Stay Ahead

Research and Development
(Centre for Research)
@ Research Park

Research
Newsletter

**Jan – Jun 2023
Volume 04 | Issue 02**

RESEARCH PARK

Centre for Research (CFR)

Institute Vision

To be a centre of excellence, providing world-class education that transforms individuals into intellectual, empathetic and responsible citizens.

CFR Mission

- To indulge in extensive core and multi-disciplinary research activities
- To integrate research and education
- To develop core group of faculty members with high research potential

Specific Objectives

- Effective utilization of existing facilities and to establish new facilities
- Enable faculty members and students to translate the knowledge and research into new products to improve the lifestyle of the people
- Ensure timely disclosure of all potential Inventions / Innovations and results of research activities by faculty members/students through patents or proper mode of publications with relevant property rights

Contents

Recent Achievements

Scientific and Technological Infrastructure (STUTI)

A seven-day residential hands-on training program entitled "Synergistic Training Program Utilizing the Scientific and Technological Infrastructure (STUTI)" funded by NITW-DST, Govt. of India was hosted by Department of Physics and Centre for Research, Bannari Amman Institute of technology, from 22.06.23023 to 28.06.2023.

The Inaugural function was held on 22.06.2023. 35 participants from five different states participated the training program. Dr. R.T. Rajendrakumar, Prof / Dept. of Nanoscience and Technology, Bharathiar University was the Guest of Honor for the Inaugural Function. Fourteen scientists and researchers from different academic and research institutes shared their expertisein their invited talk sessions.Also, a Hands on training was given to the participants for all the seven days in sophisticated research equipment's which enhances their scientific knowledge in the research career. Moreover, post graduate students, research scholars pursuing their doctoral program and the faculty members had been benefited in terms of the scientific knowledge of the characterization instruments from this seven days residential training program.

Travel Grant received by SERB to attend the conference in USA.

Dr V Sathish, Assistant Professor Level II, Department of Chemistry, received travel grant from SERB (Rs.1.71 lakhs) for presenting paper entitled "Photoswitchable compounds in micelles and confined spaces" in "Gordon Research Conference on Artificial Molecular Switches and Motors" held at Colby-Sawyer College, New Hampshire, USA during July 18-23, 2023.

International Conference on Materials, Design and Manufacturing (ICMDM 2023)

3

Ms.Pavithra.K (201ME167) , Ms.Nandana R (201ME155) , Mr.Thirumugam J (201ME201) ,Mr.Prakash Raj M (201ME168) Received the Best paper award by presenting the paper entitled on " Experimental Investigation of Date seed and Neem powder reinforced natural fiber Composites " in the international Conference on Materials, Design and Manufacturing (ICMDM 2023) Conducted by department of mechanical engineering ,Anna University CEG Campus,Guindy under the guidance of Mr.D.Dinesh APIII/ Mech

Funding Proposals - Sanctioned

1 Development Building Blocks using Construction Demolition Waste

Grantee	:	Dr.A.Jayaraman
Funding agency	:	Startup Research Grant
Amount	:	Rs. 2,50,000/-
Duration	:	1 Year

Scope of Sanctioned Funding:

To innovate the practical competency of native building materials such as red soil brick and construction waste brick for various applications using sustainable natural binders, their suitability and performance in various environmental conditionsare to be studied. During the preliminary analysis in the laboratory, noteworthy improvement has been observed in the strength, durability, high impact strength and soundness of the red soil bricks and construction waste bricks. These are evaluated by testing the compressive strength, water absorption, impact test and soundness test of the sample specimens. Through the compression test, the increase the compressive strength value determines in the red soil brick and construction waste brick has been identified. Through the water absorption test, the reduction in water absorption value determines the resistance to water penetration and lower permeability to the red soil brick and construction waste brick has been identified.

2 Nanoparticles Dispersed Hydrogen Bond Ferroelectric Liquid Crystals for Efficient Optical Modulator

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Grantee	:	Dr.V.N.Vijayakumar
Funding agency	:	DAE
Amount	:	Rs. 7,61,000/-
Duration	:	3 Years

Scope of Sanctioned Funding:

Dispersion of nanoparticles into HBFLC matrix could be used to design electro-optic devices such as, frequency modulators, optical filter and low driving voltage devices. Detailed investigation (theoretical and experimental) on nanoparticle dispersed hbflcs could be more useful to introduce an efficient and cost effective optical modulators.

3

Design and Synthesis of Nanomaterial Dispersed with Hydrogen Bonded Binary and Ternary Liquid Crystal Complexes for Photonic Devices

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Grantee	:	Dr.V.N.Vijayakumar
Funding agency	:	TNSCST- RFRS
Amount	:	Rs. 3,00,000/-
Duration	:	2 Years

Scope of Sanctioned Funding:

Cuo nanomaterial is dispersed with HBLC mixture in different ratio. The change in ratio of cuo with HBLC clearly explored the enhancement of LC properties. This nano HBLC mixture shows different color changes while applying thermal and electric filed. If the external energy is applied, molecular order is changed and the variation in helical pitch has been observed and to exhibit thermochromic changes which is exploited in optical device, chromic paint, and color display devices. The reorientation of molecules within the layers induces the change in refractive index. A light transmit towards an opaque medium which depends on the molecular orientation. In optical devices, electrical signal is transformed into optical representation which intern induces thermochromic change. It could be an effective usage in polarizing optical filters. Furthermore dielectric studies, molecular transition order, relaxation method and its activation energy for thermochromic mesophases is evaluated from cole-cole plots. Investigation on thermochromic changes in the present cuo dispersed anti-ferroelectric (HBLC) mixture provides a novel idea to develop the well-organized and considerably reduce the price effective optical devices.

Funding Proposals - Ongoing

1

Development of Self-driven Vehicle
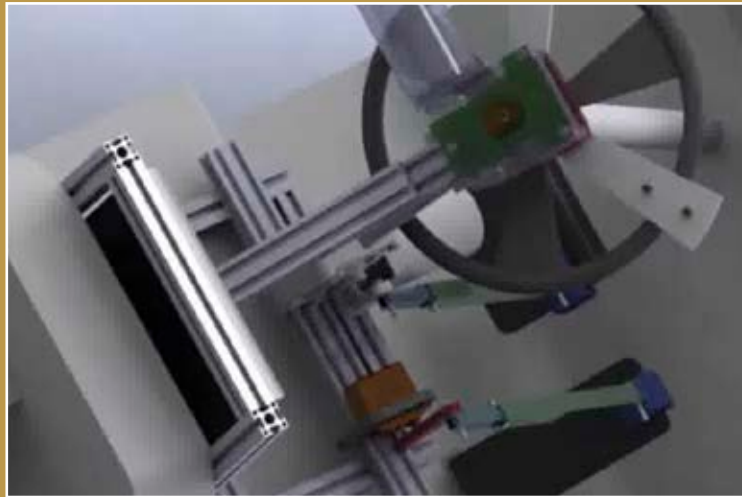
Grantee	: Dr.L.Rajasekar
Funding agency	: Institution of Engineering and Technology (IET)
Amount	: Rs. 59,275/-
Period	: 1 year

Scope of sanctioned funding:

The primary focus of technology nowadays is to moderate the human intervention in day-to-day tasks. Machine learning, artificial intelligence, and computer vision being the big players in doing so. We have reached a time wherein we can automate our menial tasks like driving.

2 Profiling and Development of Exosome-based Novel Anti- Arthritic Flavonoid Formulation

|	
Grantee	: Dr.L.Dinesh Kumar
Funding agency	: SERB
Amount	: Rs. 20,50,000/-
Period	: 3 year

Scope of sanctioned funding:

Profiling and development of exosome-based novel anti-arthritic flavonoid formulation to mitigate the hif regulated angiogenic-pannus growth in rheumatoid arthritis. The bioactive flavonoids, which have been identified and scientifically confirmed for their disease suppressing effects in ra will be collected from standard research literature/ databases and pharmacokinetic properties will be analysed along with the exosomes retrieved from fibroblast-like synoviocytes.

Besides, the association of ra-angiogenesis (ra-ag) regulatory targets with other Pathway mediators and bioactive small molecules will be assessed using network Pharmacology (string/stitch). Possible mechanism of the flavonoids and their predicted ra-ag targets will further be assessed with interaction and stability analysis by molecular docking and dynamics studies. Finally, the modulatory efficiency of the compound in the ra-ag pathway will be studied by in vitro cell culture (mh7a-fls cell line). The effective flavonoid compounds will then be formulated as a drug/ supplement to withhold the progression and severity of ra.

3 Human-Elephant-Conflict Mitigation Through Design and Installation of SMS Operated Electronic Elephant Signage
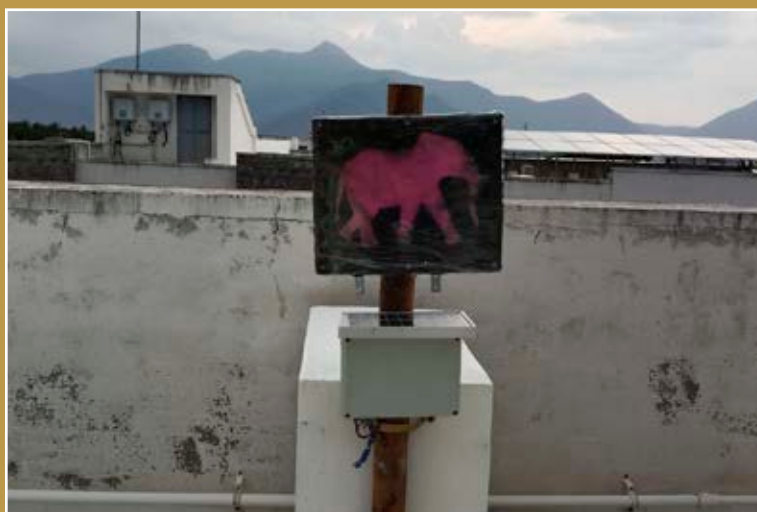
Grantee	: Dr.Sanjoy Deb
Funding agency	: Elephant mangers association
Amount	: Rs. 1,16,000/-
Period	: 2 years

Scope of sanctioned funding:

This is an initiative for human-elephant-conflict mitigation through design and installation of SMS operated electronic elephant signage. Invasive species like prosopis and wattle needs to be removed rigorous monitoring and ecological restoration should be done to prevent reinvasion practiced in Tamilnadu and Karnataka among other states. Elephant proof trenches (epts useful around large forest blocks. Separated by walls(septa) to prevent water flow.

Solar electric fences require lower investment than Karnataka and Tamilnadu. Strong barriers are using steel channels, used rails distances. Involvement of the local community or the stakeholder is most important maintenance of barriers.

4 Development of Integrated 6- Phase Electric Drive System for Hybrid/electric Vehicles and to Promote Sustainable Agriculture in Rural Areas

Grantee	: Dr.P.Sivaraman
Funding agency	: AICTE - RPS
Amount	: Rs. 13,74,333/-
Period	: 3 years

Scope of Sanctioned Funding:

The rural people are highly dependent on public transportation that is not available during the pandemic situation. In future, with the proposed system the reduced size and cost of the electric vehicle making it feasible for rural people to be connected with towns for emergency. Also, it reduces the impact of co2 emission caused by internal combustion engines resulting replacement of fossil fuel with battery-operated vehicles. The proposed system offers an integrated inverter along with the motor resulting in reduced which is very compatible with 2&3wheeler, small cars, public & last-mile transportation for rural people

Grantee	: Dr.Sanjoy Deb
Funding agency	: TNSCST
Amount	: Rs.4,15,000
Period	: 3 years

Scope of Sanctioned Funding:

The testing of wearable thermoelectric generator module designed under TNSCST project entitled "Prototype Development and Field Trial of body heat operated wearable mini torchlight for rural area" is mainly to glow mini torchlight by resourcing power from human body heat. Four mini TEG modules are embedded over an especially designed lather armband, in a series configuration and together they generate 0.1V from human body heat.

6 Autonomous Robotic Manipulator for Order Picking Task Integrated with Visula Servoing, Impedance Control Schemes and ASRS


Investigator	: Dr.K.L.Senthil Kumar
Funding agency	: AICTE -MODROB
Amount	: Rs.8,51,769/-
Period	: 2 years

Scope of sanctioned funding:

The Industrial and Mobile robotics laboratory of the mechatronics department, Bannari Amman Institute of Technology has been sponsored with an amount of Rs. 8,51,769/- under AICTE-MODROB-Rural Aid Scheme. The project is aimed at development of an Autonomous robotic manipulator for order picking task integrated with visual servoing, impedance control schemes and AS/RS. The project integrates different sensors like vision, force to automate the order picking or retrieving task appropriately based on the order, for packaging or dispatching in a warehouse. The experimental setup developed in this project, provides a chance to the staff-members and the post graduate students to carry out their research in the latest areas like ware-house automation, vision-based robot control, sensor integration of vision and force feedback, etc. The setup not only restricts its research to robotics, it also includes mechatronic systems like conveyor control, Automated Storage and Retrieval systems.

Modernisation of Electrical Machines
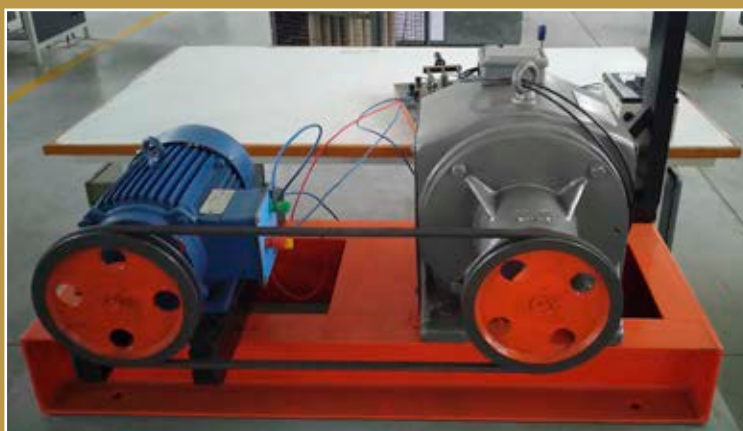
Grantee	: Dr.P.Sivaraman
Funding agency	: AICTE - MODROB
Amount	: Rs.13,88,000/-
Period	: 2 years

Scope of sanctioned funding:

This project aims to upgrade the existing facilities thereby establishing CDAQ based automation of motor testing bundle, automation of induction motor testing bundle, eddy current dynamometer motor testing unit, variable frequency drive system, switched reluctance motor drive with eddy current loading and permanent magnet synchronous motor drive.

cDAQ based Automation of the motor testing bundle used in High-channel-count distributed DAQ , Benchtop test and measurement , Mixed sensor measurements The most common uses of a VFD are for control of fans, pumps and compressors, and these applications account for 75% of all drives operating globally. Soft starters and across-the-line contactors are other, less sophisticated types of motor controllers. The permanent-magnet synchronous machine (PMSM) drive is one of best choices for a full range of motion control applications. For example, the PMSM is widely used in robotics, machine tools, actuators, and it is being considered in high-power applications such as industrial drives and vehicular propulsion.

8 Technological Interventions for Enhancing Productivity, Scalability and Value Addition to Obtain Fiber from a Local Plant (Urtica dioica) for Tribals in Nagaland

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Grantee	:	Dr.S.Arun Jayakar (Level III), Department of EIE
Funding agency	:	DST - SEED
Amount	:	Rs. 68,82,120/-
Period	:	2 years

Scope of Sanctioned Funding:

Design and development of textile machine, value addition and training to Naga Tribals Notable Accomplishments. Portable size of nettle fibre equipments like crushing setup, carding unit and roving machine are developed. The treated nettle samples are tested on developed machines in order to produce the nettle yarn. To save the energy, solar panels are used to run the newly developed machines. The Hill Innovation Lead Organisation (HILO) is an NGO at Nagaland, provided training on value addition of the nettle fiber to the tribal peoples in Nagaland.

Funding Proposals - Completed

1 IEEE Sponsored First International Conference on "Smart Technologies, Communication and Robotics" - (ST CR-2021)
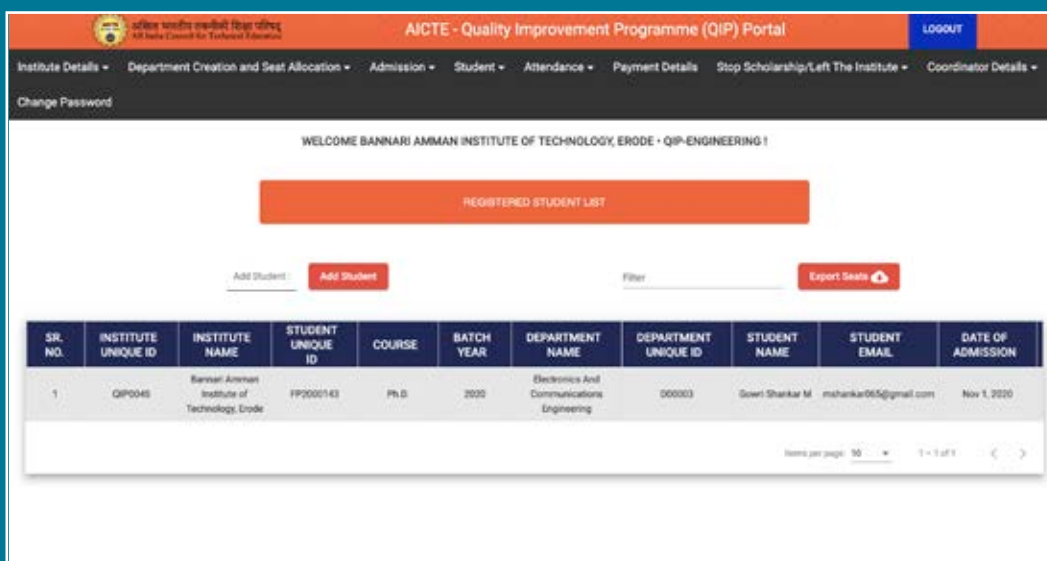

Grantee	:	Dr.R.Harikumar
Funding agency	:	AICTE
Amount	:	Rs. 49,300/-
Duration	:	1 week

Scope of Sanctioned Funding:

STCR 2022 will provide a forum for researchers and engineers in both academia and industry to exchange the latest innovations and research advancements in smart technologies, communication and robotics. This virtual conference will provide a wonderful forum to refresh knowledge and explore the innovations in smart technologies, communication and robotics. This conference strives to offer plenty of networking opportunities and interact with leading scientists and researchers, friends and colleagues. The conference includes technical sessions, tutorials and technology and business panels. The primary goal of the conference is to promote research and developmental activities in smart technologies, communication and robotics. The main objective is to provide an opportunity to discuss about the technologies involved in the implementation of social relevant applications such as security aspects regarding the smartcity, IOT enabled wireless communication, autonomous vehiclesand automations in trust areas"

2 Upgradation of the Expertise and Capabilities of the Faculty Members of the Degree Level Institutions in the Country

Grantee	: Dr.S.Jegadheeswaran
Funding agency	: AICTE - QIP
Amount	: Rs. 1,65,000/-
Period	: 1 year

Scope of Sanctioned Funding:

The QIP funding allows an indian-listed company to raise capital from domestic markets without the need to submit any pre-issue filings to market regulators. This also supports upgradation of the expertise and capabilities of the faculty members of the degree level institutions in the country.

3 Design and Development of Wireless Automatic Quality Domestic Water Distribution and Wastage Reduction Management System with PLC Controller and IOT Implementation, for Athiyappagoundan Pudur Village, Sathyamangalam, Erode District, Tamilnadu

Grantee	:	Dr.C.Ganeshbabu
Funding agency	:	AICTE - RPS
Amount	:	Rs. 3,71,470/-
Period	:	3 Years

Scope of Sanctioned Funding:

This project has 8 delivery points with different volume of pre-set delivery. The House 1 can be set to 500 lts per day and once the limit is delivered the solenoid is switched OFF automatically until for the next cycle of supply. Likewise, we can set various levels for the houses 1 to 8. Every house has a independent ON /OFF solenoid valve which is controlled by the PLC unit. Every independent node will have a LCD display interfaced with a Micro controller unit to show the user his Maximum Delivery limit per day ,Current Usage in Lts /day, Total quantity delivered. The entire data is transmitted to the IoT data concentrator through a RF link. The RF link enables as a data transmitter and as a wireless control switch to Switch ON /OFF the delivery line.

4 Application of Non-invasive Bio - Nano Electro Mechanical Systems (NEMS) Sensors in Healthcare: Innovative and Emerging Trends

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Grantee          : Mrs.Andril Alagusabai
Funding agency   : DBT-CTEP
Amount           : Rs. 59,500\-
Period           : 1 year
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Scope of sanctioned funding:

The role of micro & nano system in biomedical engineering is ever increasing because human health is complex and deals with all aspects of human bodies, not just the physical aspects bio-engineers are concerned with all aspects and a wide range of problems that affect the body. Bio-engineering encompasses many areas, but the common thread that runs through the various field is the application of the sciences especially biology and mathematics. The mission of all disciplines of bio engineering is to: the prevention, diagnosis, and treatment of disease, patient rehabilitation, and the improvement of health.

5 **Climate Change Assessing and Developing Impacts, Adaptation and Mitigation Strategies in Tamil Nadu**

Grantee	: Dr.N.Karthiga Shenbagam
Funding agency	: AICTE - ATAL
Amount	: Rs. 3,00,000
Period	: 1 year

Scope of sanctioned funding:

This FDP on FUTURE TRENDS IN TRANSPORTATION AND LOGISTICS INDUSTRY aims to focus on the basic aspects of transportation and its advancements related to logistics industry , its need in the present day life with the help of programming . The latest developments in the field of civil and IT industry will be of great help to students, academicians and practicing Engineers in Civil Engineering to identify current technical gaps as well as immediate research needs.

The transport and the logistic sector are undergoing a major and important transformation today. The political, social, economic, environmental, technological and legal changes are amazingly influencing this sector every day. The transportation and logistics companies of today have to stay competitive and are made to add improved and advanced technologies in order to improve their warehouses, distribution centers, shipping and transport management. There is a new wave of startups in different segments of the logistics space that are helping to shape a modern supply chain marketplace that supports game changing technology.

6 Nutraceutial Cake as a Protein Multivitamin-multimineral Suppliment for Cancer Patients

Grantee	: Dr.I.Shanmuga Sundari
Funding agency	: TNSCST-SPS
Amount	: Rs.7,500/-
Period	: 6 months

Scope of Sanctioned Funding:

Health Supplements for Cancer Patients. Access to a wealth of information on the internet has led many cancer patients to use complementary methods as an adjunct to traditional therapy for cancer, with, and more often, without informing their primary caregiver. Of the common complementary modalities, the use of dietary supplements appears to be highly prevalent in patients in active treatment for cancer, and later in cancer survivors. Some plant-based agents may, indeed, impact late-stage cancer, influencing molecular processes corrupted by tumor cells to evade detection, expand clonally, and invade surrounding tissues.

Design and Development of Electronic Planter

Grantee   : Mr.K.Muthukumarvel
Funding agency : TNSCST-SPS
Amount   : Rs.7,500/-
Period   : 6 months

Scope of Sanctioned Funding:

Gardening is an activity that requires fully care and time which two main factors of nowadays people lack of due to fast moving daily lifestyle. Growing a plant requires a person to monitor several parameters such as water, oxygen, nutrient, light, temperature and support for the plant. In conjunction to overcome the lack of commitment for the people to enjoy their hobby in gardening, an automatic plant pot is introduced. This Project explores the plant growth which later will be used as the criteria to design and develop a prototype of automatic plant pot. Three outstanding elements were used as the main criteria to design a prototype of automatic plan pot which are water, nitrogen and temperature. These three elements need to be fully automated control to meet the objective that this prototype can help people to do gardening with less care and attention.

8 Studies on Development of cost Effective moving Bed Biofilm Technology for Controlling and Treatment of Tannery Effluent odour

Grantee	:	Dr.M.Kirupa Sankar
Funding agency	:	TNSCST-SPS
Amount	:	Rs.7,500/-
Period	:	6 months

Scope of sanctioned funding:

Cost effective biofilm bed can be allotted in tannery industries at it's effluent tanks to control the odor. The increase in the generation of wastewater along with the presence of different recalcitrant pollutants has stressed the existing conventional biological treatment systems beyond capacity. Given the necessity of advanced biological treatment processes, moving bed biofilm reactor (MBBR) is preferred for treating high organic and nutrient load and recalcitrant contaminants with enhanced removal efficiency, less footprint, reduced operational difficulties, and increased technical feasibility for large-scale as well as package-based-unit implementation. The influencing design and operational parameters, such as hydraulic retention time, filling ratio of carriers and wastewater in the reactor, aeration, biofilm thickness, etc., have significant effects on the performance of MBBR.

Grantee	: Mr.B.Jeyanth
Funding agency	: TNSCST-SPS
Amount	: Rs.7,500/-
Period	: 6 months

Scope of sanctioned funding:

Waste materials can be reused in concrete which would reduce the issues of solid waste management and construction cost. A new innovative sustainable material will be developed. Concrete is a composite material with cement, fine and coarse aggregate which is well known for its strength and durability. The rapid growth in urbanisation and industrialisation increases its consumption to a huge quantity. Since natural aggregate occupies more than 70% of volume, any rise in use of concrete will intensify its quantity consumed. All over the world every year about 40 billion tons of aggregate is produced in which india contributes 13%. Further, the increase in concrete consumption makes the concrete into a most non-sustainable material due to maximum consumption of natural resources. The generation of source of natural aggregate requires thousands of years. The rate of generation of natural aggregate is very much smaller compared to its present rate consumption which leads to depletion of natural resource.

10 Development of Emergency Braking Mechanism in Heavy Vehicles

Grantee	: Mr.S.Deepankumar
Funding agency	: TNSCST
Amount	: Rs.7,500/-
Period	: 6 months

Scope of sanctioned funding:

Development of Emergency Braking Mechanism in Heavy Vehicles. Rear-end collisions in heavy traffic or at the tail ends of traffic jams are usually the consequence of inattentiveness or driver error. The advanced emergency braking (AEB) detects critical proximity to a vehicle in front, warns the driver of an impending collision, and provides assistance with braking. However, the driver must continue to drive attentively and considerately at all times. The front radar sensor from Bosch can not only enable this function, but can also more than satisfy the legal requirements. If the AEB system detects critical proximity to a stationary or moving vehicle ahead, it prepares the braking system for the possibility of an emergency stop.

Funding Proposals - Applied

Faculty Name	Name of the project	Funding Agency	Amount (in Rs.)
Mathankumar P	Investigation on the performance of electric discharge machining using crb2-cu electrode	DRDO	23,00,000
Pavithra MKS	Evaluation of inhibitory activity and kinetic studies of the low glycemic index millets	SERB| CRG	44,25,744
Rajeshkumar G	Machine learning based iris recognition modern voting system	SERB	CRG	8,12,048
Sudhahar S	Experimental investigations of track, barrel and fire control with stabilization under tracking, load rejection and uncertainty conditions using robust adaptive control techniques	SERB	CRG	31,18,193
Parimala M	Q-rung ortho pair fuzzy soft topsis/codas and hash-based cryptography techniques in iot echosystem	CSIR	ASPIRE	6,00,000
Shubham Joshi	Electro spun smart sensing textiles for healthcare	SERB	CRG	5,00,000
Shanmuga Sundari I	Nutraceutical cake as a protein multivitamin-multimineral supplement for cancer patients	TNSCST -SPS	7,500
Chinnadurrai CL	Renewable energy based electric vehicle charging stations in the distribution network	SERB START UP RESEARCH GRANT	14,30,000
Jeyanth B	Sustainability of natural aggregates by utilizing cdw in concrete	TNSCST -SPS	7,500
Goldvin Sugirtha Dhas B	Hybrid electric energy storage solutions for grid support and charging infrastructure	SERB START UP RESEARCH GRANT	17,39,360
Sundaram S	Improvement in electro-optical and dielectric properties of ternary liquid crystal mixture for optical shutter	SERB	SRG	10,60,000
Eswaramoorthy V	Innovative water quality management: a hybrid mobile and satellite imaging solution	SERB	CRG	9,00,000

Faculty Name	Name of the project	Funding Agency	Amount (in Rs.)
Anandha Babu G	Prevail strategy of mof derived heterogeneous electrocatalysts for alkaline water electrolysis and super capacitor applications	SERB START UP RESEARCH GRANT	8,20,000
Maheswari KT	Power electronics application to renewable energy	SERB CRG	15,88,000
Kirupa Sankar M	Studies on development of cost effective moving bed biofilm technology for controlling and treatment of tannery effluent odour	TNSCST -SPS	7,500
Vasudevan M	Bioremediation of contaminated soils	IKS	15,00,000
Sri Vigna Hema V	Traceability solutions for dairy and livestock products using blockchain or any other technology	CSIR ASPIRE	5,00,000
Sakthi Suriya Raj J S	Design and development of grid connected PV system for ev charging station using multiport converter	DST INDUSTRY RESEARCH AND DEVELOPMENT FELLOWSHIP PROGRAMME (IRDFP)	5,00,000
Karthiga Shenbagam N	Climate change assessing and developing impacts, adaptation and mitigation strategies in tamil nadu	CSIR ASPIRE	3,00,000
Subrata Das B	Environment friendly chemical processing	SERB CRG	13,65,000
Kirupa Sankar M	Anti-propolis based safe removal of beehives	TATA INNOVERSE	2,50,000
Chinnadurrai CL	Optimal placement of electric vehicle charging station considering uncertainties	DST INDUSTRY RESEARCH AND DEVELOPMENT FELLOWSHIP PROGRAMME (IRDFP)	50,000
Geethamani R	Non -invasive method for assessing the health of underground water pipelines	TATA INNOVERSE	1,50,000
Sangeethaa S N	International conference on emerging trends and advancements in computational and information technology	SERB	CRG	2,00,000
Rajalashmi K	Development of new technology for accelerated development of particularly vulnerable tribal groups	SERB - POWER	9,64,000

Faculty Name	Name of the project	Funding Agency	Amount (in Rs.)
Bharathi A	Smart communication assisting device for hearing disorder humans	CSIR-ASPIRE	29,17,990
Pushpavalli M	Smart agriculture uisng AI & IOT	CSIR-ASPIRE	16,86,000
Vijayanand PS	Design of one dimesnional and two dimensional aniline nanocomposites	DST India south Korea joint Research Project	30,00,000
Karthiga Shenbagam N	Experimental studies on effect of coating performance, durability and anti-corrosion	CSIR-ASPIRE	13,50,000
Tamilselvi S	Development of herbal intimate wipes against vulvovaginitis	TNSCST Tamilnadu Ariviyal Tholizhnutpa Manila Mandram	10,50,000
Kavitha C	Applicational perspectives of lcs subjected to various climatic conditions	CSIR-ASPIRE	25,00,000
Sampoornam K P	A decentralized soc balancing control on cascaded h-bridge multilevel inverter in battery	CSIR-ASPIRE	61,78,449

Funding Proposals			
No. of Proposals Sanctioned	No. of Proposals ongoing	No. of Proposals Completed	No. of Proposals Applied
3	8	10	32
Rs.13,11,000	Rs.1,31,36,497	Rs.9,82,770	Rs.5,30,15,289

Patent

S.No.	Patent Title	Name of the faculty	Department	Patent Status
1	Iot based forecasting desideratum for agricultural crops using sensors	Balakrishnaraja R	Biotechnology	Granted
2	Integrated system for production of biofuels using machine learning	Dheepanchakkravarthy A	Electrical and Electronics Engineering	Granted
3	Solar concentrated cooker	Sivaraman P	Electrical and Electronics Engineering	Granted
4	Two way bottle	Dhivya P	Computer Science & Engineering	Granted
5	Mosquito repellent device	Karthiga M	Computer Science & Engineering	Granted
6	Clip lock safety pin	Dhivya P	Computer Science & Engineering	Granted
7	Citrus limetta peel extract preparation and antimicrobial application in fabric	Subrata Das B	Fashion Technology	Published
8	Design of a system to study the psychological signals of humans and predict the life stress in early using machine learning pipelines	Thulasimani T	Mathematics	Published
9	Speed limit authenticator using yolo	Gopal R	Information Science and Engineering	Published
10	Design and implementation of surveillance system based on iot	Gunalan K	Computer Technology	Published
11	Analysis of how importance google translator for the non-english learner	Preetha R	Mathematics	Published
12	Secure private data storage and file sharing using homomorphic and hash-based cryptographic technique in cloud	Gunalan K	Computer Technology	Published
13	An analysis on roles of human resource management in managing the work stress in an organization	Thulasimani T	Mathematics	Published
14	A systematic method for employee behaviors before and after stress management	Thulasimani T	Mathematics	Published
15	A systematic approach to analyze the impact of algebra, topology, differential calculus and optimization theory for machine learning	Thulasimani T	Mathematics	Published
16	Real time speech to braille converter for hearing and visually impaired	Rajesh Kanna P	Information Science and Engineering	Published
17	Machine learning techniques in perovskite solar cell crystal size distribution analysis	Ashokan S	Physics	Published
18	Evaluating the solution for numerical methods of differential equations using artificial intelligence techniques	Thulasimani T	Mathematics	Published
19	Systematic study to analyze the impact of discrete mathematics and probability in the theory of machine learning	Thulasimani T	Mathematics	Published
20	Smart education with artificial intelligence and big dataadaptive techniques for educational systems within e-learning platforms	Thulasimani T	Mathematics	Published

S.No.	Patent Title	Name of the faculty	Department	Patent Status
21	Speed limit authenticator using yolo	Gopal R	Information Science and Engineering	Filed
22	Development of flame retardent viscose fabric by using promegranate rind extract	Saranya D V	Fashion Technology	Filed
23	Multi workout equipment	Tajdeen A	Mechanical Engineering	Filed
24	Automatic juice vending machine for motherhood and illness people	Praveen V	Computer Science & Engineering	Filed
25	Automatic earthenware pulley	Annapoorani B T	Electronics and Communication Engineering	Filed
26	Analysis of how importance english language for communication in multilinguistic state in india	Umamageswari D	Mathematics	Filed
27	Ragi milk jelly	Arunasree Tna	Food Technology	Filed
28	Moringa infused millet cookies	Arunasree Tna	Food Technology	Filed
39	Wireless load monitoring system	Kalimuthu M	Electronics and Instrumentation Engineering	Filed
30	Danblock wet wipes with ketoconazole and zinc pyrithione	Rajesh Kumar S	Textile Technology	Filed
31	Antiviral functional wet wipes with acalypha indica	Rajesh Kumar S	Textile Technology	Filed
32	Development of sound insulation composite made from kenaf fiber and selvedge waste	Rajesh Kumar S	Textile Technology	Filed
33	Design and implementation of surveillance system based on iot	Gunalan K	Computer Technology	Filed
34	A novel technique for establishing social presence and intimacy in teacher– student relationships	Thulasimani T	Mathematics	Filed
35	Syringe integrated strap to control furious elephants	Santhosh N	Mechatronics	Filed
36	Double headed grinding machine	Manojkumar P	Electrical and Electronics Engineering	Filed
37	Magnetic metal waste collector	Santhosh Kumar S	Automobile Engineering	Filed
38	Payload dropping mechanism in fixed wing uav	Lakshmanan D	Aeronautical Engineering	Filed
39	Railways accident prevention system	Mariaamutha R	Electronics and Communication Engineering	Filed
40	Design and fabrication of solar powered grass cutting and spraying machine	Deepankumar S	Agriculture Engineering	Filed
41	Design and fabrication of saw drone	Deepankumar S	Agriculture Engineering	Filed

S.No.	Patent Title	Name of the faculty	Department	Patent Status
42	A novel statistical hypothesis technique for quality control and quality assurance in applied soil microbiology and biochemistry	Thulasimani T	Mathematics	Filed
43	Patriotic emoji	Vaanathi S	Artificial Intelligence and Data Science	Filed
44	Iot based collapsible metal detector apparatus	Sangeethaa SN	Computer Science & Engineering	Filed
45	AI based fake news detector	Nithin P	Artificial Intelligence and Machine Learning	Filed
46	Smart system for soil type & nutrient level detection in agri fields	Pushpavalli M	Electronics and Communication Engineering	Filed
47	Improving cyber security by improved predictive potential of machine learning models	Sangeethaa SN	Computer Science & Engineering	Filed
48	Smart solid sample holder for optical spectral studie	Malathi Mahalingam	Chemistry	Filed
49	Design of capsule endoscopy with co2 pump	Hemalatha K	Biomedical Engineering	Filed
50	Design of lightweight building blocks using nanomaterials	Jayaraman A	Civil Engineering	Filed
51	Autonomous multi-rotor drone design for multi-purpose applications	Lakshmanan D	Aeronautical Engineering	Filed
52	Pneumo detectant - medical assistance	Rajesh Kanna P	Information Science and Engineering	Filed
53	Home automation using PLC	Rishikesh N	Electrical and Electronics Engineering	Filed
54	Sitting chair in baton stick	Dinesh D	Mechanical Engineering	Filed
55	Secure private data storage and file sharing using homomorphic and hash-based cryptographic technique in cloud	Gunalan K	Computer Technology	Filed
56	Analysis of how importance google translator for the non-english learner	Sangeetha K	Mathematics	Filed
57	Unfertilized seed providing complaint registration portal for farmers	Gayathri K	Information Technology	Filed
58	Real time driver lassitude sensing system	Santhiya B	Information Technology	Filed
59	Design of a system to study the psychological signals of humans and predict the life stress in early using machine learning pipelines	Thulasimani T	Mathematics	Filed
60	An analysis on roles of human resource management in managing the work stress in an organization	Thulasimani T	Mathematics	Filed
61	Thermotropic hydrogen bond ferroelectric liquid crystal complex for profound temperature sensor	Vijayakumar V N	Physics	Filed
62	Ar shopping modliv	Saranya N	Computer Science and Business Systems	Filed
63	Seeder	Velmurugan S	Mechanical Engineering	Filed
64	Para speak (healthcare application)	Selvakumar M	Information Technology	Filed
65	Development of yoghurt from amaranth seeds milk	Ramya M	Food Technology	Filed

S.No.	Patent Title	Name of the faculty	Department	Patent Status
66	Development of yoghurt from quinoa seeds	Ramya M	Food Technology	Filed
67	Ai-powered virtual assistant for predicting housing price	Padmashree A	Computer Science and Business Systems	Filed
68	Extendable papaya fruit picker with container	Dhinesh S K	Mechatronics	Filed
69	Performance analysis of semantic segmentation using bayesian hierarchical modelling	Hemalatha K	Biomedical Engineering	Filed
70	Rejuventation of river	Vijayanand P S	Chemistry	Filed
71	Autonomous drone with battery swapping station	Nijandhan K	Mechatronics	Filed
72	A systematic approach to analyze the impact of algebra, topology, differential calculus and optimization theory for machine learning	Thulasimani T	Mathematics	Filed
73	Non revenue water	Kanthimathi N	Electronics and CommunicationEngineering	Filed
74	Protonated platinum phthalocyanine with axial coordination of picolines for photodynamic therapy	Murali Krishnan M	Chemistry	Filed
75	A systematic method for employee behaviors before and after stress management	Thulasimani T	Mathematics	Filed
76	Analysis of aortic stenosis influence in radical artery pulse	Hemalatha K	Biomedical Engineering	Filed
77	Renewable charging system for e-vehicle	Pravin M C	Mechatronics	Filed
78	Solar portable charger	Prakash K B	Mechanical Engineering	Filed
79	Design and fabrication of smart blind stick for visually impaired persons	Bhuvanesh N	Mechanical Engineering	Filed
80	Automatic obesity monitoring bmi scale	Hemalatha K	Biomedical Engineering	Filed
81	Cocoon necklace	Sowmmiya S	Fashion Technology	Filed
82	Silk cocoon pen stand	Subrata Das B	Fashion Technology	Filed
83	Effects of guar gum on biscuit dough and quality analysis at different temperature	Nithiya Priya B T	Food Technology	Filed
84	Machine learning based iris recognition modern voting system	Rajeshkumar G	Information Science and Engineering	Filed
85	Human body temperature based air conditioning control system	Pandiyan M	Information Science and Engineering	Filed
86	Virtual assistant for deaf and dumb people using deep learning	Pandiyan M	Information Science and Engineering	Filed
87	Indian brinjal leaf disease prediction using yolo machine learning algorithm	Raj Kumar V S	Information Science and Engineering	Filed
88	Timer based infant incubator	Mohanapriya V	Electrical and Electronics Engineering	Filed
89	Domestic water tank with novel cleaning system	Prakash K B	Mechanical Engineering	Filed

S.No.	Patent Title	Name of the faculty	Department	Patent Status
90	Automatic worship machine	Chandrasekaran M	Mechanical Engineering	Filed
91	Solar air purifier	Chandrasekaran M	Mechanical Engineering	Filed
92	Systematic approach to predict the roles and research of artificial intelligence in mathematics	Thulasimani T	Mathematics	Filed
93	Machine learning techniques in perovskite solar cell crystal size distribution analysis	Ashokan S	Physics	Filed
94	Development of natural fibre blended composite material for automobile application	Punitha V	Textile Technology	Filed
95	Scooty with extendable seat and automatic seat belt	Megavarthini K K	Mechatronics	Filed
96	Iot and sensor based smart irrigation system for home gardening	Kodieswari A	Artificial Intelligence and Machine Learning	Filed
97	Smart medi kit	Megavarthini K K	Mechatronics	Filed
98	The poratble charging unit for gadgets	Megavarthini K K	Mechatronics	Filed
99	Sprocket side stand retractor for motorbikes	Megavarthini K K	Mechatronics	Filed
100	Heritage landmark detection	Karthiga M	Electronics and CommunicationEngineering	Filed
101	Personal assistant bot	Divakar R	Computer Technology	Filed
102	Fibre-removing roller for the tamarind processing machine	Kamal Basha K	Mechanical Engineering	Filed
103	Multi drive otg	Kamal Basha K	Mechanical Engineering	Filed
104	Early-stage coconut protector from squirrel	Kamal Basha K	Mechanical Engineering	Filed
105	Water jacketed khoa maker	Edamakanti Ramanji Reddy	Food Technology	Filed
106	Packing material using bamboo waste	Pidathala Sahitya	Food Technology	Filed
107	Areca palm leaf (areca catechu) bio packaging material for high pressure processing	Ramya M	Food Technology	Filed
108	Real time speech to braille converter for hearing and visually impaired	Rajesh Kanna P	Information Science and Engineering	Filed
109	Foldaway ceiling fan	Jayakumar N	Mechanical Engineering	Filed
110	Design and fabrication of automatic differential unit locking system	Saraswathi C	School of Management Studies	Filed
111	Mobile stand with pen holder	Kodieswari A	Artificial Intelligence and Machine Learning	Filed
112	Aircraft wing using carbon fiber composite reinforced polymer for increasing the structural life	Rohini D	Aeronautical Engineering	Filed
113	Luminous silk cocoon flower vase	Subrata Das B	Fashion Technology	Filed
114	Evaluating the solution for numerical methods of differential equations using artificial intelligence techniques	Thulasimani T	Mathematics	Filed

S.No.	Patent Title	Name of the faculty	Department	Patent Status
115	Outfit design generation on men's fashion	Subrata Das B	Fashion Technology	Filed
116	A smart indoor plant environment control system	Raghavendra Prabhu S	Mechatronics	Filed
117	Systematic study to analyze the impact of discrete mathematics and probability in the theory of machine learning	Thulasimani T	Mathematics	Filed
118	Packaging material using sugarcane bagasse	Pidathala Sahitya	Food Technology	Filed
119	Development of chocolate spread with different types of shortenings as an alternative for palm oil	Pujaa Sakthy M R K	Food Technology	Filed
120	Fuzzy logic based simple traffic controller using fpga-an architectural design solution	Ajin R Nair	Electronics and Communication Engineering	Filed
121	Nft generator	Sri Vigna Hema V	Information Technology	Filed
122	Quizen	Poojitha P	Food Technology	Filed
123	Underwater vehicle for inspection purposes	Selvamuthukumaran D	Mechanical Engineering	Filed
124	Development of protein rich egg ablumin jam	Gowrishankar L	Food Technology	Filed
125	Intelligent underwater robotic vehicle	Selvamuthukumaran D	Mechanical Engineering	Filed

Patent		
No. of Patent Granted	No.of Patent Published	No. of Patent Filed
6	14	105

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218. S Murugppan, Nagarajan S,A study on level of adaptability, technical issues and other challenges of virtual classroom, Indian Journal of Engineering, Science, and Technology, 2023

219. S Murugppan, Nagarajan S,A comprehensive analysis of the return on equity for selected fmcg companies using dupont framework, Indian Journal of Engineering, Science, and Technology, 2023

220. B.Nandhini,Pester power and advertisement influence on purchase of food product by kids in coimbatore region, Indian Journal of Engineering, Science, and Technology, 2023

221. Gokul k,A study on influencing factors to retain an employee in the it industry, Indian Journal of Engineering, Science, and Technology, 2023

222. Maheshwari K T, Ajay Vishnu M S,Time ahead folk prophecy, Indian Journal of Engineering, Science, and Technology, 2023

223. Pravin M C, Sharne Moni D H, Hrishi Kesav R, Sriram S P,Amr-based logistic robot for industrial application, Indian Journal of Engineering, Science, and Technology, 2023

224. Raja T, Kumaresan G,An insight into the numerical approach to model and simulate the proton exchange membrane fuel cell., Indian Journal of Engineering, Science, and Technology, 2023

225. Veerasivakumar M , Ajeeth J, Dr Nagarajan P,Autonomous mobile robot for visitor guidance, Indian Journal of Engineering, Science, and Technology, 2023

226. N.santhosh ,Design and characteristic study of heating coil coated with blygold ploual xt and zinc, Indian Journal of Engineering, Science, and Technology, 2023

227. Mala Sivaranjini R, Neharika R, Yaghavi G S, Chelladurai V,Development and analysis of spaghetti incorporated with amaranthus campestris leaves, Indian Journal of Engineering, Science, and Technology, 2023

228. A.Amar Karthik , J.Vinoth Kumar,Performance analysis of automobile radiator using mwcnt nano-fluid, Indian Journal of Engineering, Science, and Technology, 2023

229. G.Nithya,J.Senthilkumar,A modified dual input boost dc-dc converter for solar-fed electric vehicle system, Indian Journal of Engineering, Science, and Technology, 2023

230. Prasath M S, Sivaraj G, Lakshmanan D, Vadivelu P,Simulation study on design of space junk collector mechanism with cube-satellite for active debris removal in low earth orbit (leo), Indian Journal of Engineering, Science, and Technology, 2023

231. Vadivel Vivek V, Dinesh T C R, Rakesh T S, Pravin M C, Boopathi C, Kamalakkannan K,Increasing the road visibility of automobile drivers using smart head light technology, Indian Journal of Engineering, Science, and Technology, 2023

232. Mr. Selvamuthukumaran D, Mr. Jaswanthkumar M, Mr. Kavin E, Mr.Balaganesh S,Obstacle avoidance using rplidar s2, Indian Journal of Engineering, Science, and Technology, 2023

233. Soundarapandian E, Selvamuthukumaran D ,Design and analysis aqua bike for floating waste cleaning, Indian Journal of Engineering, Science, and Technology, 2023

234. Jayakumar N, Senthilkumar G, Velmurugan S, Kamal Basha K,Design and fabrication of automatic starch feeding attachment in powerlooms, Indian Journal of Engineering, Science, and Technology, 2023

235. Rajendran M ,A systematic review of bacteria based self healing concrete: machanical, durability properties and biomineralization., Indian Journal of Engineering, Science, and Technology, 2023

236. Vivek kumar P,Design and analysis of vac-line rear subframe tank mounting , Indian Journal of Engineering, Science, and Technology, 2023

237. Jayakumar N, Senthilkumar G, Velmurugan S, Kamal Basha K ,Comparsion on performance of injection moulding and 3d printed parts, Indian Journal of Engineering, Science, and Technology, 2023

238. Geethamani R. ,Kanmani S., Soundara B.,,Carbon footprint: an impact on global warming, Indian Journal of Engineering, Science, and Technology, 2023

239. Boopathi Raja K P ,Foldable bike trolley, Indian Journal of Engineering, Science, and Technology, 2023

240. Sanjaikumar S M, Sureshkumar G, Jayanthi V,Eco-friendly applications of natural waste materials in construction, Indian Journal of Engineering, Science, and Technology, 2023

241. Prasath M S, Sivaraj G, Lakshmanan D, Vadivelu P,Simulation study on design of space junk collector mechanism with cube-satellite for active debris removal in low earth orbit (leo), Indian Journal of Engineering, Science, and Technology, 2023

242. Prasath M S, Sivaraj G, Lakshmanan D, Vadivelu P,Computational study on flow characteristics of a tapered wing with modified raked wingtip for regional aircraft, Indian Journal of Engineering, Science, and Technology, 2023

243. Dinesh D,Selection of bearings for the two-stage speed reduction gear-box and study of failures on the bearings, Indian Journal of Engineering, Science, and Technology, 2023

244. Gunalan K,Design and implementation of chatgpt: a neural language model for conversational ai , Indian Journal of Engineering, Science, and Technology, 2023

245. Freddy Chris,A study on awarness of e-banking services among college students, Indian Journal of Engineering, Science, and Technology, 2023

246. Vijayanand P S,Design and development of new portable water filter system for drinking water purpose, Indian Journal of Engineering, Science, and Technology, 2023

Student Publication

S.No.	Students Name	Article Title	Journal Name
1	Gowrishankar L, Asmitha N P, Harish V, Sathiyapraba G, Poojitha P	A comprehensive review on fermented foods	Gravida review journal
2	Shree Ranganathan D	Advanced underwater mapping technology	Mat journals
3	Rohini D, Madhumitha D, Karthik K, Sathis Kumar A.	Analysis and reduction of cavitation effect on submerged hydrofoils	International journal of scientific research in engineering and management
4	Divakar R, Sankardhayalan M,hariprasanth A,ajith G P	Automatic detection of diabetic retinopathy using deep learning	IRJETS
5	Rinish R	Automatic parking with collision avoidance using fish eye camera and ultrasonic sensor	International research journal of modernization in engineering technology and science
6	Bharath S	Characteristics study of capacitive sensor to identify native breed cow milk	Electronics and renewable system(icears)
7	Aarthi S S,divyasreetha M,dharshini K S,selvakumar M	Classification of deep learning algorithm for rheumatoid arthritis predictor	International research journal of education and technology
8	M. Parthiban , R. Sridhar , S. D. Vedhabhashini , S. Sudhan , S. Rajesh Kumar	Comparative analysis of properties of yarn made from vortex blended, ringspun blended and oe blended	International journal of recent advances in multidisciplinary topics
9	C. Akshhayya, B. Janani, V. Subhiksha	Construction of a s-scheme cds/cufe2o4 heterojunction with suppressed charge recombination for enhanced visible light-driven photocatalytic activity	New journal of chemistry
10	Priyanka Ram S, Sunil Prabhu D, Subas D T, Kavitha R	Crop recommendation system using machine learning algorithm	Crop recommendation system using machine learning algorithm (anfis)
11	Sarumathi G,susmitha T,shivani S,sathish S	Deep learning project based on human activity recognition	IJSREM
12	Madhanraj, Tharun, Vishnukumar, Divya	Detecting autism spectrum disorder using machine learning techniques	International journal of innovative research in engineering
13	Mohan Barathi C, Nandhini E, Tamilarasi K A, Navadheesan R, Mothishwaran G K	Development of ecofriendly sanitary napkin using natural fibres(banana fibre,cotton,linen)	International research journel of engineering and technology(irjet)
14	Mohan Barathi C, Nandhini E, Tamilarasi K A, Navadheesan R, Mothishwaran G K	Development of sustainable eco friendly sanitary napkins using natural fibres (banana fibre, cotton, linen)	International research journal of engineering and technology (irjet)
15	L. Sruthi, Mohammad Asad, Muhammad Nadeem Arshad, Abdullah M. Asiri, S. Sudheer Khan	Dual functionalized ag plasmonic sensor for colorimetric detection of cr(iii)/hg(ii)-carboxyl complexes: mechanism and its sensing based on the interference of organic ligand	Journal of environmental chemical engineering
16	Poojitha , Aishwarya R, Vyshnavi K, Sai Samyukktha J U, Keren Bharath S M, Cibi Sakthi Harees S, Jayanthan D, Nirmal Abraham Koshy, Gowrishankar L, K.a. Athmaselvi	Effect of chemical preservatives on storage of thermally processed banana pulp	International journal of food and nutritional sciences

S.No.	Students Name	Article Title	Journal Name
17	Ps Narendhran, S Parthasarathy, S Vignesh, A Mouliyarasu, S Prashanth, A Jayaraman And M Vasudevan	Envisaging sustainable building materials for earthen construction practices	IOP conference series: earth and environmental science
18	Nishanth S, Sandeep Iniyan A, Sanjaykumar A, Ponmurugan M	Fabrication of solar seed dryer with auto tracking system	International research journal of modernization in engineering technology and science
19	Rakshit V, Santhanakumar M, Kavya H J, Prasath M S	Flow separation stabilization in fixed wing unmanned aerial vehicle model	IJSREM
20	Pratiksha V Pai	Formulation of herbal tea using selected parts of passiflora incarnata and plumeria rubra	Jsfs-jornal of survey in fisheries sciences
21	Sakthivarshini K	Genetically modified maize	Gradiva review journal
22	Mrs.karthiga,Mrs.chandraprabha, Mr.venkateshkumar, Mr.gokulraj, Mr.nikhilraghav	Grade wise detection and classification between iron-ore and pellets using yolov5 algorithm	Indian journal of natural sciences
23	Manikandan C,manojkumar S,haran H, Saranya K	Identification of plant disease using image processing technique.	International journal of progressive research in engineering management and science
24	Asmithaa P M, Nafisa Mukhtar M, Chandru K S	Integrated management platform to streamline customers, vendors and employees using sap	International journal of scientific research in engineering and management
25	Lakshmissruti M M	Journal of survey in fisheries science	Journal of survey in fisheries science
26	Arun E, Rithika M	Kaar cve dashboard	International research journal of education and technology
27	Shree Ranganathan D , Abishek R, Fakir J, Karthik Balaji M	Localization and mapping using matlab	Mat journals
28	Arun Chendhuran R, Balamurugan V T, Abarnaa K P,Priyanka P L, Selvapriya R, Praveen Kumar M	Measurement of ocean salinity using capacitance based sensor	IEEE xplore
29	Nisanth M, Sowmiya M, Ajmal Basha A	Monthly electricity billing with bill sms using pic	International research journal of education and techonology
30	S.Arun Jayakar	Novel based hybrid fmn-ga,basedpid and fractional order internalmodel controller for compressed air pressure process	Novel based hybrid fmin-ga,based pid and fractional order internal model controller for compressed air pressure process
31	Swetha S	Novel insight on chemo-specific detection of toxic environmental chromium residues existing as recalcitrant cr(iii)-carboxyl complexes using plasmonic silver nanoplatform bi-functionalized with citrate and pvp	Spectrochimica acta part a: molecular and biomolecular spectroscopy
32	E Ramanji Reddy , Menaha R, Nithya Bala Sundari, Sriram D, Buvanesh P, Prashanth P Reddy, Keerthana S U, Prasanna Selvi S, Rakesh A	Optimization of spray drying parameters for carrot juice powder by using central composite design	European chemical bulletin

S.No.	Students Name	Article Title	Journal Name
33	Sakty Kv, Divyajothy V, Ashfa Nihar J	Passport application	Passport application
34	Nandhini K M , Kumar C, Shineka Varshini A P, Tharunika N,sakthipriya S A	Pathway guided deep neural network towards interpretable and predictive modeling and drug preparation	Pathway guided deep neural network towards interpretable and predictive modeling and drug preparation
35	Saranya N, Kanthimathi N, Deepika C, Sowmiya A, Santhiya S	Person identification and tracking using deep learning	International journal of advance research and innovative ideas in education
36	Sakthiya Ram S, Brindha S Dasaprakash C	Portal application using sap	International research journal of engineering and technology (irjet)
37	Gayathridevi RK, Akalya S, Kowsalya V	Predict the quality of freshwater using machine learning	IRJET
38	Jayasurya J, Kanimolzhi S, Manoj N, Ramasami S	Real time detection and classification of yoga pose using tensorflow movenet	IJARIIE
39	Balasubramaniam P, Kiruthikashree K, Thamaraikannan K	Scalable processing using kafka along with akka actor	International research journal of education and technology
40	Devakipriyadharshini V N, Praveensri T, Sreerenusankar V, Dr Suguna R	Segmenting lane for car automation and detecting vehicles using yolov3	International journal of innovative research in engineering
41	Nivash C	Smart fire fighting robot	Journal of advanced research in technology and management sciences
42	Sangeeth Sri Subramani S, Roshan Shandres C, Sahaya Res Mercin J	Study and analysis of formula style vehicle	International research journal of education and technology
43	S. Swetha	Triple mechanism driven fe-doped n-n hetero-architecture of pr6o11-moo3 decorated g-c3n4 for doxycycline degradation and bacterial photoinactivation	Chemical engineering journal
44	Bala Harshithaa B, Leelavathi R	Virtual mouse using opencv	International research journal of engineering and technology
45	Deepak M, Rohith P M	Web application for digital library using react/java	IRJMETS

Journal Publication

No. of Faculty Publication	No. of Student Publications	Scopus	WoS
246	45	192	25

Consultancy Activities

S.No.	Faculty Name	Department	Name of the Industry/ Organization	Type of consultancy	Amount (in Rs.)
1	Preetha V	Civil Engineering	Lakshmi Construction	Material Testing	708
2	Dhinesh S K	Mechatronics	Birdscale Technologies and Services	Drone Based Lidar Survey at Uttarkhand	1,57,448
3	Dinesh D	Mechanical Engineering	BIT & Academic Institutions	FESEM Lab Testing	10,06,299
4	Poojitha P	Food Technology	Jain University	Quality Analysis of Bhujia	2,065
5	Dhinesh S K	Mechatronics	Birdscale Technologies and Services	Drone Based Lidar Survey at Kadapa	47,141
6	Dhinesh S K	Mechatronics	Birdscale Technologies and Services	Drone Based Lidar Survey at Kadapa	1,29,800
7	Dhinesh S K	Mechatronics	National Institute Of Advanced Manufacturing Technology, Ranchi	174ph Stainless Steel Metal 3d Printer	50,221
8	Sanjoy Deb	Electronics and Communication Engineering	Dharmapuri Forest Division	Solar Fence Inspection Stick	51,920
9	Sanjoy Deb	Electronics and Communication Engineering	Karnataka Forest Department	High Voltage Personal Safety Stick	96,147
10	Sanjoy Deb	Electronics and Communication Engineering	West Bengal Forest Department	High Voltage Personal Safety Stick	1,34,560
11	Pongali Sathya Prabu N	Physics	Nandha Engineering College	FTIR Spectrum Recording	177
12	Malathi Mahalingam	Chemistry	PSG Hi-Tech Coimbatore	Fluorescence Analyss	2,124
13	Pongali Sathya Prabu N	Physics	Nandha Engineering College	Ftir Spectrum Recording	885
14	Arulmurugan L	Electronics and Communication Engineering	Mr. K.V. Appala Naidu, Ifs District Forest Officer, Dharmapuri Division, Dnarmapuri-636705.	Solar Fence Inspection Stick	51,920
15	Sanjoy Deb	Electronics and Communication Engineering	Range Forest Officer, Elephant Task Force, Chamarajanagar, Pin Code: 571313, Karnataka	High Voltage Personal Safety Stick	96,147
16	Manojkumar P	Electrical and Electronics Engineering	Deputy Field Director, Sundartdan Tiger Reserve Office, Near Canning Electricity Office, Digher Par, South 24, West Bengal	High Voltage Personal Safety Stick	1,34,560
17	Sanjoy Deb	Electronics and Communication Engineering	Parry Agro Industries	Acoustic Wild Animal Repellent System	4,720
18	Pongali Sathya Prabu N	Physics	Nandha Engineering College	FTIR Spectrum Recording	531
19	Arulmurugan L	Electronics and Communication Engineering	The Deputy Conservator Of Forest, Sawantawadi Forest Division, Kolhapur Circle, Maharastra-416504	FTIR Spectrum Recording	97,468
20	Rajendran M	Civil Engineering	Gopi Municipalty	Gobi Municipalty Survey	1,77,000
21	Sanjoy Deb	Electronics and Communication Engineering	Animal Warriors Conservation Society, Telangana	Long Range Acoustic Device	11,328
22	Sanjoy Deb	Electronics and Communication Engineering	VGM Hospital, Trichy Road, Coimbatore	Acoustic Crop Safety System	13,452

S.No.	Faculty Name	Department	Name of the Industry/Organization	Type of consultancy	Amount (in Rs.)
23	Pongali Sathya Prabu N	Physics	Liquid Crystal Research Laboratory	DSC Thermogram Recording	2,124
24	Jayanthi V	Civil Engineering	Municipal Administration And Water Supply Department	Contour Surveying	3,540
25	Dhinesh SK	Mechatronics	Srikrish Automation	17-4ph stainless steel 3d printed component	27,252
26	Rajendran M	Civil Engineering	Gobichettipalayam Municipality`	Drone Survey For The Construction Of Treatment Plant Of Used Water And Fecal Sludge	17,700
27	Vijayakumar V N	Physics	Kalasalingam University	Material Characterization	1,500
28	Dhinesh S K	Mechatronics	Tulasi Industries Coimbatore	Metal Additive Manufacturing - Inconel 625	58,764
29	Dhinesh S K	Mechatronics	Indian Council For Agricultural Research - Sugarcane	Sugarcane Drone Spraying	47,200
30	Pongali Sathya Prabu N	Physics	Liquid Crystal Research Laboratory	Ftir Recording	177
31	Pongali Sathya Prabu N	Physics	Liquid Crystal Research Laboratory	Ftir Spectrum Recording	708
32	Preetha V	Civil Engineering	Lakshmi Construction	Material	708
33	Jeevanantham V	Civil Engineering	Sathyamangalam Municipality	Construction Of Knowledge Centre At Sathyamangalam	17,695
34	Jeevanantham V	Civil Engineering	Sathyamangalam Municipality	Construction Of Additional Classroom At Sathy-1 Municipal School Campus	17,695
35	Pongali Sathya Prabu N	Physics	Liquid Crystal Research Laboratory	FTIR Spectrum Recording	531
36	Deepha V	Chemistry	Gobi Arts And Science College	M.sc Project On Theoretical Analysis	2,006
37	Praveena R	Chemistry	Gobi Arts And Science College	M.sc Project On Computation Using Dft	2,006
38	Praveena R	Chemistry	Gobi Arts and Science College	M.sc Project On Computational Analysis	2,006
39	Praveena R	Chemistry	Gobi Arts and Science College	M.sc Project On Theoretical Analysis	2,006
40	Praveena R	Chemistry	Gobi Arts and Science College	M.Sc Project Work On DFT Analysis	2,006
41	Pongali Sathya Prabu N	Physics	Liquid Crystal Research Laboratory	FTIR Spectrum Recording	885
42	Preetha V	Civil Engineering	Sri Bahavani Textiles	Material Testing	1,416
43	Preetha V	Civil Engineering	Sri Bahavani Textiles	Material Testing	2,360
44	Rajendran M	Civil Engineering	Gobichettipalayam Municipality	DGPS Consultancy Project At Keeripallam Odai, Gobichettipalayam	17,700
45	Vijayakumar V	Chemistry	JKKN Komarapalyam	ATR FTIR	1,180
46	Jeevanantham V	Civil Engineering	Sathyamangalam Municipality	Sbc Assessment For Overhead Watertank Construction	35,400

S.No.	Faculty Name	Department	Name of the Industry/ Organization	Type of consultancy	Amount (in Rs.)
47	Pongali Sathya Prabu N	Physics	Liquid Crystal Research Laboratory	FTIR recording and analysis	1,239
48	Loganayagan S	Civil Engineering	M/s App Infra Tech	Concrete cube Test report	2,124
49	Mekala N	Fashion Technology	AR Apparels	Design work	5,000
50	Manjunath N V	Civil Engineering	Geo Touch Engineeering	Soil nailing design	5,000
51	Sadasivam K	Physics	PKR Arts And Science College	M.Sc. Final year project	6,000
52	Dhinesh S K	Mechatronics	Indian Council For Agricultural Research - Sugarcane	Sugarcane drone Spraying	39,648
53	Pongali Sathya Prabu N	Physics	Liquid Crystal Research Laboratory	FTIR Analysis	354

Consuntancy	
No. of Consuntancy	Total Amount (Rs.)
53	25,31,186

Events Organized

Date	Event Name	Resource Person(s)
30.01.2023	Seminar on "Research Integrity"	Dr. Digvir S. Jayas, University of Manitoba
14.02.2023	Principle of absorption and emissions spectroscopy	Dr. Malathi Department of Chemistry
17.02.2023	Sustainable innovation in nanotechnology for different applications	Dr. Sivakumar Muthusamy, Chief Technology Officer, Ariviya Deep Tech, Thanjavur
02.02.2023	Smart nanomaterials for madical and energy applications towards industry 4.0	Prof. Kasi Nehru , Anna University, Trichy
02.05.2023	Research equipment training	Dr. Malathi M /BIT, Dr. Praveena R /BIT Dr. N. Pongali Sathya Prabu /BIT Dr. V N Vijayakumar /BIT Dr. Gowthamraj G /BIT, Dr S Ashokan /BIT Dr. M Vasudevan /BIT, Mr.D.Dinesh /BIT
04.03.2023	Equipment Training in Electrical Power Analysis Lab (Research Park)	Dr. Rajalashmi K APIII/EEE
09.03.2023	Research work in Subsonic Airflow testing lab CFR - Research Park	Dr. Sivaraj G Assistant Professor - III, Department of Aeronautical Engineering
13.03.2023	Faculty training in CFR-CMRL (Research Park)	Dr V N Vijayakumar/ASP/HoD/Physics, CFR-CMRL
04.03.2023	Research equipment training	Dr. B. Goldvin Sugirtha Dhas, Assistant Professor, Department of Electrical and Electronics Engineering
13.02.2023	Research equipment training	Mr. Narendra Ilaya Pallavan /BIT
13.02.2023	TOC Analyzer training	Dr. Vasudevan M /BIT
16.02.2023	Cloud & Pour Point Apparatus training	Mr. Mathiselvan G /BIT
13.02.2023	FTIR training	Dr N Pongali Sathya Prabu /BIT
14.02.2023	Rotary Evaporator training	Dr R Praveena /BIT
11.03.2023	Microscope training	Dr V N Vijayakumar /BIT
13.02.2023	Spin Coating Unit training	Dr S Ashokan / Physics /BIT
13.02.2023	FESEM training	Mr.D.Dinesh & Dr.J.Vivekanandan /BIT

Ph.D. Completion

S.No.	Name of the Schalor	Registration No.	Title of the Thesis	Date of Ph.D. Completion	Photo of the Scholar
1	Mr. Vijayakumar P	17142691305	Performance Analysis and Optimization of a Solar Collector Integrated With Pulsating Heat Pipe and Compound Parabolic Concentrator	13.01.2023	
2	Ms. Malathi L	1523469872	Certain Investigations on VLSI Multipliers for Filtering Techniques in Signal Processing Applications	24.01.2023	
3	Mr. Anbazhakan K	17147697183	Experimental and Theoretical Validation of Antioxidant Activity of Flavonoids from Secondary Metabolites	20.01.2023	
4	Ms. Poornimasre J	1524469560	Investigations on Performance Analysis of Machine Learning Algorithms in Low Power Testing for Test Vectors Compaction	27.01.2023	
5	Ms. Vasanthi T	17237697139	Design, Synthesis, Experimental and Theoretical (DFT) Investigation on Hydrogen Bond Binary Liquid Crystal System	17.02.2023	
6	Mr. Sathis Kumar K	1514469840	Certain Investigations on Performance of Scheduling Algorithms in Network on Chip	24.02.2023	

S.No.	Name of the Schalor	Registration No.	Title of the Thesis	Date of Ph.D. Completion	Photo of the Scholar
7	Ms. Karthiga M	18244697172	Certain Investigations on Remote Detection of Arrythmias Using Meta-heuristics Optimization Techniques	02.03.2023	
8	Ms. Priya J	19234691154	Enhancing Data Privacy and Access Anonymity in Smart Healthcare Using Internet of Things	10.03.2023	
9	Mr. Shivakumar N	1615219164	Experimental Studies on Control Strategies of GDI Engine With Different Combustion Chamber Geometry for Fuel Economy and Emissions Control	12.04.2023	
10	Mr. Daniel Raj A	1514469218	Performance Analysis of Enhancement Mode III-V Semiconductor Hemt Devices in Lateral and Vertical Topology for High-power Low-loss Switching Circuits	20.04.2023	
11	Mr. Gowri sankar M	21144691105	Investigation on Performance Enhancement Investigation on Performance Analysis of Electrocardiogram Signals Using Various Classification Machine Learning Algorithims	27.06.2023	
12	Ms. Rohini	1624769214	Investigations on Thermotropic Liquid Crystals and Their Binaries	09.06.2023	
13	Ms. Selvi M	31474/B2/2018	A Study on S-waves in a Half Space of Layered Anisotropic Media	10.06.2023	

Recognized Supervisor

S.No	Name of the Faculty	Department	Date of Supervisor Recognition	Ph.D. Degree Awarded Discipline	Photo of the Faculty
1	Dr. Nagarajan P	Mechatronics	2023-01-20	Mechanical Engineering	
2	Dr. Thirumurugan V	Textile Technology	2023-02-16	Technology	
3	Dr. Sundaram S	Physics	2023-02-16	Science and Humanities	
4	Dr. Malathi Balasubramaniyan	Biotechnology	2023-02-22	Technology	
5	Dr. Karthiga Shenbagam N	Civil Engineering	2023-02-22	Civil Engineering	
5	Dr. Nijandhan K	Mechatronics	2023-03-07	Mechanical Engineering	

S.No.	Name of the Faculty	Department	Date of Supervisor Recognition	Ph.D. Degree Awarded Discipline	Photo of the Faculty
7	Dr. Sureshkumar M	Mechanical Engineering	2023-03-07	Mechanical Engineering	
8	Dr. Manivannan S	Electrical and Electronics Engineering	2023-03-16	Electrical Engineering	
9	Dr. Rajeshkumar G	Information Science and Engineering	2023-04-12	Information and Communication Engineering	
10	Dr. Saranya K	Computer Science and Engineering	2023-05-15	Information and Communication Engineering	
11	Dr. Anandha Babu G	Physics	2023-06-08	Science and Humanities	
12	Dr. Karthiga M	Computer Science and Engineering	2023-06-12	Information and Communication Engineering	
13	Dr. Sangeetha S N	Computer Science and Engineering	2023-05-12	Information and Communication Engineering	

Central Research Facility

Research labs

1. Biomolecular Characterization and Instrumentation Lab
2. Instrument Calibration Lab
3. Fabric Surface Enhancement Lab
4. Functional Macro Molecular Enhancement Lab
5. Engine and Fuels Testing Lab
6. Materials Processing and Testing Lab
7. Electrical Power Analysis Research Lab
8. Aircraft Materials Testing Lab
9. Liquid Crystals Research Lab
10. Quantum Computing and Phytochemistry Research Lab
11. Condensed Matter Research Lab
12. Advanced Materials Research Lab
13. Subsonic Airflow Testing Lab
14. Materials Characterization FESEM Lab

Softwares

1. MATLAB
2. Cadence Tools Suite
3. LabVIEW
4. Oracle 11g
5. Ansys 18.0
6. CREO
7. CATIA V5
8. NX CAM Express
9. Solidworks 16
10. Altair Multiphysics/Mechatronics