated with Photovoltaic Systems ", Government of India, Grant number: 439394

- **Dr.K.Saravanan** received a patent grant for the title, " A Device For Preventing Extreme Climatic Conditions ", Government of India, Grant number: 201741016558

- **Dr.R.Sridhar** published patent title, "Non-Isolated Synchronous Buck Converter-Based Power Factor Correction Unit with Battery Storage for a BLDCM Ceiling Fan with LED Lighting System", Indian patent, Application Number: 202341043274 A

ONLINE COURSE

Dr.S.Usha completed an online course "Geospatial Technology for Climate Smart Agriculture" in ISRO from 10-07-2023 to 14-07-2023.

Dr.A.Geetha completed an online course "Geospatial Technology for Climate Smart Agriculture" in ISRO from 10-07-2023 to 14-07-2023.

Dr.D.Suchitra completed an online course "Psychology of Everyday" in NPTEL SWAYAM from 01-08-2023 to 30-09-2023.

Dr.K.Selvakumar completed an online course " Foundations of AI: From Problem-Solving to Machine Learning" in Udemy from 10-07-2023 to 14-08-2023.

Dr.D.Karthikeyan completed an online course " Introduction to Automata Theory, Languages and Computation" in Udemy from 25-07-2023 to 22-08-2023

Dr.N.Kalaiarasi completed an online course " Psychology of Everyday" in NPTEL SWAYAM from 01-08-2023 to 30-09-2023.

Dr.D.Anitha completed an online course " Psychology of Everyday" in NPTEL SWAYAM from 01-08-2023 to 30-09-2023.

Dr.R.Palanisamy completed an online course " Foundations of AI: From Problem-Solving to Machine Learning" in Udemy from 25-07-2023 to 22-08-2023.

Dr.R.Palanisamy completed an online course " Geospatial Technology for Climate Smart Agriculture" in ISRO from 10-07-2023 to 14-07-2023.

Dr.K.Selvakumar completed an online course " Introduction to Automata Theory, Languages and Computation" in Udemy from 25-07-2023 to 22-08-2023.

Dr.R.Ramya completed an online course " Geospatial Technology for Climate Smart Agriculture" in ISRO from 10-07-2023 to 14-07-2023.

अंतरिक्ष विभाग /DEPARTMENT OF SPACE
भारत सरकार/GOVERNMENT OF INDIA
भारतीय अंतरिक्ष अनुसंधान संगठन /INDIAN SPACE RESEARCH ORGANISATION
भारतीय सुदूर संवेदन संस्थान, देहरादून / INDIAN INSTITUTE OF REMOTE SENSING, DEHRADUN

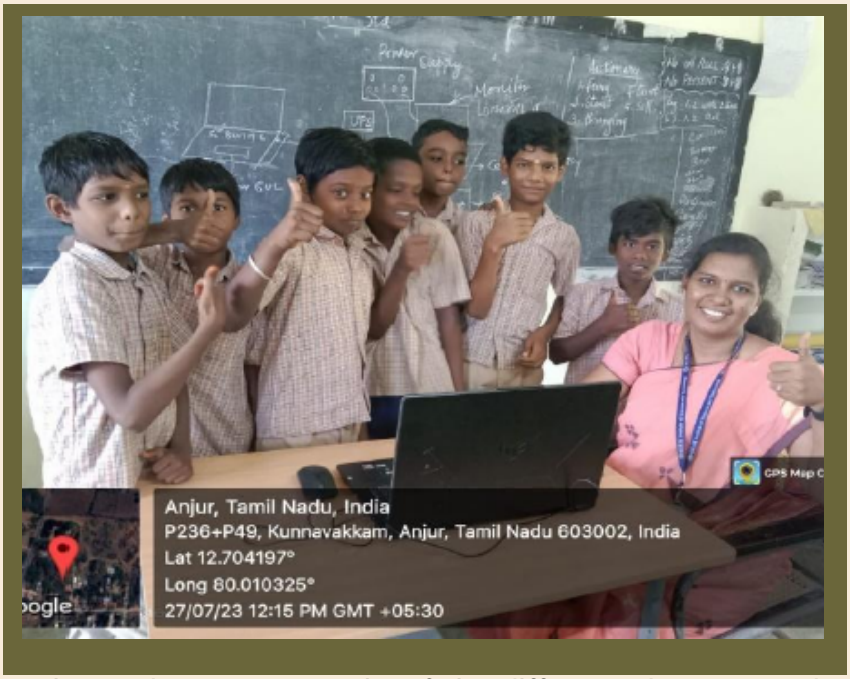
नामांकन सं. / Enrolment No.: 20231191914809

CERTIFICATE OF PARTICIPATION IN
ONLINE COURSE

यह प्रमाणपत्र
DR. S USHA
का " जलवायु-स्मार्ट कृषि के लिए भू-स्थानिक प्रौद्योगिकी "
में ऑनलाईन पाठ्यक्रम में भाग लेने पर प्रदान किया जाता है।
इस ऑनलाइन पाठ्यक्रम का आयोजन 10 जुलाई, 2023 से 14 जुलाई, 2023 (कुल पाठ्यक्रम की अवधि = 7 घंटे 30 मिनट) के दौरान किया गया।
(संबन्धित आई.आई.आर.एस नोडल केंद्र- एस.आर.एम. इन्स्टीट्यूट ऑफ साइन्स एंड टेक्नोलॉजी (स्कूल ऑफ कम्प्यूटिंग))

THIS CERTIFICATE IS
AWARDED TO
DR. S USHA
ON HAVING PARTICIPATED IN THE ONLINE COURSE ON
"Geospatial Technology for Climate Smart Agriculture"
THIS ONLINE COURSE WAS CONDUCTED DURING 10-07-2023 to 14-07-2023 (Total course duration was = 7 hours and 30 minutes).
(Concerned IIRS Nodal Centre- SRM INSTITUTE OF SCIENCE & TECHNOLOGY(SCHOOL OF COMPUTING))

Date: 01-08-2023
Place: Dehradun
समन्वयक, विश्वविद्यालय/संस्थान
Coordinator, University/ Institution
निदेशक/ Director
आई.आई.आर.एस, देहरादून/ IIRS, Dehradun
UID: 65711b31c325b6455c0629555a4bf19f .This Certificate can be validated using URL- https://certificate.iirs.gov.in



TComputer Awareness Drive for UBA- SRMIST Adopted Village -Pattaravakkam

An Outreach Programme on Computer Awareness Drive was organized by SRMIST Unnat Bharat Abhiyan (UBA) team in association with EEE department, SRMIST Kattankulathur, SRMIST Universal Human values cell and IOT Alliance Club (Electrical Division) at the UBA adopted village Pattaravakkam on 27.07.2023.

The motive behind the conduct of this awareness programme is to bring an awareness on Computer.

The students were taught of the difference between a desktop and laptop, the necessary accessory components needed for both and how effectively we can use them. The research scholars of the EEE the department trained the students to use Word, Paint and Excel sheet. The students were asked to type a typical letter and save it, then opening it and editing. The students enthusiastically participated and they were very happy to have hands on experience on the computers.

OUTREACH INITIATIVES

SCHOOL PROJECT EXPO - 2023

The School Project Expo 2023 conducted by SRM Institute of Science and Technology in association with MTS India Section, ASCE India Section Southern Region, MTS SRM Student Chapter and ASCE SRM Student Chapter was a showcase of innovative and creative projects developed by 6th grade to 12th grade school students from various parts of Tamil Nadu. Held on 04.08.2023 at Faraday Hall, ESB Block, Main Campus, SRMIST, Kattankulathur, the expo aimed to provide a platform for students to demonstrate their skills, knowledge, and achievements in various fields

The expo featured a wide range of projects spanning science, technology, arts, and social initiatives, reflecting the depth of talent and interests among our students. Participants delivered captivating presentations, explaining their projects' objectives, methodologies, and outcomes to a diverse audience, including fellow students, parents, teachers, and external guests.

INDUSTRIAL VISIT

Visit to MAPAL India Private Limited

The visit to MAPAL India Private Limited proved to be an enlightening experience for our group. The students and faculty members were given the opportunity to explore the facility extensively and gain valuable insights into cutting-edge instruments and industrial processes.

Highlights of the visit to MAPAL India Private Limited are In-depth explanations and live interactions with industry experts.

Observation of advanced machinery and tools in operation, Understanding the precision engineering processes employed by the company, Insights into quality control and safety measures. 30 students from the Electrical and Electrical Engineering department & Faculty Members: Dr. Pradeep V and Dr. Thamizh Thentral T M

Integral Coach Factory

Retech Solutions is a Chennai-based research foundation and engineering company that was founded in 2013. The company is known for its innovative work in the field of laser technology and its commitment to providing opportunities for young graduates. Retech Projects is a trusted partner for engineering students, offering comprehensive support and guidance for coursework, internships, and project work. The division also conducts extensive research activities for the company's affiliated enterprises.

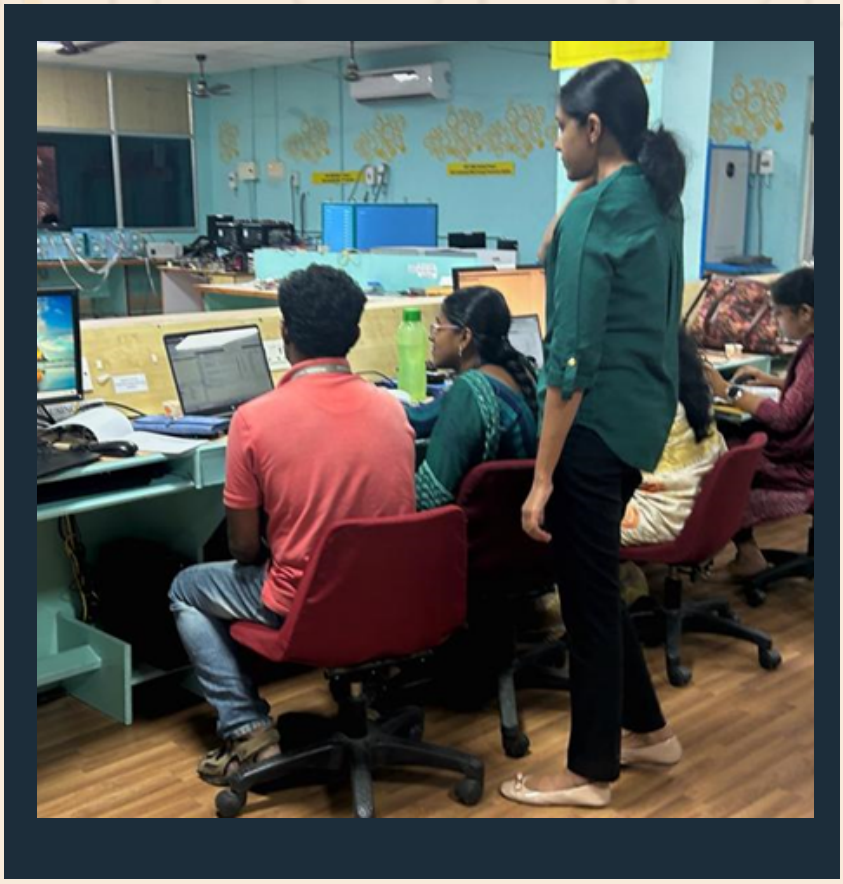
It is a manufacturing company that specializes in cutting-edge machinery powered by laser technology. The company's products are used in a variety of industries, including automotive, aerospace, and electronics. Retech Motors is a startup company that is developing and designing BLDC motors. BLDC motors are a type of electric motor that is known for its efficiency and reliability

PLC VALUE ADDED COURSE

On 21-08-2023, Mr. Himanshu Kumar started the session with the industrial revolution from Industry 1.0 to 5.0. He explained how each new stage represents advancement of the industrial revolution in the manufacturing process that has changed the way we think about and work in the industry. In the scope of industrialization, automation is a step beyond mechanization. He explained how automation plays an increasingly important role in the global economy and in daily experience.

Machine-Learning and Deep-Learning in MATLAB

Machine Learning is one of the emerging areas in the areas of Artificial Intelligence is applied in various areas of science and technology. With the objective creating awareness and impart working knowledge in the ML &DL domain to the SRM faculty, SRM Marine Technology Society Student Chapter. MATHWORKS & Department of EEE, SRMIST organized a 2-day faculty training program on Machine Learning and Deep Learning in MATLAB on 26th and 27th July 2023 in the Department of EEE, SRMIST.



After the end of the two-day session, the participated faculty expressed that the program was very useful for the application perspective. They thanked the organizers and requested for more advanced training sessions.

The training ended with a vote of thanks by Dr.Preetha J Roselyn, Coordinator, SRM MTS student chapter.

Art of Real-Time Data Acquisition for Electrical and Electronics Engineering

The "Art of Real-Time Data Acquisition for Electrical and Electronics Engineering" workshop was successfully conducted from August 7th to 12th, 2023, at the Conference Hall of the EEE Department, SRM Institute of Science and Technology . The workshop, sponsored by STMIST, MJS, and Resocreations, aimed to equip participants with practical skills and knowledge in real-time data acquisition techniques and their applications in the field of electrical and electronics engineering. The event saw participation from students, faculty members, and industry professionals

CONTROLLERS PROGRAMMING FOR RENEWABLE ENERGY SYSTEM AND ELECTRIC VEHICLE APPLICATIONS

The "Controllers Programming for Renewable Energy System and Electric Vehicle Applications" workshop was successfully conducted from September 7th to 8th, 2023, at the Conference Hall of the Electrical and Electronics Engineering (EEE) Department, SRM Institute of Science and Technology (SRMIST). The workshop, sponsored by STMIST, IEI and Resocreations, aimed to equip participants with practical skills and knowledge in Controllers Programming for Renewable Energy and their applications in the field of electrical and electronics engineering. The event saw participation from students, faculty members, and industry professionals.

Opportunities and Challenges of Electric Vehicles in Agricultural Applications in India

Indian agriculture industry is the world's second-largest producer of rice, wheat, sugarcane, cotton, groundnuts and fruits & vegetables. The machines and equipment used in agriculture are mostly depend on fossil fuels or electricity grid. United Nations Sustainable Development Goals (SDG) SDG 7 emphases on the production of affordable and clean energy. The solar PV (SPV) and Electric vehicle technologies can be useful in achieving the SDG and urban life without polluting the environment. Also, SPV technology is a matured technology these days.

Hands-On Training on Emerging Technologies in Core Engineering

A two-day training program on "Hands-On Training on Emerging Technologies in Core Engineering" was conducted in the department of Electrical and Electronics Engineering (EEE) Department jointly organized by the Alumni Chapter and Placement Cell of the department. This program was organized for final year students of EEE to make them aware of the job prospects in core engineering and also to give them a hands-on training in the emerging areas of electrical and electronics engineering. This training program is boon to the preparations for forthcoming placements. Mr. Balaji in his training session posted so many basic questions to the students especially from the switch gear and protection domain. Most of the students enthusiastically answered.

Dr. S. Vijayalakshmi and Dr. V. Pradeep coordinated the students' enrollment and participation in the training. In all, the training program has kindled interest among the students to aspire more for core jobs and also to develop skill sets in their area of interest in core engineering domain

HEMAVARSHINI VIDYASAGAR

Role of Sustainable Development Goals in Education and Student's lives

The Sustainable Development Goals (SDGs) are a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030. Adopted by all United Nations Member States in 2015, the SDGs provide a framework for addressing the world's most pressing challenges. There are 17 goals set out of which the following seven are more critical both in short and long run for sustainable development.

Goal 1: No Poverty
End poverty in all its forms everywhere. This goal aims to eradicate extreme poverty, ensure social protection, and promote equal access to resources and opportunities.

Goal 2: Zero Hunger
End hunger, achieve food security and improved nutrition, and promote sustainable agriculture. This goal targets the elimination of hunger by promoting agricultural productivity, improving food distribution systems, and ensuring access to nutritious food for all.

Goal 3: Good Health and Well-being
Ensure healthy lives and promote well-being for all ages. This goal focuses on reducing maternal and child mortality, combating communicable diseases, and ensuring access to essential healthcare services.

Goal 4: Quality Education
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. This goal aims to provide universal access to education, improve literacy and numeracy skills, and enhance vocational training.

Goal 5: Gender Equality
Achieve gender equality and empower all women and girls. This goal seeks to end discrimination, violence, and harmful practices against women and girls, and promote their full and equal participation in all spheres of life.

Goal 6: Clean Water and Sanitation
Ensure availability and sustainable management of water and sanitation for all. This goal addresses the importance of clean water and sanitation in promoting health, supporting economic development, and preserving ecosystems.

Goal 7: Affordable and Clean Energy
Ensure access to affordable, reliable, sustainable, and modern energy for all. This goal aims to increase the use of renewable energy sources, improve energy efficiency, and expand access to electricity in developing countries.

-The Sustainable Development Goals provide a roadmap for building a more sustainable, inclusive, and prosperous world for future generations.

Dr. Shanmugapriya S, Assistant Professor/EEE

அறிவோம் தமிழ்

(Arivom Tamil)

இருந்தோம்பி இல்வாழ்வ தெல்லாம் விருந்தோம்பி வேளாண்மை செய்தற் பொருட்டு

குறள் 81#

Explanation

வீட்டில் இருந்து பொருள்களைக் காத்து இல்வாழ்க்கை நடத்துவதெல்லாம் விருந்தினரைப் போற்றி உதவி செய்யும் பொருட்டே ஆகும்.

Keeping the things from the house and living in the house is for the purpose of appreciating and helping the guests

घर की चीजें घर में रखना और घर में रहना मेहमानों की सराहना और मदद करने के उद्देश्य से है।

അതിഥികളെ അഭിനന്ദിക്കാനും സഹായിക്കാനും വേണ്ടിയാണ് വീട്ടിലെ സാധനങ്ങൾ സൂക്ഷിക്കുന്നതും വീട്ടിൽ താമസിക്കുന്നതും.

ఇంట్లో వస్తువులను ఉంచడం మరియు ఇంట్లో నివసించడం అతిథులను మెచ్చుకోవడం మరియు సహాయం చేయడం కోసం.

For Feedback, Copyright and Suggestions :
newsletter.eee.srmist.ktr@gmail.com