







Volume 10 : No. 2 April - June 2022

### A quarterly News Bulletin

#### **Chief Editor**

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

#### Editor

**Dr. B.M. Nagabhushana** Professor & HoD, Chemistry

#### **Editorial Board**

**Dr. S.H.C.V. Subba Bhatta**Professor, Dept. of Mathematics

**Dr. Shobha K.R**Associate Professor, Dept. of ETE

#### Dr. Ahalya N

Associate Professor, Dept. of Biotechnology.

#### Dr. Udayakumar H.M

Assistant Professor, Dept. of Humanities

**Mr. Nandeesha H.L** Assistant Professor, Dept. of Mechanical

#### **Contents**

Departmental Activities
Placement & Training
NSS
Sports
Extra Curricular Activities
New Appointments

### From the Editorial Board

Greetings,



It offers me great pleasure to connect with all our beloved readers of Sampige, a quarterly News Bulletin of Ramaiah Institute of Technology, in which we keep the college community and beyond abreast of happenings, developments and the great strides accomplished through our institution. I am very happy to share that the institution will conduct various meaningful academic activities during the centenary celebration of our founder chairman Shri M S Ramaiah, throughout the year to make the year very special by recollecting his lifetime achievements and selfless

contribution to society. Once again, all efforts were made to gather information about numerous activities held in individual departments and their achievements effectively considering that we don't forget this News Bulletin as an effective communication tool. I would respect all our faculty and staff for their valuable and meaningful contributions. Sampige, a quarterly News Bulletin of RIT, welcomes your recommendations and comments.

Best wishes **Dr. N. V. R. Naidu** 



Friends,

It gives us immense pleasure, joy and satisfaction to place before the second issue of Sampige, a quarterly News Bulletin of Ramaiah Institute of Technology this year 2022. In this News Bulletin, we have highlighted significant achievements of faculty and students. The Editorial Board would like to place on record our gratitude and heart full thanks to all the Department Heads, and Section Heads, who have contributed at large to this News Bulletin. The success of Sampige

depends on your valuable response. Please feel free to offer any suggestions for improving the News Bulletin.

I am 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.

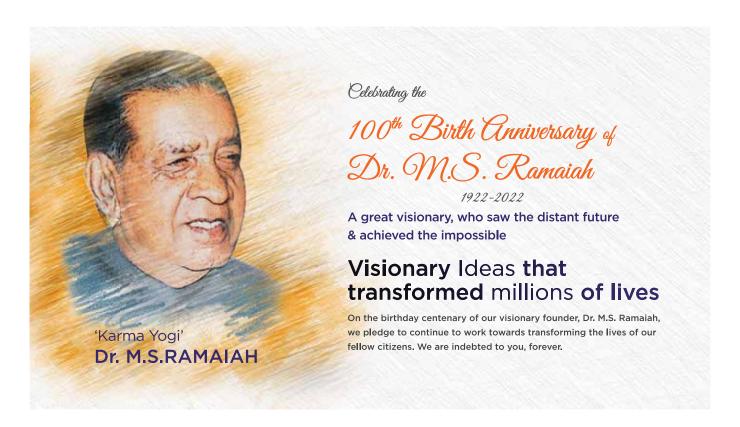


MSRIT is accredited by NAAC with A+ Grade



# **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 Tigure

Dr. Mathikere Sampangi 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 the 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. MS 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 Ramaih 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.

Uhat 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



### **Hearty Congratulations!**

### Mega ATV Championship 2022



**Team Volante** is a Student Design team, involved in the design and development of off-road electric buggy started in the year 2014 and focus on building ATVs (Allterrain vehicles). Recently the team has participated in the Mega ATV championship 2022 held in Goa and secured 1<sup>st</sup> place in the drag race and 3<sup>rd</sup> place in the flat dirt race. Overall the team has secured 3<sup>rd</sup> place.

## DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING



 Department of Electrical & Electronics in association with IEEE, Bangalore section, IEEE Ramaiah and IEEE PES organized one day IEEE PES day on 22<sup>nd</sup> April. The events included Technical Quiz, Web Page Design, Logo Design, Debate. More than 200 students participated in the event.

#### International Conference / National Conference

#### Paper Publications in National/International Journals

- Channegowda J, Lachappa Y G, Jagwani S 'A Graph-Based Lithium-Ion Battery Parameter Estimation Approach to Produce Diverse Synthetic Data,' Advanced Theory and Simulations, June 2022, https://doi.org/10.1002/adts.202200128[Q1].
- Channegowda J, Vageesh Maiya, Niharika Joshi, Vinayak Raj Urs, Chai-Tanya Lingaraj 'An Attention-based Synthetic Battery Data Augmentation Technique to Overcome Limited Dataset Challenges', Energy Storage, May 2022, https://doi.org/10.1002/est2.354.[Q1]



- Channegowda J, Vinayak Raj Urs, Chaitanya Lingaraj

   'Synthetic battery attribute generation to surmount
   data scarcity using auto-correlation mechanism',
   International Journal of Energy Research, June
   2022, Vol. 46(7), Pages 9882-9891, https://doi.org/10.1002/er.7784.
- B, Mr. Shravan Basvaraj and Krori Dutta, Mrs. Kusumika 'Capacity Estimation Of Lithium Ion Battery To Evaluate SOH Using Machine Learning Method,' International Journal of Electronics Signals and Systems: Vol. 4(3), Article 4, April 2022.
- Nemagoud, Mr. Vishwanath S and Krori Dutta, Mrs.
   Kusumika 'Effective Torque Ripple Reduction of Permanent Magnet Brushless DC Motor,' International Journal of Electronics Signals and Systems, Vol. 4(3), Article 3, pp 130-136, April 2022.

#### International Conference/National Conference

- Pavan H S, Sridhar. S, Kodeeswara Kumaran.
   G 'Transformerless Boost Converter for Fuel Cell Application,' National conference on Recent Trends in Engineering and Technology, organized by Cambridge Institute of Technology, Bangalore, June 2022.
- Chinmaya Kulkarni, Kodeeswara Kumaran G, Sridhar S – 'Battery and Supercapacitor Hybrid Source Integrated with DC – DC Converter', National Conference on Recent Trends in Engineering and Technology, organized by Cambridge Institute of Technology, Bengaluru, June 2022.
- Venkatesh Goge, Kodeeswara Kumaran G, Sridhar S 'Improved Torque Ripple Minimisation Technique For Permanent Magnet Synchronous Motor Using Fuzzy Logic Controller', National Conference on Recent Trends in Engineering and Technology, 17<sup>th</sup> & 18<sup>th</sup> June 2022, organized by Cambridge Institute of Technology, Bengaluru, June 2022.
- Rachana A U, Kodeeswara Kumaran G, Sridhar

   'Performance Assessment of Continuous Space
   Vector Pulse Width Modulation Technique for
   Controlling Three Leg Inverter for IM Drives', National
   Conference on Recent Trends in Engineering and
   Technology, organized by Cambridge Institute of
   Technology, Bengaluru.

#### **Book Chapters**

C. Ramakrishnan, S. Sridhar, Kusumika Krori Dutta, R. Karthick, C. Janamejaya, book chapter titled – 'Deep Feature Selection for Wind Forecasting-I', chapter 7 of book titled, 'Artificial Intelligence for Renewable Energy Systems', Wiley online Library 7th February 2022. https://doi.org/10.1002/9781119761686.

#### **Patent Granted**

 A design patent tiled 'Radio Frequency Receiver Antenna', has been granted to Dr. Chandrashekhar.
 B, Associate Professor, E & E dept. with Number 356493-001

#### Guest lectured delivered by the department faculty

Dr. Pradipkumar Dixit, Professor & HOD –
 'Assessment Quality, PO.PSO attainment and
 Gap analysis', in Five-day faculty development
 programme on 'outcome based education & NBA
 accreditation' sponsored by AICTE, held at AMC
 college of engineering, Bangalore, 1st April 2022.

#### **Guest Lecture/s - Invited**

- Madhusudan Chakrapani CTO, RE Connect Energy
   'Inverter Interfaced Renewable Generations:
   Experience and Trends, Planning, Forecasting,
   Scheduling and Dispatch, Grid Integration and Grid
   Code Compliance, Dynamic Modelling of Inverter
   Interfaced Generations, Protection & Control, Future
   Trends', on 9th April 2022.
- Dr. P K Ashwini Kumar, Patent Attorney 'Taking your ideas to market' in association with IEEE, PES, Bangalore chapter, IEEE Ramaiah organized a IPR lecture on 26th April on account of World IPR Day.
- Sri. Padmanaban Kalyanaraman, program Specialist, INTEL, Bangalore - Department of E & E in association with IEEE, PES, Bangalore chapter organized a guest lecture on 'Intel FPGAs -Opportunities and Challenges', 24<sup>th</sup> June 2022.

Health is the greatest gift, contentment the greatest wealth, faithfulness the best relationship.

- Buddha



## DEPARTMENT OF MECHANICAL ENGINEERING

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

- Gururaj Lalagi, P. B. Nagaraj, Mallikarjuna Veerabhadrappa Bidari, and Ramakrishna N. Hegde - 'Influence of Design of Microchannel HeatExchangers and Use of Nano fluids to Improve the Heat Transfer and Pressure Drop Characteristics: A Review', International Journal of Ambient Energy, 2022, https://doi.org/10.1080/01430750.2022.2056 918.
- Nagesh, S.N Experimental and Numerical analysis of VCR diesel engine fuelled with Blendsof Jatropha curcas Methyl Esters. Int. Journal of Renew, Energy research, June 2022, vol. 12(2), Pg No. 930-941.
- Mohamad Reda A Refaai, D. Prakash, Jaya Christian K G, DVSSSV Prasad, E. Archana and Agegnehu Shara Shata 'Experimental Investigation on the Average surface Roughness(Ra) of AlSi10Mg Alloy Manufactured by Laser Powder Bed Fusion Method,' Advances in Materials Science and Engineering, Volume 2022, Article ID 5874875, https://doi.org/10.1155/2022/5874875.

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

- Harshit Shukla, Nagesh S.N, Siddaraju C, Rajesh M N, Ramprabhu T 'Optimization of gating design for AA2024 base alloy casting using numerical method', 6th International conference on Sustainable materials and recent trends in Mechanical Engineering (SMARTME-2022), 8th 9th July 2022, Reva university, Bangalore.
- Rajeshwari Halagalimath, Jyothilakshmi R and Nagaraju Kottam - 'Biodegradable Nanocellulose and its composite materials for food packaging applications: A Review', 6<sup>th</sup> International conference on Sustainable materials and recent trends in Mechanical Engineering(SMARTME-2022), 8<sup>th</sup> - 9<sup>th</sup> July 2022, Reva university, Bangalore.
- Jyothilakshmi R 'Advances in passive energy storage systems using phase change materials and nano - enhanced phase change materials', National conference on Advances in Automation and Allied materials organized by the Department

- of Mechanical Engineering, East point college of Engineering and Technology, 7<sup>th</sup> -8<sup>th</sup> June 2022.
- C.M. Ramesha, Chandan B.R, Mohandas K.N., Anil Kumar T, Sharan Raj V-'Effect of polymer quenchants on the toughness and hardness of different medium carbon low alloy steels', 6<sup>th</sup> International conference on Sustainable materials and recent trends in Mechanical Engineering (SMARTME-2022), 8<sup>th</sup> -9<sup>th</sup> July 2022, Reva University, Bangalore.
- N. Kapilan, Ashok Kumar K, Atilla Biyikoglu -'Covid-19 And Hospital Room Air Dilution Methods', 6th International conference on Sustainable materials and recent trends in Mechanical Engineering (SMARTME-2022), 8th -9th July2022, Reva university, Bangalore.
- Ashok Kumar K 'Comparative Studies On Solar Assisted Adsorption Refrigeration System Using Different Working Pairs', International Conference on Recent Developments in Mechanical Engineering (ICRDME-2022), organized by Siddaganga Institute of Technology, Tumakuru, Karnataka, India, 24<sup>th</sup> 25<sup>th</sup> June 2022.
- Akash Korgal, Naveen Kumar B.K, Shravan Upadhyaya 'Study of Non identical properties of three various hybrids natural fiber Reinforced Composite Materials', International conference on Advances in Chemical and Material Sciences (ACMS-2022), Heritage Institute of Technology, Kolkata, 14th -16th April 2022.
- Pravallika J J S, Pannaga S, Yashwanth K, Lokesha K 'Artificial Intelligence in Mechanical Engineering', at the International Conference on Artificial Intelligence, Robots and Mechanical Engineering (ICAIRME) held in Chennai, India, 18th May, 2022.
- Harish N, Lokesha K, Bharath M R, P B Nagaraj, Shailesh - 'Study on Influence of Process Parameters and Insert Nose Radius on Surface Roughness in Turning Operation', International Conference on Recent Developments in Mechanical Engineering, (ICRDME 2022), organized by Siddaganga Institute of Technology, Tumakuru, Karnataka, India, 24<sup>th</sup> -25<sup>th</sup> June 2022.
- Shailesh, Lokesha K, P B Nagaraj, Harish N 'Study on Influence of Process Parameters on Surface Roughness in CNC Milling Operation', International



Conference on Recent Developments in Mechanical Engineering, (ICRDME 2022), organized by Siddaganga Institute of Technology, Tumakuru, Karnataka, India,  $24^{th}$  -  $25^{th}$  June 2022.

- Pradnya Deshpande, Priyanka, Jyothilakshmi R 'Advances in the study of Phase change material and Ne-PCMs for the storage of Energy applications', International Conference on Recent Developments in Mechanical Engineering, (ICRDME 2022), organized by Siddaganga Institute of Technology, Tumakuru, Karnataka, India, 24th 25th June 2022.
- Santhosh H, R. Kumar, Deepak S and Vasu S 'Modelling and analysis of the effect of Plateau
   Honing operation on Cylinder liners', 6<sup>th</sup> International
   conference on Sustainable materials and recent
   trends in Mechanical Engineering(SMARTME-2022),
   8<sup>th</sup> 9<sup>th</sup> July 2022, Reva university, Bangalore.
- Vasu S, R. Kumar, Nandeesha H. L., Santhosh H 'Development of IOT based Pneumatic Punching machine', 6<sup>th</sup> International conference on Sustainable materials and recent trends in Mechanical Engineering (SMARTME-2022), 8<sup>th</sup> 9<sup>th</sup> July 2022, Reva university, Bangalore.
- Sunith Babu L, Pradeep Kumar K. V, Harinath Reddy, Chetan B Shivshette, Ashwin Nair and Yogendra A - 'Studies on Open Hole Tensile Test of GFRP/Epoxy Composites', International Conference on Recent Developments in Mechanical Engineering, (ICRDME 2022), organized by Siddaganga Institute of Technology, Tumakuru, Karnataka, India, 24<sup>th</sup> – 25<sup>th</sup> June 2022.
- Shobha R, C. Siddaraju, Nagaraju Kottam, T.S. Srivatsan, N.D. Shiva Kumar and Rajath S 'Preparation and Characterization of Selective Catalytic Reduction catalysts for Reducing the level of pollution', International Conference on Recent Developments in Mechanical Engineering, (ICRDME 2022), organized by Siddaganga Institute of Technology, Tumakuru, Karnataka, India, 24<sup>th</sup> 25<sup>th</sup> June 2022.
- Sujeet magi, C. M. Ramesha, Rajendra P. Mohanraju S - 'A Review on Erosion of Aluminium alloy for Various Application', 6<sup>th</sup> International conference on Sustainable materials and recent trends in Mechanical Engineering (SMARTME-2022), 8<sup>th</sup> - 9<sup>th</sup> July 2022, Reva university, Bangalore.

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



• Team Quatlas is the official Aero modelling team of Department of Mechanical Engineering, Ramaiah Institute of Technology, Bangalore. Among 30 teams from prestigious universities from around the world, there are 3 teams from India were part of this competition and among them only one team from Karnataka has participated in this competition. In this year's SAE Aero Design West 2022 Competition, organized by SAE Aero Design held at Van Nuys, California, USA from 8th to 10th April 2022, Team Quatlas of Ramaiah Institute of Technology, Bangalore, were crowned with 2nd place in Technical Written Design Report, 10th in Technical Presentation and overall 9th Place Internationally.

# DEPARTMENT OF CIVIL ENGINEERING

#### Publications in National / International Journals

- Nataraja M C Shivakumar M J and Vibha N Dalawai
   'Effect of design parameters on the proportioning of mass concrete using fly ash and ground granulated blast furnace slag', Materials Today: Proceedings, Available online, April 2022, Vol.62, Part 8, pp 5329-5335. https://doi.org/10.1016/j.matpr.2022.03.410
- P. S. Laxmikanth, M. C. Nataraja and Supreeth 'Performance of High-Strength Concrete using Alccofine', Journal of the Institution of Engineers (India): Series A, Vol. 103,pp 567-580 April 2022, https://doi.org/10.1007/s40030-022-00635-3



#### Guest Lectures delivered by the department faculty

- M C Nataraja 'Utilisation of manufactured and crushed sand in construction industry', for Professionals from Industry and academia, Sponsored by KIT College of Engineering, Kolhapur, Maharastra and Institution of Engineers (I), 09/05/2022.
- M C Nataraja- 'Advances in materials for concrete and mix design', and 'Alternative aggregates for concrete', Four weeks Online Orientation programme for Engineers, organized by Engineering Staff College, KRS, Mysore, Government of Karnataka, 16/05/2022.
- M C Nataraja 'Mix design of concrete using advanced materials', and 'Manufactured aggregatestests and requirements', Four weeks Online Orientation programme for Engineers, organized by Engineering Staff College, KRS, Mysore, Government of Karnataka, 24/06/2022.

# DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



 Industrial Visit was arranged to 'HAL Heritage Centre and Aerospace Museum' on Wednesday 6th July, 2022 for ECE 4<sup>th</sup> semester students.

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

 Indira K, Maya Karki, Mallika H – 'Recognition of Kannada Characters Using Deep Learning Approach',

- Journal of Intelligent and Fuzzy Systems, pp.1-14, May 2022
- Senthilkumar Dhanasekaran and Chitra M –
   'Performance Analysis of NOMA in Full-duplex Cooperative Spectrum Sharing Systems', IEEE Transactions on Vehicular Technology, Vol. 71, No. 8, pp. 9095-9100, May 2022
- Atharva Deshmukh, Maya V Karki, Bhuvan S R, Gaurav S, Hitesh J P – 'Deep Neural Network Model for Automated Detection of Alzheimer's Disease using EEG Signals, International Journal of Online and Biomedical Engineering (iJOE), Vol.18, No. 8, pp. 115–126, June 2022.
- Reena Chackochan, Albert Sunny, and Senthilkumar Dhanasekaran - 'Approximate Aggregate Utility Maximization Using Greedy Maximal Scheduling', IEEE Transactions on Networking, June 2022, doi: 10.1109/TNET.2022.3179451
- Sadashiv V Chakrasali, Indira K, Sunitha Y. N and C. Shadaksharaiah - 'Performance Analysis of Different Intonation Models in Kannada Speech Synthesis', in Indonesian Journal of Electrical Engineering and Computer Science, Vol. 26, No. 1, April 2022, pp. 243-252.
- Pavitha U S, Mamtha Mohan, Sandeep Kakde, Annam Karthik - 'Efficient carry select 16-bit square root adder with complementary metal-oxide semiconductor implementation', Indonesian Journal of Electrical Engineering and Computer Science, Volume 26, pp. 172-183, 2022.
- Rajendra Prasad P, Shivashankar 'An Improved Multipath Energy Aware On-Demand Routing Protocol for MANETs', Journal of Communications, ISSN: 1796-2021(Online); 2374-4367 (Print) JCM Vol. 17, No. 9, pp. 691-704, 2022.
- Suma K V, Sethu Selvi S, Pranav Nanda, Manisha Shetty, Vikas M & Kushagra Awasthi. - 'Deep Learning Approach to Nailfold Capillaroscopy Based Diabetes Mellitus Detection'. International Journal of Online and Biomedical Engineering (iJOE), Vol. 18, No. 6, pp. 95–109, 2022.



- Suma K V, Dr. H S Niranjana Murthy, Manoj B R, Fawaz Saleem, Neeraj Hebbar and Mustafa B M
   'Teleconsulting device for vital measurement and digital health record maintenance' Neuro Quantology, May 2022, Volume 20, Issue 5, pp. 3295-3304.
- Rosaline I, Kumar A, Upadhyay P, Murshed A H – 'Four Element MIMO Antenna Systems with Decoupling Lines for High-Speed 5G Wireless Data Communication'. International Journal of Antennas and Propagation. Vol. 2022 Jun 25; 2022.
- Kumar A, Chaturvedi D, Rosaline S I Design of Antenna-Multiplexer for Seamless On-Body Internet of Medical Things (IoMT) Connectivity'. IEEE Transactions on Circuits and Systems II: Express Briefs. Vol. 29, No. 8, Pg. 3395, 2022 April 26.
- KY Prashanth, Rohitha Ujjini Matad, S M Sarala 'Securing camera based active driver monitoring system from video forgery attacks using deep learning', SAE Technical Paper, April 2022, https://doi.org/10.4271/2022-01-0115.
- Shilpa Biradar, J. Shiny Duela, P. Ramya, Flory Francis, Tarun Singhal, Ankur Singhal, Ranjan Mishra, R. Govindaraj, and Amare Kebede Asfaw, 'Improved Channel Capacity in 5G Ultradense Network', Hindawi Wireless Communications and Mobile Computing Vol. 2022, Article ID 7948395, https://doi.org/10.1155/2022/7948395, June 2022.
- Shoaib Kamal, K R Shobha, Flory Francis, Rashmita Khilar, Vikas Tripathi, M. Lakshminarayana, B. Kannadasan and Kibebe Sahile 'IOT Automation with Segmentation Techniques for Detection of Plant Seedlings in Agriculture', Hindawi, Wireless Communications and Mobile Computing Vol. 2022, Article ID 6466555, 10 pages https://doi.org/10.1155/2022/6466555. April 2022.
- Flory Francis, Sharmila Suttur C, Veena G N –
   'Fault identification for power systems using Deep
   Learning', Neuro Quantology, Volume2, Issue5, pp.
   4577-4585, May 2022.
- Lakshmi Shrinivasan, M D Nandeesh, Basavraj
   Hiremath 'Artificial Intelligence based Techniques

- for Decision Support System and prediction for Diabetes Diagnosis', Neuro Quantology, Vol. 20, No. 5, May 2022, pp. 1322-1331.
- Dr. V. Anandi, Dr. M. Ramesh, Ponduri Sivaprasad –
   'Design Of Double Precision Floating point Arithmetic
   Unit For Space Signal Applications', Journal of
   Critical Reviews, Vol. 9, No. 04, 2022.
- H.V. Pavithra, C.G. Raghavendra 'An Overview on detection, counting and categorization of silkworm eggs using image analysis approach', Global Transitions Proceedings, Vol. 3, No. 1, pp. 285-288, April 2022.

### Paper presentation in National / International Conferences

- V Anandi 'Descriptive and Predictive Analytics on Electronic Health Records using Machine Learning', IEEE Explore 2022 Second International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT), 2022, pp. 1-6, 2022 April 2022.
- Ajey Kalagi, Dharini Raghavan, C.G. Raghavendra, Supreet Bajannavar and Bhavani V S – 'Sericulture Technology Towards Sustainable Management, IEEE, International Conference on Distributed Computing and Electrical Circuits and Electronics, Ballari Institute of technology, Ballari, pp. 1-5, April-2022.
- K Rohan, Om Roria, C.G. Raghavendra, Savan S Awanti, Shruthishree C and Srijoni Chakravorty

   'Determining Water Quality for Productivity in Aquaculture using Information and Communication Technologies', IEEE, International Conference on Distributed Computing and Electrical Circuits and Electronics, Ballari Institute of technology, Ballari, pp. 1-5, April-2022.

#### **Guest Lecture delivered**

 Dr. Imaculate Rosaline - 'Metamaterial Antennas and their Applications' at the Technical Workshop "Wireless Systems, Circuits, and Antennas -Advances and Applications" organized by IETE Bangalore and SAGE on 21/4/2022.



- Dr. Imaculate Rosaline 'IP Awareness Program', sponsored by Ministry of Education's Innovation Cell (MIC), AICTE, DPIIT and Indian Patent Office (IPO), in a one-day interaction with RR institute of Technology, Bangalore held on 28th April, 2022.
- Dr. Imaculate Rosaline handled a hands on session on Ansys HFSS Tool on the simulation of Microstrip Patch Antennas at the Technical Workshop 'Wireless Systems, Circuits, and Antennas - Advances and Applications', organized by IETE Bangalore and SAGE on 17/4/2022.

#### **Funded Project**

 Dr. Deepali B Koppad, as a PI has been granted LSRB, DRDO fund for the project 'Thermal Profiling and Performance Evaluation of Micro Climate Garment through Embedded Electronic Module',

**Grant Amount:** Rs 51,34,000/-.

#### Patents filed

 Dr. Maya V Karki and Dr. Suma K V have filed a patent application for the invention titled 'An Apparatus for Recording and Analyzing Electromyogram Signals and a Method Thereof', at Indian Patent in 2022.

#### Achievements, Awards/Prizes by Faculty

- Dr. Suma K V acted as Session chair, 'Technovation

   National Level Paper Presentation Competition',
   held on 30<sup>th</sup> April 2022, organized by Electronics and Telecommunication Engineering Department of Shah and Kutchhi Engineering College, Mumbai (online)
- Dr. Suma K V acted as Session chair on 02/10/2021, at 2<sup>nd</sup> Global Conference for Advancement in Technology during 1 – 3 Oct 2021, organized by Nagarjuna College of Engineering and Technology.
- Dr. Anandi V was an Evaluator for Smart India Hackathon June 2022
- Dr. Rajendra Prasad P was an evaluator for Smart India Hackathon-2022
- Dr. Rajendra Prasad P acted as Proctor to guide in IEEEEXtreme-2022

### DEPARTMENT OF CHEMICAL ENGINEERING

The workshop on "Process Intensification" was organized on 18th May 2022, Wednesday in association with Student Chapter of IIChE and MSRIT Alumni Association. The resource persons were Mr. Amritesh Soni and Ms. Nikita Chrisel Corda, both alumni of the department and currently working as Lead Engineer-Process Development and Engineering, Sravathi Advance Process Labs Pvt. Ltd., Bengaluru.

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

- Manjunath R, Narula Archna and R.R. Siva Kiran

   'Conversion of palm oil sludge to biodiesel using sulphuric acid as catalyst' Research Journal of Chemistry and Environment, Volume No: 26 (7), July 2022.
- Shreyas J. Kashyap, Ravi Sankannavar, G. M. Madhu

   'Hydroxyapatite nanoparticles synthesized with a wide range of Ca/P molar ratios and their structural, optical, and dielectric characterization', The Korean Ceramic Society https://doi.org/10.1007/s43207-022-0 0225-w at Springer. July 2022, page no: 1-13.
- Smirthi S P, Nagaraju Kottam, Archna Narula, Madhu G M, Riyaz Mohammad, Agilan R 'Carbon dots decorated cadmium sulphide heterojunction-nanospheres for the enhanced visible light driven photocatalytic dye degradation and hydrogen generation', Journal of Colloid and Interface Science, 2022, volume no: 627, 956-968, https://doi.org/10.1016/j.jcis.2022.07.100.
- Priya S, Brijesh 'Comparative study on Thermotoga maritima and Rhodobacter meghalophilus for hydrogen gas production using crude glycerol from Biodiesel plant', Indian Journal of Chemical Technology, Vol. 29(2), 207-212, March 2022.
- Prakash Binna, Darsi Jayaprasanna Kumar, Manjunath Sasalu Parameshwaraiah Jagadish Patil, - 'Upgrading rice husk biochar characteristics through microwave-assisted phosphoric acid pretreatment followed by co-pyrolysis with LDPE



- in Biofuels, Bioproducts and Biorefining', https://doi.org/10.1002/bbb.2392 at SCI. year May 2022.
- Dheer A. Rambhia, Sravanthi Veluturla, Archna Narula 'Parametric and kinetic study of solvametric and kinetic study of solvent-free synthesis of solk ee synthesis of solketal using ion exchange resin', Turkish Journal of Chemistry, 46(3), 881-889, https://journals.tubitak.gov.tr/chem.
- Brijesh, R.R. Sivakiran, and Jagadish H. Patil –
   'Statistical optimization of process parameters for hydrogen production in halobacterium salinarium immobilized with calcium alginate and escherichia coli', Rasayan J Chem, 15(2), 1319-1324, http://doi. org/10.31788/ RJC.2021.1526859, RJC.
- Ravi Shanker, Prasaanth Ravi Anusuyadevi, Sampath Gamage, Tomas Hallberg, Hans Kariis, Debashree Banerjee, Anna J. Svagan, and Magnus P. Jonsson, - 'Structurally Colored Cellulose Nanocrystal Films as Transreflective Radiative Coolers', ACS NANO, https://doi.org/10.1021/ acsnano.1c10959 at American Chemical Society. June 2022.
- Shreyas J. Kashyap, Ravi Sankannavar, G. M. Madhu 'Insights on the various structural, optical and dielectric characteristics of La1 xCaxFeO3 perovskite type oxides synthesized through solution combustion technique' at Applied Physics, Vol. No. 128(6), Page No. 1-14, https://doi.org/10.1007/s00339-022-05628-4, Springer.
- Arun Kumar, Monika, Ranjeet Kumar Mishra, Saurabh jaglan – 'Pyrolysis of low-value waste miscanthus grass: Physicochemical characterization, pyrolysis kinetics, and characterization of pyrolytic end products at Process Safety and Environmental Protection', 163 68-81, https://doi.org/10.1016/j. psep.2022.05.022.

### Paper Presentation in National / International Conference

 Dr. Jaya Prasanna Kumar – 'Enhancement in Efficiency of Solar Cell using Graphene Derivatives' International Conference on Recent Developments in Mechanical Engineering organized by SIT, Tumakuru on 24th & 25th June 2022.

- Dr. Jaya Prasanna Kumar 'Graphene based Nanosheets as an Adaptable Material for Protective Coatings' held at Heritage Institute of Technology, Kolkata on 14<sup>th</sup> & 16<sup>th</sup> April 2022.
- Dr. Sravanthi Veluturla 'A Concise Review on the Extraction of Silica from Agricultural Waste and its applications', 2<sup>nd</sup> International conference on CHEMBIOEN held during 20<sup>th</sup> to 22<sup>nd</sup> August 2021 organized by Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab.
- **Dr. Ramasivakiran Reddy** presented a paper 'Ecomark an official eco labelling scheme from Govt. of India', at the 5<sup>th</sup> World Congress on Disaster Management held at Indian Institute of Technology, New Delhi from 24<sup>th</sup> to 27<sup>th</sup> November 2021.

#### **Guest Lecture/s - Invited**

- Dr. Mahesh Murthy, Process Safety Manager in Oil Search Private Limited, Sidney, 'Regulatory basis of Major Accident Prevention Policy Risk Management Governing Documents' on 21.04.2022.
- Dr. Mahesh Murthy, Process Safety Manager in Oil Search Private Limited, Sidney, 'HAZOP – A Risk Assessment Methodology' on 28.04.2022.

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

- Mr. Lakshaya Anand, Mr. Suraj Shivaramakrishnan, Ms. Tanmayi Tanusri and Ms. Dhanushiya Ravi secured first place for the project titled 'Simulation and Techno-Economic studies for the production of SYNGAS', Project Exhibition "Pradarshana – 2022 held on 6th & 7th July 2022 at MSRIT.
- Mr. Akul Shetty, has secured First place in paper presentation 'Process Simulation and Techno Economic Analysis for the synthesis of Butyl Levulinate using Aspen Plus VII', in National Level Student Symposium, Chemovation 2022, held in DSCE, Bengaluru.
- Ms. Sindhu Pranayi & Ms. Vandana P, secured First place in Paper presentation in National Level Student Symposium, Chemovation 2022, held in DSCE, Bengaluru.



Ms. Sharon Fernandez has been awarded First place for Best Project Award for her project titled 'Optimization studies and Techno-Economic Analysis for Catalytic Conversion of Levuling acid to Biofuel additive using Sulphonated Titania Zirconia Nanocomposite', Project Exhibition "Pradarshana – 2022" held on 6th & 7th July 2022 at MSRIT.

### DEPARTMENT OF INDUSTRIAL ENGINEERING AND MANAGEMENT

#### **Publications in National / International Journals**

- M. Shilpa, P. Parthiban 'Taguchi's robust parameter design to analyse ordered categorical data using inverse omega transformation', International Journal of Enterprise Network Management, Vol. 13(2), 2022, DOI: 10.1504/IJENM.2022.10049543
- Dr. Sridhar. B. S, Dr. Shashikala. A. R 'Effect of foam and epoxy on aluminum honeycomb structure for an automobile applications', International Journal of Natural Volatiles & Essential Oils, 2021, Vol. 8(4), Pg. No.: 2809-2820.

### Students publications in National / International Journals

 Reeti Sethi, Dr. M. Rajesh – 'Assessing triple bottom line assessment frame work: A systematic approach for the manufacturing industries', Journal of Language and Linguistic Studies, ISSN: 1305-578X, Vol. 18(2), (2022), Pg. No.: 444-464.

#### Guest Lecture/s - Invited

 Ramani Venkat, NLP Trainer, mentor to startups-'Workshop on converting innovation to Start-Up' organized in association with MBA on 30th June 2022.

Every worthwhile accomplishment has a price tag attached to it. The question is always whether you are willing to pay the price to attain it – in hard work, sacrifice, patience, faith, and endurance.

- John C. Maxwell

### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



Department of CSE conducted 'Tech Master Quiz' on 24<sup>th</sup> June 2022.



 Department of CSE conducted 'Orientation and Volunter meet' on 13<sup>th</sup> June 2022.



### Paper presentation in National / International Conferences

- Sangeetha V 'Performance Analysis of Deep Learning Models for Detection of Pneumonia', The International Conference on Bio-Neuro Informatics and Algorithms (ICBNA-2022), held at Symbiosis Institute of Digital and Telecom Management, Deemed University, Pune, held on 21<sup>st</sup> and 22<sup>nd</sup> June 2022.
- Sangeetha V 'Novel approach for E-payment by voice Authentication using Machine Learning techniques', 3<sup>rd</sup> International Conference on Recent Innovative Trends in Computer Science and Applications (ICRTCS-2022), held at Ramaiah Institute of Technology, Bangalore, held on 6<sup>th</sup> and 7<sup>th</sup> May 2022.

#### **Guest Lecture/s - Invited**

 Prasad Calyam, Director for the Cyber Education, Research and Infrastructure (CERI) Center, USA – 'Recommender systems for Cyber infrastructure management and Domain Knowledge Discovery', 10-06-2022.

#### Guest Lecture delivered by the department faculty

- Dr. Sangeetha V 'Implementation of Cryptography Primitives and Protocols", in One Week Faculty Development Programmed on Recent Advancements in Machine learning, cyber security and IoT", organized by Faculty of Engineering and Technology, SRM Institute of Science and Technology, Tiruchirappalli, Tamilnadu, 6th June 2022 to 12th June 2022.
- Dr. Sangeetha V 'Genetic Algorithms in Artificial Intelligence", 5 Day Workshop organized by Department of Information Science and Engineering & Computer Science and Engineering, Nagarjuna College of Engineering & Technology, Bangalore from 28th March 2022 to 1stApril 2022.

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

 Dr. Annapurna P Patil, received the "Best Research Paper Award" in 8<sup>th</sup> International Conference on Electronics, Computing and Communication

- Technologies, IEEE CONECCT-2022 (July 08-10, 2022) organized by IEEE Bangalore Section.
- Dr. Sangeetha V received "Best Research Paper Award" for presenting the paper titled 'Performance Analysis of Deep Learning models for Detection of Pneumonia' in The International Conference on Bio-Neuro Informatics and Algorithms (ICBNA 2022), from Symbiosis Institute of Digital and Telecom Management, Pune, 21st & 22nd June, 2022.

#### Faculty who obtained Ph.D degree



Sanjeetha. R, received PhD degree for her research title 'Design and Development of Algorithms for Mitigating Distributed Denial of Service attacks in Software Defined Networks' Visvesvaraya Technological

University, Belagavi, under the guidence of Dr. Anita Kanavalli, RIT.

### DEPARTMENT OF INFORMATION SCIENCE ENGINEERING

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

- Kirankumar Kataraki, Sumana Maradithaya

   'Effective Allocation of Resources and
   Task Scheduling for Workflow Scheduling in
   Heterogeneous Parallel Environment', International
   Journal of Engineering Systems Modelling and
   Simulation, Inderscience, 2022 (Online)
- Sheela, Pravinthraja, M Sinthuja, Vidhya Banu, Sapna

   'Classification of EEG signals using Neural Network
   for predicting consumer choices', Computational
   Intelligence and Neuroscience, 2022, pp 1-7.
- Purnachand Kollapudi, Mydhili K Nair 'A Novel Faster RCNN with ODN-Based Rain Removal Technique', Mathematical Problems in Engineering, vol. 2022.
- Vijaya Kumar B.P, Chongtham Pankaj, Naresh
   E 'An Approach for Semi-Supervised Machine
   Learning-Based Mobile Network Anomaly Detection



With Tagging', International Journal of Knowledge-Based Organizations (IJKBO), vol. 12(3), 2022, pp. 1 - 16.

- Srinidhi Hiriyanniah, Siddesh G M, Srinivasa K G – 'DeepLSGR: Neural collaborative filtering for recommendation systems in smart community', Multimedia Tools and Applications, 2022. pp. 1 – 20.
- Jamuna S Murthy, Siddesh G M, Wen-Cheng Lai, B D Parameshachari, Sujata N Patil, K L Hemalatha
   'ObjectDetect: A Real-Time Object Detection Framework for Advanced Driver Assistant Systems Using YOLOv5', Wireless Communications and Mobile Computing, Hindwai Publishing. vol. 2022.
- Srinidhi Hiriyannaiah, Siddesh G M, Srinivasa K G –
   'Deep visual ensemble similarity (DVESM) approach
   for visually aware recommendation and search in
   smart community', Journal of King Saud University
   - Computer and Information Sciences, Volume 34,
   Issue 6, 2022, pp 2562-2573.
- Siddesh G M, Mani Sekhar et.al. 'Forecasting Stock Market Volume Price using Sentimental and Technical Analysis', Journal of Information Technology Research (JITR), IGI Global Publishers, 15(3), 2022.
- Savita Shetty, Raghav Maheshwari, Rithika Mehta, Shirsh Vardhan Kashyap - 'Intelligent Video Analytics for Better Planning of Smart Cities Using Edge Computing', GRENZE International Journal of Engineering and Technology (GIJET), 2022.
- Ashwitha A, Latha, C. A. 'Crop recommendation and yield estimation using machine learning', Journal of Mobile Multimedia, Vol 18(3), 2022, pp. 861-884.
- Ashwitha A, Latha, C. A. 'GSA-based support vector neural network: a machine learning approach for crop prediction to provision sustainable farming', International Journal of Intelligent Computing and Cybernetics, 2022.
- S R Mani Sekhar, Gaurav Kashyap, Akshay Bansali, Andrew Abhishek, Kushan Singh – 'Dysarthric-speech detection using transfer learning with convolutional neural networks', ICT Express, Vol. 8(1), 2022, pp. 61 – 64.

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

- Rebecca, Vijaya Kumar B P 'Effective Usage of Cognitive Computing for Designing Smart Sensing Systems and Networks in Transportation', 2022 IEEE International Conference On Distributed Computing and Electrical Circuits and Electronics (ICDCECE), 23-24 April 2022
- S. Rashmitha, H. A. Sanjay, K. A. Shastry, K. Jayaa Shree Laxmi 'Farm Fund A Blockchain based Crowdfunding App for Farmers', 2022 7<sup>th</sup> International Conference on Communication and Electronics Systems (ICCES), 2022, pp. 682-689
- Anantshesh Katti, Sumana M 'Pipeline for pre-processing of Audio Data', 6<sup>th</sup> International Conference on Information and Communication Technology for Intelligent Systems (ICTIS 2022), April 22<sup>nd</sup> and 23<sup>rd</sup> 2022.
- Nibras Ahmed Nizar, Krishna Raj P. M. Vijaya Kumar B P – 'Anomaly Detection in Telemetry Data Using Ensemble Machine Learning', IEEE CONECCT 2022,
- Sumana Maradithaya, Rashmitha H R 'Efficient Decision-Making Approaches to Detect Cardiac Arrhythmia', 3<sup>rd</sup> International Conference on Recent Innovative Trends in Computer Science and Applications (ICRITCSA-2022), 06<sup>th</sup> 07<sup>th</sup> May, 2022
- Shivanna K, Dr. Niranjanmurthy M, Janardhana D R 'A Double Encryption for Data Protection in Cloud Computing', 3<sup>rd</sup> International Conference on Recent Innovative Trends in Computer Science and Applications (ICRITCSA-2022), 6<sup>th</sup> 7<sup>th</sup> May 2022
- HM Arshad Ali Khan, Evangeline D-'Review on Facial Emotion Recognition Techniques', 3<sup>rd</sup> International conference on Recent Innovative Trends in computer science and Applications (ICRITCSA 2022), Ramaiah Institute of Technology, Bangalore, 6<sup>th</sup> and 7<sup>th</sup> May, 2022
- Evangeline D, Parkavi A 'Conduction of Online Examinations: A Survey', 10<sup>th</sup> International Conference on Contemporary Engineering and Technology – 2022, Prince Shri Venkateshwara



Padmavathy Engineering College, Chennai, May  $21^{st}$  –  $22^{nd}$ . 2022

#### Funded project/Patents

Dr. Vijaya Kumar B P (Principal Investigator), Sr. Sumana M (Co-Principal Investigator) – obtained funding from Indian Space Research Organization.
 Title of Project: Use of Artificial Intelligence (AI)/ Expert Systems (ES)/Machine Learning (MI) in Mission Operations.

Grant: Amount: Rs. 16, 94, 880/-

#### **Patents**

- Dr. Pushpalatha M N published a patent on 'A system for automated malpractice detection during an examination and a method thereof'.
- Dr. Sanjay H A published a patent on 'Cardiac Diagnosis in real time using machine learning and IoT'.
- Dr. Siddesh G M is granted an Australian patent for 'A Middleware based system and method for monitoring real time air quality using Internet of Things'.

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

- Diya James, T N Bhavitha Reddy won the Inter Zone award for chess tournament held at SJM Institute of Technology, Chitradurga from 25<sup>th</sup> June to 26<sup>th</sup> June, 2022.
- Rohan Kumar Shetty, Vinay K, Pavana H A won second prize in a 48-hour virtual hackathon, Hackwell 4.0 organized by the Center for Interdisciplinary Research, JSS Academy of Technical Education, Bengaluru sponsored by Honeywell, held from 22<sup>nd</sup> to 24<sup>th</sup> of June. Cash prize Rs. 50,000.
- Anusha Chaturvedi, Benny Nandha Dharshan G,
   Ankita M Thakur, Himanshu Behl won PowerToFly
   Global Hackathon 2022
- Anusha Chaturvedi, Benny Nandha Dharshan G
   won 2<sup>nd</sup> Place in Nokia Hackman V5.0 hosted at Dayanand Sagar College of Engineering

- Rohan Kumar Shetty, Vinay K, Pavana HA, Praneeth Shetty – won Go Al for social good Hackathon Conducted by IEEE Bangalore and Center for Development and Advance Computing Bangalore on 11<sup>th</sup> and 12<sup>th</sup> of June 2022, a 24-hour offline Hackathon in Center for Development and Advance Computing Campus City, Bangalore. Prize money of 5000
- Rohan Kumar Shetty, Vinay K Secured second prize in idea presentation event held on 2<sup>nd</sup> June organized by MCA, CSE and ISE RIT in association with computer society of India.

### DEPARTMENT OF MEDICAL ELECTRONICS ENGINEERING

#### Publications in National / International Journals

- Lakshmi Shrinivasan, M D Nandeesh, Basavaraj Hiremath - 'Artificial Intelligence based Techniques for Decision Support System and prediction for Diabetes Diagnosis', Neuro Quantology ,Vol.20(5), May 2022, Pg. 1322-1331.
- Divya M.N, C. K. Narayanappa, Gangadharaiah S.L

   'Hybrid controller design using gain scheduling approach for compressor systems', International Journal of Electrical and Computer Engineering (IJECE), Vol. 12(3), June 2022, pp. 3051-3060, ISSN: 2088-8708, DOI: 10.11591/ijece.v12i3. pp. 3051-3060.
- Jai Shankar K N, Poornima G R, C K Narayanappa
   'COVID-19 Detection using Chest X-RAY', International Journal of Circuits, Systems and Signal Processing, (2022) DOI: 10.46300/9106.2022.16.10, pp. 859-864.
- Divya M N, C K Narayanappa, Gangadharaiah, V Nuthan Prasad – 'Design and Performance Analysis of Anti-Surge Control Mechanism for Compressor System using Neural Networks', International Journal of Advanced Computer Science and Applications (IJACSA), Vol. 13(1), 2022, pp. 710-718.
- Gangadharaiah S.L, C K Narayanappa, Divya M. N, M.
   Nagabhushanam , Nuthan Prasad V, Bhanu Darshan



Srinivas Shobhavathi – 'Delay-power efficient VLSI architecture design for robust proportionate adaptive filter', Indonesian Journal of Electrical Engineering and Computer Science Vol. 26(1), April 2022, ISSN: 2502-4752, DOI: 10.11591/ijeecs.v26.i1. pp. 67-74.

Kassaeva, P. Belova, E. Shashina, E. Shcherbakov, D. Makarova, V. Ershov, B.; Sukhov, V. Zabroda, N.; Sriraam, N. Mitrokhin, O. Zhernov, Y.- 'Anxiety, Depression, and Other Emotional Disorders during the COVID-19 Pandemic: A Narrative Review of the Risk Factors and Risk Groups'. Encyclopedia 2022, Vol.2, Pg.912-927. https://doi.org/10.3390/encyclopedia2020060.

#### **Guest Lecture/s Invited**

 Dr. N Sriraam conducted an online webinar on 'How to write quality research papers for the under graduate and graduate students'. The event was organized by EMB MSRIT student chapter on 23.04.2022.

#### Faculty who obtained Ph.D. degree



Mahendra S J - obtained his Ph.D. degree from VTU for his work on 'Design of an Advanced FES System Prototype through Novel Sensor, Fusion and Control Design Technique', under the supervision of Dr.

Vishwanath Talasila, Professor, Dept. of Electronics and Telecommunication Engineering, RIT.

# DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING



 One-day workshop on 'Radio Frequency Amplifiers: Principles, Design and Simulations' 'Dr. Prasad Shastry, Professor, Bradley University, USA and Ms. Gayetri Ranjeri, application Engineer, Keysight Technologies, Bangalore are the resource persons, date 10<sup>th</sup> June, 2022.



 CARFS Colloquium, Technical Talk on 'IoT & Telematics Enabling Electric Vehicle for a Smarter and Sustainable Mobility', by Mr. Karan Makhija, CEO and Founder, Intellicar Telematics Pvt. Ltd., Bangalore on 28-05-2022.



 CARFS Colloquium, Technical Talk on 'Concepts of MMIC Design & Technology', by Mr. Anbarsan V, Senior Engineer in MMIC Dept. of PDIC, BEL, Bangalore and Mr. K.Satish Kumar, Senior Engineer in MMIC, Dept of PDIC, BEL, Bangalore on 1<sup>st</sup> April, 2022.

#### **Publications in National / International Journals**

Vidyarani K.R, ViswanathTalasila , Megharjun N, Supriya M, Ravi Prasad K.J, Prashanth G.R,
 'An inertial sensing mechanism for measuring gait parameters and gait energy expenditure', Biomedical Signal Processing and Control, https://doi.org/10.1016/j.bspc.2021.103056.



- Mahendra, S.J., Viswanath Talasila., Dutt, A.G. 'A wiener model based closed loop fes for positional control during wrist flexion', International Journal of Circuits, Systems and Signal Processing, 2021, Vol. 15, pp. 829–835, DOI: 10.46300/9106.2021.15.91.
- Saade Abdalkareem Jasim, Mustafa M. Kadhim, Venu K N, Indah Raya, Sarah Jawad Shoja, Wanich Suksatan, Muneam Hussein Ali, Ehsankianfar -'Molecular Junctions: Introduction and Physical Foundations, Nanoelectrical Conductivity and Electronic Structure and Charge Transfer in Organic Molecular Junctions', Brazilian Journal of Physics (2022) 52: 31, https://doi.org/10.1007/s13538-021-01033-z.
- M N Manjunatha, Umesharaddy Radder, M D Nandeesh, Noor Afshan Banu, Brungesh K V, Mohamed Ziaulla 'Biological Studies of Cobalt Bromide Complex with 2-(P-Thiomethyl Phenyl) Benzimdazole', Nat. Volatile & Essent. Oils, April 2022, Vol. 9(1), Pg. 1679-1686, International Journal.
- Karthikeya. G.S., Magray, M.I., Zebiri, C. et al. -Implementational Aspects of Various Feeding Techniques for mm Wave 5G Antennas. Arab J. Sci. Engg., (2022). DOI. org/10.1007/S13369-022-06953-9

#### **Funded Project:**

- Dr. B. K. Sujatha, Principal Investigator –
   'Performance characterization of flexible Wearable
   Antenna for dynamic IoT Connectivity', sponsored by
   AICTE under MODROBS Scheme under the guidance
   of Amount: Rs. 10 Lakhs.
- Dr. B.K. Sujatha, Principal Investigator 'Centre of Learning for setting up Microwave and Antenna Lab', sponsored by VGST K-FIST. Amount: Rs. 40 Lakhs.
- Dr. Viswanath Talasila. 'Development of a Prosumer Driven Integrated SMART Grid', sponsored by DST Amount: Rs. 33.32 Lakhs.
- Dr. Shobha KR, Principal Investigator and Co-PI Dr.
   S G Shivaprasad Yadav 'Setting up of Internet of things (IoT) based Sensor Network Lab', sponsored by VGST K-FIST. Amount: Rs. 40 Lakhs.

- **Dr. Viswanatha Talasila,** Principal Investigator 'Enabling functional mobility through advanced gait analysis', sponsored by BIRAC Rs. 21.4.
- Dr. Shobha K R, Principal Investigation, Dr. Parimala P, CO-PI, Nisha SL, CO-PI- 'Design, Development and Prototyping of High Accuracy NavIC Receiver for Rapid Topographic Survey', sponsored by DST Device Development Programme Rs.53 lakhs. November 2021.

#### Faculty who obtained Ph.D. degree



**Arvind Kumar G,** Assistant Professor Completed Ph.D. under Visvesvaraya Technological University on 10<sup>th</sup> March 2022 titled 'Analysis and Simulation of an ANN based Image Denoising using Soft Thresholding Techniques',

under the guidance of Dr. Ashok Kusagur, Associate Professor & Chairman, Dept. Of EEE, UBDT College of Engineering, Davanagere.

# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING (CYBER SECURITY)

#### **Patents**

Dr. Thippeswamy M N, Dr. K Chenna Reddy, Mr. Venkatesh S N, Mrs. Mamatha N P, Mrs. Manjula K B, Mr. Boban Mathews, Mrs. ShamaFirdous, Dr. Puttamade Gowda J - 'Emergency Alert System for Physically Handicapped Cyclists Using IoT' Application Number: 202241027741, Publication Date (U/S 11A): 17/06/2022.

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

- Abhishek M Cleared round 1 in the National Engineering Olympiad 6.0; took part in RVITM Fantom Code 202'; Participated in IEEE CIS treasure hunt 'find', on 21<sup>st</sup> June, 2022.
- **Rohan Santhosh** has been a part of design competition held by ECell, Ramaiah on 21<sup>st</sup> June, 2022, won 1<sup>st</sup> place in video editing competition



conducted by ECell RIT and participated in Treasure Hunt by S.T.A.R.D.U.S.T, RIT on  $9^{\text{th}}$  June 2022, participated in Treasure Hunt 'find' () organized by IEEE CIS, RIT on  $17^{\text{th}}$  June 2022.

Yash Gupta – played state ranking tournament conducted by KTTA, went till 2<sup>nd</sup> round in men's category; Won 3<sup>rd</sup> position in Table Tennis tournament in BMSIT; Participated in ideath on conducted by society of mechanical engineers RIT; Participated in IEEE CIS treasure hunt 'find', 4<sup>th</sup> June, 2022.

### DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

#### Publications in National/International Journals

- Varalakshmi P N K, Jagadish S Kallimani 'Text Normalization Through Neural Models in Generating Text Summary for Various Speech Synthesis Applications', Cyber Security, Privacy and Networking. Lecture Notes in Networks and Systems, 2022, vol 370. Springer, Singapore. https://doi.org/10.1007/978-981-16-8664-1\_18
- Chandrika C P, Jagadish S Kallimani 'Instance Based Authorship Attribution for Kannada Text Using Amalgamation of Character and Word N-grams Technique', Distributed Computing and Optimization Techniques. Lecture Notes in Electrical Engineering, 2022, vol 903. Springer, Singapore. https://doi. org/10.1007/978-981-19-2281-7\_51
- Rajeshwari S B, Jagadish S Kallimani, 'Optimization of Linguistic Techniques by Extracting Opinion in Text Summarization Using Transferable Neural Network', Distributed Computing and Optimization Techniques. Lecture Notes in Electrical Engineering, 2022, vol 903. Springer, Singapore. https://doi.org/10.1007/978-981-19-2281-7\_63
- Rajeshwari S B, Jagadish S Kallimani 'Statistical Study and Analysis of Polysemy Words in the Kannada Language for Various Text Processing Applications', Second International Conference on Sustainable Technologies for Computational

Intelligence. Advances in Intelligent Systems and Computing, 2022, vol 1235. Springer, Singapore. https://doi.org/10.1007/978-981-16-4641-6\_31

#### **Achievements**

- Dr. Jagadish S Kallimani, Prof and Head, Dept of Al & ML and Prof. Chandrika Prasad, Asst. Prof, Dept of CSE, Consultation project with fund of Rs. One lakh is received towards 'Spell-Check project for Kannada language' by from Kannada Ganaka Parishat, Bangalore on 27<sup>th</sup> April 2022 for the duration of two months.
- Dr. Jagadish S Kallimani Session chair, reviewer, technical committee member, and publication committee member, 3<sup>rd</sup> International Conference on Recent Innovative Trends in Computer Science and Applications (ICRITCSA-2022), Ramaiah Institute of Technology, on 7<sup>th</sup> May 2022
- Dr. Jagadish S Kallimani Session Chair, 4<sup>th</sup> National Conferenced on Advancements in Computer Science & Engineering, New Horizon College of Engineering, Bangalore, on 11<sup>th</sup> May 2022.

#### **Guest Lecture/s - Invited**

• Mr. Harsh Singhal, Head of ML, K00 India, Bangalore - 'Electricity of the Future and Enabling Entrepreneurship' on 29<sup>th</sup> June 2022.

### DEPARTMENT OF BIOTECHNOLOGY



 An industrial Visit to Merck Life Sciences Pvt. Ltd, Bengaluru was organized on 20<sup>th</sup> May 2022.



#### **Publications in International Journals**

- Monika, P., and M. N. Chandraprabha 'Risks of Mucormycosis in the current Covid-19 pandemic: a clinical challenge in both immunocompromised and immunocompetent patients', Molecular Biology Reports (2022), Pg.1-12.
- N. Ahalya 'Assessing the awareness of nutritional benefits of millets amongst women in Bangalore', British Food Journal, 2022, Pg. 1-17.
- Gokulakrishnan Murugesan 'Rapid Photocatalytic degradation of 2, 4-dichlorophenoxy acetic acid by ZnO nanoparticles synthesized using the leaf extract of Muntingiacalabura', Journal of Molecular Structure (2022), Pg. 133127.
- K. Samrat 'Green chemistry principles for the synthesis of anti-fungal active gum acaciagold nanocomposite-natamycin (GA-AuNC-NT) against food spoilage fungal strain Aspergillus ochraceopealiformis and its marked Congo red dye adsprtion efficacy', Environmental Research (2022), Pg. 113386.
- Priyadarshini Dey 'Insight into the Molecular Mechanisms Underpinning the Mycoremediation of Multiple Metals by Proteomic Technique'. Frontiers in Microbiology 13 (2022).

#### **Funded Projects Ongoing**

- Dr. Bindu S & Mrs. Vijayalakshmi V Development of a Biocompatible Poly (L-Latic 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 & Dr. Harikrishna R Design of structurally modified nanoceria with enhanced haloperoxidase activity to combat sulphate reducing bacteria (SRB) induced biocorrosion: A biomimetic approach to combat microbilogically – 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, 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.
- Dr. Bindu S & Dr. Dhamodhar P BiSEP (Biotechnology Skill Enhancement Programme), Domain: Biopharmaceutical Technology, KBITS, Govt. of Karnataka, Rs. 162.5 Lakhs.
- Dr. Chandraprabha M.N & Mrs. Sanchita Sharma
   Enhanced Production of Indian (Precursor of Indigo Dye) from cell suspension culture of Indigoferatinctoria and its up scaling through bioreactor, DST, Rs. 23.72 Lakhs.

#### Guest Lecture/s - Invited

- Dr. Rashmi. C. Upadhyay Senior Commercial Marketing Manager, Life Science Biology, Research Solutions, Bangalore - 'Biomarker Research: Advanced Assays' on 05.05.2022.
- Dr. Kirthana M.V. Sindhe, Commercial Marketing Manager, Customer Experiences Labs, Merck Life Sciences, Bengaluru - 'A road map to targeted cancer therapies', on 08.04.2022.
- **Dr. Vani Murthy,** Solid Waste Management Round Table, Bengaluru- 'Home composting & Terrace gardening', on 09.06.2022.
- Dr. Subbaiah T S, Founder, Bioman Technology, Bengaluru – 'Sustainability in Environment', on 07.06.2022.
- **Mr. P Srinivasu,** Founder of SOIL, Bengaluru 'Sustainability in Agriculture', on 07.06.2022.
- **Dr. Vani Murthy,** Solid Waste Management Round Table, Bengaluru "Home composting & Terrace gardening" on 09.06.2022.

#### **Achievement by Student**

 Pooja G, VIII semester, won Best paper presentation award, at International Conference on Functional



Materials, Energy, Environment and Biomedical Applications, Bishop Heber College.

- Trupthi Joshi, received Full EMJMD scholarship \$1125 per month, Erasmus Mundus scholarship by European Union for higher studies at University of Groningen, Netherland.
- Niyati Navaneeth, won 2<sup>nd</sup> place in solo dance, "Prathidhwani", inter collegiate cultural fest, UTSAV-ENVISAGE held on 27<sup>th</sup> of May 2022.
- Sreemoyee Biswas, II semester, won 2<sup>nd</sup> place in a group dance, Step up group dance event at Utsaha Vaibhava, BMS Institute of Technology & Management, Yelahanka on 24<sup>th</sup> and 25<sup>th</sup> July 2022

#### **DEPARTMENT OF MATHEMATICS**

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

- Girinath Reddy M, et.al 'Enhanced heat transfer in hydrodynamic non-Newtonian film flows past an extending cylinder: a hydrogen energy application', Waves in Random and Complex Media, Vol. 2022, pp.1-14, 2022.
- Girinath Reddy M, et.al 'Enhanced heat transfer efficiency of PTSC using hydromagnetic cross nanofluid: A hydrogen energy application', International Journal of Hydrogen Energy, Vol. 47 (46), PP. 20254-20264, 2022.
- B. Azghar Pasha, G. Sowmya et.al 'Flow and Heat Transfer Analysis of a Thin Film Ferromagnetic Liquid over and Unsteady Stretching Sheet', Biointerface Research in Applied Chemistry, Vol. 13(3), Pg. 1-15, 2022.
- B. Azghar Pasha,G. Sowmya et.al 'Numerical investigation of ferromagnetic liquid film flow over an unsteady stretching surface in the presence of radiation and aligned magnetic field', Heat Transfer, Vol. 51(5), Pg. 4268-85, 2022.
- G. Sowmya et.al 'Convective- radioactive thermal investigation of a porous dovetail fin using spectral collocation method', Ain Shams Engineering Journal, 2022, Pg. No.: 101811.

#### **Guest Lecture/s – Invited**

 Prof. Ashok Rao, Former Head, Network Project, CEDT, IISc., Bengaluru – 'Relook into Mathematics for Engineers' on 29.06.2022.

#### **DEPARTMENT OF CHEMISTRY**



 In association with Kanneri Mutt, Maharastra, Luminescence Society of India: Karnataka Chapter (LSIKC) conducted 3 days (13-04-2022 to 15-04-2022) workshop at Kanneri (Maharastra) on the topic: 'Strategies for Sustainable Rural Development', Sri. Adrishya Kadasiddeshwara Swamiji blessed the occasion.



 Farmers participants at Krushi Vignana Kendra, Kanneri Mutt, Siddagiri, Maharashtra, 'Natural farming & Experience sharing by Farmers' on 15-04-2022.





 Farmers participants at Krushi Vignana Kendra, Kanneri Mutt, Siddagiri, Maharashtra, discussion with Director on 'An Effective Soil Museum' 15-04-2022.



 In association with Luminescence Society of India: Karnataka Chapter (LSIKC) Department of Chemistry conducted a program called "My Research Journey"; it was arranged for Research Scholars working on 'Nano materials and their applications in luminescent properties', 26-04-2022.



 In association with 'Shivaganga Melanagavi Mutt', Shivaganaga, Thumkuru - District, Luminescence Society of India: Karnataka Chapter (LSIKC), celebrated World Environment day - 'Plantation Program' on 05-06-2022.

#### Publications (National / International) Journals

- G. K. Prashanth, B. M. Nagabhushana 'Controlled synthesis of Ag/CuO nanocomposites: evaluation of their antimycobacterial, antioxidant, and anticancer activities', Applied Physics A (2022) 128:614.
- VinayakAdimule, Sheetal Batakurki, Basappa C Yallur, Rangappa Keri 'Design, Synthesis, Characterization and Anticancer properties of Novel derivatives of 2-(4-t-butyl)-5-(5-Aryl substituted-1, 3, 4-oxadiazol-2-yl) pyridine, 2022/5/23.

- M. N Manjunatha, U Radder, MD Nandeesh, NA Banu, B K.V, M Ziaulla – 'Biological Studies Of Cobalt Bromide Complex With 2- (P-Thiomethyl Phenyl) Benzimdazole', Journal of Natural Volatiles and Essential Oils, Vol. 9 (1), 2022/4, Pg. 1679-1686.
- Nandeesha Itigimatha, Kailash S Chadchan, Basappa C Yallur, Manjunatha D Hadagali, Manjunatha D Hadagali 'Simple And Sensitive Rp-Hplc And Uv Spectroscopic Methods For The Determination Of Remogliflozin Etabonate In Pure And Pharmaceutical Formulations SafVe Farmasötik ...', Journal of Turk J Pharm Sci, Vol. 19(2), 2022/4/23, Pg. 213-219.
- Misba Kallur, M N Chandraprabha, Hari Krishna Rajan, Ajit Khosla, C Manjunatha – 'Synthesis, Characterization of Cerium Oxide Nanoparticles and Evaluation of DNA Binding Interactions', International Journal of ECS Transactions, Vol. 107(1), 2022/4/24, Pg. 15935.
- C Manjunatha, Ajit Khosla, R Hari Krishna, P Vijay Kumar, Sujan Chakraborty, M Krishna 'Recent Advances in the Synthesis, Characterization of Pure and Doped NiO Nanostructures for Gas Sensor Applications', International Journal of ECS Transactions, Vol. 107(1), 2022/4/24, Pg. 3725.
- Chandra Prabha, Hari Krishna Rajan, Bhargavi Vadappi 'Synthesis, Characterization of Nano Zinc Sulphide and Evaluation of DNA Binding Interactions', International Journal of ECS Transactions, Vol. 107(1), 2022/4/24, Pg. 15999.
- C Manjunatha, Ajit Khosla, R Hari Krishna, S Ashoka

   'Current Progress in Materials, Device Fabrication,
   and Biomedical Applications of Potentiometric
   Sensor Devices: A Short Review', International
   Journal of ECS Transactions, Vol. 107(1), 2022/4/24,
   Pg. 6343.
- Kesarihi Piyush Kumar Gupta B.H. Jaswanth Gowda, Mohammed Gulzar Ahmed, Sampath Chinnam – 'Current trends in bio-waste mediated metal/metal oxide nanoparticles for drug delivery', Journal of Drug Delivery Science and Technology, 2022/4/8, Pg. 103305.
- Ashu Rani SakshiKabra Malpani, DeeptiGoyal,
   Sampath Chinnam 'Vapor Phase Alkylation of

#### ಶಂಸಿದೆ



Isomeric Cresols with Tert-Butyl Alcohol over Perlite Supported Sulfated Zirconia Catalyst', International Journal of Sustainability, Vol. 14, 2022/4/24, Pg. 5149.

- Richie R Bhandare, Chandrashekar, Sampath Chinnam – 'Multistep synthesis and screening of heterocyclic tetrads containing furan, pyrazoline, thiazole and triazole (or oxadiazole) as antimicrobial and anticancer agents', Journal of Saudi Chemical Society, Vol. 26(3), 2022/5/1, Pg. 101447.
- Ashish BaldiPreet Amol Singh, Neha Bajwa, Sampath Chinnam, Arun Chandan – 'An overview of some important deliberations to promote medicinal plants cultivation', Journal of Applied Research on Medicinal and Aromatic Plants, 2022/5/25, Pg. 100400.
- M N Chandraprabha, R Hari Krishna, K Samrat, K Pradeepa, Neelashree C Patil, M Sasikumar – 'Biogenic Collagen-Nano ZnO Composite Membrane as Potential Wound Dressing Material: Structural Characterization, Antibacterial Studies and In Vivo Wound Healing Studies', Journal of Inorganic and Organometallic Polymers and Materials, 2022/6/7, Pg. 1-16.
- Vinayak Adimule, Basappa C Yallur, Debdas Bhowmik, Adarsha HJ Gowda – 'Dielectric properties of P3BT doped ZrY<sub>2</sub>O<sub>3</sub>/CoZrY<sub>2</sub>O<sub>3</sub> nanostructures for low cost applications', Transactions on Electrical and Electronic Materials, Vol. 23(3), 2022/6, Pg. 288-303.
- Sahana C P, P R Deepthi, P Mohan Kumar, Anu Sukhdev, Malathi Challa, J Shanthi - 'Methyl Orange Doped Sulphamic Acid Single Crystals: Growth, Optical and Thermal Properties for Optoelectronic Applications', Brazilian Journal of Physics, Vol. 52(3), 2022/6, Pg. 1-8.
- Dhiraj V. Panke Ismail Celik, Mithun Rudrapal, Pradeep Kumar Yadalam, Sampath Chinnam 'Resveratrol and Its Natural Analogues Inhibit RNA Dependant RNA Polymerase (RdRp) of Rhizopusoryzae in Mucormycosis through Computational Investigations', Polycyclic Aromatic Compounds, 2022/6/27, DOI: 10.1080/10406638.2022.2091618.

#### **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 lons, sanctioned date: 18.02.2022,

Amount: 700000/-.

 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

 Dr. P. Murali Krishna – received grant by 'Boeing Research & Technology-India Centre'. 'Environmental friendly coatings: To replace chrome based conversion coatings with chrome-free coatings'.

Grant: Rs. \$30,865

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 microbilogically – influenced Corrosion (MIC) of marine structures'.

Grant: 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',

Grant: Rs.30.0 Lakhs.

#### **Patents**

Ramesh Chandra Panda Khushbu Patel, Alok Garg, Sapana Jadoun, Shailesh Iyer, Manali Singh, Kuldeep, Sampath Chinnam – Title of the invention – 'Preparation of activated carbon from agricultural waste-wheat straws using rapid microwave digestion method', Application No.: 202221014687, Status of the patent: Indian Patent published on 1st April 2022.



- Siddhartha Maji Basappa C Yallur, Ambika Madalakote Rajanna, Sampath Chinnam, Malathi Challa, Mithun Rudrapal, Sapana Jadoun, Sheetal Batakuri, Vinayak Adimule Title of the invention 'Novel 1, 3-dicarbonyl derivative of aminobenzoic acid as a potential inhibitor of SARS-CoV-2 main protease (Mpro)', Application No.: 202241019343, Status of the patent: Indian Patent published on 8<sup>th</sup> April 2022.
- Moamen S. Refat Indu Kumari, Sampath Chinnam, Sughra Muzaffar, Kumarappan Chidambaram – Title of the invention – 'A new alternative synthesis of potential anti-coagulant drug rivaroxaban: Molecular dynamics simulations, density functional theory, molecular docking, and ADMET studies', Application No.: 202211022190, Status of the patent: Indian Patent published on 22<sup>nd</sup> April 2022.
- Mahbubul Matin Ajoy Kumer, Sampath Chinnam, Badriya Al-halaili – Title of the invention – 'Novel methyl α-D-rhamnopyranoside analogues against anthrax: Molecular dynamics simulations, molecular docking, density functional theory, and ADMET studies', Application No.: 202211025776, Status of the patent: Indian Patent published on 6<sup>th</sup> May 2022.
- Santosh S Nandi Vinayak Adimule, Basappa C Yallur, Sheetal R Batakurki, Malathi Challa, Manjunatha D.H, R-Title of the invention – 'Aprocess for synthesis of chromium doped tellurium dioxide nanostructures for egfet ph sensor application', Patent No.: 2021104485, Application No. 2021104485, Status of the patent: Australian Patent published on 25<sup>th</sup> May 2022.
- B Neha, A S Preet, Sampath Chinnam, Nagaraju Kottam, D K Bhavesh, J Saurabh Kumar, S pallavi, R Mithun Title of the invention 'Design Patent: User-oriented magnetic stirrer', Application No.: 362521-001, Status of the patent: Indian Patent published on May 2022.
- R. Sharath Nagaraju Kottam, Sampath Chinnam, Smrithi S P N, Ahmad Salawi, Suvardhan Kanchi, A. Mushira Banu, Muktha H – Title of the invention – 'Novel carbon dots derived Beta vulgaris as potential anti-cancer and antioxidant agents', Application No.:

- 202241030127, Status of the patent: Indian Patent published on 3<sup>rd</sup> June 2022.
- Dr. Vinayak Adimule, Dr. Basappa C Yallur, Dr. Sheetal R Batakurki, Dr. Malathi Challa Title of the invention 'A process for synthesizing poly-3-butyl thiophene doped ZrY2O3/ZrCoY2O3 nanostructures', Patent No.: 400518, Application No. 202141055303, Status of the patent: Indian Patent published on 30<sup>th</sup> June 2022.

#### Guest Lectures – Delivered by Department Faculty

- Dr. B.M. Nagabhushana 'Research Opportunities in Low Temperature Solution Combustion process', KSTA sponsored two days National Symposium on 'Materials Science', JSS College of Arts. Commerce & Science. Mysore. Date- 12-05-2022.
- Dr. B.M. Nagabhushana 'Low Temperature Solution Combustion Process: A Versatile Method for Preparing Technologically Important Oxide Materials', 3<sup>rd</sup> International Conference on Recent Advances in Materials Science (ICRAMS-2022), held at National College, Tiruchirappalli, TN, on 20-05-2022.
- Dr. B.M. Nagabhushana 'Research Opportunities for Graduates', KSTA sponsored 2 days Workshop, Ramaiah College of Arts, Science and Commerce, Bangalore 09-06-2022.

#### DEPARTMENT OF PHYSICS

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

- A. Jagannatha Reddy 'Influence of Flux on the Structural and Thermoluminescence Properties of Y<sub>2</sub>SiO<sub>5</sub>:Dy<sup>3+</sup> Nanophosphors for Dosimetric Applications', Asian Journal of Chemistry; Vol.34(5), (2022), Pg. 1284-1290, https://doi.org/10.14233/ ajchem.2022.23461
- M. R. Ambika 'A Succinct Review On Piezoelectric Characteristics of PVDF and Its Copolymer PVDF-HFP', ECS Transactions, Vol. 107, (2022), pp. 10623-10630.



#### **Funded Project**

 Dr. Sandhya K L - 'Experimental investigations on developing LC nanocomposites for energy storage applications', VGST,

Grand: Rs. 15 lakhs.

#### **Patents**

Basappa C Yallur, Sampath Chinnam, Malathi Challa, Mithun Rudrapal, Sapana Jadoun, Sheetal Batakuri, Vinayak Adimule, Siddhartha Maji, Ambika Madalakote Rajanna – 'Novel 1,3-dicarbonyl derivative of aminobenzoic acid as a potential inhibitor of SARS-CoV-2 main protease (Mpro)', Indian patent, 202241019343, April 2022.

#### **DEPARTMENT OF HUMANITIES**

- Five Days Workshop on 'Resume Building' for VI Semester Students was conducted from 20th to 24th June 2022. Three hundred and thirty participants were actively involved in the five days' workshop, and the sessions empowered them to build professional resumes. **Mr. Diwakar P.** from the Department of Humanities was the resource person for the workshop.
- Five Days Workshop on 'Communicative Skills at the Workplace' Organized by the Department of Humanities in Association with Chief Proctor's Office from 9<sup>th</sup> May to 13<sup>th</sup> May 2022. Thirty-one participants were actively involved in the five days' workshop, and the sessions empowered them to speak confidently. **Mr. Diwakar P.** and Dr. Kiran Magavi from the Department of Humanities were the resource persons for the workshop.

#### **Guest Lecture/s – Invited**

 Aravind B Jatti, Former Chairman, Jatti Motors also a distinguished alumnus of Ramaiah Institute of Technology, 'Vachana Matthu Maanava Hakkugalu'. This program is organized in association with Mathematics, and Alumni Association, RIT on 22<sup>nd</sup> April 2022.  Dr. Aneesh Vidyashankar a walking violinist, gave a talk and performed musical instruments. - 'Public Speaking & Speech Acts', on 1st June 2022.

### MASTER OF COMPUTER APPLICATIONS



 International Conference ICRITCSA 2022, Department Organized AICTE Sponsored 3rd International Conference on Recent Innovative Trends in Computer Science and Applications (ICRITCSA-2022) on 6<sup>th</sup> - 7<sup>th</sup> May 2022. Mr. Ganesh Kalyanaraman, Senior Vice President, Cognizant, Chennai and Mr. Tomonori Sekiguchi, CEO and President, WooGway, Japan, were the Chief Guests of this conference.

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

- V.K.Reshma, Ihtiram Raza Khan, M. Niranjanamurthy

   'Hybrid Block-Based Lightweight Machine Learning-Based Predictive Models for Quality Preserving in the Internet of Things- (IoT-) Based Medical Images with Diagnostic Applications', Computational Intelligence and Neuroscience, vol. 2022, Article ID 8173372, Pg. 14 (2022), https://doi.org/10.1155/2022/8173372.
- Kimmi Kumari, M. Mrunalini 'Detecting Denial of Service attacks using machine learning algorithms', Journal of Big Data, Vol. 9(1), (2022), pp. 1-7.
- M Mrunalini et al 'Classification of Liver Tumors from Computed Tomography Using NRSVM', Intelligent Automation and Soft Computing, Vol. 33(3), (2022), pp. 1517-1530.



### Paper presentation in National / International Conferences

 B. K. Nirupama and M. Niranjanamurthy – 'Network Intrusion Detection using Decision Tree and Random Forest,' International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI) 2022, (2022), pp. 1-9, doi: 10.1109/ ACCAI53970.2022.9752578, IEEE.

# DEPARTMENT OF MANAGEMENT STUDIES



 Department of MBA organized a workshop on Marketing Analytics on 13-04-2022. The resource person Mr. M. S Kumar explains the basics of Digital Marketing and how marketing analytics contribute to a business. Mr. Vijay Machha presented the current market trends, the scope of marketing analytics in the corporate world, and the concepts of Buyer Persona, ROAS, Responsive web design, CTR, etc.



The department organized a workshop on "Psychometrics" from 18<sup>th</sup> to 20<sup>th</sup> April 2022, The

resource person Mr. Manjunath S. A explained the difference between Top and Poor performers and how top-notch category performers create and grab opportunities in life and briefed about KAIZEN theory.



A workshop on "Digital Marketing" was conducted from 22<sup>nd</sup> to 23<sup>rd</sup> April 2022, A resource person Mr. M.S Kumar explained the basics of Digital Marketing, its different models, and its importance in the business world. The resource person, Mr. Rahul Kargal, explained the various types of media, Google Analytics, Google Ads Console, etc.

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

- Dr. Y. M. Satish 'An Emphirical study on impact of learning theory on Gamification-based training programmes' Organization Management Journal, DOI: 10.1108/omj-04-2021-1232.
- Dr. T. Mohanasundaram 'The Application of a systematic conceptual model of Artificial Intelligence to snowballing consumer delight in Digital Age', International Journal of Scientific Engineering & Applied Science (IJSEAS), Vol. 8(4), April 2022.
- Dr. G. Vijayakumar 'Operationalizing Organizational Capacity Assessment for Identifying Capability Gaps in the Indian Hospital Sector', Business Perspectives and Research, 2022, DOI: 10.1177/22785337221077397.



### Paper presentation in International /National Conferences

- Dr. A. Mahalakshmi 'Artificial Intelligence enabled Smart Fintech towards Digital Financial Inclusion', AICTE sponsored 3<sup>rd</sup> International Conference on 'Recent Innovation Trends in Computer Science & Applications', on 6<sup>th</sup> and 7<sup>th</sup> May 2022.
- Dr. Deepak. R 'A New Normal as Stock Markets
   Are Still the Last Investment Options for Employed
   Women Individual Investors in post-covid Era', in
   GFGC Ripponpet, 'Recent Trends in Commerce &
   Management', on 5<sup>th</sup> April 2022
- Dr. Deepak. R 'An Exploratory Study on Investment and Assessment of Investment Habits of Employed Women among Conventional and Non-Conventional Avenues', in GFGC – Ripponpet, 'Recent Trends in Commerce & Management' on 5<sup>th</sup> April 2022.

#### **Guest Lectures Invited**

- Mr. Nishanth, Head of Strategic Business
  Development for Global Growth Markets, Cognizant
   'Campus to Corporate and Email writing skills' on
  26-04-2022.
- **Mr. Naveen,** Founder of Anukshana Naturals 'My story of Entrepreneurial Journey' on 14-05-2022.
- Mr. Ramani Venkat, Senior Entrepreneur 'Converting Innovation to Start-Up' on 30-06-2022.

#### **Funded Project**

 Dr. Pallavi. B – 'Impact assessment of e-market platforms for the digital inclusion of farmers in Karnataka', ICSSR, New Delhi.

Grant Rs. 3,00,000.

#### Achievements, Awards/Prizes by Students

- Ms. A.V. Thrinethra, Ms. Pavana. P, Ms. Chandana Priya Mr. Nagesh - won 2<sup>nd</sup> place in Marketing event in "ADHIVESHANA" at NMIT, Bangalore on 12-05-2022.
- Ms. A.V. Thrinethra won Runner-up place in Fond Vs Farhari event at the 'National Level Management Fest' at Ramaiah Institute of Management on 26<sup>th</sup> & 27<sup>th</sup> April 2022.

#### **ARCHITECTURE**



Inspirit 2022 was celebrated on the 27th and 28th of May 2022 with an array of guest lectures by wellknown and award- winning architects of the country. Design competition events, workshops and panel discussions were conducted. During INSPIRIT, the students attempted to create a platform to showcase the philosophies and ideologies learnt by them. The theme for INSPIRIT 2022 was MORPHOSIS. It indicated the ever changing scope of architecture, constantly transforming according to the zeitgeist shifts in civilization. In this age of ongoing flow of cosmic history, we approach the realms of new experiences. With the advent of globalization, architects are perpetually pushed to seek new techniques to revamp their designs and find solutions for the burgeoning demands of the world. The keynote speaker for 2022 was Ar. Reza Kabul of ARK Reza kabul Architects, Mumbai. His experience and knowledge in his field of expertise was extremely insightful for students. The Chief quest was Ar. Smaran Mallesh from Cadence Architects, Bengaluru and the guest speaker was Ar. D K Chaitanya from DA Studios, Hyderabad.

If a country is to be corruption free and become a nation of beautiful minds, I strongly feel there are three key societal members who can make a difference. They are the father, the mother and the teacher.

- A.P.J. Abdul Kalam



#### PLACEMENT & TRAINING

#### The main Highlights - 2022 batch

- 823 Companies visited & amp; 1669 offers
- Highest package: Apple India: Annual CTC: 31,37,930 LPA, Total CTC: 64,23,400 LPA
- International Placements: Sobha Constructions LLC, DUBAI: CTC: 5000 AED per month
- Highest Stipend: Walmart Global Tech: 90,000/- per month

#### **NSS**



- On the occasion of the 100<sup>th</sup> birth anniversary of our bellowed Founder Chairman late Dr M.S. Ramaiah, NSS organised a plantation drive at J P Park on 23<sup>rd</sup> April 2022.
- NSS organised Women's Hygiene Awareness Drive on 26<sup>th</sup> May 2022. It is important to take an initiative and promote menstrual hygiene management and proper disposal of menstrual waste by encouraging women to use incinerators at educational institutions and workplaces. We demonstrated how to use the equipment and safe disposal of used napkins.

Always be yourself, have faith in yourself, do not go out and look for a successful personality and duplicate it.

- Bruce Lee



 Organised an event on the 8<sup>th</sup> edition of International Yoga Day celebrating the theme "Yoga for Humanity" on 21<sup>st</sup> June 2022 to promote global health, harmony and peace through Yoga.

#### DEPARTMENT OF SPORTS



- BASKETBALL [Men] Winners in All India Invitational Basketball Tournament, organized by MIT, Manipal held from 9<sup>th</sup> to 12<sup>th</sup> April 2022.
- Winners in All India Invitational Inter Collegiate Basketball Tournament, organized by CHRIST UNIVERSITY, Kengeri Campus, Bangalore held from 28<sup>th</sup> & 29<sup>th</sup> April 2022.
- Winners in Invitational Inter Collegiate Tournament organized by NMIT, Bangalore held on 10<sup>th</sup> & 11<sup>th</sup> May 2022.
- Winners in State Level Invitational Inter Collegiate Basketball Tournament organized by RVCE, Bangalore held on 2<sup>nd</sup> to 4<sup>th</sup> June 2022
- Runners in Invitational Inter Collegiate Tournament organized by St. Joseph's Management College held on 7<sup>th</sup> & 8<sup>th</sup> April 2022.



- Runners in Invitational Inter Collegiate Tournament organized by CHRIST University from 21<sup>st</sup> to 24<sup>th</sup> April 2022.
- Runners in Invitational Inter Collegiate Tournament organized by St. Joseph's College of Commerce held from 30<sup>th</sup> April to 7<sup>th</sup> May-2022.



- CRICKET [Men]: Winners in Sri. Chamaraju Memorial Invitational Inter Collegiate Cricket Tournament organized by R V College of Engineering held from 24<sup>th</sup> to 30<sup>th</sup> May 2022.
- Runners in All India Invitational Inter Collegiate Basketball Tournament – DEVADAN CUP – 22, organized by Christ University, Kengeri Campus, Bangalore held from 28<sup>th</sup> & 29<sup>th</sup> April 2022
- Winners in 17<sup>th</sup> Dr. M V Jayaram Invitational Inter Collegiate Tournament organized by M. V. Jayaram College of Engineering held from 9<sup>th</sup> to 12<sup>th</sup> May 22.



 BADMINTON [Men] - Winners - in RVCE -"MOMENTUM - 22" State Level Inter Collegiate Badminton Tournament, held on 1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup> June 2022.



- CHESS [WOMEN] Winners in VTU Bangalore
   Zone Chess Competition held at The Oxford College of Engineering, on 22<sup>nd</sup> & 23<sup>rd</sup> June 2022.
- Winners in VTU Inter Zone [STATE LEVEL] Chess Competition held at S J M Institute of Technology, Chitradurga on 24<sup>th</sup> to 26<sup>th</sup> June 2022.



- HANDBALL [Men] Runners in St. Joseph's College (Autonomous) Inter Collegiate Sports Fest "SPORTSTAKES 2022" held from 28<sup>th</sup> June to 1<sup>st</sup> July 2022.
- Karthik N Gowda & Joshua Simon Sajith of II
   Semester Mechanical Engineering, represented
   Karnataka Basketball Team in Khelo India Youth
   Games held at Panchakula, Haryana from 13<sup>th</sup> to 17<sup>th</sup>
   June.





Ganashyama Prabhu I of VI Semester EIE represented VTU in All India Inter University Competition held at Andhra University, Vishakapatnam from 30th June to 3rd July 2022, Secured - Bronze Medal - 500 +D, 1000 Mtrs & Road One Lap events, and also represented Karnataka in 59th National Roller Skating Championship held at New Delhi from 10<sup>th</sup> to 22<sup>nd</sup> Dec. 2021. Secured - Gold Medal - 3000 Mtrs Relay & Bronze Medal -1000 Mtrs. Rink Race.



Shrikara S & Rishi Bopanana of IV Semester MBA and Akshan Rao of IV Semester IEM represented VTU South Zone Inter University Championship 2021-22 held at Hindustan Institute of Technology & Science, Chennai from 6<sup>th</sup> to 12<sup>th</sup> June 2022.

# DEPARTMENT OF EXTRA-CURRICULAR ACTIVITIES

- Literary Extravaganza Fest: a one-week fest conducted in MSRIT from 21<sup>st</sup> - 26<sup>th</sup> April 2022. Everyday there was a different kind of activity happening across the college.
- First day lecture on dev-ops, here speaker started explaining about the DevOps, she explained about servers then its requirements she asked audience about no of servers present in Facebook and google and explained how the whole server ecosystem at these big organizations work.
- Second day storytelling, the event started off with the anchors Kritika Gupta and Shriradha welcoming everyone and the judge Mr. Shivansh.
- Third day book review, author Andaleeb Wajid. She spoke about her past work as a content and technical writer which she did not enjoy much which was the reason why she chose writing as a full time profession. She spoke about her journey as a writer; facing many rejections initially to get her first book published she gave insights into what the readers and publishers expect from the community and writers.
- Forth day movie screening, the movie, "Ford v Ferrari" was screened in The Apex Auditorium for maximum audience experience. Movies are a critical media of provoking thoughts and expression.
- Fifth day quiz, host: Aditi Kulkarni She is currently
  the president of quiz club RIT and has conducted
  10+ quizzes on a variety of topics like pop culture,
  entertainment, movies, current affairs, politics,
  motorsport, gaming etc. Her interests include trivia,
  problem-solving, architecture, art, design, literature,
  and video gaming.

Every worthwhile accomplishment has a price tag attached to it. The question is always whether you are willing to pay the price to attain it – in hard work, sacrifice, patience, faith, and endurance.

- John C. Maxwell



- Last day debate, judge Ishan Singh Currently in 4<sup>th</sup> year, Mechanical engineering, MSRIT. He is the president of MSRIT Debsoc. He has had many achievements in the field of adjudicating and as a debater.
- Shoutout The Intra-Collegiate Theatre Fest Shoutout, Ramaiah annual theatre fest, spanned the length of three days starting from the 28th to 30th April 2022. It was organized by the club Ramaiah Theater Society (Theatrix and Chiraranga) with the help of DECA (Department of Extra Curricular Activities). This was the 13th edition of the event, coined "SHOUTOUT 13.0" by the event coordinators. The Theatre societies and the organizing committee of shoutout took immense pride in presenting this landmark event in the extracurricular calendar of the institute and are grateful for the support and encouragement they received throughout the entire process.





Cultural Orientation (ICE BREAKER) for fresher's
 The cultural orientation is one of the most looked forward events of MSRIT conducted on 10<sup>th</sup> June 2022. The fresher's are introduced to the various

clubs in the college and to the truck-load of talent filled seniors. The clubs give them their chance to shine, nurture and explore their talents to become the best of all. The event kicked off with much enthusiasm mirrored by the fresher's. The clubs were introduced in the order.

#### **NEW APPOINTMENTS**

#### Department of Electrical & Electronics Engineering



Dr. Binshati Chatterjee, joined as Assistant Professor, she completed her B.E in 2009 from WBUT and M.Tech in 2015 from Jadhavpur University, West Bengal. She has obtained Ph.D. from IIT, Dhanbad in the year, 2021. Her research interest are

control systems, Instrumentation, Photonics and optical communication.

#### FORTHCOMMING EVENTS

- 4<sup>th</sup> International Conference on Recent Advances in Engineering Sciences [ICRAES - 2022] on 13<sup>th</sup> and 14<sup>th</sup> October, 2022.
- International Conference on Applied Research in Engineering Sciences (ICARES 2022) on 24<sup>th</sup> and 25<sup>th</sup> November, 2022.
- 4<sup>th</sup> International Conference on Circuits, Control, Communication and Computing (I4C - 2022) on 21<sup>st</sup> -23<sup>rd</sup> December, 2022

Your work is going to fill large part of your life, and the only way to be truly satisfied is to do what you believe is great work. And the only way to do great work is to love what you do. If you haven't found it yet, keep looking. Don't settle. As with all matters of the heart, you'll know when you find it.

- Steve Jobs



#### 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 Memorial Hospital

Ramaiah Medical College Hospital

Ramaiah Institute of Nursing Education & Research

Ramaiah Institute of Physical Medicine & Rehabilitation (Physiotherapy)

Ramaiah Medical College

Ramaiah College of Law

Ramaiah Institute of Management

Ramaiah College of Education

Ramaiah Composite Pre-University College

Ramaiah College of Arts, Science & Commerce

Ramaiah Polytechnic

Ramaiah Institute of Technology

Ramaiah High School

Ramaiah Vidyaniketan

Ramaiah University of Applied Sciences

Ramaiah International Centre for Public Health Innovation

Ramaiah Quality Assurance Cell

Ramaiah Officers IAS Academy

Ramaiah Sunshine Ayurveda Centre, Penang, Malaysia Ramaiah Innovation Centre for Healthcare Technologies

Ramaiah Public Policy Centre

Ramaiah Clinic

Ramaiah Neha Prakash Hospital

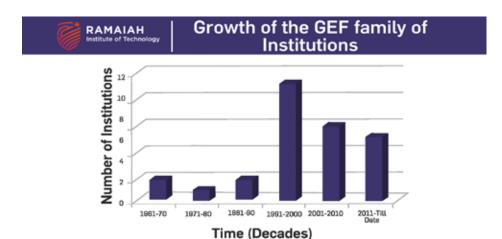
Ramaiah Leena Hospital

Ramaiah Harsha Hospital

Ramaiah Clinical Research Centre

Ramaiah INDIC Speciality Ayurveda

Ramaiah International Medical School



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

**RAMAIAH INSTITUTE OF TECHNOLOGY**