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## Sampige

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## A quarterly News Bulletin

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## From the Editorial Board

Friends,



Greetings and a warm welcome to another issue of Sampige.

This News Bulletin especially includes the report on the Birth Centenary Celebrations of Dr. M.S. Ramaiah event and all the activities held at the institute and department levels. Once again all efforts have been spared in preparing this document since we consider this News bulletin an effective communication tool. We hope you enjoy reading this issue as much as we have enjoyed

thoroughly for making it beautiful. I express my sincere gratitude to all our faculty and staff for their valuable input. Looking forward to your continuous support in the upcoming issue.

Any suggestions or criticism on the News Bulletin would be always most welcome.

Best wishes

**Dr. N. V. R. Naidu**

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Friends,

It gives us immense pleasure, joy and satisfaction to place before the first issue of Sampige, a quarterly News Bulletin of Ramaiah Institute of Technology of the year 2023. In this News Bulletin, we have highlighted significant achievements of faculty and students. The Editorial Board would like to place our gratitude and heartfelt thanks to all the Department Heads and Section Heads, who have contributed to this News Bulletin. The

success of Sampige depends on your valuable response. Please feel free to offer any suggestions for the improvement of the News Bulletin. Looking forward to your continuous support in the upcoming issue.

With best wishes

**Dr. B. M. Nagabhushana**

## RAMAIAH INSTITUTE OF TECHNOLOGY

### VISION OF THE INSTITUTE

To be an Institution of International Eminence, renowned for imparting quality technical education, cutting edge research and innovation to meet global socio-economic needs.

### MISSION OF THE INSTITUTE

**RIT shall meet the global socio-economic needs through**

- Imparting quality technical education by nurturing a conducive learning environment through continuous improvement and customization.
- Establishing research clusters in emerging areas in collaboration with globally reputed organizations.
- Establishing innovative skills development, techno-entrepreneurial activities and consultancy for socio-economic needs.

### QUALITY POLICY

We at Ramaiah Institute of Technology, strive to deliver comprehensive, continually enhanced, global quality technical and management education through an established Quality Management System complemented by the synergistic interaction of the stakeholders concerned.

#### RIT is Ranked

# #1

AMONG  
ENGINEERING  
COLLEGES AFFILIATED  
TO VTU, KARNATAKA

# #67

BEST ENGINEERING  
INSTITUTE AMONG 1249  
REPUTED INSTITUTES  
IN INDIA

# #17

BEST ARCHITECTURE COLLEGE  
AMONG 91 REPUTED  
ARCHITECTURE COLLEGES IN INDIA

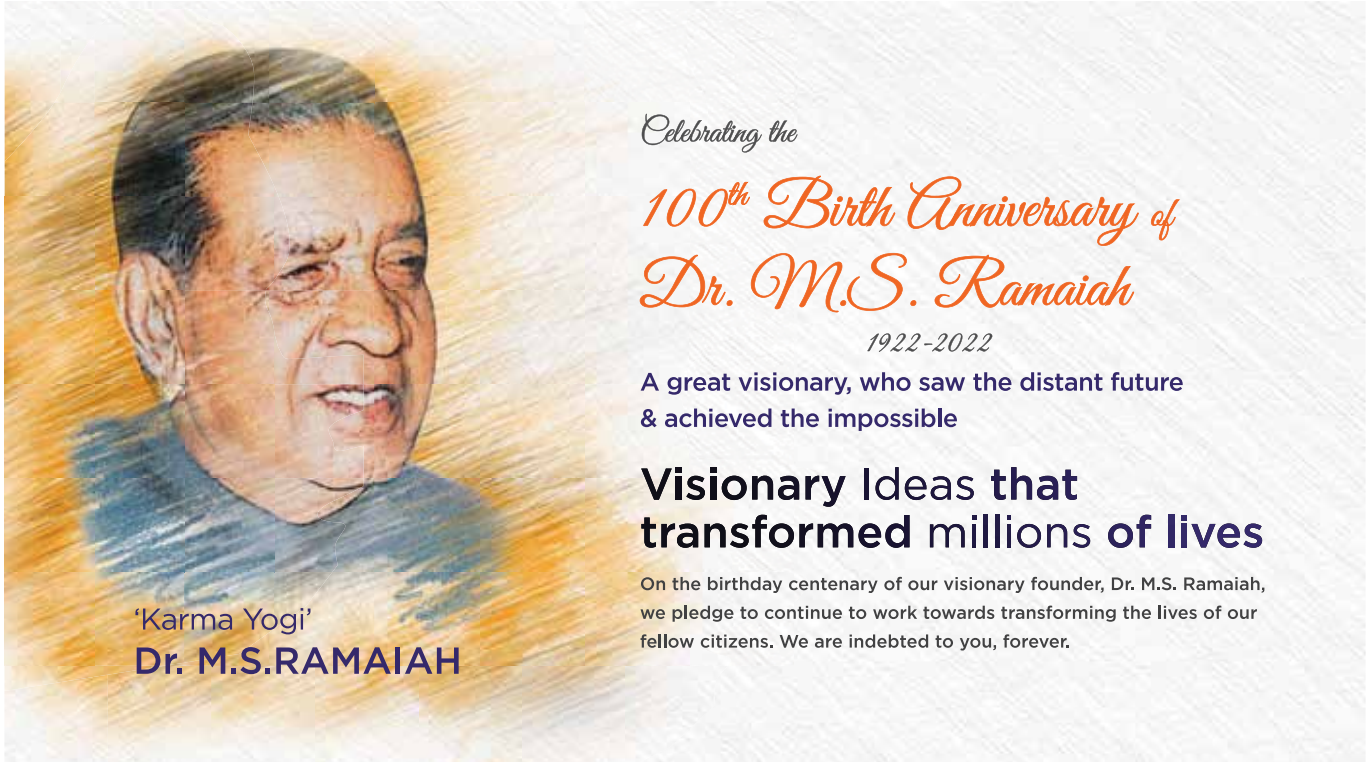


- As per National Institutional Ranking Framework, MoE, Govt. of India. 2022

**MSRIT is accredited by NAAC with  
A<sup>+</sup> Grade**

## Dr. M.S. Ramaiah (1922 - 1997)

Founder Chairman, Gokula Education Foundation



We offer our humble tributes to our venerable founder Chairman late Dr. M S Ramaiah, a renowned philanthropist, educationist and visionary who Established the Gokula Education Foundation in 1962 and M S Ramaiah Institute of Technology (MSRIT) was started in the same year envisioning the need for quality technical education towards taking India ahead.

MSRIT is celebrating its Diamond Jubilee year in 2022, at this juncture, we at MSRIT reiterate our commitment to creating world-class technical professionals who strongly reflect the universal human values of integrity, honesty, and character as they go on to contribute to the nation and the world at large.

# TRIBUTE TO A VISIONARY

*Celebrating 100 years of this Great Iconic Figure*

Dr. Mathikere Sampangappa Ramaiah was born on 20<sup>th</sup> April 1922. This great visionary lives on through his legacy, which continues to illuminate the lives of millions through healthcare, education and philanthropy.

Dr. M S Ramaiah began his career at Indian Testing Laboratories, where he rose in popularity amongst his peers and colleagues. Dr. M S Ramaiah moved on to the Mysore Railway narrow gauge section as a fireman a few days later his father called him back to the family brick manufacturing facility. His zeal to build greater milestones inspired Dr. M S Ramaiah into civil contracting of his first Radhanagiri Hydroelectric Project, building the Ghataprabha left bank canal. The Sharavathi valley and Dharma dam and the renowned Irrigation Project of River Budhi Gandak on the Indo-Nepal border.

Dr. M S Ramaiah's strong connection with nature lured him to start Gokul dairy farm in 1950 and procure 700 acres of land near Devanahalli which he evolved into a lush green region.

In 1957 Dr. M S Ramaiah took over Tayinadu a local newspaper from Chamrajpet which he enriched with ample resources and passion. In 1963 he launched a monthly called Kailasa and a weekly called Gokula which saw eight years of growing appreciation in the Kannada Literary World.

Dr. M S Ramaiah believed education is the most powerful tool to change the world and this empowered him to set up educational institutions. In 1962 Ramaiah Institute of Technology (RIT) was established, which foresaw India's IT revolution and is continuously grooming the country's leading talent. Today, Ramaiah Institute of Technology has been recognized as one of the premier educational institutions across India and Ranked First among the VTU affiliated Engineering Institutions as per the NIRF, MoE, Government of India. RIT offers courses that are shaping professionals of today and tomorrow with engineering brilliance. Dr. M S Ramaiah focused on all fields and levels of education, i.e., Nursery to Surgery, Foundational courses to building the foundation of the country with lawyers, Artists, Doctors, Managers and Business Analysts.

In 1972 he facilitated water, electricity and innovative agricultural practices to plant

numerous trees. He won an Asian record for being a single individual to nurture so many trees, he was also the first person to implement drip irrigation in private farms.

Dr. M S Ramaiah welcomed industrialization and set up M S Ramaiah industrial estate for running small-scale industries in plastics, agro products, steel & metals and software technology.

Being a patron of art and culture, Dr. M S Ramaiah provided a platform to many artists to showcase their talents. He organised the Kannada Sahithya Sammelana at Kaiwara in the year 1990, for the neoteric and literary minds of Kannada literature to convene.

Dr. M S Ramaiah took over as the Dharmadhikari of Kaiwara temple and oversaw a pristine temple built for Tatayya. Great development works were carried out, including lodging for thousands of daily devotees. The trust arranges Prasad distribution every day for all visitors.

Dr. M S Ramaiah built the pristine Venkateshwara Temple and the magnificent entrance Arch of Raja Rajeshwari Temple, which is still one of the largest arches built.

This charismatic man nourished people's progress through education as well as philanthropy, he set up an education fund to support deserving students irrespective of caste or religion, which today provides impactful assistance of nearly 90 lakhs a year. He even developed affordable residential layouts to house those who could not afford them. Dr. M S Ramaiah also developed numerous places of worship community marriage halls and tall trees for mass marriages, and public kitchens and even started a rural health care center to offer free medical and dental treatment by top doctors of Bengaluru city.

Dr. M S Ramaiah's dreams shine on beyond his lifetime and his greatness fondly lives on in the hearts of thousands of people through his numerous impactful initiatives.

*What we have done for ourselves alone dies with us.  
What we have done for others and the world remains  
and is immortal. —Dr. M.S. Ramaiah*



## BIRTH CENTENARY CELEBRATIONS OF DR. M.S. RAMAIAH



A grand Birth Centenary Celebrations of Dr. M. S. Ramaiah, Founder Chairman, Gokula Education Foundation (GEF) was held on the 1<sup>st</sup> of March 2023. The Chief Guests of the function are the Hon'ble Vice-President of India Shri Jagdeep Dhankhar, Smt. Sudesh Dhankhar, Hon'ble Governor of Karnataka Shri.Thawar Chand Gehlot, and Hon'ble Minister Shri.S J. C. Madhu Swamy Minister of Law, Parliamentary Affairs and Legislation of Karnataka.

## DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING



- Department of Electrical and Electronics Engineering in association with MATHWORKS organized a Five-day faculty development programme on 'Machine and Deep Learning Research Opportunities in Electrical Science Industries', held during 13<sup>th</sup> -17<sup>th</sup> March 2023. The experts were from MATHWORKS, IISc, IAS, Intel and Schneider Electric etc.



- Department of E&EE in association with IEEE-PES organized 'Design Thinking Competition', at RIT campus on 9<sup>th</sup> March 2023.

### Funding received by the department

- Dr. Dawnee. S** Mr. Sourav S, Mr. Mayur V, Miss. Tanu S, Mr. Yash J and Mr. Rohit S. - 'Design and Fabrication of Onion Harvester', Grant of 6 Lakhs. US students project titled under TIH-IOT CHANAKYA fellowship program,

### Patents

- S. Dawnee (Mentor)**, Mr. Varun.G, Mr. Mohith. P, Mr. Deepak. T.N and Mr. Veeresh. B A - 'A smart

safety enhancement system', with application no 202341000182A.

### Guest Lecture/s – Invited

- Mrs. Vijaylaxmi V**, Educator & Mentor - 'Career and higher education guidance program', organised in association with IEEE PES and IEEE Ramaiah, on 24<sup>th</sup> February, RIT, Bangalore.

### Student Achievements

- Nihad P**, VI sem - was finalist in Potpourri and Programming contest at National level Tech Fest "SHASTRA-23" January 2023, Organized by IIT, Madras, Chennai.
- Bhagyashree. H.N**, VI sem - as a part of college team Formula Racing VOLANTE has secured Best girl participant at National Level Competition EDGEKINE CHAMPIONSHIP 2023, February, organized by WISDOMATIC SWARMS LLP, Pune.

## DEPARTMENT OF MECHANICAL ENGINEERING

### Publication in (National/International) Journals

- P. C. Arunakumara, H.N. Sagar, Bimal Gautam, Raji George, S. Rajeesh** - 'A review study on fatigue behavior of aluminum 6061 T-6 and 6082 T-6 alloys welded by MIG and FS welding methods', Materials Today: Proceedings, Vol. 74(2), 2023, Pages 293-301, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2022.08.242>.
- Jyothilakshmi R, Nandheesha H.L, Deepak S** - 'Experimental Study and Analysis of fretting wear and its influence on functionality of mechanical components', Journal of Applied science and Engineering progress, Vol. Page no. 16, Issue 3, March 2023.
- Sangmesh B., Nagraj Patil, Krishna Kumar Jaiswal, T.P. Gowrishankar, K. Karthik Selvakumar, M.S. Jyothi, **R. Jyothilakshmi**, Santosh Kumar - 'Development of sustainable alternative materials for the construction of green buildings using agricultural residues: A review', Construction and Building Materials, Volume 368, 2023, 130457, ISSN 0950-0618, <https://doi.org/10.1016/j.conbuildmat.2023.130457>.



- **Jyothilakshmi R, Sumangala Patil, K. J. Hemanth Kumar**- 'Environmental applications of microbial nanotechnology based sustainable wet waste management techniques adopted by BBMP Bangalore', Elsevier Environmental applications of microbial nanotechnology, 2023, <http://doi.org/10.1016/11978.0.323.91744.5.00007.2>
- Prasad H. Nayak, H.K. Srinivas, **P. Rajendra**, Madeva Nagaral, M. Raviprakash, V. Auradi- 'Effect Of Nano Zirconium Oxide (ZrO<sub>2</sub>) Particles Addition On The Mechanical Behaviour And Tensile Fractography Of Copper-Tin (Cu-Sn) Alloy Nano Composites', Structural Integrity and Life, Vol. 22 (3), (2022), pp. 319-327.
- Vasu S, **R Kumara, Nandeesh H L** and Santhosh H - 'Development of IoT Based Pneumatic Punching Machine', Journal of Mines, Metals and Fuels Vol.70 (10A), January 2023, pp363-367
- Niveditha Dharani and **Nandeesh H L** - 'Design and Development of an IoT Kit to Predict Cutting Tool Life and Generate Auto Inventory', Journal of Mines, Metals and Fuels, Vol.70 (10A), January 2023, pp. 368-373.
- Santhosh H, **R Kumar, Deepak S** and Vasu S - 'Modelling and Analysis of the Effect of Plateau Honing Operation on Cylinder Liners', Journal of Mines, Metals and Fuels, Vol.70 (10A), January 2023, pp. 355-362.
- Sandesh Hegde, Ramachandra C.G., **Nagesh S.N.**, Prashanth Pai M - 'Implementation of Permanent Magnet Propelling Phenomenon in Traditional Vertical; Axis Wind Turbine System to Enhance the performance and Efficiency', Indian Journal of Production and Thermal Engineering, ISSN:2582-8029, Volume 3, Issue 2, February 2023.
- Vasantha Kumar, **C. M. Ramesha**, V. Sharanraj, Sadashiva M and Kavya K - 'In-Vitro Biocompatibility Study and Comparison of Magnesium AZ31 and PEEK 450G Biomaterials used as Cardiovascular Stent Implants', Journal of Mines, Metals and Fuels, Vol. 71(1), Pages: 66-72, 202, DOI: 10.18311/jmmf/2023/33358.
- Mohammed Jawad A A and Manu Puranic - 'Effect of Laminate Thickness on Low Velocity Impact of GFRP/Epoxy Composites', First International Conference on Advanced Materials, Manufacturing and Industrial Engineering (AMMIE 2023) 23<sup>rd</sup> – 24<sup>th</sup> March 2023 Organized by Vellore Institute of Technology, Chennai.
- Shrishail Kakkeri, S. Sunil, **Ashok Kumar K, Vishwanath. Koti**, B. G. Girswamy and **P. B. Nagaraj** – 'Singularity Localities in Robot Work Envelope Comparative Analysis 2022', International Interdisciplinary Humanitarian Conference for Sustainability (IIHC), Bengaluru, India, 2022, pp. 1413-1417, doi: 10.1109/IIHC55949.2022.10059938.
- **B. P. Harichandra** - 'Simple Home Solutions to the Complex Health Issues- A review of Dr. BRC's approach', World congress on contribution of Indian knowledge and Sanskrit to humanity, 24<sup>th</sup> - 26<sup>th</sup> February, 2023, Srinivas University, Mangaluru.
- **B. P. Harichandra** - 'Varamusha of Vagbhatacharya – The Adventure of its Reinvention', World congress on contribution of Indian knowledge and Sanskrit to humanity, 24<sup>th</sup> - 26<sup>th</sup> February 2023, Srinivas University, Mangaluru
- **B.P. Harichandra**, Manoj Prabhakar, Deepak Deepu- 'Sundara Vimana as Recommended by Maharshi Bharadwaja: A Conceptual Computer 3D Model', World congress on contribution of Indian knowledge and Sanskrit to humanity, 24<sup>th</sup> - 26<sup>th</sup> February 2023, Srinivas University, Mangaluru.
- **B.P. Harichandra**- 'The planet problem and its logical energetic solution!', World congress on contribution of Indian knowledge and Sanskrit to humanity, 24<sup>th</sup> - 26<sup>th</sup> February 2023, Srinivas University, Mangaluru.

#### Guest Lecture delivered by the department faculty

- **Jyothilakshmi R** - 'Advanced Pedagogy' at S.J. Government Polytechnic, Bangalore on 14<sup>th</sup> March 2023.

#### Achievement/s, Awards/Prizes by Faculty/Staff/Students

- **Dr. B. P. Harichandra**, Associate Professor, Department of Mechanical Engineering has Received 'Best Paper Presenter Award (First

#### Publication in (National/International) Conferences

- **Sunith Babu L, Ashok Kumar K, Jaya Christiyan K G**, Mohammed Anas Byary, Nikhil Poojary,

place)' for the paper on the area of Ancient Indian Astrology and numerology during the World Sanskrit Conference-2023 held at Srinivas University, Mangaluru.

- **Dr. B.P. Harichandra** has published a book titled "Namaami Dharithri", released at the 'Sumangalam Panchamahabhuta Lokotsava', on 22<sup>nd</sup> February 2023, by Aadrushya Kadasiddeshwara Swamiji of Kaneri Mutt. Soft copy of the book on methods to improve soil fertility

## DEPARTMENT OF CIVIL ENGINEERING



- Organized one-day Workshop on 'Entrepreneurship, Skill, Attitude and Behavior Development', resource person Preethi M Rao, 10/02/2023.

### Publications in National/ International Journals

- **J Sumalatha**, P V Sivapullaiah and R Prabhakara – 'Modelling contaminant transport for the design of waste containment facilities and remediation of contaminated soil', International Journal of Environment and Waste Management, Vol 30, Jan 2023, pp 357-379

### Faculty who obtained Ph.D degree:



**Mr. Basavanagowda G M** obtained his Ph.D. from VTU on 23<sup>rd</sup> Feb 2023. His Ph.D. thesis entitled 'Seismic Behaviour of Pile Foundations in Liquefiable Soils' under guidance of Dr. L Govindraju UECE



**Mrs. Suguna B R** obtained her Ph.D. from VTU on 23<sup>rd</sup> Feb 2023. Her Ph.D. thesis entitled 'Performance characteristics of Recycled aggregate concrete- An experimental study' under guidance of Dr. S. M. Naik.

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



- One-day Industrial Visit was arranged to Airshow 2023, Air Force Air Base, Yelhanka Bangalore, on 17<sup>th</sup> February 2023 for VI semester students. The visit focused mainly on understanding the achievement of Indian Air force and technology.



- One-day Industrial Visit was arranged to Semicon India Future Design: Design Linked Incentive (DLI) Scheme JN Tata Auditorium, NSSC Complex, IISc Bangalore on 24<sup>th</sup> February, 2023 for VI semester UG and I SEM PG students. The event had Fireside chat on Global opportunities for Future Design: DLI Start-ups, Panel Discussion on DIR-V: Digital India's march towards RISC-V dominance, Attracting investment from VC industry and Press Meet.



## Publications in (National / International) Journals

- **Sujatha B**, M. Naveen, Thejas B, Vivek B.T, Rishi P, Sinchan Hegde – 'EMI shielding performance of electroless coated iron nanoparticles on graphite in low-density polyethylene composite for X-band applications', Journal of Indian Chemical Society, Vol. 100(4), March 2023.
- Kusumika Krori Dutta, Premila Manohar, **K. Indira**, Falak Naaz, Meenakshi Lakshminarayan Shwethaa Rajagopalan – 'Seven Epileptic Seizure Type Classification in Pre-Ictal, Ictal and Inter-Ictal Stages using Machine Learning Techniques', Advances in Machine Learning and Artificial Intelligence, Vol. 4, Issue 1, January 2023.
- **Suma KV**, Niranjana Murthy H S, Venu K N. Manjunath P R – 'Parametric Standardization and Quantification of EMG Signals for detection of muscle function of Knee Osteoarthritis Subjects', Journal of Survey in Fisheries Sciences (JSFS), Vol.10, Special Issue-4: pp.387-395, March 2023.
- **Mamtha Mohan, Veena G N, Pavitha U S**, Vinod H C – 'Analysis of ECG Data to Detect Sleep Apnea using Deep Learning', Journal of Survey in Fisheries Sciences (JSFS), Vol.10, Special Issue-4: pp. 371-376, March 2023.
- Avinash Sharma, K.D.V. Prasad, **Sadashiva V. Chakrasali**, Dankan Gowda V, Chanakya Kumar, Abhay Chaturvedi, A. Azhagu Jaisudhan Pazhani – 'Computer vision based healthcare system for identification of diabetes & its types using AI', Measurement: Sensors (Elsevier Ltd), Vol.27, Article 100751, March 2023.
- Chaya Ravindra, Manjunath R. Kounte, Gnagadharaiah S. L, **V. Nuthan Prasad** – 'ETELMAD: Anomaly Detection Using Enhanced Transient Extreme Machine Learning System in Wireless Sensor Networks', Wireless Personal Communications, Vol.130, March 2023, pp. 21 – 41.
- Dharini Raghavan, **C. G. Raghavendra** – 'Grasserie Disease Identification in Bombyx Mori Silkworm using Ensemble Learning Approach', International Journal of Electronics Signals and Systems, Vol. 4, No. 3, pp.148-153, 2023.

## Paper presentation in National / International Conferences

- **S. Sethu Selvi**, Paarth Barkur, Nikhil Agarwal, Abhishek Kumar, Yash Mishra – 'Time Series based Models for Corona Data Analytics', 4th International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT 2022), 26<sup>th</sup> – 27<sup>th</sup> December 2022, Mandya, India.
- Adithya H H, Lekhashree, **Raghuram S** – 'Violence Detection in Drone Surveillance Videos', Seventh International Conference on Smart Trends in Computing and Communications, Jaipur, India, 24<sup>th</sup> – 25<sup>th</sup> January, 2023.

The following research papers are presented in 4<sup>th</sup> International Conference on Circuits, Control, Communication and Computing (I4C-2022), 21<sup>st</sup> - 23<sup>rd</sup> December 2022, RIT, Bengaluru: -

- **Maya V Karki**, Ayush Aripirala, Chirag Vasist, Ayush Renith, Aditya Balasubramanian – 'Abnormal Human Behavior Detection in Crowded Scenes on Hybrid Neural Networks', **Maya V Karki**, Santhosh Inamdar – 'Skin Cancer Classification Using Deep Networks'.
- Sudheer D Kulkarni, **S Sethu Selvi**, Mohammed Zuber M Momin, Nandan S Bharadwaj, Navya S R, Sudesh, Shiv Kumar S Thanki - 'Machine Learning based Classification of Welded Components.
- **Jayashree S, Maya V Karki, Indira K, N Shivashankrappa** – 'Performance Analysis of Image Fusion Rules Implemented on Nonsubsampled Contourlet Transform Decomposed Images for Pansharpening'.
- **Lakshmi S**, Sujana Sundar, Sri, Navya Kesana, Varshitha M G – 'Development of Piezoelectric Biosensors for pathogen detection'.
- **Suma K V**, Dharini Raghavan, Puneeth Ganesh – 'Deep Learning for Alzheimer's Disease Detection using Multimodal MRI-PET Fusion'.
- Vinayak Sanjeev Deshpande, **H. Mallika**, Preet Singhvi, Yogesh Mahla, Rebeka S. A. - 'Stock Market Analysis and Forecasting Using Long Short Term Memory'.
- H Pooja Rani, **Dr. Mamtha Mohan** – 'A Tenable Approach to Detect Brain Haemorrhage Using Deep learning'.

- **Suma K V, Deepali Koppad**, Kushagra Awasthi, Phani Abhiram K, Vikas R – 'Application of AI Models in Agriculture'.
- **C Sharmila Suttur, Punya Prabha V**, Rakshitha S R, Rapaka Rakshith, Sneha N, Supriya S Mangalgi – 'Women Safety System'.
- Khushi S Patil, **Sara Mohan George**, Komal G Naik, P Chetana, Nikitha V Kamath. 'Freeze of Gait and Fall Detection in Parkinson's Patients'.
- Pooja B S, **Sara Mohan George**, Neha Tarannum N, Pradheep S, Ramesh Ganesh Patgar. Smart Gloves for Hand Gesture Recognition in Kannada.
- Daaniya R Naik, Keerthana B, **Sujatha B, Sara Mohan George** – 'Novel methods to characterize the quality of food grains by using horn antenna and continuous flow method'.
- Praveen Kumar, **Suma K V, Manjunath C Lakkannavar**, Varun C R – 'Comparison of Machine Learning Algorithms for EMG based Muscle Function Analysis'.

#### Guest Lecture/s - Invited

- **Mr. Rudramuni B**, Dell Technology, R&D, Bangalore – 'Succeeding @ Campus Recruitment', 17<sup>th</sup> February 2023.
- **Karthik Rao Bappanad**, CySeck, Bangalore – 'Cyber Security' 4<sup>th</sup> February 2023.
- **Dr. Nitin J Sanket**, WPI, USA – 'AI Powered Robotic Bees' 11<sup>th</sup> January 2023.
- **Sri. Sarvesh Angadi & Team**, CynLr, Bangalore – 'Comprehending Intelligence' 17<sup>th</sup> March 2023.

#### Guest Lecture delivered by the department faculty

- **Dr. Raghuram S** – 'Introduction to Transformers' at Five Day Faculty Development Program on 'Machine and Deep Learning research opportunities in Electrical Science Industries', organized by Dept. of EEE, RIT, from 13<sup>th</sup> to 17<sup>th</sup> March 2023.

#### Funded Project

- **Dr. C.G. Raghavendra**, Dr. Raghuram S - 'A non-intrusive method in BIOFLOC technology for determining fish growth, population and monitoring water quality for improving productivity in

aquaculture using information and communication technologies'. Grant Amount: Rs. 30 Lakhs. Funding Agency: Vision Group on Science and Technology (VGST).

- **Dr. S Imaculate Rosaline** – 'Rectenna System for wireless power transfer'. Grant Amount: Rs. 5 Lakhs. Funding Agency: RIT seed funding for research & development.

#### Achievements, Awards/Prizes by Faculty and students

- **Dr. S Sethu Selvi** has won Best Paper Award at 4<sup>th</sup> International Conference on 'Emerging Research in Electronics, Computer Science and Technology' (ICERECT 2022), December 2022.
- **Dr. V. Anandi** has applied for Indian Patent for "Design of High through put and low latency Double Precision Floating Point Arithmetic Unit for space signal applications" in February 2023.
- **Dr. Roshan Zameer Ahmed** is providing technical consultancy to Bangalore Institute of Management Studies, Mysore Road, Bangalore for the project 'Faculty Training Program on Design, Development & Delivery of Add-on Courses in Business Applications' for a fee of Rs. 35,000/-
- **Smt. Padmavathi K**, research scholar, Research Centre, ECE has been awarded Ph.D. degree for her research work 'Low Power Arithmetic Circuits using GDI Technique' under the guidance of Dr. Maya V Karki.
- **Smt. Sujatha Hiremath**, research scholar, Research Centre, ECE has been awarded Ph.D. degree for her research work 'Computer Aided Diagnosis based on Fusion of Multimodal Data' under the guidance of Dr. Deepali Koppad.

### DEPARTMENT OF CHEMICAL ENGINEERING

- One-day workshop Entrepreneurship Skill, Attitude and Behavior Development on 4<sup>th</sup> February 2023. Mr. Mahesh Murthy, started taking his motivational speech on Entrepreneurship Skill, Attitude and Behavior Development. The following topics will be covered in his speech during the workshop. The



Entrepreneurial Attitude and The Life Cycle of All Organizations, Creating Entrepreneurial Business Plans, Entrepreneurial Behavioral Development – Tools and Techniques and Skill sets: Leadership, business management, creative thinking and problem-solving.



- Faculty Development Programme was organized by the department of Chemical Engineering on 'Renewable, Green and Sustainable energy from Biomass/waste: An approach towards Sustainable Development', from 30.01.2023 to 03.02.2023. The renowned speakers viz., scientists, industry experts and teachers from across the state were invited as guest speakers who presented their views on the respective topic and area of expertise.

#### Publications in (National/International) Journals

- **Rajeswari M. Kulkarni**, J.K. Dhanyashree, Esha Varma, S.P. Sirivibha, M.P. Shantha - 'Impact of Treatment Strategies on Biohydrogen Production from Waste-Activated Sludge Fermentation, Materials for Hydrogen Production, Conversion, and Storage', Chapter 16, <https://doi.org/10.1002/9781119829584.ch16>, Wiley 2023.
- Prasaanth Ravi Anusuyadevi, **Darsi Jaya Prasanna Kumar**, A. D. H. V. OmkaaraJyothi, Neha S.

Patwardhan, Janani V, and ArjanMol – 'Towards Viable Eco-Friendly Local Treatment of Blackwater in Sparsely Populated Regions', Water, 15(3), Pages. 1-26, <https://doi.org/10.3390/w15030542>, MDPI, 2023.

- Ahmad Nawaz, Bineeta Singh, **Ranjeet Kumar Mishra**, Pradeep Kumar – 'Pyrolysis of low-value waste Trapanatanspeels: An exploration of thermal decomposition characteristics, kinetic behaviour and pyrolytic liquid product, Sustainable Energy Technologies and Assessments', Vol. 56, Page. 1-12, <https://doi.org/10.1016/j.seta.2023.103128>, Elsevier, 2023.
- **Ranjeet Kumar Mishra**, D. Jaya Prasanna Kumar, ArchanaNarula, Syeda Minnat Chistie, Sneha Ullhas Naik – 'Production and beneficial impact of biochar for environmental application: A review on types of feedstocks, chemical compositions, operating parameters, techno-economic study, and life cycle assessment', FUEL, Vol. 343, Pg.1-31, <https://doi.org/10.1016/j.fuel.2023.127968>, Elsevier, 2023.
- Saddam Sharief, **Sravanthi Veluturla**, Nagaraju Kottam, S. P. Smrithi, Rahul Singhvi, Esterification of levulinic acid to butyl levulinate over TiO<sub>2</sub>/WO<sub>3</sub>/SO<sub>4</sub> 2–: optimization and kinetic study, Biomass Conversion and Biorefinery, 1-15, <https://doi.org/10.1007/s13399-023-04016-z>, Springer, 2023.
- Kikaoseh Agweh, Michael R. Snowdon, **Ranjeet Kumar Mishra**, Guowei Chen, Singaravelu Vivekanandhan, Amar K. Mohanty, Manjusri Misra, - 'Production and characterization of waste nutshells derived biocarbon through slow pyrolysis: an investigation on the effects of pyrolysis temperature', Biomass Conversion and Biorefinery, 9-023- 1-15, <https://doi.org/10.1007/s133903851-4>, Springer, 2023.
- Pradima J. Britto, **Rajeswari M. Kulkarni**, **Sravanthi Veluturla**, Archana Narula - 'Application of Steapsin lipase for bioconversion of glycerol acetates from glycerol', Biocatalysis and Agricultural Biotechnology, Vol. 48, Pages. 102641 1-6, <https://doi.org/10.1016/j.bcab.2023.102641>, Elsevier, 2023.

#### Paper Presentation in National/International Conference:

- **Ms. A.D.H.V Omkara Jyothi**, Neha S Patwardhan,



**Janani V** - presented an article titled: towards viable eco-friendly local treatment of Blackwater in sparsely populated regions in the Journal WATER2023, volume15, issue3, January 2023.

#### Guest Lecture/s – Invited

- **Dr. Ramanathan K**, Professor, Vellore Institute of Technology, Tamil Nadu - Modern Approaches to Learning on 24<sup>th</sup> March 2023.
- **Dr. Seema Kapoor**, Professor, SSBUICT, Punjab University presented - Career Prospects and importance of Social Service on 20<sup>th</sup> March 2023.
- **Mr. Jayanth and Ms. Akankasha Kala**, Alumni of MSRIT - Career and Higher Studies Guidance for Chemical Engineers on 9<sup>th</sup> January 2023.

#### Funded Project

- **Dr. V Sravanthi**, Assistant Professor, project titled: Process Intensification Strategy for the Synthesis of Fuel Additive from Biomass Derived Levulinic Acid Via Reactive Distillation, Seed funding from MSRIT, Rs. 5,00,000/-

#### Achievement/s, Awards/Prizes by Faculty/Staff/Students

- **Ms. A.D.H.V Omkara Jyothi, Neha S Patwardhan, Janani V** - presented an article titled: Towards viable eco-friendly local treatment of Blackwater in sparsely populated regions in the journal WATER2023, volume 15, issue 3, January 2023.
- **Ms. Laila Nafisa** participated in 1500m. running competition and secured 3<sup>rd</sup> place conducted by RIT, 18<sup>th</sup> March 2023.

### DEPARTMENT OF INDUSTRIAL ENGINEERING AND MANAGEMENT

- Management Development Program on 'Digital Empowerment of Startups', 13<sup>th</sup> to 17<sup>th</sup> March 2023, jointly organized by the department of Management Studies & IEM dept. The main objective of the management development program is to provide a platform to address various topics which are redefining digital frontiers for digital empowerment of startups and to provide an ecosystem to interact with experts with respect to digital innovation in recent times.

#### Publications in National / International Journals - Faculty

- **M. Shilpa**, Alamelu, Monica R Mundada, Parthiban P, Nikhil V Patil, & Rahul M – 'Statistical analysis of factors affecting electronic product waste generation in Bangalore city', Informatics Journals, Journal of Mines, Metals and Fuels, Vol. 71 (2), Page. 255-260, 2023. DOI: 10.18311/jmmf/2023 Print ISSN: 0022-2755

#### Publications in National / International Journals - Students

- **Madhosh Gowda, Sanath Kumar. B** (Research Scholars) – 'Six Sigma Methodology to reduce noise level in manufacturing plant', Presented a technical paper in the National Conference on 'Transforming business management and disruptive technologies: Sustainability, Strategies and Challenges (NCTBMDT-2023)', organized by the Dept. of MBA, GSSS Institute of Engineering and Technology for Women, Mysuru held on 24<sup>th</sup> Feb 2023.
- **Komal S Kulkarni, Shreya Sunil** (Research Scholars) – 'Application of Human Resource Analytics to improve retention of employees in educational technology', Presented a technical paper in the National Conference on 'Transforming business management and disruptive technologies: Sustainability, Strategies and Challenges (NCTBMDT-2023)', organized by the Dept. of MBA, GSSS Institute of Engineering and Technology for Women, Mysuru held on 24<sup>th</sup> Feb 2023.
- **Vinay Mavuthanahalli, Channabasavegowda** (M. Tech Students, Dept. of IEM, RIT) & **Hamritha Shankar** – 'Statistical analysis of PV cell power generation and influence of weather on power generation', Informatics Journals, Journal of Mines, Metals and Fuels, Vol. 71 (2), Pg. 217-222; 2023. DOI: 10.18311/jmmf/2023 Print ISSN: 0022-2755.

#### Guest Lecture delivered by the department faculty

- **Dr. R. Shobha** – 'Effective Pedagogy in contemporary Education', FDP on 'Advanced Pedagogy', S.J. Government Polytechnic, Bengaluru, 13<sup>th</sup> March 2023.

- **Dr. M. Rajesh** – 'Innovation and Entrepreneurship opportunities', Vivekananda School, Bengaluru, 27<sup>th</sup> January 2023.
- **Dr. M. Rajesh** – 'Importance of industrial engineering in ergonomics' – St. Joseph Institute of Management, Bengaluru, 23<sup>rd</sup> March 2023.

#### Funded Project

- **Dr. M. Rajesh** – 'Design and development of girth bagging equipment using the principles of ergonomics', Institution of Engineers (India), Rs. 60000/- for 1-year duration

#### Faculty Achievements - Patent

- Veeresh Kogathoor, **Dr. M. Shilpa, Dr.G.S. Prakash, Hamritha S** – 'A device for loading goods onto a vehicle', Application number: 202341005164, TEMP/E-1/5904/2023-CHE. Application filing date: 25<sup>th</sup> Jan 2023.

### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

- EEE computer society funded outreach activity conducted on 25<sup>th</sup> January 2023.

#### The following Workshops/FDPs/Seminars/Conferences Organized

- 'Essential Tools and Techniques for Researchers: A hands - on Approach', from 20<sup>th</sup> to 24<sup>th</sup> February 2023.
- 'Recursive Thinking to Dynamic Programming: A roadmap for problem solving', 7<sup>th</sup> - 10<sup>th</sup> March 2023 & 16<sup>th</sup> - 17<sup>th</sup> March 2023.

#### Publications in (National / International) Journals

- **Dr Sangeetha. V** – 'Tamper Proof Air Quality Management System using Blockchain', International Journal of Advanced Computer Science and Applications, Vol. 14 (2), February 2023.
- **Pradeep Kumar D** – 'DAMIAN – data accrual machine intelligence with augmented networks for contextually coherent creative story generation', International Journal of Business Intelligence

and Datamining, <https://doi.org/10.1504/ijbidm.2023.127314>, Jan 2023.

- **Pradeep Kumar D** – 'Building a hybridised meta-heuristic optimisation algorithm for efficient cluster analysis', International Journal of Business Intelligence and Data Mining, <https://doi.org/10.1504/ijbidm.2023.127314>, Jan 2023.

#### Guest Lecture/s – Invited

- **Mrs. Vijay Lakshmi Venugopalan** from TIME Institute – 'Career and Higher Education Guidance Programme' on 3<sup>rd</sup> March 2023.
- **Mr. Harish Kumar, Mr. Divay, Mr. Hitesh** from Nestlings – 'GRE Guidance Workshop' on 24<sup>th</sup> March 2023.
- **Dr. Shivram**, NAL – 'Plagiarism Software' on 24<sup>th</sup> February 2023.

#### Guest Lecture delivered by the department faculty

- **Dr. Annapurna P Patil, Pradeep Kumar D, Jammuna S Murthy** – 'Code RIT'S Wackiest Hackathon 2023', on 27<sup>th</sup> and 28<sup>th</sup> January 2023.

#### Funded Project:

- **Dr. Annapurna Patil** – 'Design and implementation of a predictive cloud-based application for early detection and risk stratification of oral cancer using computational pathology', received fund from RIT Seed Money, Rs 5.45.000/-
- **Dr. Monica** – 'Design of a Secure assistant-based system for Elderly People using IoT, machine learning and computer vision techniques', received fund from RIT Seed Money, Rs. 5,03,230/-

#### Patents

- **Dr. Parkavi, Dr. Sangeetha V and Prof. Mallegowda G** received a patent for 'Space Ensuring Drones Based IOT System Using Machine Learning Interfaces', from Government of India, 2023.

#### Achievement/s, Awards/Prizes by Faculty/ Staff/ Students

- Ms. Nikita B, 8<sup>th</sup> semester received IEEE Bangalore Outstanding WIE Volunteer award in Jan 2023.



- Computer Science Department won 1<sup>st</sup> prize in March-past with the theme of celebrating 60 years Excellence in Education - 'Progressive Institution: Progressive Nation', at Sports Meet-RIT.
- **Dr Parkavi, Prof. Soumya C S and Nagraj** won 1<sup>st</sup>, 3<sup>rd</sup> and 1<sup>st</sup> prize respectively for 100m. Athletic Sports Meet-RIT.

## DEPARTMENT OF ELECTRONICS & INSTRUMENTATION ENGINEERING

- Workshop titled 'Design Thinking, Critical Thinking and Innovation Design' has been organized for I year students of RIT in collaboration with Entrepreneur Development Cell, RIT on 6<sup>th</sup> and 7<sup>th</sup> March 2023. Department coordinator: Dr Christina Grace.

### Faculty Publications in (National / International) Journals

- **Shivaprakash Ganganna** et.al – 'Human emotion detection and classification using modified Viola-Jones and convolution neural network', IAES International Journal of Artificial Intelligence (IJ-AI), Vol. 12(1), March 2023, pp. 79-86.
- **Jyothirmayi, M.,** Raj, V.B., Lekhana, V., Manjunath, P. - 'Design and Implementation of an Automated Fuel Station. In: Chokkadi S., Bandyopadhyay R. (eds) Smart Sensors Measurement and Instrumentation', Lecture Notes in Electrical Engineering, Vol. 957, 2023, Springer, Singapore. [https://doi.org/10.1007/978-981-19-6913-3\\_15](https://doi.org/10.1007/978-981-19-6913-3_15) (Book Chapter).
- **Suma K V, Niranjana Murthy H S, Venu K N** – 'Parametric Standardization and Quantification of EMG Signals for detection of muscle function of Knee Osteoarthritis', Journal of Survey in Fisheries Sciences (JSFS), Vol. 10(4S), March 2023, Pg. 387-395.

- **Elavaar Kuzhali S., Manvitha K., Singh A., Pranathi L., Dhavule S., Poorvita M** – 'Automatic Fabric Classifier Using Nesterov-Accelerated Adaptive Moment for Washing Machine', In: Chokkadi S., Bandyopadhyay R. (eds) Smart Sensors Measurement and Instrumentation. Lecture Notes in Electrical Engineering, Vol. 957, 2023, pp. 139-151, Springer Nature Singapore. [https://doi.org/10.1007/978-981-19-6913-3\\_9](https://doi.org/10.1007/978-981-19-6913-3_9) (Book Chapter).
- **A Saravanan** et.al – 'Security Measures for Crops and Domestic Animals using CNN', International Journal of Innovative Science and Research Technology, Vol. 7(6), 2022.

### Faculty Achievement

- **Dr H S Niranjana murthy**, received second prize in the quiz competition conducted during one-week national level online FDP on 'Mathematics for Data Science and Machine Learning' organised by department of Computer science and engineering, Gopalan College of Engineering and Management, Bangalore from 2nd - 7th Jan 2023.
- **Dr J V Alamelu**, Reviewer for IEEE Bangalore Humanitarian Technology Conference (IEEE B-HTC 2023) organized by JSS Academy of Higher Education and Research, JSS Hospital, Mysuru, during 24<sup>th</sup> and 25<sup>th</sup> March 2023.
- **Dr. Christina Grace**, Reviewer for RAEEUCCI 2022 – A Virtual International Summit on Recent Advances in Electrical, Electronics, Ubiquitous Communication and Computational Intelligence conducted by SRM Institute of Science and Technology, Tamil Nadu.
- **Dr H S Niranjana murthy**, completed the Industry consultancy work in the form of technical guidance for the development and Evaluation of PLC based Faucet life testing machine at Flow and Force Engineers & received an amount of Rs.75,000 for the 3<sup>rd</sup> phase of consultancy work

### Guest Lecture delivered

- **Dr. J V Alamelu** - 'Digital Education for Women Empowerment and Safety', 8<sup>th</sup> March 2023 for Central pollution control board, Bangalore.
- **Dr. Christina Grace** - 'Design thinking - History, scope, application' 6<sup>th</sup> March 2023 for I year students of Ramaiah Institute of Technology, Bangalore.



## DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING



- The workshop on 'Recursive Thinking to Dynamic Programming: A roadmap for Problem Solving' was conducted in four phases on 7<sup>th</sup>, 9<sup>th</sup>, 15<sup>th</sup>, and 16<sup>th</sup> of March 2023. Mr. Channa Bankapur, a renowned Trainer in Computational Thinking and Algorithmic Problem-solving at GoMaster.in was resource person. The objective of the workshop was to offer practical training on various essential data structure and algorithm (DSA) concepts, Recursive Thinking with Head Recursion, Recursive Thinking on Binary Trees, Recursive Trees Analysis, Graphs, Backtracking, Solution Space of Search Problems, Dynamic Programming, Recurrence Derivation, Memorization and Bottom-Up Dynamic Programming and Dynamic Programming on Counting Problems.

### Publications in (National / International) Journals (Faculty)

- Sukruth G, **Vijaya Kumar B P**, Tejas M R, Rithvik K, Trisha Ann Tharakan – 'Enhancing Collaborative Interaction with the Augmentation of Sign Language for the Vocally Challenged', (IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 14(1), 2023.
- M. Sinthuja, Vijayakumar B. P.** – 'Frequent Item set Generation Using Clustering', Grenze International Journal of Engineering and Technology, Vol. 9(1), Jan 2023, pp.1361-1370.
- Savita Shetty**, Annapurna P. Patil – 'Oral cancer Detection Model in Distributed Cloud Environment via Optimized Ensemble Technique', Biomedical Signal Processing and Control, Volume 81, March 2023.

### Book Chapters

- Chandrashekhar B N, **Sanjay H A** – 'Accelerating Real-Time Face Detection Using Cascade Classifier on Hybrid [CPU-GPU] HPC Infrastructure', Emerging Research in Computing, Information, Communication and Applications, Lecture Notes in Electrical Engineering, Vol. 928, Springer, Singapore.

### Funded Projects:

- Dr. Krishna Raj PM** – 'Developing Interactive Digital Games for Improving the Foundational Numerical Skills Among Primary School Children in Karnataka', KSCST. Amount: ₹ 4,61,000/-
- Dr. Pushpalatha M N** – 'Facial Emotion Recognition and Encoding for the Visually Impaired', VGST, Amount: ₹ 3,00,000/-
- Dr. Pushpalatha M N** – 'Speech to sign Language Conversion and vice versa', Seed Funding, RIT. Amount: ₹ 4,70,000/-
- Dr. Lincy Meera Mathews** – 'AI Approach for plant production using hydroponics and Aeroponics', Seed Funding, RIT, Amount: ₹ 3,29,600/-

### Achievements /Awards /Prizes by Faculty/Staff// Student

- Nitin Krishna (1MS20IS028)** - won second prize in Folk Orchestra held in 22<sup>nd</sup> VTU Youth Festival, YUVOTHSAVA at Nagarjuna College of Engineering, Bangalore from 29<sup>th</sup> to 31<sup>st</sup> March 2023.
- Sharath R Maiya** – won 2<sup>nd</sup> place in Prashne Namdu Uttara Nimdu (Kannada Quiz) held at Dayananda Sagar College of Engineering, March 2023.

## DEPARTMENT OF MEDICAL ELECTRONICS ENGINEERING

- One-day Symposium Medipulse-2023 with theme 'Sustainability in Healthcare' on 17.02.2023.

### Publications in National / International Journals

- N Sriraam**, Avarru Srinivasalu – 'A Signal Processing Framework for the Detection of Abnormal Cardiac Episodes', CardiovascEng Tech, DOI: 10.1007/s13239-023-00656-4, Feb 2023.

- **N Sriraam**, T V Sushma – 'A Computer Aided Markov Random Field Segmentation algorithm for assessing Fetal Ventricular Chambers', Critical Reviews in Biomedical Engineering, Volume 51, Issue 1, March 2023, pp. 15-27.

#### Paper presentation in National /International Conferences

- Uma Arun, **N Sriraam** – 'Real-time Evaluation of Cardiac Activities with Multi-features with KNN Classifier- A Pilot Study', was presented in Second International Conference on Artificial Intelligence, Computational Electronics and Communication Systems (AICECS 2023) on 16<sup>th</sup> - 17<sup>th</sup> February 2023
- Tejaswini S, **N Sriraam** – 'Recognition of High-Risk Neonates in NICUs Using Perceptual Linear Prediction Cepstral Coefficients with Mobility Features and Support Vector Machine Classifier', was presented in Second International Conference on Artificial Intelligence, Computational Electronics and Communication Systems (AICECS 2023) on 16<sup>th</sup> - 17<sup>th</sup> February 2023.

#### Funded project

- **Dr. Sriraam N**, received the ICMR grant of 17.92 Lakhs for the project titled 'An Automated Quantitative Framework with Explainable Artificial Intelligence (XAL)', on 24.01.23.

### DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING



- Three-day summer school training program on 'Embedded System Design Using ARM Cortex Microcontrollers', from 23<sup>rd</sup> to 25<sup>th</sup> February 2023.



- An industrial visit was scheduled for 6<sup>th</sup> and 8<sup>th</sup> - semester students to U R Rao Satellite Centre, ISRO, Bengaluru on 23<sup>rd</sup> & 27<sup>th</sup> March 2023 respectively.

#### Publications in National / International Journals

- Suma K V, Niranjan Murthy, **Venu K N**, Manjunath P R – 'Parameter standardization and quantification of EMG signals for detection of muscle function of knee osteoarthritis subjects', Journal of Survey in Fisheries Sciences, Vol. 10 (4S), February 2023, pg. 387-295.

#### Paper Presentation in National / International Conference

- Manvi S., **Shobha K. R.**, Vastrad S. (2023) – 'Performance Analysis of Routing Protocol for Low Power and Lossy Networks (RPL) for IoT Environment'. In: Molla A.R., Sharma G., Kumar P., Rawat S. (eds) Distributed Computing and Intelligent Technology. ICDCIT 2023. Lecture Notes in Computer Science, vol.13776. Springer, Cham. [https://doi.org/10.1007/978-3-031-24848-1\\_25](https://doi.org/10.1007/978-3-031-24848-1_25), Jan 2023.
- **S G Shivaprasad Yadav**, Sumangala Itagi, B V N V Krishna Suresh, Hemalatha K.L, Ramachandra A C – 'Human Illegal Activity Recognition Based on Deep Learning Techniques', 2023 IEEE International Conference on Integrated Circuits and Communication Systems (ICICACS), DOI: 10.1109/ICICACS57338.2023.10099857, ISBN:979-8-3503-9847-2.
- Renuka Devi, Suresh Patel, **S G Shivaprasad Yadav**, Gandla Shivakanth, Divya G – 'An Efficient Inter-Cluster Wireless Sensor Network Communication by using Priority Queues and Reliability Models', 2023 IEEE International Conference on Integrated

Circuits and Communication Systems (ICICACS), DOI:10.1109/ICICACS57338.2023.10100034, ISBN:979-8-3503-9847-2

- Swaroopa Rani B, Geetha B, **S G Shivaprasad Yadav**, Gandla Shivakanth, Manjula B M – 'Deep Learning Based Cancer Detection in Bone Marrow using Histopathological Images', 2023 IEEE International Conference on Integrated Circuits and Communication Systems (ICICACS), DOI: 10.1109/ICICACS57338.2023.10100116
- Jagadevi C Gudda, Vijayrani Katkam, **Nisha S L**, K Aruna Bhaskar, Naveen I G – 'Secured Data Transmission in Multiplexing System', 2023 IEEE International Conference on Integrated Circuits and Communication Systems (ICICACS), DOI: 10.1109/ICICACS57338.2023.10099954.
- Vankudothu Malsoru, Amareshwari Patil, **S M Kusuma**, Gandla Shivakanth, N. Samanvita – 'An Efficient SFLA and CUCKOO Search Hybridization for Source Distribution in Cloud Computing', 2023 IEEE International Conference on Integrated Circuits and Communication Systems (ICICACS), DOI: 10.1109/ICICACS57338.2023.10100133.
- Priyadarshini C Patil, Ashwin R K, **Arvind Kumar G**, M Bhaskar, Rajesh N – 'Analysis of Facial Expression using Deep Learning Techniques', 2023 IEEE International Conference on Integrated Circuits and Communication Systems (ICICACS), DOI: 10.1109/ICICACS57338.2023.10100110.
- **Dr. Parimala P, Dr. B.K. Sujatha, Meghana S** – 'Wearable Fractal Antenna design using Hilbert Transform', 4th International conference on Multidisciplinary innovation in Academic research, 17th and 18th March 2023.
- Smita C Chetti; Shilpa Patil; **Ramya H R**, Gandla Shivakanth; Shashidhar K S – 'FPGA Based Area Reduction with Recurrent Neural Network and VHDL Modelling', 2023 IEEE International Conference on Integrated Circuits and Communication Systems (ICICACS), DOI:10.1109/ICICACS57338.2023.10099853.

#### Guest Lecture (Invited)

- **Arun Micheal**, Director (Compliance) - EMF Awareness by the Department of Telecom (DOT)

Karnataka LSA, Govt. of India on 28<sup>th</sup> December 2022.

#### Guest Lecture delivered by the department faculty

- **Dr. Shobha K R** - 'IoT and Embedded Systems', one-month internship, conducted by IETE Bengaluru, 27th Feb to 24th March 2023.
- **S G Shivaprasad Yadav** - 'Embedded Systems and Applications' one-month internship, conducted by IETE Bengaluru, 27th Feb to 24th March 2023.
- **Dr. H R Ramya** - 'Fuzzy Logic and its Applications' under IETE Students Forum, IQAC-RVCE, Bengaluru on 9th February 2023.

#### Funded Project

- **Dr. B. K. Sujatha** – 'Centre of Learning for setting up Microwave and Antenna Lab' sponsored by VGST K-FIST Level 2 for 40 lakhs.
- **Dr. Shobha K R, Dr. S G Shivaprasad Yadav** – 'Setting up of Internet of things (IoT) based Sensor Network Lab', sponsored by VGST K-FIST Level 2 for 40 lakhs.
- **Dr. Viswanatha Talasila** – 'Enabling functional mobility through advanced gait analysis', sponsored by BIRAC Rs. 21.4 lakhs
- **Dr. Shobha K R, Dr. Parimala P, Nisha S L** – 'Design, Development and Prototyping of High Accuracy NavIC Receiver for Rapid Topographic Survey' sponsored by DST – Device Development ProgrammeRs. 52.58 lakhs.
- **Dr. Vijaya Kumar B P, Kusuma S M, Dr. Sumana M, Dr. Dinesh P A**, - 'Use of Artificial Intelligence (AI) Expert Systems(ES) Machine Learning (ML) in Mission operations', sponsored by ISRO-RESPOND, Rs. 16,94,880.00

#### Achievement/s, Awards/Prizes by Faculty/Staff/Students

- **Dr. Parimala P**, Best Senior Faculty Award from Novel Research academy, Puducherry, India on 17th March 2023.
- **Dr. Shobha K R** has published two chapters, titled 1. Deep Learning Applications for IoT in Healthcare Using Effects of Mobile Computing 2.



Classification and Diagnosis of Alzheimer Disease Using Magnetic Resonance Imaging are published in the Book: 'AI and IoT-based intelligent Health Care & Sanitation', in March 2023, publisher: Bentham Science Publisher (Indexed in ESCI and Scopus), ISBN: 978-981-5136-53-1(Online), ISBN:978-981-5136-54-8. (Print), <https://benthambooks.com/book/9789815136531/>

## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING (ARTIFICIAL INTELLIGENCE & MACHINE LEARNING) (CYBER SECURITY)

- Symposium on Achieving Problem-Solution Fit and Product - Market Fit by SAP YOUNG UPSTARTS on 4<sup>th</sup> February 2023.



- MoU with SAP LABS Private Limited, Bangalore for Enhanced Industry-Academia Relationship on 7<sup>th</sup> March 2023.



- Five Days Faculty Development Programme on 'Cyber Security Challenges and Ideations', on 20<sup>th</sup> to 24<sup>th</sup> Feb. 2023.

### Publications in (National / International) Journals

- **Dr. M N Thippeswamy** et.al. – 'Fake Product Identification System Using Blockchain', 2022 4th International Conference on Circuits, Control, Communication and Computing (I4C) DOI: 10.1109/I4C57141.2022.10057923 (March 2023).
- **Dr. Siddesh G M** et.al. – 'Deep LSQR: Neural collaborative filtering for recommendation systems in the smart community', Multimedia Tools and Applications, Springer, Vol. 82, (2023), Pg. 8709–8728.
- **Dr. Siddesh G M** et.al. - 'Protein tertiary structure prediction by integrating ant colony optimization with path relinking and structure knowledge', International Journal of Information Technology, Springer, Vol. 15, (2023), Pg. 1399–1405.

### Paper presentation in National / International Conferences/ Book Chapter

- **Sini Anna Alex** - Data-Driven Mathematical Modeling for AI-Based Security Applications, Handbook of Research on Data-Driven Mathematical Modeling in Smart Cities, 175-191, IGI Global, 2023.
- **Sini Anna Alex** –'Qualitative Analysis of Anomaly Detection in Time Series', 4<sup>th</sup> International Conference on Circuits, Control, Communication and Computing (I4C), IEEE.

### Guest Lecture Guest Lecture/s – Invited

- **Mr. Ajay K Gupta**, Old Dominion University, USA– 'The electricity of the future', 14-02-2023.

### Guest Lecture delivered by the department faculty

- **Dr. M N Thippeswamy** – 'Direct and Indirect Tools for PO and PSO Attainment, PO and PSO Attainment and Gap Analysis', Acharya Institute of Technology, Bangalore, 16-02-2023.
- **Dr. M N Thippeswamy** – 'Direct and Indirect Tools for PO and PSO Attainment, PO and PSO Attainment and Gap Analysis', IQAC RIT, 19-01-2023.

*"The man who does not read books has no advantage over the one who cannot read them."*

— Mark Twain

### Achievement/s, Awards/Prizes by Faculty/ Staff/ Students

- **Mrs. Sujatha D H**, Instructor: 100 Mts Running - 2<sup>nd</sup> Prize, 15<sup>th</sup> Annual athletic sports meet RIT, 18-03-2023.
- **Yash Gupta & Hari Vishwanath** – CSE (Cyber Security) Students: CodeRIT'S WHACKIEST Hackathon 2023, 2<sup>nd</sup> Runners Up – WYSTERIA, Date: 27<sup>th</sup> and 28<sup>th</sup> January 2023.
- **Shravan M R** – CSE (AI&ML) Student: CodeRIT'S WHACKIEST Hackathon 2023, 3<sup>rd</sup> Runners Up – WYSTERIA, Date: 27<sup>th</sup> and 28<sup>th</sup> January 2023.

- The Department of Biotechnology & Department of Chemistry, RIT, organized DST-SERB Sponsored Workshop on 'Multidisciplinary applications of Electrochemical Techniques' on 10.03.2023.



### DEPARTMENT OF BIOTECHNOLOGY



- The Department of Biotechnology, RIT, organized 'National Science Day' on 3<sup>rd</sup> March 2023.



- An industrial visit to Bangalore Bioinnovation Centre, Bengaluru was organized on 23<sup>rd</sup> January 2023

### Publications in International Journals (Faculty)

- **K. Samrat** – 'Enhanced Antibacterial Activity of Highly Biocompatible Polymeric Core-Shell Levofloxacin Gold Nanocomposite Formulation against Pseudomonas aeruginosa', Applied Biochemistry and Biotechnology, Vol. 195(3), (2023), Pg. 1837-1861.
- **K. Samrat** - 'Production, nanoformulation, and potential anticancer effect of camptothecin metabolites from biomass of Aspergillus niger', Biomass Conversion and Biorefinery, (2023), Pg. 1-14.
- **Samrat K** – 'Sustainable approach to manage the vulnerable rodents using eco-friendly green rodenticides formulation through nanotechnology principles - A review', Process Safety and Environmental Protection, (2023).
- **Samrat K** – 'Antinociceptive activity of marine derived chitosan coated triphala extract against formalin-induced zebrafish pain model', Journal of Environmental Biology, Vol. 44(1), (2023), Pg. 64-72.
- **Gokulakrishnan M** – 'Bioinspiration synthesis of hydroxyapatite nanoparticles using eggshells as a calcium source: Evaluation of Congo red dye adsorption potential', Journal of Materials Research and Technology, Vol. 22, (2023), Pg.169-180.
- **Gokulakrishnan M** – 'Green synthesized cobalt oxide nanoparticles with photocatalytic activity

- towards dye removal', Environmental Research, Vol. 216, (2023), Pg. 114766.
- **Gokulakrishnan M** – 'Adsorptive removal of tetracycline from aqueous solutions using magnetic Fe<sub>2</sub>O<sub>3</sub>/activated carbon prepared from Cynometramiflora fruit waste', Chemosphere, Vol. 310, (2023), Pg. 136892.
  - **Gokulakrishnan M** – '2, 4 - Dichlorophenoxyacetic acid (2, 4-D) adsorptive removal by algal magnetic activated carbon nanocomposite', Chemosphere, Vol. 310, (2023), Pg. 136883.
  - **Gokulakrishnan M** – 'Synthesis of photocatalytic zinc oxide nanoflowers using Peltophorumpterocarpum pod extract and their characterization', Applied Nanoscience, Vol. 13(1), (2023), Pg. 847-857.
  - **Abhijith S R.** – 'Experimental Oxidative Stress Breaks Down the Barrier Function of the Corneal Endothelium', Journal of Ocular Pharmacology and Therapeutics, Vol. 39(1), (2023), Pg. 70-79.
  - **Monika P, M. N. Chandrababha** – 'Standardized ready-to-use laboratory protocol to isolate primary human wound associated fibroblasts from infected wound samples for clinical applications', Journal of Microbiological Methods, (2023), Pg. 106712.
  - **Monika P, M. N. Chandrababha** – 'Gene expression studies in primary human acute and chronic wound fibroblasts treated with most popular wound healing phytoextracts', South African Journal of Botany, Vol. 155, (2023), Pg. 205-213.
  - **Vijayalakshmi V, Bindu Sadanandan** - 'In vitro comparative cytotoxic assessment of pristine and carboxylic functionalized multiwalled carbon nanotubes on LN18 cells', Journal of Biochemical and Molecular Toxicology, Vol. 37(3), (2023), Pg. e23283.
  - **Vijayalakshmi V, Bindu Sadanandan** – 'Aqueous Spice Extracts as Alternative Antimycotics to Control Highly Drug Resistant Extensive Biofilm Forming Clinical Isolates of Candida albicans', bioRxiv, (2023), 2023-01.
  - **N. Ahalya** – 'Experimental study on the treatment of urban garment industry wastewater to mitigate groundwater contamination using a solar evaporative still', Urban Climate, Vol. 49, (2023), Pg. 101435.
  - **N. Ahalya** – 'Magnetic porous Ag<sub>2</sub>O/Chitin nanostructure adsorbent for eco-friendly effective disposing azo dyes', Environmental Research, Vol. 218, (2023), Pg. 114824.
  - **N. Ahalya** – 'Hydroponics, Aeroponics, and Aquaponics Technologies in Modern Agricultural Cultivation', In Trends, Paradigms, and Advances in Mechatronics Engineering, pp. 223-241. IGI Global, 2023.

#### Student Publications:

- **T. P. Krishna Murthy, N. Durga Prasad, Praveen Swetha, S. Shreyas, Ramya Pattabiraman, Shishira S. Nair** – 'Comprehensive analysis of non-synonymous missense SNPs of human galactose mutarotase (GALM) gene: an integrated computational approach', Journal of Biomolecular Structure and Dynamics, (2022), Pg. 1-15.
- **Anushka A Poola, Prithvi S. Prabhu, T. P. Krishna Murthy, Swati Krishna** – 'Ligand-based pharmacophore modeling and QSAR approach to identify potential dengue protease inhibitors', Frontiers in Molecular Biosciences, Vol. 10, (2023).

#### Funded Projects Ongoing:

- **Dr. Samrat K & Dr. Priyadarshini Dey**, Investigation of anticancer potential of nanosulphur against ovarian cancer, RIT Seed Funding, RIT2023, Rs. 5.0 Lakhs
- **Dr. Abhijith S R**, Role of ZIC1 (Zink finger of the cerebellum) in the progression of triple negative breast cancer VGST (K-FISTL1)/DST/KSTePS/2021-2022 dated 14.02.2022, 15.0 Lakhs
- **Dr. Divyashri G** – 'Coffee Waste Utilization for the production of food oligosaccharides', RIT Seed Funding, RIT, Rs. 3.30 Lakhs.
- **Dr. Bindu S** - Development of an antimicrobial lock therapy solution for control of candida albicans under flow conditions, KSCST, Rs. 4.50 Lakhs.
- **Dr. Bindu S & Mrs. Vijayalakshmi V** – 'Development of a Biocompatible Poly (L-Lactic Acid) - Chitosan hydrogel scaffold for neuronal regeneration, Ministry of Science & Technology', DST, Rs. 32.90 Lakhs.
- **Dr. Bhavya S G** – 'An investigation of the role of S-acylation in cardiac hypertrophy – proteomics,



site-specific mutation and molecular dynamics simulations approach', DST, SERB- TARE, Rs. 18.30 Lakhs

- **Dr. Chandra Prabha M N & Mrs. Monika P** – 'A biological strategy to enhance chronic wound healing in patients using Human Autologous Platelet – Rich Plasma'. RIT Seed Funding, RIT, Rs. 2.6 Lakhs
- **Dr. Chandra Prabha MN & Dr. Harikrishna R** – 'Design of structurally modified nanoceria with enhanced haloperoxidase activity to combat sulphate reducing bacteria (SERB) induced biocorrosion: A biomimetic approach to combat microbiologically – influenced Corrosion (MIC) of marine structures', DST, CRG, Rs.41.83 Lakhs.
- **Dr. Chandra Prabha M N & Dr. Harikrishna R** – 'Designing of Novel Biocompatible and Multifunctional Nano Ceramic Coatings for Medical Implants', VGST-KFIST L2, Rs.30.0 Lakhs.
- **Dr. Lokesh K N** – 'Stimuli Responsive Polymeric Particles Containing Iron (III) Chelating Bioactive Ligands for Mitigation of Intracellular Labile Iron Pool (LIP)', SERB, DST, TARE, Rs. 18.30 Lakhs.

#### Guest Lecture/s – Invited

- **Prof. Teena Mary Thomas**, Research Associate, iCrest, International Stem Cell Services, Bengaluru, - 'Mesenchymal Stem cells: Unveiling the therapeutic potentials', on 24.02.2023.

#### Achievement/s, Awards/Prizes- Student Achievements



*"The beautiful thing about learning is that no one can take it away from you."*

— B.B. King

## DEPARTMENT OF MATHEMATICS

#### Publications in (National / International) Journals

- **Aruna A S and M S Basavaraj** – 'Onset of stability and heat transfer by Rayleigh - Benard magne to convection with variable viscosity thermal/gravity modulation', Numerical Heat Transfer, Vol. 83(4), 2023, Pg. 227-2424.
- **G Sowmya** – 'Artificial Neural network modelling for predicting the transient thermal distribution in a stretching/shrinking longitudinal fin', Journal of heat and mass transfer, Vol. 145, 2023, Pg. 083301.
- **G Sowmya** – 'Thermal performance of a longitudinal fin under the influence of magnetic field using sumudu transform method with pade approximant (STM-PA)', ZAMM - Journal of Applied Mathematics and Mechanics, Vol. 26, Pg. e2021005 26, 2023.
- **G Sowmya** – 'Squeezing flow of aqueous CNTs-Fe<sub>3</sub>O<sub>4</sub> hybrid nanofluid through mass-based approach: Effect of heat source/sink, nanoparticle shape, and an oblique magnetic field', Results in Engineering, Vol. 17, 2023, Pg. 100976.
- **G Sowmya** – 'Non-Fourier heat transfer in a moving longitudinal radiative convective dovetail fin', Case Studies in Thermal Engineering, Vol. 41, 2023, Pg. 102623.
- **G Sowmya** – 'Convective-radiative thermal investigation of a porous dovetail fin using spectral collocation method', Shams Engineering Journal, Vol. 14, 2023, Pg. 101811.

#### Guest Lecture delivered by the department faculty

- **Dr. Shashiprabha S Gogate** - 'Computational Techniques in Fluid Dynamics', two-day workshop organized under the scheme Scientific Social Responsibility of the core Research Grant Project by the Department of Mathematics, Bengaluru City University, on 24<sup>th</sup> and 25<sup>th</sup> January 2023.



### Achievement/s, Awards/Prizes by Faculty/ Staff/ Students

- **Dr. Srikantha N.** has been awarded first place for his contribution of cover photo to the special issue of Abhijna Darpana – Quarterly Newsletter of GEF, December 2022

### Faculty who obtained Ph.D. degree



- **Mr. B. Azghar Pasha** is awarded Ph.D in Mathematics from VTU, Belagavi for the thesis titled "Flow of ferromagnetic liquid film over an unsteady stretching surface" under the guidance of Dr. V Ramachandra Murthy, Professor (Retired), Dept. of Mathematics, RIT, Bengaluru.

## DEPARTMENT OF CHEMISTRY



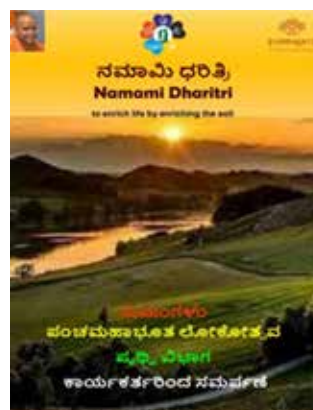
- One-day seminar on 'Advanced Technological Materials', the speakers were Dr. Rudresh. CEO, Vijaya Metal Finishing, Bangalore and Dr. J. N Balaraju, Chief Scientist and Deputy Head of Surface Engineer Division. CSIR, NAL, Bangalore.



- In association with 'Nadoja Narayana Reddy Foundation', Doddaballapura, Luminescence Society of India: Karnataka Chapter (LSIKC) conducted a program 'Soil health & Soil fertility', on 15-01-2023.



- The members of Luminescence Society of India: Karnataka Chapter (LSIKC) participated in "Sumangalam Panchamahabhuta Lokotsava" program and actively involved in designing 'Bhootatava, Earth Gallery'. This week-long Lokotsava celebration was held at Kanneri Math in Kolhapur (Maharashtra), spread on over 650 acres. It is being celebrated with the guidance of the Saint Kadsiddheshwar Swamiji. The Participants from 25 states, Delegates from 50 countries, thousands of Vice-Chancellors, Doctors, Saints and over 30 lakh devotees were attended.



"ನಮಾಮಿ ಧರತಿ" E-Book  
(ಮಣ್ಣಿನ ಕುರಿತಾದ ಬರಹಗಳು)

ನಮಾಮಿ ಧರತಿ



- The members of Luminescence Society of India: Karnataka Chapter (LSIKC) participated in "Sumangalam Panchamahabhuta Lokotsava" held at Kanneri (Maharashtra) on 20-02-2023 to 26-02-2023, On this occasion, published a/e-book titled "Namaami Dharithri" (Edited by Dr. B.

M. Nagabhushana & Dr. Harichandra, Associate professor, Mechanical Engg.) released at the on 22<sup>nd</sup> February, 2023 by Adrushya Kadasiddeshwara Swamiji of Kaneri Mutt.



- In association with 'Shivaganga Savayava Tarakari Belegarara Sangha', Kempalinganahalli, Nelamangala. Luminescence Society of India: Karnataka Chapter (LSIKC), conducted a program 'Deshi seeds importance and their production', on 18<sup>th</sup> and 19<sup>th</sup> March 2023.

#### Publications in (National / International) Journals

- Pompapathi Kurlla, Anantharaju Kurupalya Shivram, **Nagaraju Kottam** – 'Green-engineered synthesis of  $\text{Bi}_2\text{Zr}_2\text{O}_7$  NPs: excellent performance on electrochemical sensor and sunlight-driven photocatalytic studies', International journal of Environmental Science and Pollution Research, 2023/1/5, Pg. 1-21.
- Usha Jinendra, **BM Nagabhushana**, Dinesh Bilehal - 'Encapsulated Co-ZnO nanospheres as degradation tool for organic pollutants: Synthesis, morphology, adsorption and photo luminescent investigations', Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Vol. 299, 2023, Pages. 122879.
- Vinayak Adimule, Sheetal Batakurki, Vinay S Bhat, **Basappa C Yallur**, Gurumurthy Hegde, Chinna Bathula – 'Enhanced dielectric and supercapacitive properties of spherical like Sr doped  $\text{Sm}_2\text{O}_3/\text{CoO}$  triple oxide nanostructures', Journal of Energy Storage, Vol. 57, 2023/1/1, Pg. 106318.
- Abhishek Udnoor, Manjunath Lokolkar, **Basappa C Yallur**, Raju Kale, Muttanagoud N Kalasad – 'Monitoring the interactions between bovine serum albumin and ZnO/Ag nanoparticles by spectroscopic techniques', Journal of Biomolecular Structure and Dynamics, Vol. 41(1), 2023/1/2, Pg. 352-365.
- Nandeeshal Itigimatha, Kailash S Chadchan, **Basappa C Yallur**, Manjunatha D Hadagali – 'New Analytical Methods for the Determination of New Anti-Viral Drug Favipiravir: A Potential Therapeutic Drug Against Covid-19 Virus, in Bulk and Dosage Forms', Pharmaceutical Chemistry Journal, 2023/1/12, Pg. 1-7.
- Vinayak Adimule, **Basappa C Yallur**, Sheetal Batakurki, Chinna Bathula. – 'Promoting the photocatalytic reduction of  $\text{CO}_2$  and dye degradation via multi metallic Smx modified  $\text{CuCo}_2\text{O}_4$  Reverse spinel hybrid catalyst', Ceramics International, Vol. 49 (2), 2023/1/15, Pg. 1742-1755.
- Ranjit Sah, Ranjan K Mohapatra, Snehasish Mishra, **Sampath Chinnam** – 'Cocktail of FIFA 2022 Vis-A-Vis camel beauty pageant championship; potential health threat of MERS among players and fans-A possible global spread', Travel Medicine and Infectious Disease, 2023/1/6, Page. 102541-102541.
- Tariq Aziz, Arshad Farid, **Sampath Chinnam**, Fazal Haq, Mehwish Kiran - 'Synthesis, characterization and adsorption behavior of modified cellulose nanocrystals towards different cationic dyes', Journal of Chemosphere, Vol. 321, 2023/1/29, Pages. 137999.
- Fazal Haq, Mehwish Kiran, **Sampath Chinnam**, Arshad Farid, Rizwan Ullah Khan - 'Synthesis of bioinspired sorbent and their exploitation for methylene blue remediation', Journal of Chemosphere, Vol. 321, 2023/1/29, Pages: 138000.
- G Chaithra, P R Deepthi, Wajeetha Sultana, **Malathi Challa**, Anu Sukhdev, P Mohan Kumar, B C Hemaraju, J Shanthi – 'Exploring the influence of safranin dye on optical, thermal and dielectric properties of TGA crystal for SSDL applications', Journal of Materials Science: Materials in Electronics, Vol. 34(1), 2023/1, Pg. 29.

- **K Gurushantha**, Dalal Abdullah Aloraini, Aljawhara H Almuqrin, G Jagannath, A G Pramod, M I Sayyed, K Keshavamurthy – 'Third-order optical nonlinear features of Er<sup>3+</sup> and Pr<sup>3+</sup> activated multicomponent borate glasses in nanosecond pulse regime: A comparative study', *Ceramics International*, Vol. 49(1), 2023/1/1, Pages. 1473-1478.
- B S Surendra, **K Gurushantha**, K S Anantharaju, M Rudresh, N Basavaraju, N Raghavendra, A A Jahagirdar, H M Somashekar, H C Ananda Murthy – 'Effective paracetamol sensor activity, thermal barrier coating (TBC), and UV-light-driven photocatalytic studies of ZrO<sub>2</sub>: Mg 2+(1- x) nanoparticles', *New Journal of Chemistry*, Vol. 47(8), 2023, Pages. 3978-3992.
- C P Sahana, PR Deepthi, **Malathi Challa**, P Mohan Kumar, Anu Sukhdev, J Shanthi – 'Exploring the Influence of FeSO<sub>4</sub> on the Structural and Thermal Properties of Sulphamic Acid Single Crystals', *Iranian Journal of Science*, 2023/1/7, Pg. 1-9.
- Vinayak Adimule, Vinay S Bhat, Rajeev Joshi, Sheetal Batakurki, Gurumurthy Hegde, **Basappa C Yallur** – 'Enhanced electrical properties of CuO:CoO decorated with Sm<sub>2</sub>O<sub>3</sub> nanostructure for high-performance supercapacitor', *Journal of Solid State Electrochemistry*, Vol. 27(2), 2023/2, Pg. 511-529.
- **Basappa C Yallur**, Vinayak Adimule, M S Raghu, Fahad A Alharthi, Byong-Hun Jeon, L Parashuram – 'Solar-light-sensitive Zr/Cu-(H<sub>2</sub>BDC-BPD) metal organic framework for photocatalytic dye degradation and hydrogen evolution', *Surfaces and Interfaces*, Vol. 36, 2023/2/1, Pg. 102587.
- **Malathi Challa**, **Sampath Chinnam**, Ambika Madalakote Rajanna, Apurva Nandagudi, **Basappa C Yallur**, Vinayak Adimule – 'Adsorption efficacy of functionalized Cu-BDC MOFs tethered 2-mercaptobenzimidazole analogue: A comparative study', *Journal of Heliyon*, Vol. 9(2), 2023/2/1, Pg. e13223.
- Vinayak Adimule, **Basappa C Yallur**, Ravi Sankannavar – 'Influence of Y<sup>3+</sup> Doping on Dielectric and Optical Properties of Ce<sub>2</sub>S<sub>3</sub> Spherical Shaped Nanostructures Synthesized by Chemical Precipitation Method', *Nano Hybrids and Composites*, Vol. 38, 2023/3/3, Pg. 37-51.
- F M Mashood Ahamed, **Sampath Chinnam**, **Malathi Challa**, **Gurushantha Kariyanna**, Ajoy Kumer, Sapana Jadoun, Ahmad Salawi – 'Molecular Dynamics Simulation, QSAR, DFT, Molecular Docking, ADMET, and Synthesis of Ethyl 3-((5-Bromopyridin-2-yl) Imino) Butanoate Analogues as Potential Inhibitors of SARS-CoV-2', *Polycyclic Aromatic Compounds*, 2023/2/16, Pg. 1-19.
- Cheema Huzaifa Ahmad, Sohail Aruba, Fatima Areej, Shahid Abia, Shahzil Muhammad, Rehman Mo Sahammad Ebad Ur, Awan Rehmat Ullah, **Sampath Chinnam** – 'Quercetin for the treatment of COVID-19 patients: A systematic review and meta-analysis', *Reviews in Medical Virology*, Vol. 33(2), 13/02/2023, Pages. e2427.
- **Nikita Varghese**, Joyna Reba Jose, Murali Krishna Panchangam, Darit Philip – 'In vitro Analytical Techniques as Screening Tools to investigate the Metal chelate-DNA interactions', *Chemistry Select*, Vol. 8(5), February 2023.
- Saddam Sharieff, Sravanthi Veluturla, **Nagaraju Kottam**, S P Smrithi, Rahul Singhvi – 'Esterification of levulinic acid to butyl levulinate over TiO<sub>2</sub>/WO<sub>3</sub>/SO<sub>4</sub>: optimization and kinetic study, Biomass Conversion and Biorefinery, 2023/3/9, Pg. 1-15.
- Manisha Mishra, K J Jomon, **Sampath Chinnam**, Jyothis Devasia, Aatika Nizam, MB Madhusudana Reddy – 'Switchable surface activity of Bi<sub>2</sub>Al<sub>4</sub>O<sub>9</sub> nano particles: A contemporary approach in heterocyclic synthesis', *Journal of Nanoparticle Research*, Vol. 25(3), 2023/3, Pages. 49.
- Hari Babu B, Rambabu A, **Sampath Chinnam**, Ravi V, Bala Murali K K, Ravikumar K, Khasim S S, Narasimhaswamy D, Mastan A S – 'C-Dimethylated Flavones as Possible Potential Anti-Tubercular and Anticancer Agents', *Journal of Chemistry and Biodiversity*, Vol. 20(4), 20/03/2023, Pages. e202201201.
- B Uma, Kurupalya Shivram Anantharaju, B S Surendra, **K Gurushantha**, Sunil S More – 'Influence of Ag on the Structural, Electrochemical,



Antibacterial, and Photocatalytic Performance of the (CuO-Cu<sub>2</sub>O)Cu Nanocomposite', ACS omega, Vol. 8(11), 2023/3/10, Pages. 9947-9961.

### Book Chapters

- Vinayak Adimule, **Basappa C Yallur**, Sheetal Batakurki – 'Design, synthesis, and in vitro anticancer activity of thiophene substituted pyridine derivatives', Recent Developments in the Synthesis and Applications of Pyridines, 2023/1/1, Page. 127-143.
- C. Pushpalatha, Kumar Chhaya, Arshiya Shakir, V. S. Gayathri, R. Deveswaran, and **Sharanabasappa B Patil** – 'Oral Health Benefits of Cocoa Polyphenols', Polyphenols and their Role in Health and Disease, ISBN: 979-8-88697-418-8.2023. Publication Date: January 5, 2023.
- **Sharanabasappa B. Patil** – 'Recent Advances of Heterocyclic Compounds', The Chemistry of Coumarin, ISBN: 979-8-88697-560-4, 2023. February 9, 2023.

### Patents

- **Sampath Chinnam**, Kumarappan C, Chandramorthy H. C. K., A. Ali Abha, Farid Arhsad -'Title of the German grant patent: A system for the green synthesis and their biological evaluations of novel urea analogues'. Published on 16/01/2023, DE., Patent number 202023100095.
- **Basappa C Yallur, Sampath Chinnam** -'Novel anti-SARS-CoVthio-ether analogue as highly potent inhibitor against SARS-CoV-2 main protease: Molecular docking and DFT calculations', Published on 06/01/2023, IN., Application number: 202341000515
- Saravanakumar Kasimbedu, Maya Kulshekar, Annie Thomas, Guru Prasad Muppala, **Sampath Chinnam** - 'Title of the UK grant patent: Portable Blood Chemistry Analyzer', Published on 06/02/2023, GB, Patent number: 6259159.
- **Sampath Chinnam**, Mehaboobali P, Arshad Farid, Harun Patel, Sah Ranjit, Ahmad Irqar, Amjad Khan, Al-Sehemi - 'Title of the German grant patent: A

system for the synthesis and biological evaluations of novel urea analogues' A, Published on 9/2/2023, DE., Patent number: 202023100373.

- **Sampath Chinnam**, Iqar Ahmad, Harun Patel, Alshahrani Mohammad Y, Preet Amol Singh, Neha Bajwa - 'Worldwide patent: Novel urea analogues containing 5-amino uracil: one-pot green synthesis and in vitro biological evaluation'. Published on 23/02/2023, WO, Patent number: WO2023/021496.
- Parthasarathi P H, Sofiya P D, Annie T, **Sampath Chinnam**, Nagarajan L – 'Title of the UK grant patent: Menstrual Cramp Relief Belt' Published on 27/03/2023, GB, Patent number: 6270256.
- **Sampath Chinnam**, Arshad Farid, Samy S, Mohammed S A, Ahmad S, Sangeetha S, Mithun R, Bijili A F, Mushira Banu A M, Arina N - 'Title of the South Africa grant patent: A system for the synthesis of sulfonamides', Published on 29/03/2023, ZA, Patent number: 2022/12010.

### Funded project

- **Dr. Nagaraju Kottam** - received grant from VTU for the project titled: Design and Development of Carbon dot (C-dot) Based Nanosensors: Detection of Environmentally and Biologically Relevant Metal Ions, sanctioned date: 18.02.2022, Amount: 700000/-.
- Dr. Chandra Prabha M N & **Dr. Harikrishna R** – received grant from DST, CRG, 'Design of structurally modified nanoceria with enhanced haloperoxidase activity to combat sulphate reducing bacteria (SRB) induced biocorrosion: A biomimetic approach to combat microbiologically – influenced Corrosion (MIC) of marine structures'. Rs.41.83 Lakhs.
- Dr. Chandra Prabha M N & **Dr. Harikrishna R** – received grant from VGST-KFIST L2, 'Designing of Novel Biocompatible and Multifunctional Nano Ceramic Coatings for Medical Implants', Rs.30.0 Lakhs.
- **Dr. M. N. Manjunatha** – received grant from VGST, Govt. of Karnataka -'Anticancer activity and molecular modeling studies of transition metal complexes with novel substituted benzimidazole derivatives'. Grant: Rs. 20,00,000.00



### Guest Lecture delivered by the department faculty

- **Dr. B. M. Nagabhushana** – 'Morphological effect of nano-structured materials: 'Research Opportunities in Solution Combustion process', VLES Institute of Science, Technology and advanced studies, Pallavaram, Chennai, 01-03-2023.
- **Dr. B. M. Nagabhushana** – 'Agri-Entrepreneurship Training', at Mangalore, Savayava Krushika Grahaka Balaga, Mangalore, 05-03-2023.

## DEPARTMENT OF PHYSICS

### Publications in (National/International) Journals

- **A Jagannatha Reddy & G N Anil Kumar** – 'Influence of K/Na ions on structure and luminescence properties of red phosphors  $K_{0.5}Na_{0.5}Gd(WO_4)_2: Eu^{3+}$ ', Applied Surface Science Advances, Vol. 13, (2023), pp. 100375.
- **M R Ambika** - 'Synthesis, physical, optical and radiation shielding properties of Barium-Bismuth Oxide Borate - A novel nanomaterial', Nuclear Engineering and Technology, Vol. 55(5), (2023), pp. 1783-1790.
- **M R Ambika** - 'Green synthesis and characterization of dibismuth zinc oxide diborate nano particle as a good candidate for radiation shielding applications', Journal of Alloys and Compounds, Vol. 938, (2023), pp. 68600.
- **M R Ambika** - 'Adsorption efficacy of functionalized Cu-BDC MOFs tethered 2-mercaptobenzimidazole analogue: A comparative study', Heliyon, Vol. 9(2), (2023).

### Publication in (National/International) Conferences

- **Kalpana S** – 'Effect of pore size on the rattling of Carbon di- oxide permeating through nanoporous Graphene membrane and its Infrared signature', International workshop and conference on Membrane assisted water purification processes Mahatma Gandhi University, Kottayam, Kerala, India, Pg. 9-12, March 2023.

### Funded Projects

- **Dr. Ambika M R** - 'Flexible and Graded polymer composite radiation shields for medical applications' RIT Seed grant (Ongoing) Grant: Rs. 3.90 lakhs.
- **Dr. Sandhya K L** – 'Liquid crystal as matrices for nanomaterial assembly-manipulation' Science and Engineering Research Board (SERB) (Ongoing) Grant: Rs. 29.52 lakhs
- **Dr. Sandhya K L** – 'Experimental investigations on developing LC nanocomposites for energy storage applications' VGST (Ongoing) Grant: Rs. 15 lakhs

## MASTER OF COMPUTER APPLICATIONS



- Department of MCA organised five days Faculty Development Program on 'Research Challenges in Social Network Analysis', on 27<sup>th</sup> February to 3<sup>rd</sup> March 2023.

## DEPARTMENT OF MANAGEMENT STUDIES



- Management Development Programme on 'Digital Empowerment of Startups' from 13<sup>th</sup> To 17<sup>th</sup> March 2023. The programme was inaugurated by Mr. Suresh Narasimha, CEO. Cocreate Ventures.

#### Publications in (National /International) Journals

- **Dr. P. V. Raveendra** – 'P2P-The Key Behind Regulatory Framework of DeFi Services. In: Panda S.K., Mishra V., Dash S.P., Pani A.K.(eds), Recent Advances in Blockchain Technology. Intelligent Systems Reference Library, Springer, Cham., vol 237, pp 267-279, [https://doi.org/10.1007/978-3-031-22835-3\\_13](https://doi.org/10.1007/978-3-031-22835-3_13).
- **Dr. P .V. Raveendra, Dr. G. Vijayakumar, Dr. Arunkumar. D.C** – 'Challenges of Hospital Administration in new normal: Strategies to overcome', Journal of Fisheries Sciences, Vol. 10(4S), (2023), Special Issue 4 pages 10 (3S), Pg. 1011-1017.

#### Paper presentation in International /National Conferences:

- **Dr. Rizwana. M** – 'Study on Consumption Pattern of Middle-Class Consumers on Food items in New Normal', in the CUA's International E-Conference on 'Business Excellence and Quality Management in the Digital Era', at City University Ajman on 27<sup>th</sup> & 28<sup>th</sup> Feb 2023.
- **Dr. A. Mahalakshmi** – A detailed investigation on Blockchain Smart contacts application and its usefulness in the International Conference on 'Innovative Data communication Technologies and Application', at Graphic Era Hill University from 14<sup>th</sup> to 16<sup>th</sup> March 2023.
- **Dr. T. Mohanasundaram** – 'Automatic Flood Alert System Using IOT', in the International Conference on 'Advanced Computing & Communication Systems', at Sri Eshwar College of Engg., Coimbatore on 17<sup>th</sup> & 18<sup>th</sup> March 2023.
- **Dr. Deepak. R** – 'Estimation of Long-run and Short-run relationship during pre-and-post COVID-19 Pandemic outbreak: A Time series analysis of Quad nations' stock Market', at the Indian Institute of Finance (IIF) International Research Conference and award summit 2022-23 held at New Delhi from January 6<sup>th</sup> to 8<sup>th</sup> 2023.

- **Dr. Pallavi. B** – 'Effect of Digital Media on Crowd Funding in India', in the International Conference on 'Redefining Business Strategies: New Age Business Models', at Acharya Bangalore B-School on 5<sup>th</sup> & 6<sup>th</sup> January 2023.

- **Mrs. Rashmi. S. B** – 'Effect of Digital Media on Crowd Funding in India', in the International Conference on 'Redefining Business Strategies: New Age Business Models', at Acharya Bangalore B-School on 5<sup>th</sup> & 6<sup>th</sup> January 2023.

#### Guest Lectures Invited

- **Mr. Ramani Venkat** - Co-Founder, Varnaaz Leaders Factory, Bangalore – 'Group Discussion and How to face the interview' on 07-01-2023
- **Ms. Sahana Bapat** - Business Analyst, Odessa Technologies – 'Business Analytics-From the eyes of Information Technology', on 18-01-2023.
- **Dr. Mahesh Pavan Sathavalli**, Program Manager, Mphasis- "HR Analytics" on 21-01-2023.

#### Guest Lecture delivered by the department faculty

- **Dr. Rizwana. M** – 'Fundamentals of Research Methodology', Department of Management Studies, KPR College of Arts, Science and Research, Coimbatore, 06-02-2023.
- **Dr. Rizwana. M** – 'Connect with Global Business and the Global Community for Management and Creative Professionals', Association of International Business & Professional Management, Malang, Indonesia, 17<sup>th</sup> & 18<sup>th</sup> March 2023.
- **Dr. Deepak. R** – 'AI/ML using python', at MSME – Technology Development Center, Process & Product development center, Agra on 18<sup>th</sup>, 19<sup>th</sup>, 25<sup>th</sup> and 26<sup>th</sup> March 2023.

#### Achievements, Awards/Prizes by Faculty/Staff/Students

- **Mr. A.V. Thrinethra, Mr. Nagesh. T. B** - won 1<sup>st</sup> place in Numn3rs-Analyse it at the Management and Commerce Fest "The Office-Season 01" at MSRUAS, Bangalore on 24-02-2023.

- **Mr. Nagesh. T. B** - won 1<sup>st</sup> place in Numn3rs-Analyse it at the Management and Commerce Fest "The Office-Season 01" at MSRUEAS, Bangalore on 24-02-2023

## PLACEMENT & TRAINING

### The Main Highlights - 2023 batch

**Companies visited:** 342

**Total Offers:** 1199

- **Highest Stipend:**  
Atlassian: 1,30,000/- Per month  
4 Students selected
- **Highest CTC:**  
Fivetrans 50LPA  
3 Students selected
- **International Placement:**  
Sobha Constructions LLC Dubai  
5000 AED / per month  
3 Students selected

## DEPARTMENT OF SPORTS



- Republic Day Celebrated in the College on 26<sup>th</sup> January 2023. Flag hoisted by Sri. M R Seetharam, Hon'ble Vice Chairman, GEF & Director, Ramaiah Institute of Technology and the program witnessed by Sri. B S Ramaprasad, Chief Executive, GEF (Engg & GS), Sri. G Ramachandra, Chief of Finance, GEF, Dr. Pradip Kumar Dixit, Vice - Principal, RIT,



Dr. Archana, Registrar Academic, RIT, Sri. Mahadev Kakkari, Registrar Administration, RIT and Principals of all GEF Institutions.







- The 50<sup>th</sup> Annual Athletic Meet organized on 18<sup>th</sup> March 2023 in Ramaiah Sports Ground, in which 19 Engg Branches took part in the March Past and sports activities. Sri. G Ramachandra, Chief of Finance, GEF, was the Chief Guest and Presided by Dr. NVR Naidu, Principal, RIT. The program witnessed by Dr. Pradip Kumar Dixit, Vice-Principal, Dr. Archana, Registrar Academic, Sri. Mahadev Kakkari, Registrar Administration, Dr. G S Prakash, Controller of Examination, Dr. N L Ramesh, Vice-Chairman, Sports Committee and Dr. Kiran Kumar H K, Director of Physical Education.

- Ms. Simran F** of IV Semester MCA Secured the Champions Trophy in the 50<sup>th</sup> Annual Athletic Meet.





- **Mr. Basavaraju** of VIII Semester TCE Secured the Champions Trophy in the 50<sup>th</sup> Annual Athletic Meet.

### Sports Achievements



- **BASKETBALL: WINNERS:** All India Inter Collegiate Invitational Basketball Tournament, organised by BITS Pilani, Hyderabad held from 3<sup>rd</sup> to 5<sup>th</sup> Feb. 2023.
- **RUNNERS – CHRISPO FEST – 23**, Christ University - STATE LEVEL BASKETBALL Tournament held on 2<sup>nd</sup> & 3<sup>rd</sup> March 2023.
- **RUNNERS – DEVANGA CUP – 23**, STATE LEVEL BASKETBALL Tournament, organized by KSBBA held on 4<sup>th</sup> March 2023.



- **CRICKET: WINNERS** – State Level Inter Collegiate Invitational Cricket Tournament, organised by IISC, Bangalore held from 3<sup>rd</sup> to 5<sup>th</sup> Feb. 2023.

### DECA



- **22nd ANNUAL VTU YOUTH FESTIVAL "YUVOTSAVA"**:- Every year, VTU organizes one of the most widely participated cultural extravaganza in Karnataka, at different host colleges affiliated to the university. This year, VTU fest was hosted at NCET, Bengaluru from 29<sup>th</sup> March to 1<sup>st</sup> April 2023. RIT was represented at the fest by an elected contingent of 43 talented students. At the festival, there were five categories of competitive events, namely, Dance, Music, Fine Arts, Literary and Theater, under which there were several events like 'Western Group Music', 'Indian Group Music', One Act Play, Skit, Mime, Elocution, Debate, Cartooning, Clay Modeling etc. We participated in 24 events out of 25 events, making our contingent one of the most diverse contingent at

the fest. The event saw participation from over 70 colleges, and with our cumulative score we placed **SECOND** amongst all participating institutions.

## LIBRARY & INFORMATION CENTRE



- The Library & Information Centre and the MBA Department jointly organised a workshop on Discover Emerald Resources for Academic Excellence and Research on 10<sup>th</sup> March 2023, 112 participants, including Students, Faculty Members and Research Scholars from the MBA Department have participated. The hands-on training given by Mr. Vinay Kumar.



- The Library & Information Centre and the Doctoral Programmes jointly organized a hands-on workshop on Scholarly Information Discovery and Reference Management' at IBM Lab in Multipurpose Block, 2<sup>nd</sup> Floor, RIT, Bangalore. Full-time Research Scholars and Faculty Members of RIT, Bangalore, Dr. Shivaram B S, Joint Head, ICAST, CSIR-NAL, Bangalore, gave the hands-on training to all the participants.

## NEW APPOINTMENTS

### Department of Computer Science & Engineering



**Akshatha Kamath** is joined as an Assistant Professor in the Department of Computer Science and Engineering; her areas of interest include Algorithms, Data Structure, AI and ML, Block chain Technology, RPA and Data Science.

### Department of Computer Science & Engineering (Artificial Intelligence & Machine Learning) (Cyber Security)



**Mrs. Pallavi T P** - joined as an Assistant Professor in the Department of CSE (Cyber Security) at RIT. She has an overall 3.2 years of teaching experience. She is pursuing Ph.D. under VTU in the machine learning domain. Her key area of research interest includes Machine Learning, Deep Learning and Data Mining.

*Learning gives creativity  
Creativity leads to thinking  
Thinking provides knowledge  
Knowledge makes you great*

- APJ Abdul Kalam

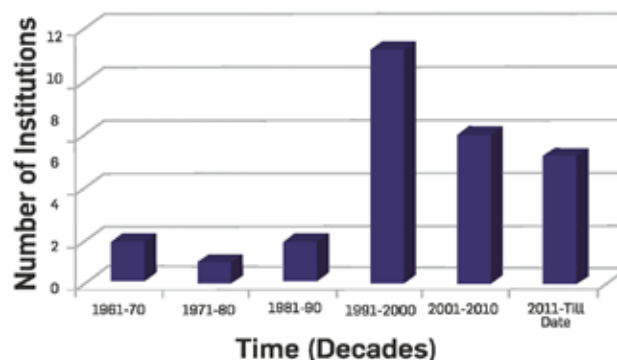
## Highlights of Ramaiah Institute of Technology

- Strategically located in the heart of Bengaluru City offering excellent connectivity and convenience.
- Proven track record spanning 60 years, in Engineering Education.
- Outstanding placement record up to 90-95% accomplished year on year.
- Faculty-Student the ratio of 1:15 among the best in the industry.
- Highly qualified and committed faculty, constantly evolving teaching-learning methodology.
- State-of-the-art infrastructure and facilities are comparable to international standards.
- Focus on all-round development to enable professionals to deliver in a dynamic ecosystem.
- Industry oriented instructional content to ensure strong synergy with the changing requirements.
- Several departments involved in various prominent projects.
- A solid association with leading names in the industry.

## Various Institutions / Centres Under Gokula Education Foundation (GEF)

Ramaiah Advanced Testing Laboratory	Ramaiah University of Applied Sciences
Ramaiah Memorial Hospital	Ramaiah International Centre for Public Health Innovation
Ramaiah Medical College Hospital	Ramaiah Quality Assurance Cell
Ramaiah Institute of Nursing Education & Research	Ramaiah Officers IAS Academy
Ramaiah Institute of Physical Medicine & Rehabilitation (Physiotherapy)	Ramaiah Sunshine Ayurveda Centre, Penang, Malaysia
Ramaiah Medical College	Ramaiah Innovation Centre for Healthcare Technologies
Ramaiah College of Law	Ramaiah Public Policy Centre
Ramaiah Institute of Management	Ramaiah Clinic
Ramaiah College of Education	Ramaiah Neha Prakash Hospital
Ramaiah Composite Pre-University College	Ramaiah Leena Hospital
Ramaiah College of Arts, Science & Commerce	Ramaiah Harsha Hospital
Ramaiah Polytechnic	Ramaiah Clinical Research Centre
Ramaiah Institute of Technology	Ramaiah INDIC Speciality Ayurveda
Ramaiah High School	Ramaiah International Medical School
Ramaiah Vidyaniketan	

## **RAMAIAH** Institute of Technology **Growth of the GEF Group of Institutions**



**A total of 29 Institutions are established under the umbrella of Gokula Education Foundation**

### RAMAIAH INSTITUTE OF TECHNOLOGY

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