

List of Research Supervisors

Research Areas in Civil Engineering

Research Area	Research Supervisors	Department	Research Expertise	Research Mentor
Sustainable Construction Materials: This study explores the development of sustainable construction materials by repurposing recycled waste, addressing environmental concerns.	Dr. Bharathraj Etigi Y B	Civil Engineering	Civil Engineering Materials	Dr. S. Ramachandra
	Dr. Varun B K	Civil Engineering	Civil Engineering Materials	
	Dr. Harish B A	Civil Engineering	Concrete Composites & Recycled Aggregates	
	Dr. Hanumesh B M	Civil Engineering	Concrete Composites & FRP Bars	
Water Resource Management: Through the strategic capture and storage of rainwater, the research aims to optimize water availability and mitigate scarcity. The analysis encompasses the efficiency and sustainability of such systems, offering valuable insights for improving water management practices.	Dr. Kiran Kumar H S	Civil Engineering	Water and Waste Water Treatment	Dr. K G Gupta
	Dr. Arun Kumar S L	Civil Engineering	Water Shed Management & Remote Sensing and GIS	
Wastewater Treatment: The study provides insights into enhancing water quality for safe and responsible reuse. The findings contribute to the promotion of efficient water resource management and environmental conservation.	Dr. Kiran Kumar H S	Civil Engineering	Water and Waste Water Treatment	
	Dr. Arun Kumar S L	Civil Engineering	Water Shed Management & Remote Sensing and GIS	
Earthquake-Resistant Design: The research contributes to the	Dr. Bharathraj Etigi Y B	Civil Engineering	Civil Engineering Materials	

development of robust materials and structures capable of withstanding earthquakes. the findings offer valuable insights for creating safer and more durable built environments in seismically active regions.				
	Dr. Varun B K	Civil Engineering	Civil Engineering Materials	
	Dr. Harish B A	Civil Engineering	Concrete Composites & Recycled Aggregates	
Dr. Hanumesh B M	Civil Engineering	Concrete Composites & FRP Bars		
Smart Infrastructure Monitoring with IoT Devices:	Dr. Varun B K	Civil Engineering	Civil Engineering Materials	
The findings emphasize the benefits of proactive maintenance and timely interventions facilitated by IoT technologies. This research contributes to the evolution of intelligent infrastructure management systems, promoting resilience and sustainability.	Dr. Neelambike S	Information Science and Engineering	Data Mining, IOT & Communication Network	

Research Areas in Computer Science and Engineering

Research Area	Research Supervisors	Department	Research Expertise	Research Students	Research Mentor
<p>Advances in Image Processing and Pattern Recognition: This research explores recent advances in image processing and pattern recognition, showcasing cutting-edge techniques and methodologies. The study investigates innovative algorithms and technologies that enhance the accuracy and efficiency of image analysis.</p>	Dr. Sanjay Pande M B	Computer Science and Engineering	Image Processing & Medical Imaging, Application Software to understand role of Chemical elements in progression of Neurological Disorders	Thippeswamy G N	Dr. Raghavendra Kulkarni
	Dr. B N Veerappa	Computer Science and Engineering	Speech Recognition, Pattern Recognition, Image Processing & Machine Learning	Usha N Rashmi S C	
	Dr. Shivanagowda G M	Computer Science and Engineering	Personalized Learning Environment, Recommendation System, Local and Indoor Navigation System.	--	
	Dr. Asha K	Artificial Intelligence and Machine Learning	Image Processing & Pattern Recognition	--	
	Dr. Maheshwari L Patil	Computer Science and Engineering	Artificial Intelligence, XAI, Machine learning, Convolutional Neural Network & Cyber Security	Dayanand Bhovi	

	Dr. Rachana P G	Computer Science and Engineering	Image Processing & Machine Learning	Manjula K	
	Dr. Somashekar G C	Electronics and Communication Engineering	Image Processing	--	
	Dr. Kavitha K J	Electronics and Communication Engineering	Signal Processing and Medical Image Processing	--	
<p>Cybersecurity for Internet of Things (IoT) Devices: Threat Detection and Mitigation: This study addresses cybersecurity concerns in Internet of Things (IoT) devices, focusing on threat detection and mitigation strategies. Through advanced security measures, the research aims to safeguard IoT ecosystems from potential vulnerabilities.</p>	Dr. Sunil Kumar B S	Information Science and Engineering	Cyber Security, Networking, Image/Video Processing	--	
	Dr. Veergangadhara Swamy T M	Information Science and Engineering	Data Mining	--	
	Dr. Neelambike S	Information Science and Engineering	Data Mining, IOT & Communication Network	Ashwini A M Thippeswamy G N	
<p>Machine Learning Techniques for Sensitive Data The study explores innovative methods that safeguard individual privacy while extracting meaningful insights from sensitive datasets. Emphasizing the balance between data utility and privacy protection, the findings contribute to advancing secure machine learning applications in</p>	Dr. B N Veerappa	Computer Science and Engineering	Speech Recognition, Pattern Recognition, Image Processing & Machine Learning	--	
	Dr. Maheshwari L Patil	Computer Science and Engineering	Artificial Intelligence, XAI, Machine learning, Convolutional Neural Network & Cyber Security	--	
	Dr. Rachana P G	Computer Science	Image Processing &	--	

healthcare, finance, and other sensitive domains.		and Engineering	Machine Learning		
<p>Explainable Artificial Intelligence (XAI): This study delves into Explainable Artificial Intelligence (XAI), aiming to bridge the gap between AI performance and interpretability. Investigating methods to make complex AI models more understandable, the research emphasizes the importance of transparency in decision-making processes.</p>	Dr. Maheshwari L Patil	Computer Science and Engineering	Artificial Intelligence, XAI, Machine learning, Convolutional Neural Network & Cyber Security	--	

Research Areas in Applied Mathematics

Research Area	Research Supervisors	Department	Research Expertise	Research Mentor
<p>Mathematical Modelling and its applications: This study delves into the versatile realm of mathematical modelling and its wide-ranging applications across various disciplines. Exploring diverse mathematical approaches, the research highlights the significance of modelling in understanding complex phenomena and making informed predictions.</p>	Dr Onkarappa K S	Mathematics	Mathematical Modelling	Dr. Gireesha B J
	Dr. Shanmukha B	Mathematics	Differential Geometry, Fractional Differential Equation, Mathematical Modelling	

Research Areas in Biomedical Engineering

Research Area	Research Supervisors	Department	Research Expertise	Research Mentor
<p>Artificial Intelligence in Diagnostic Imaging: This research investigates the integration of artificial intelligence (AI) in diagnostic imaging, aiming to enhance accuracy and efficiency in medical diagnostics. Through advanced machine learning algorithms, the study explores AI's potential for rapid and precise image analysis. Findings contribute insights into optimizing diagnostic workflows and improving the overall quality of medical imaging interpretations.</p>	Dr. Sanjay Pande M B	Computer Science and Engineering	Image Processing & Medical Imaging, Application Software to understand Neurological Disorders	Dr. Bhanu Prakash K N
	Dr. Maheshwari L Patil	Computer Science and Engineering	Artificial Intelligence, XAI, Machine learning, Convolutional Neural Network & Cyber Security	
	Dr. Rachana P G	Computer Science and Engineering	Image Processing & Machine Learning	
	Dr. Kavitha K J	Electronics and Communication Engineering	Signal Processing and Medical Image Processing	
<p>Smart Prosthetics: This research delves into the realm of smart prosthetics, exploring advanced technologies that enhance functionality and user experience. Investigating sensor integration and responsive control.</p>	Dr. Srinivasa C V	Mechanical Engineering	Solid Mechanics- Vibration, Acoustics, FEM & Natural Fiber Composites	
	Dr. Bharath K N	Mechanical Engineering	Bio-Composite Materials, Automotive Composites & Advanced Material Characterization	

Research Areas in Biotechnology

Research Area	Research Supervisors	Department	Research Expertise	Research Mentor
Biodegradable Plastics from Agricultural Waste: This research investigates the development of biodegradable plastics derived from agricultural waste, offering an eco-friendly alternative to conventional plastics. Exploring innovative processes, the study focuses on transforming agricultural by-products into sustainable and biocompatible materials.	Dr. Gurumurthy H	Biotechnology	Bio-Informatics & Plant Biotechnology	Dr. H E Shashidhar Professor (Rtd.), Genetics and Plant Breeding, University of Agricultural Science, GKVK, Bangalore.
	Dr. Pavan K J	Biotechnology	Plant & Agricultural Bio-Technology	
	Dr. Onkarappa H S	Chemistry	Nano-Cellulose, Material Science, Organic Chemistry	
Synthetic Biology for the Production of Biofuels from Algae: This research explores the application of synthetic biology in harnessing algae for biofuel production. The findings contribute to the advancement of sustainable energy solutions, offering insights into the potential of synthetic biology for enhancing biofuel production efficiency from algae.	Dr. Pavan K J	Biotechnology	Plant & Agricultural Bio-Technology	
	Dr. Pradeep M J	Biotechnology	Bio-Chemical Engineering	
	Dr. Basavarajappa D N	Mechanical Engineering	Bio Fuels & IC Engine	
Bioinformatics Approaches for Understanding Microbial Community Dynamics: This study employs bioinformatics tools to unravel the complexities of microbial community dynamics. By analyzing genetic and molecular data, the research explores intricate relationships and ecological patterns within microbial communities.	Dr. Prakash K K	Biotechnology	Microbial Bio-Technology	
	Dr. Rakesh N R	Biotechnology	Bioinformatics	
	Dr. Poojitha B S	Biotechnology	Cancer Biology	

<p>Nanotechnology in Drug Delivery Systems: This research delves into the application of nanotechnology in drug delivery systems, showcasing its potential for revolutionizing medical treatment. Through innovative nano-sized carriers, the study explores targeted and controlled drug release, enhancing therapeutic efficacy while minimizing side effects.</p>	Dr. Keerthi S	Biotechnology	MBA- Pharmaceutical Sector	
	Dr. Swaroop K	Physics	Material Science, Polymer Nano- composites, Hydrogel Nanocomposites, Biomedical Applications	
<p>Environmental Biotechnology: Through innovative biotechnological interventions, the research explores sustainable methods to remediate contaminants and improve environmental quality.</p>	Dr. Harish E R	Zoology	Environmental Toxicology, Environmental Microbiology, Bio-diversity and Conservation.	

Research Areas in Commerce

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<p>E-commerce Growth Strategies: This study investigates e-commerce growth strategies tailored for emerging markets, analyzing innovative approaches to navigate unique challenges and capitalize on opportunities. The research provides insights into adapting business models and marketing strategies to foster successful and sustainable e-commerce expansion in dynamic emerging market environments.</p>	Dr. Shweta H S	Commerce	Finance, HRM, Entrepreneurship	<p>Dr. Poornima M Charantimath Advisor, IEMS B-School, Hubli.</p>
	Dr. Tejashwini K C	Commerce	Accounting and Finance	
	Dr. Basavaraj Swamy	Management	Strategic HR, Talent Management Leadership and Career Management, Governance and Management, Policy Planning and Implementation, Academic Administration, Ethics in HR and Governance, Organisational Psychology, Institution Building & Educational Finance	
	Dr. Basavaraju P S	Management	Finance, Derivatives, Investment, International Insurance, Information Technology, Data Analysis, Econometrics	

Research Areas in Electrical Engineering

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Fuel Cell Technologies: This research explores fuel cell technologies, investigating advancements in design, efficiency, and applications, with a focus on sustainable energy solutions. The study aims to contribute insights into the evolving landscape of fuel cells, emphasizing their potential in addressing clean energy challenges and fostering a greener future	Dr. U M Netravati	Electrical and Electronics Engineering	PEM Fuel Cells	Dr. Rangarajan Former Director - MCF, ISRO.
	Dr. Rajkumar D G	Mechanical Engineering	Renewable energy	

Research Areas in Electronics and Communication Engineering

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Advanced Electronic Systems This study delves into advanced electronic systems, exploring cutting-edge technologies and methodologies to enhance efficiency, reliability, and functionality in electronic devices. The research aims to contribute to the evolution of electronic systems, fostering innovation and addressing the demands of a rapidly advancing technological landscape.	Dr. G M Patil	Electronics and Communication Engineering	Process Measurement, Process Control, Data Acquisition and Signal Processing, Biomedical Engineering, Transducers for Scientists	--	Dr. Rangarajan Former Director - MCF, ISRO.
	Dr. Praveen J	Electronics and Communication Engineering	VLSI/Low Power VLSI	Deepika V B	
	Dr. Rajashekar Somasagar	Electronics and Communication Engineering	Signal Processing & Embedded Systems	--	
Energy-Efficient 5G Wireless Networks: This research focuses on energy-efficient 5G wireless networks, investigating strategies to optimize power consumption without compromising network performance.	Dr. Vishwaraj	Electronics and Communication Engineering	Signal Processing & Wireless Communication	--	
Wearable Health Monitoring Systems: This study explores wearable health monitoring systems, investigating	Dr. Rajashekar Somasagar	Electronics and Communication Engineering	Signal Processing & Embedded Systems	Akshatha Chavan H J Jambukesh	

<p>their impact on remote patient care and health data analysis. The research aims to contribute insights into the design and effectiveness of wearable devices for real-time health monitoring, emphasizing their role in advancing personalized and accessible healthcare solutions.</p>	Dr. Kavitha K J	Electronics and Communication Engineering	Signal Processing & Medical Image Processing	Gnanika I V
	Dr. Murugendrappa N	Electrical and Electronics Engineering	Digital Image Processing, Digital Communication, PLC Programme Logic Controller	--
	Dr. Vishwaraj	Electronics and Communication Engineering	Signal Processing & Wireless Communication	--
<p>Advanced Algorithms for Deep Learning in Image Processing: This research delves into advanced algorithms for deep learning in image processing, exploring innovative techniques to enhance accuracy and efficiency in visual data analysis.</p>	Dr. Somashekar G C	Electronics and Communication Engineering	Image Processing	--
	Dr. Murugendrappa N	Electrical and Electronics Engineering	Digital Image Processing, Digital Communication, PLC Programme Logic Controller	--

Research Areas in Food Science and Technology

Research Area	Research Supervisors	Department	Research Expertise	Research Mentor
Extraction and Application of Natural Food Colorants: This study investigates the extraction and application of natural food colorants, exploring sustainable alternatives for the food industry. The research aims to contribute insights into utilizing natural sources for vibrant food colors, addressing consumer preferences for healthier and environmentally friendly food products.	Dr. Harish E R	Zoology	Environmental Toxicology, Environmental Microbiology, Bio-diversity and Conservation.	Dr. H E Shashidhar Professor (Rtd.), Genetics and Plant Breeding, University of Agricultural Science, GKVK, Bangalore.
	Dr. Aruna Charantimath	Botany	Botany (Microbiology)	
Food Waste Reduction through Innovative Packaging Solutions: This research explores innovative packaging solutions to reduce food waste, focusing on sustainable and effective methods for extending shelf life and preserving food freshness. The study contributes to addressing the global challenge of food waste, emphasizing the role of packaging innovations in promoting a more efficient and environmentally friendly food supply chain	Dr. Swaroop K	Physics	Material Science, Polymer Nano-composites, Hydrogel Nanocomposites, Biomedical Applications	
	Dr. Gurumurthy H	Biotechnology	Bio-Informatics & Plant Biotechnology	

Research Areas in Management

Research Area	Research Supervisors	Department	Research Expertise	Research Students	Research Mentor
<p>Leadership Development for the Digital Age: This study examines leadership development tailored for the digital age, exploring strategies to cultivate adaptive and tech-savvy leaders. The research contributes insights into navigating the evolving business landscape, emphasizing the importance of digital literacy and agility in effective leadership practices</p>	Dr. Basavaraj Swamy	Management	Strategic HR, Talent Management Leadership and Career Management, Governance and Management, Policy Planning and Implementation, Academic Administration, Ethics in HR and Governance, Organisational Psychology, Institution Building & Educational Finance	Rashmi J Rubina J	<p>Dr. Poornima M Charantimath Advisor, IEMS B-School, Hubli.</p>
<p>Remote Finance Work and Digital Transformation: The research contributes insights into the evolving landscape of finance, emphasizing the crucial role of digital transformation in fostering innovation and adaptability within the financial sector.</p>	Dr. Basavaraju P S	Management	Finance, Derivatives, Investment, International Insurance, Information Technology, Data Analysis, Econometrics	Nischitha K B	

Remote Work and Employee Productivity: This research investigates the relationship between remote work and employee productivity, exploring factors influencing performance in decentralized work environments.	Dr. Shiva Kumar S	Management	Production operation Management, Manufacturing	--	
	Dr. K. Jagadeswari	Management	Human Resource Management, Recruitment and Selection, Training and development, Entrepreneurship Formation of Business plans, Economics Investment avenues in finance, Insurance, International Finance	Varsha Hiremath	

Research Areas in Physics

Research Area	Research Supervisors	Department	Research Expertise	Research Mentor
Advanced Materials: This research explores advanced materials, investigating innovative compositions and structures to enhance properties and applications in diverse industries. The study aims to contribute insights into the development of cutting-edge materials, emphasizing their potential impact on technological advancements and sustainable practices.	Dr. G H Pujar	Physics	Material Science, Spectroscopy	Dr. D Narasimha Former Scientist, TIFR, Bangaluru/ Visiting Professor IIT Dharwad.
	Dr. Swaroop K	Physics	Material Science, Polymer Nano-composites, Hydrogel Nanocomposites, Biomedical Applications	
	Dr. Rakesh Vishwarup	Physics	Ferrites	
Nanotechnology in Medicine: This study examines the application of nanotechnology in medicine, exploring nanoscale materials and devices for diagnostic and therapeutic purposes. The research contributes insights into the potential of nanotechnology to revolutionize medical treatments.	Dr. Swaroop K	Physics	Material Science, Polymer Nano-composites, Hydrogel Nanocomposites, Biomedical Applications	
	Dr. Vismitha S Patil	Physics	Polymer Nanocomposites Semiconductor Alloy Quantum Dots, Humidity Sensing	
Physics of Climate Change: The study contributes insights into the scientific understanding of climate change, emphasizing the importance of physics-based models for formulating effective strategies to address and alleviate its impacts.	Dr Anand B C	Physics	Condensed Matter Physics	

Research Areas in Mechanical Engineering

Research Area	Research Supervisors	Department	Research Expertise	Research Mentor
<p>Advanced Composite Materials for Lightweight and Durable Components</p> <p>This research investigates advanced composite materials for automotive components, exploring their potential to offer lightweight solutions without compromising durability. The study aims to contribute insights into materials innovation, emphasizing the role of composites in enhancing fuel efficiency and sustainability in the automotive industry.</p>	Dr B R Sreedhar	Mechanical Engineering	Materials Science-Composites	<p>Dr. J S Mathur Former Scientist, National Aeronautics Laboratory (NAL), Bengaluru.</p> <p>Dr. Rajiv Jain Former Scientist, Gas Turbine Research Establishment- DRDO, Bengaluru.</p> <p>Dr. Vinod Banthia Professor (Rtd.) M.S. Ramaiah School of Advanced Studies, Bengaluru.</p> <p>Dr. S Ramachandra Former Scientist, Gas Turbine Research Establishment- DRDO, Bengaluru.</p>
	Dr. Srinivasa C V	Mechanical Engineering	Solid Mechanics-Vibration, Acoustics, FEM & Natural Fiber Composites	
	Dr. Bharath K N	Mechanical Engineering	Bio-Composite Materials, Automotive Composites & Advanced Material Characterization	
	Dr. Harsha H M	Mechanical Engineering	Natural Fiber Hybrid Composites, Fracture Mechanics	
	Dr. Mudasar Pasha B A	Robotics and Automation	Corrosion & Wear	
<p>Thermal Management in Electric Vehicles:</p> <p>This study explores thermal management strategies for electric vehicles, investigating innovative techniques to optimize temperature control in batteries and components. The research aims to contribute insights into enhancing the efficiency and performance of electric vehicles.</p>	Dr. S V Prakash	Mechanical Engineering	CFD, Renewable Energy, Smart Materials	
	Dr. Rajkumar D G	Robotics and Automation	Renewable energy	
	Dr. Basavarajappa D N	Mechanical Engineering	Bio Fuels & IC Engine	
	Dr. Basavarajappa S	Mechanical Engineering	Heat Exchanger, Bio Mass Energy & Electronic Cooling	

Research Areas in Chemistry

Research Area	Research Supervisors	Department	Research Expertise	Research Mentor
Smart Drug Delivery Systems Using Nanotechnology: This research explores smart drug delivery systems employing nanotechnology, investigating precision-controlled mechanisms for targeted and efficient drug release.	Dr. V S Betageri	Chemistry	Pharmaceutical Chemistry	Dr. C V Yelamaggad Scientist-F, CeNS, Bengaluru.
	Dr. Shivarudrappa H P	Chemistry	Medicinal Chemistry, Organic Chemistry, Material Chemistry	
Nanomaterial, Nanotechnology and its Applications: This study delves into nanomaterials and nanotechnology, exploring their diverse applications across various fields, including medicine, electronics, and energy. The research contributes insights into the wide-ranging impact of nanotechnology, emphasizing its role in fostering innovations and addressing complex challenges through nanoscale advancements.	Dr. Santhosh B M	Chemistry	Electrochemistry, Nanotechnology Material Chemistry, Sensors, Biosensor	
	Dr. Onkarappa H S	Chemistry	Nano-Cellulose, Material Science, Organic Chemistry	
	Dr. Pavithra K S	Chemistry	Nanotechnology, Polymer Dispersants, Heat Transfer Applications.	
	Dr. Veerabhadraswamy B N	Chemistry	Synthesis and Characterization of Organic, Liquid Crystals, Nanomaterials, Sensors	
	Dr. Kiran M S	Chemistry	Nano-Chemistry, Material Synthesis	

	Dr. Swaroop K	Physics	Material Science, Polymer Nano- composites, Hydrogel Nanocomposites, Biomedical Applications	
<p>Synthesis of Organic Light-Emitting Diodes (OLEDs):</p> <p>This research focuses on the synthesis of Organic Light-Emitting Diodes (OLEDs), exploring methods to enhance efficiency and performance in organic electronic devices. The study contributes insights into the fabrication processes of OLEDs, emphasizing advancements in organic materials for achieving brighter and more energy-efficient displays.</p>	Dr. Veerabhadraswamy B N	Chemistry	Synthesis and Characterization of Organic, Liquid Crystals, Nanomaterials, Sensors	