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## Sampige

### A quarterly News Bulletin

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#### From the Editorial Board

Greetings,



It gives me great satisfaction to connect with every one of you again with another issue of Sampige, News Bulletin of RIT of the year 2021. Due to continuing pandemic, we are facing a lot of challenges and I must appreciate our staff, students, parents, and management for their continuous cooperation despite this vulnerable situation. We have again missed out on a great opportunity to organize a Fresher's day due to the delayed admission process. The Editorial Board has spared all its efforts in making this issue a special one. The editorial team would like to thank all the Heads of the departments for submitting news, information compiled here. While we have made a sincere effort, any error is deeply regretted. We look forward to your comments and suggestions. I wish you all joyous and rewarding days ahead. Please feel free to offer any suggestions for the improvement of the News Bulletin. Looking forward to your continuous support in the upcoming issue.

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



Friends,  
It gives us immense pleasure, joy, and gratification to place before you yet another issue of Sampige, a quarterly News Bulletin of Ramaiah Institute of Technology (RIT) for the year 2021. I hope we are about enter the months with a glimpse of hope provided by the decrease in the number of Covid cases in the past few months. Due to the pandemic, we have faced a lot of challenges, I must appreciate our entire department Heads for their proactive response in making the current issue of the News Bulletin of RIT, a well-documented one. 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 heartfelt 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 guidance.

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.

### RANKED

# #1

AMONG  
ENGINEERING  
COLLEGES AFFILIATED  
TO VTU, KARNATAKA

# #65

BEST ENGINEERING  
INSTITUTE AMONG 1143  
REPUTED INSTITUTES  
IN INDIA



- As per National Institutional Ranking Framework, MoE, Govt. of India. 2021

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

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



Industrious and enterprising, Dr. M. S. Ramaiah is among Karnataka's illustrious sons and an engineering contractor of national repute. He founded 'Gokula Education Foundation' in 1962 without expecting any kind of assistance from the establishment with an objective of serving the society. M.S. Ramaiah Institute of Technology (MSRIT) was born under the aegis of this foundation in the same year, creating a landmark in technical education in India. Through the years MSRIT has imparted quality engineering and education, accessible to thousands from across India and abroad, facing a lack of opportunity to pursue higher education.

Widely acknowledged as a visionary, educationist, industrialist and philanthropist, Dr. M. S. Ramaiah

personally ensured that the institution which began with just two disciplines, grew phenomenally over the years. MSRIT now offers Bachelors, Masters and Doctorate programmes in several disciplines and is recognised as one of India's leading names in technical education. The institution is with state-of-the-art laboratories, well stocked libraries and has highly qualified, experienced and dedicated faculty. In tune with the noble ambitions and aspirations of Dr. M. S. Ramaiah, to keep the institution growing and developing continuously so as to become a 'Jnana Sagara', all departments are continuously engaged in implementing appropriate procedures to initiate, include and conduct unique programmes keeping in touch with the emerging requirements of the industry.

## Hearty Congratulations



- **M.D. Haris Sumair**, Department of Computer Science and Engineering, 2014-2018 batch has secured 270<sup>th</sup> Rank in UPSC.

## ALUMNI CORNER

### Shri. K. KANNAN



- **K. Kannan** is an alumnus of MSRIT and he has completed his BE in Computer Science Branch during the years 1992-1996. After the completion of his Bachelor Degree, he pursued his Master's in Computer Science at the University of Texas at Arlington, USA which

he managed to complete in a one-year time frame with a GPA of 4.0 / 4.0. Despite having received offers from prestigious companies - Motorola and Qualcomm where he had the opportunity of working on the cutting edge technology of Mobile Connectivity, he decided not to accept the offers and came back to India to work in Bengaluru. After a brief stint at Verifone India, in 1998 he decided to join the family business of manufacturing Transformers and is at the helm of affairs in the business. Kannan has been the Secretary of the MSRIT Alumni Association for close to 2 decades and has been instrumental in the execution of the visionary programs undertaken by the Alumni Association in close association with the Management of MSRIT. His reminiscences at the institute are shared below:

- "I have very fond memories of the time spent at MSRIT and the camaraderie I enjoyed with my batch mates. I was from the 1st batch of the Semester Scheme Syllabus of Bangalore University. The shift from Annual Scheme to Semester Scheme saw a drastic change in the Syllabus - the Course work, the method of evaluation of the students, etc. Dr. Krishnappa, then Principal ably supported by HoD of Computer Science Dr. Ramanatha ensured that the transition from the Annual Scheme to Semester Scheme was a seamless one. We cherish the warm relationship that we enjoyed with Dr. Ramanatha who had the foresight and vision to make the necessary changes to the infrastructure at the college to ensure that there were no hiccups in the successful completion of the course work every semester. Be it upgrading of the Computers, Software, training of the faculty, etc. the management of MSRIT left no

stone unturned to make sure that the students had the best of facilities".

- "MSRIT was very supportive when it came to allowing the students to participate in Inter-Collegiate Competitions. Dr. M.S. Ramaiah always insisted that the expenses incurred by the students to participate in such events were to be borne by the college. My friends & I had the opportunity to travel to colleges in Thanjavur, REC Surathkal, PESIT to participate in various events of Computer Fests wherein we bagged many prizes".
- "Inspired by the Computer Fests held at other colleges, we took the initiative of organizing an Intra-College Fest which was called as INT-96 - an interrupt to the regular college routine, wherein we organized many fun-filled events which saw active participation by the students of Comp Sc, Electronics and Information Science Streams. The management at MSRIT and faculty in the Computer Science Department were very supportive of the initiative and the interrupts to the college life routine continue till today.
- "In the year 1996, the Placement Cell at MSRIT was revamped and became more active and strengthened its strong connect with the top industries to make sure that several companies conducted their Campus Placement Interviews at MSRIT.
- The college conducted numerous activities to ensure that its students, who are the Brand Ambassadors - a strong philosophy followed by the college, are well-placed in renowned companies after the completion of their degree".
- "MSRIT has been very instrumental in shaping the lives of many students. The college not only ensured that they excelled academically but also enhanced their personality and encourages its students to grow and excel in everything they do include co-scholastic skills. MSRIT helps students to thrive in a friendly at-home atmosphere and nurtures them to become strong and able leaders of tomorrow".

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

- Buddha

## DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

### Paper Publications in National/International Journals

- Kedri Janardhana, S.Sridhar, Chandra K Dixit, M Deivakani, S Tamilselvi, Abdul Razak Kaladgi, Asif Afzal, Maughal Ahmed Ali Baig - 'ANFIS modelling of biodiesels', Physical and Engine Characteristics: A Review, Heat Transfer, Vol 50(8), Jul 2021.
- F Naaz, **J Channegowda**, M Lakshminarayanan, N S John, A Herle - 'Solving Limited Data Challenges in Battery Parameter Estimators by Using Generative Adversarial Networks', IEEE PES/IAS PowerAfrica, doi: 10.1109/PowerAfrica52236.2021.9543237, Sept.(2021), pp. 1-3.
- C Bhat, **J Channegowda**, V George, S Chaudhari, K Naraharisetti - 'Simulation of Onset and Propagation of Heat within Lithium-ion Battery Pack During Thermal Runaway', IEEE PES/IAS PowerAfrica, doi: 10.1109/PowerAfrica52236.2021.9543129, Sept (2021), pp. 1-3.
- Falak Naaz, **Janamejaya Channegowda** - 'A probabilistic forecasting approach towards generation of synthetic battery parameters to resolve limited data challenges', Oct2021,doi.org/10.1002/est2.297.
- Chalukya Bhat, **Janamejaya Channegowda** - 'An improved electrochemical-based model to estimate battery equivalent circuit parameters for pulsed discharge scenarios', Oct2021, doi.org/10.1002/est2.294.

### International Conference/National Conference

- Harish SP, Sridhar S, OmsekharIndela, **Kodeeswara Kumaran G**, P Parthiban - 'Analysis of Five Leg Voltage Source Inverter Fed Dual Motor Drive System', 3<sup>rd</sup> International Conference on Sustainable Energy and Design Aspects in manufacturing Technology(ICMED2021), Sept2021.

### Guest Lectures delivered by the department faculty

- **Dr. Pradipkumar Dixit** - 'CO writing and Bloom's Taxonomy', and 'CO, PO and PSO Attainment', 14<sup>th</sup> Aug 2021 in two-day workshop on 'Outcome Based Education and NBA Accreditation Process'

organized by CREC, Tirupati, AP under the AICTE Margadarshan Scheme.

- **Dr. Pradipkumar Dixit** - 'CO, PO and PSO Attainment' and 'SAR filling', 24<sup>th</sup> Jul 2021 in two day workshop on 'Outcome Based Education and NBA Accreditation Process' organized by SRIT, Anantpur, AP under the AICTE Margadarshan Scheme.
- **Dr. Chandrashekhar Badachi** - 'Recent trends in outdoor insulation', 23<sup>rd</sup> Sept, in 1<sup>st</sup> international Conference on Emerging Scientific applications in the field of Engineering and technology, organized by Karnataka Law Society
- **Dr. Dawnee** - 'Nano Technology-Introduction, Scope and Opportunities', Viswajyothi college of Engineering and Technology, 24<sup>th</sup> Sept 2021.

## DEPARTMENT OF MECHANICAL ENGINEERING

- One-day workshop on 'Ragi Value Addition – Live Demonstration & Training', on 21<sup>st</sup> July 2021, held at Sri Yogi Nareyana Mutt, Kaiwara, for the farmers around the area.

### Publication in (National/International) Journals

- **P. H. Renuka, B. S. Sridhar and A. R. Shashikala** - 'Development of small scale biogas digester and analysis of the effect of Chicken manure additive on the biogas yield', Ecology, Environment and Conservation, Eco. Env. & Cons. Vol. 27 (August Suppl. Issue): 2021, pp. S363-S368, Copyright@ EM International ISSN 0971-765X.
- **Nikhil D P, Dr. Sridhar B. S** - 'Stress Distribution On Composite Honeycomb Sandwich Structure For A Leaf Spring', International journal of mechanical engineering (ijme), issn (p): 2319-2240; issn (e): 2319-2259, vol. 10(2), July-Dec 2021, Pg.11-22.
- **Mallikarjuna Veerabhadrapa Bidari, P. B. Nagaraj and Gururaj Lalagi** - 'Influence of different types of vortex generators (VGs) to enhance heat transfer performance in heat exchangers: a review', International Journal of ambient energy, https://doi.org/10.1080/01430750.2021.1980740.
- **Balasubramanya H. S., T. Anil Kumar, Hemavathy S., S. M. Aradhya** - 'Effect of blade pitch and Number of



Blades on the performance of Hub-less Wind turbine using CFD', Journal of Mechanical Engineering research and Developments, ISSN:1024-1752, Vol.44(9), 2021, pp. 66-72

- **S. Rajeesh, Jaikumar Methre, Sharanappa Godiganur** - 'CFD analysis of combustion characteristics of CI engine run on biodiesel under various compression ratios', Materials Today: Proceedings, ISSN 2214-7853, Vol. 47(17), (2021), Pages.5823-5829. <https://doi.org/10.1016/j.matpr.2021.04.193>.
- **R. Kumar, A Saravanan, Nandeesh H. L, Architha N** - 'Mechanism of improved mobility of six-wheeled vehicle for mining application', Journal of Mines, Metals and fuels, September 2021.
- **Tanusha P, Jyothilakshmi R** - 'An experimental study on scrap reduction by chip removal in cast iron groove of a Diesel engine piston', Journal of Emerging technologies and Innovative Research, Vol.8(8), August (2021).

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

- **Shravan Upadhyaya, Akash Korgal, Dr. Sridhar B S** - 'Synthesis and Characterization of Honeycomb Sandwiched Composite Material for Automobile Applications', 5<sup>th</sup> International conference on Advanced Research in Mechanical, Materials and Manufacturing Engineering ICAMME 2021 organized by REVA University in July 2021.

#### Guest Lecture delivered by the department faculty

- **Dr. B. P. Harichandra** – 'Science of Saintists', at Bapuji Ayurvedic Medical College, Chellakere - 5<sup>th</sup> September 2021.

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

- **Mr. Gururaj Lalagi** - was the faculty Advisor and Supported the team Albatross to participate in 6<sup>th</sup> SAEINDIA Southern Section Aero Design Challenge 2021. Team Consist of 7 students namely: Vigneshwar T, Kartik Ravindra Kadarakoppa, Gnyaneshwar Nayak, Sunidhi Jawalkar, Amit Kumar Raut, Anoopb Agali, Manan Bhutya from Department of Mechanical Engineering, RIT.

## DEPARTMENT OF CIVIL ENGINEERING

#### Publications in National/ International Journals

- **Shridevi Holeppa Chikkur, R. Mourougane, Raje Gowda** - 'Study on Environmentally Friendly Concrete-High Strength Alkali Activated Concrete' International Journal of Scientific Research in Engineering and Management, Vol.5(8), Aug (2021), pp.1-5.

#### Guest Lectures delivered by the department faculty

- **M C Nataraja** - 'Characterisation of manufactured sand to produce Self compacting concrete', 9<sup>th</sup> July, 3-days webinar on Civil engineering infrastructures development, 7<sup>th</sup> – 9<sup>th</sup> July 2021, Dept. of Civil engineering, NMAM institute of Technology, Nitte, Udupi, Karnataka.
- **M C Nataraja** - 'Characterisation of high performance fibre reinforced concrete', 26<sup>th</sup> July, 2-days faculty development programme on 'Sustainable and strengthening of low cost housing for rural India', from 26<sup>th</sup> to 27<sup>th</sup> July 2021, Dept. of Civil engineering, MSRIT, Bangalore.
- **M C Nataraja**- invited technical talk on 'Innovation and research in engineering', 31<sup>st</sup>, August 2021, in a webinar organised by IIC-MyCEM, Mysore college of engineering and management, Mysore.
- **M C Nataraja** - 'Concrete making materials and proportioning of concrete as per IS:10262-2019', Four weeks Online Orientation programme for Engineers, organised by Engineering Staff College, KRS, Mysore, Government of Karnataka, 30/8/2021, Mysore.
- **M C Nataraja** - 'Effective use of manufactured aggregates and its characterisation', and 'Chemical and mineral admixtures in concrete', Four weeks Online Orientation programme for Engineers, organised by Engineering Staff College, KRS, Mysore, 9/9/2021.
- **M C Nataraja** - 'Revised Bloom's Digital Taxonomy, CO-PO mapping as per OBE-NEP 2020', Faculty Development programme organised by New Horizon College of Engineering, Bangalore, 23/09/2021.

- **R. Mourougane** – 'A Concrete without Cement' for Two days FDP on Sustainable and Strengthening of Low Cost Housing for Rural India on 26<sup>th</sup> and 27<sup>th</sup> July 2021 at the Department of Civil Engineering, RIT, Bangalore.

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

- AICTE Training & Learning (ATAL) Sponsored 5-Days Faculty Development Program on 'Machine Learning Techniques in VLSI Design', 26<sup>th</sup> to 30<sup>th</sup> July 2021. 180 participants from different parts of the country registered.



- One Week Faculty Development Program on 'Recent Advances in RF & Wireless Communications' from 2<sup>nd</sup> to 7<sup>th</sup> Aug 2021, organized by Departments of Electronics & Telecommunication Engineering, Electronics & Communication Engineering Jointly with IETE Bangalore & SAGE USA.



- One-week workshop on 'Recent Trends in Antenna Design for 5G and beyond Applications', 23<sup>rd</sup> – 27<sup>th</sup> August 2021, was organized in association with IEEE Antennas and Propagation Society, RIT Students Chapter.

## Publications in (National / International) Journals

- Thirtha Prasada H P, Manjunath K, **Sadashiva V. Chakrasali**, Sathisha B M, E G Satish – 'Recent Advances in Antilock Bracing Systems and its Control Strategie', Turkish Online Journal of Qualitative Inquiry (TOJQI), Vol. 12, Issue 3, July (2021) pp.2938-2950.
- **C. G. Raghavendra**, Raghu Srivatsa M.P. and Vignesh P. Nayak - 'Reduction of sidelobe levels in multicarrier radar signals via the fusion of hill patterns and geometric progression', ETRI Journal, Vol. 43(4), (2021), pp. 650-659.
- M. C. Parameshwara, **M. Nagabushanam** - 'Novel low quantum cost reversible logic based full adders for DSP applications', International Journal of information Technology, August (2021).
- Pavan M S, **M Nagabushanam**, Sushmita Hawaldar, **S L Gangadharaiah** – 'Capacitor-less Low-Dropout Regulator for Analog Sensing Using 90nm Technolog', International Journal of Circuits, Systems and Signal Processing, Vol.15, August (2021), pp.1184-1196.
- **Gangadharaiah S. L**, Narayanappa C K, **Nuthan Prasad V**, Divya M.N, Anirudha Rao - 'FPGA Implementation of Efficient VLSI Architecture of DLMS Adaptive Filter Algorith', Turkish Journal of Computer and Mathematics Education, Vol.12, No.14, August (2021), pp.478-489.
- Satish Tunga, **Sadashiva V. Chakrasali**, N. Shylashree, Latha B. N., Mamatha A.S –'Optimal path discovery for two moving sinks with a common junction in a wireless sensor network', Indonesian Journal of Electrical Engineering and Computer Science, Vol.23(2), August (2021), pp.879-889.
- **Flory Francis**, **Imaculate Rosaline S**, Jangli Kondappa, Raghavendra B.K, R Suresh Kumar - 'Zigzag Slotted Antenna with Diagonal Vias for Vehicular Applications', Design Engineering (Toronto), Vol. 2021(7), August (2021), pp. 8077-8085.
- **Mamtha Mohan**, **Flory Francis**, **Jayashree S** - 'Protection of EHR using Cryptography and Distributed File System', Design Engineering

(Toronto), Vol. 2021(7), August (2021), pp. 7637-7646.

- **Sara Mohan George, S Sethu Selvi, J R Raol** – 'Aircraft Parameter Estimation Using Gaussian Sum Filter with Lyapunov Stability Analysis', Journal of Aerospace Sciences and Technologies, Aeronautical Society of India, Vol. 73(3), August (2021), pp. 151 – 162.
- Divya M.N, Narayanappa C.K, **Gangadharaiyah S. L** - 'Modeling a Fault Detection Predictor in Compressor using Machine Learning Approach based on Acoustic Sensor Data', (IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 12, (2021), Pg. 9.

#### Paper presentation in National / International Conferences

- **S. Sethu Selvi**, Bharanidharan D, Abdul Qadir, Pavan K R - 'FPGA Implementation of a Face Recognition System', 7<sup>th</sup> International Conference on Electronics, Computing and Communication Technologies, IEEE CONECCT, July 2021.
- Ajay. S, Ajith Potluri, **Sara Mohan George**, Gaurav R and Anusri S - 'Indian Sign Language Recognition Using Random Forest Classifier', IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), July 2021.
- D Ashish, **C. G. Raghavendra**, B.R. Prajwal, B.D. Parameshachari and K L Hemalatha - 'Reduction of PMEPR in Multicarrier Signals Using CBC Approach', Springer, Proceeding of Cognitive Informatics and Soft Computing, Vol. 1317, (2021), pp. 669-683.
- L. J. L. Sujan, Vishwanath D. Telagadi, **C. G. Raghavendra**, B. M. J. Srujan, R. B.Vinay Prasad, B. D. Parameshachari and K. L. Hemalatha – 'Joint Reduction of Sidelobe and PMEPR in Multicarrier Radar Signal', Springer, Proceeding of Cognitive Informatics and Soft Computing, Vol. 1317, (2021), pp. 457-464.
- Raghu Srivatsa M P and **C. G. Raghavendra** - 'Reduction of Sidelobe Levels in OFDM Radar Signal using two samples sliding window adder (TSSWA)

algorithm', Springer, Proceedings of AISC, Vol. 1382, (2021), pp. 45–50.

- **S. Sethu Selvi**, Vignesh Anantharamakrishnan, A V Phani Koushik, Sai Akhil K – 'Emotional Speech Cloning using GAN', 6<sup>th</sup> International Conference on Recent Trends in Electronics, Information & Communication Technology, IEEE RTEICT, August 2021.
- Nayana S and **Lakshmi Shrinivasan** - 'Design of a Decision Support System for Diabetes Diagnosis and Prediction using AI Technique', in 2021 ASIAN Conference in Innovation Technology, IEEE ASIACON 2021, Technically co-sponsored by IEEE Bombay section on August 2021, hosted by PCCOER Pune, India.
- Nayana S and **Lakshmi Shrinivasan** - 'An Optimal Decision Tree Model for Diabetes Prediction and Diagnosis', in 2021 IEEE International Conference on Computing, Power and Communication Technologies, IEEE IAS GUCON 2021, through online Webex mode from September 2021, Kuala Lumpur Malaysia.

#### Guest Lecture delivered

- **Dr. Raghuram S** – 'Introduction to LaTeX', on 24-07-2021, Organized by IEEE-RIT Student Branch.
- **Dr. Raghuram S** – 'Introduction to Convolutional Neural Networks', 26-08-2021 In workshop titled 'Machine & Deep Learning- Opportunities in Industries & Research', Organized by Department of Electrical and Electronics Engineering, RIT.
- **Dr. Suma K V** – 'Applications of Biomedical Signals', on 07-08-2021 at SAKEC (Shah & Anchor Kucchi Engineering College), Mumbai as part of the webinar series 'Insight of Recent Technological Trends'.
- **Dr. Suma K V** – 'Entrepreneurial skill development' on 21-08-2021 at International Women in Engineering COVID 19 Congress 2021 (WIECOV 2021), to 22-08-2021 organized by IEEE Bangladesh Section and its Women in Engineering (WIE) Affinity Group.
- **Dr. Roshan Zameer Ahmed** – 'Advances in Electric Vehicles', 28-06-2021 to 02-07- 2021, during FDP Titled 'Advances in Electric Vehicles'.



- **Dr. V Anandi** – 'Neural Networks', on 27-07-2021, ATAL FDP 'Machine Learning Techniques in VLSI Design', organized at Ramaiah Institute of Technology, Bangalore.
- **Dr. S Sethu Selvi** – 'Machine Learning v/s Deep Learning', on 27-07-2021, ATAL FDP on Machine Learning Techniques in VLSI Design.

#### Funded Project:

- **Dr. M. Nagabushanam** – 'Customized Reconfigurable Platform for Image/Video Compression based on Deep Learning Algorithm for Hyperspectral Images', ISRO RESPOND project 2021 Funding scheme, Government of India, Department of Space, 2 years (2021-2023).

**Grant: Rs. 30 Lakhs**

- **Dr. Raghuram S** – 'Student Innovation Grant Program', ART PARK, IISc, Aug 2021 - Jul 2022.

**Grant: Rs. 6.05 Lakhs**

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

- **Dr. M Nagabushanam** has applied for Indian patent for 'IOT based smart lighting system for five different studio typed smart houses', is published on 11-06-2021.
- **Dr. Lakshmi Shrinivasan** is providing consultancy to B2 Initiatives Inc., Bengaluru for the project 'Design and development of digital dashboard for electric vehicles (EV)', for a total amount of Rs. 2,36,000/- over 2 years starting from June 2021.
- **Dr. S Sethu Selvi** procured a contract for research services from DRDO, Bengaluru for 'Detection and Identification of Drones in Videos' for a duration of 9 months from July 2021 for an amount of Rs 4,72,000/-.
- **Dr. S Sethu Selvi** received Best Paper Award, 6<sup>th</sup> International Conference on Recent Trends in Electronics, Information & Communication Technology, IEEE RTEICT, August 2021.
- **Dr. S Sethu Selvi** - was a Technical Program Committee member, Track Chair and Session Chair,

Signal Processing Track, 7<sup>th</sup> International Conference on Electronics, Computing and Communication Technologies, IEEE CONECCT, July 2021.

- **Dr. Suma K V** - applied for Indian patent, 'A Non-Invasive Screening System for Detecting the Presence and Grade of a Metabolic Disease', on 01-07-2021.
- **Dr. Suma K V** - was awarded 'Star Start up' for the startup venture 'Capicheck' on 23-08-2021 by Ramaiah Evolute, Bengaluru. Co-founders: Dr. S Sethu Selvi, Kushagra Awasthi, Pranav Nanda, Vikas M.
- **Dr. Suma K V** - was awarded 'Star Start up' for the startup venture 'Alvolved Technologies Pvt. Ltd' on 23-08-2021 by Ramaiah Evolute. Co-founders: Sudip Chandra Gupta, Giridhar N R, Nitesh K V.
- **Dr. Suma K V** - is providing technical consultancy to Euphonious Innovations Pvt. Ltd. in the area of 'Cyber Physical Systems and AI' for a year starting from August 2021 for a total consultancy fee of Rs 2.97,000/-
- **Dr. C. G. Raghavendra** - obtained a consultancy project titled 'ATAL Tinkering Lab', from Vivekananda Group of Institutions on September 2021 of Rs. 4,80,000/-

## DEPARTMENT OF CHEMICAL ENGINEERING

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

- M C Mallika, K Asokan, K S Anil Kumar, **T R Ramamohan** and K Satheesh Kumar – 'Improved tests for non-linearity using network-based statistics and surrogate data', Pramana, Springer, 95 (3), (2021), pp 1-9.
- Halima R, **Archana Narula, V Sravanthi** – 'Optimization of process parameters for the green synthesis of silver nanoparticles using Plackett-Burman and 3-level Box-Behnken Design', Journal of Huazhong University of Science and Technology, Tongji Medical University, (2021). Page No 1-17.

- Shreyas J Kashyap, **Ravi Sankannavar, G M Madhu** – 'Flouride sources, toxicity and fluorosis management techniques-a brief review', Journal of Hazardous Letters, Elsevier, Vol-2, (2021) pp 1-8.
- Pavithra Venkatraman, **V Manaswini Gowtham**, Mahendra Chintala, Akash Balakrishnan, Rajesh Kumarpolagani – 'Synthesis and applications of nano-MgO and composites for medicine, energy, and environmental remediation: a review', Environmental chemistry letters, Springer, 19 (6), (2021), pp 4415 – 4454.
- Deepa H A, **G M Madhu**, V Venkatesham – 'Performance evaluation of DSSC's fabricated employing TiO<sub>2</sub> and TiO<sub>2</sub>-ZnO nanocomposite as the photoanodes', Material today: proceedings, Elsevier. 2021, Volume 46, pp. 4579-86.

#### Funded project:

- **Dr. Rajeswari M Kulkarni, Dr. Archana** – 'Energy Efficient and Catalyst Medicated Acetalization of Glycerol to Synthesis Biofuel Additives', RIT Seed Funding.

**Grant: Rs. 4,80,000.**

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

- **Mr. Siddarth Tiwari** - secured 2<sup>nd</sup> position in the 17<sup>th</sup> session of OVCE Technical Paper Presentation titled 'Investigation of the Structural, Mechanical, and Thermal properties of polyvinyl alcohol-polyaniline film doped with zinc oxide nanoparticles', held on 2<sup>nd</sup> and 3<sup>rd</sup> Sept. 2021, organized by SOChE-IIChE Student's chapter of DMCE, Airoli, Navi Mumbai.

### DEPARTMENT OF INDUSTRIAL ENGINEERING AND MANAGEMENT

- The department successfully organized 5-days ATAL Online FDP on 'Nurturing today's learners to become tomorrow's leaders to face global challenges', from 13<sup>th</sup> to 17<sup>th</sup> September 2021.

#### Publications in National / International Journals:

- C. Priya, D. Kumutha, **M. Shilpa**, K. Jayanthi, S. Baskaran - 'Enhancing the SNR Using Deep Learning Algorithm in Wireless Communication System',

Arabian Journal for Science and Engineering, 2021, <https://doi.org/10.1007/s13369-021-06172-8>.

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

- **Mr. Deepak Kumar**, Asst. Professor, Dept. of IEM - Patent has been filed and published. Title - 'Obesity Detection and Alert System'. The Patent Office Journal, No. 26/2021 Dated: 25/6/2021.

### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

- Department of CSE, ISE and MCA organized five-day Online Faculty Development Programme on Emerging Trends in Computation in association with CISCO Systems (India) Private Limited, Bangalore, during 2-6 Aug 2021. This event covered innovatively, encompassing Teamwork, Group Discussions, and delivering solutions to identified problems at the end of each day.
- The three-day workshop on 'Recent Trends in Computing' was organized for all post graduate students of our department during 01-03 July 2021. Speakers from industries and the department faculty delivered talks on latest technologies. Industry speakers are: Mr. Jayasimha Rao, Technical Product Manager, Visteon Corporation Bangalore, Pushpalatha T P, Assistant Professor, Ramaiah University of Applied Sciences, Mr. Sailesh Patra, Ms. Shruti K, Ms. Sandhya, HPE, Bangalore, Mr. Vikram Krishnamurthy, Master Technologist, Micro Focus Pvt. Ltd., Bangalore.

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

- S. Koushik, **Annapurna P Patil** – 'Adaptive Content Planning and Delivery with Assessment Methodology Using Swarm Intelligence on Cloud Computing', Handbook of Research on Developing a Post-Pandemic Paradigm for Virtual Technologies in Higher Education, IGI Global, 2021, pp. 217-240. <http://doi:10.4018/978-1-7998-6963-4.ch011>.
- Kalyani G, **Shilpa Chaudhari** – 'Cross Layer Security MAC Aware Routing Protocol for IoT Networks', Wireless Personal Communications, (2021), pp. 1-23.

- Kalyani G, **Shilpa Chaudhari** – 'Security Aware Routing: Rule Based Attack Detection on Optimal Shortest Route Selection', Adhoc and Sensor Wireless Networks, No. 49, 2021.
- **Shilpa Chaudhari, R Aparna, ArchanaRane** - 'A Survey on Proxy Re-Signature Schemes for Translating One Type of Signature to Another', Cybernetics and Information Technologies, Vol. 21 (3), 2021.
- **Shreekant Jere, Annapurna P Patil, Ganeshayya I Shidaganti**, Shweta S Aladakatti, Laxmi Jayannavar - 'Dataset for modeling Beck's cognitive triad to understand depression', Data in Brief, ISSN: 2352-3409, <https://doi.org/10.1016/j.dib.2021.107431>, Vol.38, (2021).
- **Mallegowda M, Anita Kanavalli, Manish V, Mohammad Rahil, Achyuth Kumar K** - 'Crop Prediction using Machine Learning and Decision Tree Algorithms', GIS Science Journal, Vol. 8(8), (2021), ISSN: 1869-9391, DOI:20.18001.GSJ.2021.V8I8.21.37768.
- Puneet Chopade, C G Raghavendra, **Mohana Kumar S**, Bhaskar RN - 'Assessment of diseases in bombyxmori silkworm – A survey', Global Transitions Proceedings, ISSN 2666-285X, <https://doi.org/10.1016/j.gltp.2021.01.019>. Vol. 2(1), (2021), Pages 133-136.
- Inference System with Bio-Inspired techniques', 6<sup>th</sup> International Conference on Recent Trends in Electronics, Information and Communication Technology, Bangalore 27<sup>th</sup> – 28<sup>th</sup> Aug 2021.
- Akarsha D P, **Shilpa Chaudhari, R Apama** - 'Coarse-to-Fine Secure Image Deduplication with Merkle-Hash and Image Features for Cloud Storage', 2021 Asian Conference on Innovation in Technology (ASIANCON), Pune 28<sup>th</sup> – 29<sup>th</sup> Aug 2021, pp. 1-6.
- **Shilpa Chaudhari, Vandana Sardar, D S Rahul, M Chandan, Mahantesh Shivan Shivakale, K R Harini** - 'Performance Analysis of CNN, AlexNet and VGGNet Models for Drought Prediction using Satellite Images', Asian Conference on Innovation in Technology (ASIANCON), Pune 28<sup>th</sup> – 29<sup>th</sup> Aug 2021.
- Shreyashree S, **Pramod Sunagar, S Rajarajeswari, Anita Kanavalli** - 'A Literature Review on Bidirectional Encoder Representations from Transformers', 3<sup>rd</sup> International Conference on Inventive Computation and Information Technologies (ICICIT-2021), RVS Technical Campus Coimbatore, 12<sup>th</sup> – 13<sup>th</sup> Aug 2021.
- Kiran M H M, **Annapurna P Patil**, Harivind Prem Kumar, Pranav Hegde, Ruchita Garg, **S Rajarajeswari** - 'Machine Learning-Based on Device Contact Classification using Call and SMS Records', International Conference on Artificial Intelligence, Machine Learning and Big Data Engineering (ICAIMLBDE) Pune, on 8<sup>th</sup> July, 2021.
- **S Rajarajeswari**, Kruthika K, Manasa K, Naveen Mathews, Reji, Pooja Kumari - 'Real-Time Translation of Indian Sign Language to Assist the Hearing and Speech Impaired', 2<sup>nd</sup> International Conference on Innovations in Computational Intelligence and Computer Vision, Aug 5<sup>th</sup> – 6<sup>th</sup> 2021.
- Shruthi Srinarasi, Reshma Ram, Sanjay Raghavendra, **Annapurna P Patil, S Rajarajeswari, Manjunath Belgod, Rituraj Kabra, Abhishek Singh** - 'A Combination of Enhanced Word Net and BERT for Semantic Textual Similarity', International Conference on Information Technology and Natural Language Processing (ITNLP), Aug 20<sup>th</sup> – 22<sup>nd</sup>, 2021 Qingdao, China.
- **Ganeshayyal Shidaganti**, Sreya Salil, Prarthana Anand, Vaishnavi Jadhav - 'Robotic Process Automation with AI and OCR to Improve Business Process', 2021 Second International Conference

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

- **Annapurna P Patil** - 'Machine Learning-Based on Device Contact Classification using Call and SMS Records', International Conference on Artificial Intelligence, Machine Learning and Big Data Engineering (ICAIMLBDE), Pune on 8<sup>th</sup> July 2021.
- **Vandana Sardar** - 'Convolution Neural Network-based Agriculture Drought Prediction using Satellite Images', 2021 IEEE MysuruCon held at Navkis College of Engineering, Hassan on 25<sup>th</sup> Oct. 2021.
- **Aparna R** - 'Video Analytics-based Ingredient Detection for Smart Chef using YOLOv3 and Image AI', 2021 6<sup>th</sup> International Conference on Recent Trends in Electronics, Information and Communication Technology, Bangalore 27<sup>th</sup> – 28<sup>th</sup> Aug. 2021.
- **Vandana Sardar** - 'Statistical Forecasting of Vegetation Indices using Integrated Neuro-Fuzzy

on Electronics and Sustainable Communication Systems (ICESC), pp. 1612-1618. IEEE, 2021.

- **Mallegowda M, Anita Kanavalli**, Pooja Sarashetti - 'SOA based Middleware framework for IOT applications', International conference on sustainable expert Systems ICSES -2021, 17<sup>th</sup> – 18<sup>th</sup> September 2021, Springer, Tribuvan University Nepal.
- Darshini P, **Mohana Kumar S**, Prasad K, Jagadeesha SN - 'A Cost and Power Analysis of Farmer Using Smart Farming IoT System', Lecture Notes on Data Engineering and Communications Technologies, Vol. 66. Springer, [https://doi.org/10.1007/978-981-16-0965-7\\_21](https://doi.org/10.1007/978-981-16-0965-7_21).
- S J Krishna Prasad, **S Mohana Kumar**, Aneesha Johnson - 'Lung Cancer Detection with Prediction employing Machine Learning Algorithms: A Recent study', New Approaches in Engineering Research, Vol. 14, 25<sup>th</sup> Aug 2021. Pp 99-109.
- **Chandrika C P, Jagadish S Kallimani** - 'Word Sense Disambiguation for Indian Regional Language using BERT Title', 5<sup>th</sup> International Conference on Smart Computing and Informatics (SCI-2021) Sept 17<sup>th</sup> - 18<sup>th</sup> 2021, Springer-Smart Innovation, Systems and Technologies (SIST) Series, ISSN: 2190-3018.
- P N Varalakshmi K, **Jagadish S Kallimani** - 'Text Normalization through Neural Models in Generating Text Summary for Various Speech Synthesis Applications', International Conference on Cyber Security, Privacy and Networking (ICSPN-2021), 17<sup>th</sup> – 19<sup>th</sup> Sept. 2021, Lecture Notes in Networks and Systems (LNNS), ISSN: 2367-3370.
- Rajeshwari SB, **Jagadish S Kallimani** - 'Development of Optimized Linguistic Technique using Similarity Score on BERT Model in Summarizing Hindi Text Documents', 3<sup>rd</sup> International Conference on Innovative Data Communication Technologies and Application (ICIDCA-2021), 20<sup>th</sup> - 21<sup>st</sup> August 2021, Lecture Notes in Data Engineering and Communications Technologies (LNDECT), ISSN: 2367-4512.
- **Chandrika C P, Jagadish S Kallimani** - 'Extractive Text Summarization of Kannada Text Documents using Page Ranking Technique', 5<sup>th</sup> International Conference on Intelligent Data Communication Technologies and Internet of Things (ICICI 2021), 27<sup>th</sup> - 28<sup>th</sup> August 2021, Lecture Notes in Data

Engineering and Communications Technologies (LNDECT), ISSN: 2367-4512.

- Sajini G, **Jagadish S Kallimani** - 'Optimized Linguistic Feature Selection through Deep Learning Approach for Forensic Applications', 9<sup>th</sup> International Conference on Innovations in Computer Science and Engineering (ICICSE-2021), 3<sup>rd</sup> – 4<sup>th</sup> Sept. 2021, Lecture Notes in Networks and Systems (LNNS), ISSN: 2367-3370.
- P N Varalakshmi K, **Jagadish S Kallimani** - 'Readability Enhancement in Handwritten English Documents by Eliminating Noisy Characters through Convolutional Neural Network', 9<sup>th</sup> International Conference on Innovations in Computer Science and Engineering (ICICSE-2021), 3<sup>rd</sup> – 4<sup>th</sup> Sept 2021, Lecture Notes in Networks and Systems (LNNS), ISSN: 2367-3370.

#### Guest Lecture delivered by the department faculty

- **Dr. Annapurna P Patil** - 'Cognitive Computing', One Week National Level Online Faculty Development Program on Societal Applications of AI, Blockchain, and IoT, 1<sup>st</sup> – 5<sup>th</sup>, Sept. 2021, Department of Computer Science and Engineering, SVECW(A), Bhimavaram.
- **Dr. Sangeetha V** - 'Artificial Intelligence and Machine Learning Applications- COVID-19', 9<sup>th</sup> Aug 2021, Department of Computer Science and Engineering, Chalapathi Institute of Engineering and Technology, Guntur.

#### Guest Lecture/s – Invited

- **Mr. Vinod**, I Love to care India Charitable Trust - 'Technical Writing' on 4<sup>th</sup> Sept 2021.
- **Mr. Supreeth S Angadi**, Cloud Engineer, Amazon Web Services, 'AI and ML on Cloud' on 3<sup>rd</sup> Sept 2021.

#### Funded Projects:

- **Dr J Geetha, Dr. D S Jayalakshmi** - Lightweight Container-based Framework in Cloud Environment for Automated Online Assessment for Computer Science Courses, Vision Group on Science and Technology (VGST), Government of Karnataka, Rs. 30 Lakhs.
- **Dr. J Geetha, Hanumantharaju R** - A Secure Lightweight distributed framework for auditing shared data of Smart applications using Fully

Homomorphic Encryption in Cloud Storage, Centre of Excellence in Cyber Security (CySecK) Research Development Programme, Government of Karnataka, Rs. 2 Lakhs.

- **Dr. Annapurna P Patil** - 'Plaspickr: an intelligent plastic detector and classifier', Student Innovation Grant Program, ART PARK, Students Associated with the project are Reshma Ram, Shruthi Srinarasi, Sanjay Raghavendra, Rs. 5.4 Lakhs.

#### Achievements:

- **Dr. Annapurna P Patil** - Completed the six-month AICTE / UKIERI Leadership and Management programme and received the CMI Level V Award in Leadership and Management on 1<sup>st</sup> Sept. 2021.
- **Dr. Shilpa Chaudari** - Session chair, Third International Virtual Conference on Advances in Computing and Information Technology (IACIT-2021), 17<sup>th</sup> – 18<sup>th</sup> May 2021. Organized by school of computer Science and Engineering REVA University, Bangalore.
- **Dr. Shilpa Chaudari** -Reviewer of IEEE region 10 Humanitarian Technology Conference R10 HTC, during Sept 30<sup>th</sup> to Oct 2<sup>nd</sup> 2021, organized by Region 10, co-organized and hosted by IEEE Bangalore section, Bangalore.

### DEPARTMENT OF ELECTRONICS & INSTRUMENTATION ENGINEERING

- The department of EIE has inaugurated Innovation and Training Club on 8<sup>th</sup> September 2021, in association with Instrument Society of India, ISOI - Student Chapter, Dept. of EIE, RIT.



- The department of Electronics and Instrumentation Engineering has conducted Python programming for AI course for the students under ITC- RIT club from 8<sup>th</sup> – 30<sup>th</sup> September 2021.

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

- **H.S. Niranjana Murthy** – 'Early Prognosis of Diabetes Using Supervised Learning Techniques: A Comparison of Performance', Revista Geintec-Gestao Inovacao E Tecnologias, ISSN: 2237-0722, vol.11(4), July (2021), pp. 140-148. (Web of Science journal), DOI: <https://doi.org/10.47059/revistageintec.v11i4.2098>.
- **Ovhal Ajay Ashok** – 'A study of bridge tap effects on DSL channel', presented in 9<sup>th</sup> International Conference on Innovations in Electronics & Communication Engineering (ICIECE-2021), organized by Guru Nanak Institutions Technical Campus, Hyderabad, India, 13<sup>th</sup> August 2021.

#### Student Publications

- Sridhar Kashyap, Vasuki Venkatesh, **M. K. Pushpa**, Sidharth Narasimhan, Vrushi Chittaranjan, – 'Adaptive, AI-based automated knee physiotherapy system', Global Transitions Proceedings, Science Direct, Elsevier, vol. 2(2), August (202), pp. 484-491.

#### Faculty Consultancy

- **Dr. M. Jyothirmayi** - Consultancy Work in the area of design, fabrication and development of Medical devices and circuits, The Bangalore Kidney Stones Hospital, Bangalore. Amount- Rs.1,18,000/-
- **Mr. Ovhal Ajay Ashok** – Collaborative consultancy works in the development of a display system for the Shooting sports and the Customized IoT product, Avishkar India Education Private Limited, #10, K. No. 12/1b Gurunanjundaiah Ind. Area, Lakshmipura Road, Bangalore. Amount- Rs. 30,000/-

#### Faculty Achievements:

- **Dr. M. K. Pushpa** - Reviewer for IEEE MYSURUCON 2021 International Conference series of IEEE Mysore sub section held at NAVKIS college of Engineering, Hassan.
- **Dr. M. K. Pushpa** - Reviewer for 9<sup>th</sup> IEEE Region 10- HTC 2021 International conference.
- **Dr. H. S. Niranjanamurthy** - Reviewer for IEEE MYSURUCON 2021 International Conference series of IEEE Mysore sub section held at NAVKIS college of Engineering, Hassan.



- **Dr. H. S. Niranjanamurthy** - Chaired a Technical session at 2<sup>nd</sup> International conference on Engineering and Advancement in Technology-2021 held on 16<sup>th</sup> & 17<sup>th</sup> July 2021, at Lords Institute of Engineering and Technology, Hyderabad, Telangana (Virtual conference).
- **J. V. Alamelu** - Reviewer for 9<sup>th</sup> IEEE Region 10-HTC 2021 International conference.

## DEPARTMENT OF INFORMATION SCIENCE ENGINEERING

- Online 5 Days FDP on 'Quantum Information Systems & Machine Learning' from 23<sup>rd</sup> - 27<sup>th</sup> Aug 2021 in association with Department of CSE and MCA, conducted this event, topics included are Implementation and Applications of Quantum Computing, SVM and Quantum SVM, Hyperentanglement, Google Cirq and Tensor flow Quantum, etc. Resource people are from reputed organisations like IISc, HyperVerge, IISER, Bhopal, Honeywell, JP Morgan.
- Five Days Online Faculty Development Program on 'Emerging Trends in Computation' from 2<sup>nd</sup> to 6<sup>th</sup> August 2021, In association with CISCO Systems (India) Private Limited, Bangalore and Department of Computer Science and Engineering and Master of Computer Applications, the department conducted this event, topics included are Software Defined Network and Network Function Virtualization, Block Chain- How are industries using it, etc.
- Five Days Online Faculty Development Program on 'Digital Forensics and Investigations', from 9<sup>th</sup> - 13<sup>th</sup> August 2021 - In coordination with departments of Computer Science & Engineering and Master of Computer Applications. The Resource persons are from reputed organizations like Natural Forensic Science University, Gujarat, Cyber Sena India Ltd., E & Y, India, Group Cyber ID, NIC&FS- Ministry of Home Affairs from Govt. of India etc.

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

- T.N. Manjunath, Deepa Yogish, S. Mahalakshmi, **H. K. Yogish** - 'Smart question answering system using vectorization approach and statistical scoring

method', Materials Today Proceedings, (2021). Available online.

- **S R Mani Sekhar**, Gaurav Kashyap, Akshay Bhansali, Andrew Abishek, Kushan Singh - 'Dysarthric-speech detection using transfer learning with convolutional neural network', ICT Express, (2021). Available online.

### Paper presentation in National / International Conferences:

- **Yogish HK** - 'Breast Cancer Prediction Using Machine Learning Techniques', Springer 3<sup>rd</sup> International Conference On Integrated Intelligent Computing Communication and Security (ICIIC - 2021), 2021 - Won Best Paper Award.
- **Mydhili K Nair** - 'Federated K-Means Clustering: A Novel Edge AI Based Approach for Privacy Preservation', IEEE International Conference on Cloud Computing In Emerging Markets, AUG 2021.

### Funded project:

- **Dr. Vijaya Kumar B P** - 'Sign Language Translator for Vocally Challenged using Sensor based hand gesture Recognition (HGR)', from ART PARK - AI & Robotics.

**Grant - Rs. 1, 80,000.**

- **Dr. Naresh** - 'Development of prototype for detecting snakes in farm land using Edge computing algorithms', VGST.

**Grant - Rs. 3,00,000.**

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

- **Dr. Yogish H K** - received Best Paper Award for his work on 'Breast Cancer Prediction using Machine Learning Techniques', from SJB Institute of Technology in 3<sup>rd</sup> International Conference on Integrated Intelligent Computing, Communication and Security conducted during Aug 2021.
- **Dr. Siddesh** - Obtained patent for the innovation 'A Middleware-Based System and Method for Monitoring Real Time Air Quality using Internet of Things' from Australian Government. Patent number: 2021105263.

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



**Pushpalatha M N**, Assistant Professor, Dept. of ISE, obtained Ph.D. from VTU for her thesis titled 'A Study of Data Driven Approaches to Software Engineering' under the guidance of Dr. Mrunalini M, Assistant Professor, Dept. of MCA,

RIT.

### DEPARTMENT OF MEDICAL ELECTRONICS ENGINEERING

#### Publications in National / International Journals

- Sunil Kumar M, **C K Narayanappa**, Nagendra Kumar M - 'Optimization of Sparse Learning Problem of Signals on Hybrid Wave MIMO Systems using Sparse Coding based Reconstruction Learning Mechanism', International Journal of Circuits, Systems and Signal Processing, DOI: 10.46300/9106.2021.15.79, Vol.15, (2021), pp: 713-721.
- Divya M N, **C K Narayanappa**, Gangadharaiiah S L - 'Modelling a Fault Detection Predictor in Compressor using Machine Learning Approach based on Acoustic Sensor Data', International Journal of Advanced Computer Science and Applications, Vol. 12(9), (2021), Pp.650-657.
- G. K. Venkatesh, S Bhargavi, **Basavaraj V Hiremath**, Anil Kumar C - 'Design and Performance analysis of low power and high throughput of analog data compression and decompression using ANN in 32nm FinFET Technology', International Journal of circuits, systems and Signal Processing, Vol.14, July (2021), pp 730-744.

#### Paper presentation in National /International Conferences

- **Dr. Sweeti** - 'Cognitive load classification in alcoholic and control subjects performing delayed matching task using optimizable classifier networks', MEDCOM-21, Noida, India, 2021.

#### Invited Guest Lecture

- Dr. Pankaj Parashar, Cutting Edge Medical Devices Pvt. Ltd., - 'Product Designing and Finding Market Fit', on 23<sup>rd</sup> Jul 2021

#### Guest Lecture Delivered by the Department faculty:

- **Dr. Basavaraj Hiremath** - 'The Discrete Fourier Transform', in FDP on Fundamentals and Applications of digital Image Processing, Organized by S J C Institute of Technology, Chickballapur, on 28<sup>th</sup> Sept. 2021.
- **Dr. C K Narayanappa** - 'Higher Education: Opportunities, Challenges and Careers', at Govt. Women's Polytechnic, K.R Circle, Bengaluru, on 9<sup>th</sup> Oct 2021.
- **Dr. Sweeti** - 'Mendeley Software: A Reference Management tool' at Sri Krishna Institute of Technology, Bengaluru, on 9<sup>th</sup> Oct 2021.

### DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

- One-week online Faculty Development Program was organized by Department of Electronics and Telecommunication Engineering along with Department of Electronics and Communication Engineering. FDP titled 'Recent Advances in RF & Wireless Communication' was held during 2<sup>nd</sup> to 7<sup>th</sup> August 2021. The topics covered include – overview of all wireless communications from Personal Area Networks (PAN) like Wi-Fi, Bluetooth to Mobile Wide Area Networks of all generations up to 5G and beyond, Distributed Amplifiers and Full duplex Communications, Antennas for Wireless Communications, etc.
- One-week Workshop On 'Recent Trends in Antenna Design for 5G and Beyond Applications' from August 23<sup>rd</sup> to 27<sup>th</sup> 2021 - Jointly organized by the departments of Electronics and Telecommunication Engineering and Electronics and Communication Engineering, in association with IQAC, RIT & Antennas and Propagation Society. Topics covered include Hands on Session on HFSS Model of Microstrip Antennas and Antenna Pattern Measurement in Anechoic Chamber, 5G Smart Antenna Design and Challenges, Reconfigurable Massive MIMO Antenna Technologies for beyond 5G Applications, etc.

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

- Vidyanani K.R, **Viswanath Talasila**, **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, Vol 70, (2021), 103056, ISSN: 1746-8094.

- **Mahendra, S.J., Talasila, V., Dutt, A.G.** – 'A wiener model based closed loop fcs for positional control during wrist flexion', International Journal of Circuits, Systems and Signal Processing, Vol. 15, (2021), pp. 829-835.
- **Satish Tunga, Sadashiva V. Chakrasali, N. Shylashree, Latha B. N., Mamatha A. S.** – 'Optimal path discovery for two moving sinks with a common junction in a wireless sensor network', Indonesian Journal of Electrical Engineering and Computer Science Vol. 23(2), (2021), pp. 879-889.

#### Paper Presentation in International / National Conferences (Faculty)

- Neha Mukund. R, Sanjana Arun, **Kusuma S. M,** Vishak K R, Monisha. M – 'Intelligent RFID Based Library Management System', IEEE CONECCT 2021, July 9<sup>th</sup> – 11<sup>th</sup>, 2021.
- Kiran kumar Madihalli, **Ramya H R** – 'A Machine learning based approach for detection of Tumor', IEEE CONECCT 2021, July 9<sup>th</sup> – 11<sup>th</sup>, 2021.
- **Umesharaddy,** Ashwini R Kumbar – 'Efficient MODEM Design for SDR Application', 6<sup>th</sup> IEEE International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), 27<sup>th</sup> - 28<sup>th</sup> August 2021.
- Swati Swamy, **Krishna Prasad S J,** Mohan Kumar S – 'Detection and Prediction of Neurological Disorder Using Tremor Signals and Machine Learning Algorithms', IEEE international conference on Recent trends in electronics information and communication technology, 27<sup>th</sup> - 28<sup>th</sup> August 2021.

#### Book Chapter published by faculty

- Aneesha Johnson, **Krishna Prasad S J,** Mohana Kumar S – 'Lung cancer detection and prediction employing machine learning algorithms'. A recent study in New Approaches in Engineering Research Vol.14, 25<sup>th</sup> August 2021, Page 99-109
- P. Darshini, S. Mohana Kumar, **Krishna Prasad,** S. N. Jagadeesha – 'A Cost and Power Analysis of Farmer Using Smart FarmingIoT System' in Lecture

Notes on Data Engineering and Communications Technologies, Springer nature publications, April 2021.

#### Guest Lectures – Delivered by Department Faculty

- **Krishna Prasad S J** - 'Applications of Quantum computing' in FDP on Quantum information and machine learning Organized by Departments of Information Science & Engineering, Computer Science & Engineering, and Master of Computer Applications, 23<sup>rd</sup> August 2021. In Collaboration with IEEE-CIS Bangalore Chapter

#### Funded Project:

- **Dr. Viswanatha Talasila,** Principal Investigator – 'Enabling functional mobility through advanced gait analysis', sponsored by BIRAC,

**Grant: Rs. 21.4 Lakhs**

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

- **Dr. B K Sujatha** - has been awarded IETE - Professor K Sreenivasan Memorial Award for outstanding performance in teaching Electronics and Telecommunication Engineering.
- **Ms. Neha Mukund R (IMS17TE028), Sanjana Arun (IMS17TE044), Monisha M (IMS17TE025), Vishak K R (IMS17TE061)** - were awarded First Prize for Final year UG project 2021 by RIT for the project Titled 'Intelligent RFID based Library Management System' under the guidance by **Mrs. M Kusuma,** Assistant Professor.
- **Aditi J (IMS17TE002), Shreshtha Mehrotra (IMS17TE050), Sandeep S (IMS17TE065), Steve Jigy Antony (IMS17TE056)** - were awarded Second Prize for Final year UG project 2021 by RIT for the project Titled 'INTELLUMINATE: Weather Sensitive, Energy Saving, Proximity Lighting Installation', under the guidance by **Dr. K R Shobha,** Associate Professor.
- **Ishika Vaish (IMS17TE017), H A Amogh Dwaithi (IMS17TE068), Rohith M R (IMS17TE042)** - were awarded Third Prize for Final year UG project 2021 by RIT for the project Titled 'Design and Fabrication of a Koch Snowflake Antenna for WBAN Application', under the guidance by **Dr. Swetha Amit,** Assistant Professor.

## DEPARTMENT OF BIOTECHNOLOGY

- Organized an Add-on Course on 'Recent Advances in Industrial applications of Enzymes', during 17.07.2021 to 24.07.2021 with eight online lectures, in collaboration with Novozymes South Asia Pvt. Ltd., Bangalore.

### Publications in International Journals:

- T P Krishna Murthy**, Trupthi Joshi, ShivaniGunnar, Nidhi Kulkarni, Priyanka V, S Birendra Kumar – 'In silico analysis of Phyllanthusamarus phytochemicals as potent drugs against SARS-CoV-2 Main Protease', Current Research in Green and Sustainable Chemistry, ISSN: 2666-0865, vol.4, (2021), pg.1-14.

### Publications by student (UG)

- Sidharth Saxena, Sai Achyuth B, T P Krishna Murthy** – 'Structural and functional analysis of disease-associated mutations in GOT1 gene: An in silico study', Computers in Biology and Medicine, ISSN- ISSN: 0010-4825, vol.136, (2021), Pg.1-12.

### Guest Lecture- Invited

- Mr. Aditya Basu** - Head - Formulation Center, Novozymes South Asia India Pvt. Ltd., Bengaluru – 'Enzyme engineering' on 17.07.2021.
- Mr. Mohan B H**, Lab Manager & T S - Competency Development, Novozymes South Asia India Pvt Ltd, Bengaluru – 'Theenzymatic process to produce sweeteners by using starch as raw- material' on 19.07.2021.
- Mr Ajay Negi**, Manager, Bars and Adjacencies, Novozymes South Asia India Pvt Ltd, Bengaluru – 'Detergents and Detergency' on 20.07.2021.
- Mr. Aditya Basu**, Head - Formulation Center, Novozymes South Asia India Pvt Ltd, Bengaluru – 'Enzymesin detergents and laundry' on 20.07.2021.
- Mr. Anand Shelke** - 'Commercial Head-Bioenergy & Distilling, Novozymes South Asia India Pvt. Ltd., Bengaluru – 'Enzymatic process to produce Bio-ethanol by using Grain starch as raw-material', on 21.07.2021.

- Mr. Mohan B H** - Lab Manager & TS - Competency Development, Novozymes South Asia India Pvt. Ltd., Bengaluru – 'Theenzymatic process to produce Fructo-oligosaccharides and Invert syrup byusing Sucroseas raw-material', on 23.07.2021.
- Mr. Mohan B H** - Lab Manager & TS - Competency Development, Novozymes South Asia India Pvt. Ltd., Bengaluru – 'The enzymatic process to produce Gluconic-acids/Gluconates', (Glucose Oxidase and Catalase applications) on 23.07.2021.
- Mrs. Apoorva** - Research Associate, Global Powder Center, Novozymes South Asia India Pvt. Ltd., Bengaluru – 'Enzymes – Sources and Production Methodologies', on 24.07.2021.
- Dr. Yogambha Ramaswamy** - Professor, School of Biomedical Engineering, University of Sydney – 'Exploring the opportunities at University of Sydney' on 24.07.2021.
- Ms. Anjana Jain** - Senior Admission counselor Texas Review, - 'Exclusive Prospect of Career Counseling and Innovative Abroad Educational Programs', on 24.07.2021.
- Mr. Shekhar Suman**, Managing Director, Biotechnika info Labs Pvt. Ltd., Bengaluru, 'Strategies to succeed in Life Sciences Career', on 03.09.2021.

### Funded projects Ongoing

- 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 microbiologically –influenced Corrosion (MIC) of marine structures', DST, CRG, Rs. 41.83 Lakhs.
- Dr. Chandra Prabha M N & Dr. Harikrishna R** – 'Designing of Novel Biocompatible and Multifunctional Nano Ceramic Coatings for Medical Implants', VGST-KFIST L2, Rs.30.0 Lakhs.
- Dr. Chandra Prabha M N & Mrs. Monika P** – 'A biological strategy to enhance chronic wound healing in patients using Human Autologous Platelet – Rich Plasma', RIT Seed Funding, RIT, Rs. 2.6 Lakhs.
- Dr. Lokesh K N** – 'Stimuli Responsive Polymeric Particles Containing Iron (III) Chelating Bioactive Ligands for Mitigation of Intracellular Labile Iron

Pool (LIP)', Science Engineering Research Board, DST, TARE, Rs. 18.30 Lakhs.

- **Dr. Bindu S & Mrs. Vijayalakshmi V** – 'In Vitro Studies on Effects of Carbon Nanotubes on Antioxidant Mechanism in Human Neuronal Cells', IEI R&D Grant-in-Aid Scheme. The Institution of Engineers, India (IEI), Rs. 0.8 Lakhs.
- **Dr. Bindu S & Dr. Dhamodhar P** – 'BiSEP (Biotechnology Skill Enhancement Programme), Domain: Biopharmaceutical Technology', KBITS, Govt. of Karnataka, Rs. 162.5 Lakhs.
- **Dr. Chandrababha 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.

## DEPARTMENT OF MATHEMATICS

- Conducted Five-Days Online Faculty Development Program on 'Mathematical Developments in Cryptography and Data Science', on 9<sup>th</sup> – 13<sup>th</sup> Aug 2021.

### Publications in (National / International) Journals

- **Suresh Babu R, Govindaraju M V** - 'Impacts of Chemical Reaction, Diffusion- Thermo and Radiation on Unsteady Natural Convective Flow past an inclined Vertical Plate under Aligned Magnetic Field', Biointerface Research in Applied Chemistry, Vol.11(5), (2021), Pg.13252-13267.
- **G. Neeraja, Suresh Babu R** – 'Comprehensive Analysis of an Unsteady Radiated MHD Natural Convective Nano fluid in the Existence of Magnetic Field fixed to the Vertical Plate or to the Fluid', Biointerface Research in Applied Chemistry, Vol.11(5), (2021), Pg.12560-12572.
- **Sushma S, Suresh Babu R, G. Neeraja** – 'Triple Diffusive MHD Casson Fluid Flow Over a Vertical Wall with Convective Boundary Conditions', Biointerface Research in Applied Chemistry, Vol.11(6), (2021), Pg.13765-13778.
- **Suresh Babu R** – 'MHD Slip Flow and Heat Transfer of Cu-Fe<sub>3</sub>O<sub>4</sub>/Ethylene Glycol-Based Hybrid Nanofluid

over a Stretching Surface', Biointerface Research in Applied Chemistry, Volume 11, Issue 4, 11956-11968, 2021.

- **G. Neeraja** – 'Free Convective Flow of Water/Ethylene Glycol Based Micro polar Nano fluid Over a Shrinking Sheet', Biointerface Research in Applied Chemistry', Vol.11(5), (2021), Pg. 12596-12605.
- **Dinesh P A** – 'Effect of Variable Fluid Properties and Magneto hydrodynamics for Convection with Couple Stress Fluid', Biointerface Research in Applied Chemistry, Vol.11(5), (2021), Pg. 13490-13501.
- **Praveena M M** - 'Solitons of Kählerian space-time manifold', International Journal of Geometric Methods in Modern Physics, Vol.18(2), (2021), Pg. 2150021.
- **Veena B N** – 'Study of Brinkman-Bénard Nano-fluid convection with idealistic and realistic boundary conditions and by considering the effects of shape of nanoparticles', Heat Transfer-Asian Research, Vol.50(4), (2021), Pg. 3948-3976.
- **B. N. Veena** – 'Effect of Non-inertial acceleration on Brinkman-Bénard Convection in Water-Copper Nanoliquid-Saturated Porous Enclosures', International Journal of Applied and Computational Mathematics, Vol.3, (2021), Pg.1-24.
- **S. Shashi Prabha** – 'Linear Stability on the Local Thermal Non-Equilibrium Model of Mixed Convection Boundary Layer Flow over a Moving Wedge in a Porous Medium: Viscous Dissipation and Radiation', Journal of Heat Transfer Effects, Vol.143, (2021), Pg.041802-1.
- **S. Shashi Prabha** – 'Numerical Study of Three-dimensional Boundary-layer Flow over a Wedge: Magnetic Field Analysis', Journal of Applied and Computational Mechanics, Vol.1, (2021), Pg.1-14.
- **M S Basavaraj, A S Aruna, Vijaya Kumar** – 'MHD instability of the pressure - driven plane laminar flow in the presence of the uniform coplanar magnetic field: Linear stability analysis', Heat Transfer-Asian research, Vol. 50(6), (2021), Pg. 5779-5792.
- **A. S. Aruna, Vijaya Kumar, M. S Basvaraj** - 'The effect of temperature/gravity modulations on finite amplitude cellular convection with variable effect, Indian J. Physics, Vol.2001, (2021), Pg.1-10.



### Guest Lecture/s - Invited:

- **Dr. Mahesha Narayan**, Department of Mathematics, The University of the West Indies 'Series solution of Falkner-Skan-type equations using functions that decay exponentially' on 14.07.2021
- **Dr. Kiran Magavi**, Dept. of Humanities, RIT, Bengaluru - 'National Education Policy-2020 (NEP 2020) – 'Envisioning a holistic approach for higher education' on 30.07.2021.
- **Dr. P Sreekara**, Research Associate, Department of Mathematics, University of Manchester, UK, 'Mixed Precision Algorithms in Numerical Linear Algebra: Techniques, Analysis and Software' on 17.08.2021.
- **Dr. B Sooryanarayana**, Professor, Department of Mathematics, Dr. Ambedkar Institute of Technology, Bengaluru - 'An insight into Graph Theory' on 26.08.2021.

## DEPARTMENT OF CHEMISTRY



- In association with Yogi Nareyana Mutt, Kaiwara and Department of Mechanical Engg. MSRIT, Luminescence Society of India: Karnataka Chapter (LSIKC), conducted a hand-on training program on 'Ragi – crop based value addition'. In which farmers from AdarshaChethana Farmers Produce Organization Ltd., Peramachnahalli, Chikkaballapura, have participated, and program was held at Kaiwara on 21-07-2021.

- Department has organized on-line 'Half yearly Research Review Meeting (RRM)' on 10-07-2021.
- In association with Luminescence Society of India: Karnataka Chapter (LSIKC) Department of Chemistry conducted an online program called 'Read and Teach', it was arranged for Research Scholars working on 'Nano materials and their applications', 25<sup>th</sup> August 2021.



- In Association with Koti Vruksha Sainya (KVS) Bangalore, Luminescence Society of India: Karnataka Chapter (LSIKC), arranged 'Bengaluru Mega Tree Plantation Drive' at -Swami Vivekananda Park, Yelahanka - Newtown, Bangalore, on 14-08-2021. This event is arranged on the eve of 75<sup>th</sup> Independence Day.
- One-week e-workshop on 'Advances and Applications of Nano Biotechnology' jointly organized by the Dept. of Biotechnology and Dept. of Chemistry in association with Indian Institute of Chemical Engineers Kolkata. 4<sup>th</sup> – 9<sup>th</sup> October 2021.

### Publications (National / International) Journals

- A. Sangeetha, K. N. Sathish, **B. M. Nagabhushana** – 'Red, Green, Blue and IR emitting zirconium Titanatenano composite co-doped with Er<sup>3+</sup>/Tm<sup>3+</sup>/Yb<sup>3+</sup> synthesized by combustion synthesis' Optical Materials, Volume 121, November 2021, pg.111534.
- U Jinendra, D Bilehal, **B. M. Nagabhushana** – 'Adsorptive removal of Rhodamine B dye from aqueous solution by using graphene-based nickel nanocomposite', Heliyon 7 (4), 2021, Pg. e06851.
- R T Yogeeshwari, **R Hari Krishna**, Prashanth S Adarakatti, S Ashoka – 'Ultra-trace detection of toxic heavy metal ions using graphitic carbon functionalized Co<sub>3</sub>O<sub>4</sub> modified screen-printed electrode', International journal of Carbon Letters, (2021), Pg.No.1-11.
- K. N. Prathibha, **R. Hari Krishna**, B. V. Nagesh, D. Prakashbabu, B. S. Panigrahi, R. Ananthanarayanan

- 'Investigation of luminescence spectroscopic characteristics in  $\text{Eu}^{3+}$ -doped  $\text{Zn}_2\text{SiO}_4$  by Judd-Ofelt parameters', Journal of Materials Science: Materials in Electronics, <https://doi.org/10.1007/s10854-021-06524>, Vol.32, (2021), Pg. 20197-20210.
- D L Monika, **R. Hari Krishna**, M N Chandraprabha, R Preetham - 'Understanding the Role of Fuels and impure phases on Photo- and Thermoluminescence Properties of Combustion Derived nano  $\text{Sr}_2\text{CeO}_4$  Blue Light Emitting Phosphor', the Journal of Biological and Chemical Luminescence, Vol. 36(7), 16 Aug 2021, Pg.1793-1804.
- Sajid A Ansari, C. Manjunatha, Nazish Parveen, Shivraj B W, **R. Hari Krishna** - 'Mechanistic insights into defect chemistry and tailored photoluminescence and photocatalytic properties of aliovalent cation substituted  $\text{Zn}_{0.94}\text{M}_{0.06-x}\text{Li}_x\text{O}$  (M:  $\text{Fe}^{3+}$ ,  $\text{Al}^{3+}$ ,  $\text{Cr}^{3+}$ ) nanoparticles', journal of Dalton Trans., Vol. 50, (2021), Pg. 14891-14907.
- Vinayak V Rao, K Ramakrishna Murthy, G M Mamatha, **R Hari Krishna**, Pradipkumar Dixit - 'Experimental Investigations of Nano- $\text{BaTiO}_3$ -Filled HTV SiR insulating specimen under rainy conditions', Recent Trends in Thermal Engineering: Select Proceedings of ICAST 2020, (2021), Pg. 163-171.
- Vinayak Adimule, **Basappa C Yallur**, Kalpana Sharma - 'Studies on crystal structure, morphology, optical and photoluminescence properties of flake-like Sb doped  $\text{Y}_2\text{O}_3$  nanostructures', Journal of Optics, (2021), Pg. 1-11.

#### Funded project:

- **Dr. M. N. Manjunatha** - 'Anticancer activity and molecular modeling studies of transition metal complexes with novel substituted benzimidazole derivatives'. Granted by 'VGST, Govt. of Karnataka'.

**Grant: Rs. 20,00,000.00**

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

**Grant: Rs. \$30,865**

#### Guest Lectures -Invited

- **Dr. D. H. K. Murthy**, Assistant Professor, PPSIR, Bangalore - Online guest lecture on 'Recent

Developments in Advanced Technological Materials' on 10-07-2021.

#### Guest Lectures – Delivered by Department Faculty

- **Dr. B M Nagabhushana** - online talk on 'Nanomaterials and Their Applications Recent Advances in Physics for interdisciplinary Development', Sri Saila Jagadguru Vageesha Panditharadya College and P. G. Centre, Harihar, 29-09-2021.
- **Dr. Nagaraju Kottam** - Delivered an invited lecture on 'Development of nanomaterials for waste water treatment, hydrogen generation and biomedical application' at Guru Nanak Dev engineering college, Bidar on 9<sup>th</sup> September 2021. Through Google meet.

## DEPARTMENT OF PHYSICS

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

- **A. Jagannatha Reddy, G. N. Anil Kumar, D. L. Shruthi** - 'Structural, Judd-Ofelt, photoluminescence properties of  $\text{Eu}^{3+}$  activated  $\text{SrWO}_4$  phosphors: Electronic, vibrational, elastic properties from ab initio stud Optical Materials, Vol.118, (2021) pp.111243.
- **R. M. Melavanki** - 'Influence of substituent position in aromatic diamines on coumarin derivative', Journal of Photochemistry and Photobiology A: Chemistry Volume 422, 1 January 2022, Pg.113560, <https://doi.org/10.1016/j.jphotochem.2021.113560>.
- **R. M. Melavanki** - 'Synthesis, Structural Characterizations, and Quantum Chemical Investigations on 1-(3-Methoxy-phenyl)-3-naphthalen-1-yl-propenone', ACS Omega Vol. 6, (2021), Pg. 25982-25995. <https://doi.org/10.1021/acsomega.1c02688>.
- **Dr. Nagesh B V** - 'Investigation of luminescence spectroscopic characteristics in  $\text{Eu}^{3+}$ -doped  $\text{Zn}_2\text{SiO}_4$  by Judd-Ofelt parameters', J Mater Sci: Mater Electron, July 2021.
- **Dr. Kalpana Sharma** - 'Studies on crystal structure, morphology, optical and photoluminescence properties of flake-like Sb doped  $\text{Y}_2\text{O}_3$  nanostructures', J. of Opt (2021). <https://doi.org/10.1007/s12596-021-00746-3>.

### Guest Lecture/s - Invited:

- **Prof. Arivuoli Dakshanamoorthy**, Director, Anna University, Chennai - 'Convergence of Convergence' on 12 - 08 - 2021.

### Guest Lecture delivered by the department faculty:

- **G N Anil Kumar** - 'X-ray diffraction and its applications', Department of Applied Sciences and Humanities, Guru Nanak Dev Engineering College, Bidar, 17-08-2021.

### Funded Project:

- **Dr. Sandhya K L** - 'Experimental investigations on developing LC nanocomposites for energy storage applications', VGST, Rs. 15 lakhs.
- **Dr. Nagesh B V** - AICTE Training and Learning (ATAL) Academy Sponsored Five Days Online Faculty Development Programme on 'Research Challenges in Atmospheric Sciences with a Computing Edge' AICTE, Rs. 0.92 lakhs.
- **Dr. Kalpana Sharma** - Exploring the fluorescent Spectroscopic quantum chemical and Z scan properties of novel chalcones, VGST, Rs. 5 lakhs.
- **Dr. G. N. Anil Kumar** - Experimental and theoretical study of halogen bonding in Acid-pyridine co-crystals, VGST, Rs. 5 lakhs.

## DEPARTMENT OF HUMANITIES

- Department of Humanities organized a guest lecture in association with the Department of Mathematics, RIT on 'National Education Policy-2020 (NEP-2020) Envisioning a holistic approach for higher education', by Dr. Kiran Magavi, visiting faculty, Department of Humanities, on Friday, 30<sup>th</sup> July 2021,

### Books published by faculty:

- **Mr. Udayakumar. H. M & Dr. Premila D Swamy** - 'Soft skills: A Guide for Professional Success', First Edition - September 2021, Pages: XI + 156, P-ISBN: 9 788195173389, E-ISBN: 9 788195173389, Published by Enas Publications, Bengaluru.

### Staff Achievement:

- **Dr. Premila Swamy D**, Assistant Professor, Department of Humanities is appointed as a member

of Board of Examiners (BOE), VTU Belagavi for the year 2021-2022.

## MASTER OF COMPUTER APPLICATIONS

- The department of MCA, CSE, and ISE in association with Group Cyber ID organized a one-week Faculty Development Programme on 'Digital Forensics and Investigations' from 9<sup>th</sup> to 13<sup>th</sup> August 2021. The workshop aims to offer practical illustrations on how evidence can be captured from Computers, Laptops, Mobile Phones, and other Electronic Gadgets.
- The department conducted Five Day Online FDP on 'Emerging Trends in Computation' in association with the Department of CSE and Department of ISE, M S Ramaiah Institute of Technology, Bangalore, and Cisco Systems (India) Private Limited Bangalore from 2<sup>nd</sup> to 6<sup>th</sup> August 2021. Resource persons were from Cisco Systems (India) Private Limited. There were 120 participants from various organizations across India.

### Publications - Book Chapter

- Kurni M., **Mrunalini M**, Saritha K. - 'Deep Learning Techniques for Social Media Analytics', Book- Principles of Social Networking. Smart Innovation, Systems and Technologies, Springer, Singapore, [https://doi.org/10.1007/978-981-16-3398-0\\_18](https://doi.org/10.1007/978-981-16-3398-0_18), vol. 246, 19<sup>th</sup> August 2021.

### Paper presentation in National / International Conferences

- **Abhishek Savanur, Niranjanamurthy M.**, et.al. - 'Application of Chatbot for consumer perspective using Artificial Intelligence', 2021 6<sup>th</sup> International Conference on Communication and Electronics Systems (ICCES) - 2021, pp.1479-1483, DOI: 10.1109/ICCES51350.2021.9488990, August 2021.
- K. R. Swetha, **Niranjanamurthy M.**, et al. - 'Prediction of Pneumonia Using Big Data, Deep Learning, and Machine Learning Techniques', 2021 6<sup>th</sup> International Conference on Communication and Electronics Systems (ICCES) - 2021, pp.1697-1700, DOI: 10.1109/ICCES51350.2021.9489188, August 2021.
- **K Sailaja Kumar and D Evangelin Geetha**, - 'A Recommender System for Information Diffusion', 3<sup>rd</sup>

International Conference on Intelligent Computing, Information and Control Systems ICICCS - 2021, 2<sup>nd</sup> - 3<sup>rd</sup> July 2021.

#### Guest Lecture/s – Invited

- **Sreenivas**, Director, Medha Tech Solutions – 'Full Stack Development – A Perspective' 09-07-2021.
- **Ashish Gupta**, Sr. Software Engineer, Blue yonder – 'Web Application Development using Django and Python,' 11-09-2021.
- **Prasad D S**, Lead Architect, Accenture Solutions India Pvt. Ltd. – 'DevOps' 24-09-2021.
- **Sridar Aladhi**, Senior Program Manager, Microfocus – 'Agile Methodology' 25-09-2021.

#### Guest Lecture Delivered

- **Dr. M. Mrunalini** - Five-Day Online FDP on 'Introduction to IoT', organized by BMS Institute of Technology and Management, Bangalore from 20<sup>th</sup> to 24<sup>th</sup> September 2021.
- **Dr. Niranjanmurthy M** – 'Trends in Data Science', Department of Information Science & Engineering, Malnad College of Engineering, Hassan held on 11<sup>th</sup> June 2021.

#### Achievements by faculty:

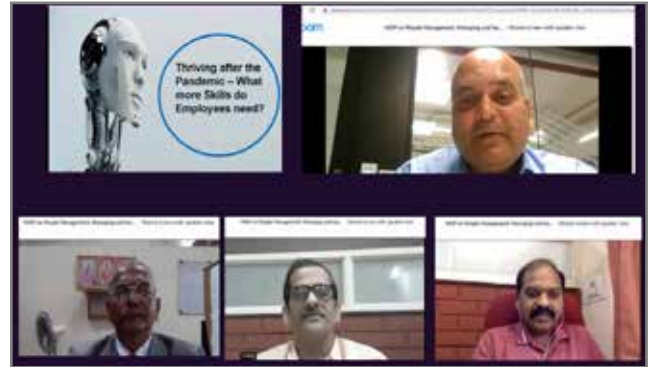
- **Dr. Niranjanamurthy M** - Received 'KSCST IP Award and Reward-2021' with Rs. 15,000 Cash Prize from Karnataka State Council for Science and Technology (KSCST) on Aug 2021.

#### Achievements by students

- **Harshitha. V**, Best Project Award, Project Competition, GSSS Institute of Engineering & Technology for Women, Mysore, 26-06-2021.
- **Harshitha. V**, Second Prize, State level Project Exhibition, Bangalore Institute of Technology, 28-08-2021.

### DEPARTMENT OF MANAGEMENT STUDIES

- Management Development Programme on 'People Management: Managing and leading during Uncertainties' from 20<sup>th</sup> to 25<sup>th</sup> September 2021. Leaders and organizations who successfully embrace change have the opportunity to create a new vision and strategies and view change as an



opportunity to learn and evolve. Individuals working in virtual teams need more clarity in their roles and responsibilities, therefore business leaders are required to become more proactive and need to embrace the upcoming challenges in the virtual workspace. In this backdrop, the Department of Management Studies, RIT has designed the MDP for professionals working in the dynamic business environment to gain ability to motivate others, thereby allowing them to effectively manage their teams and empower each other.

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

- **Dr. M.R. Shollapur** – 'Brand-Building of B-Schools: A review of Literature' in Journal of Tianjin University Science and Technology, ISSN (Online): 0493-2137, Vol.54, August 2021, Page No. 421 to 432.
- **Dr. G. Vijayakumar** - 'Facilitation for future-role of HR in Business Sustainability importance of coaching and mentoring', ISSN: 0970-8405, Vol-I, Issue-IV, July 2021, Page No. 287 to 292.

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

- **Dr. M. R. Shollapur** – 'National Education Policy and Research in Higher Education Institutions'. The Way Forward' in International Conference (ICMLTH-2021) at Golden Jubilee Auditorium, Karnatak University, Dharwad from 30-09-2021 to 01-10-2021.
- **Dr. P. V. Raveendra, Dr. Y. M Satish** – 'Impact of Goods and Service Tax on retailers in Bangalore' in the UUM-SAM International Conference on "Balancing Globalisation and Local Practices: Challenges and Strategies', Srusti Academy of Management, Odisha on 24<sup>th</sup> & 25<sup>th</sup> September 2021.
- **Dr. P. V. Raveendra, Dr. Jyothi. E. Singh** – 'A study on analyzing the investors' behavior during the pandemic' in the UUM-SAM International Conference on 'Balancing Globalisation and Local Practices: Challenges and Strategies', Srusti Academy of Management, Odisha on 24<sup>th</sup> & 25<sup>th</sup> September 2021.



- **Dr. Rizwana. M, Dr. P. V. Raveendra** – 'Mass media interventions in inculcating health behavior among general public during a pandemic outbreak', UUM-SAM International Conference on 'Balancing Globalisation and Local Practices: Challenges and Strategies', Srusti Academy of Management, Odisha on 24<sup>th</sup> & 25<sup>th</sup> September 2021.

#### Guest Lectures Invited

- **Mr. Rajesha. H. G**, Lead Consultant, Infosys Tech. Ltd.,- 'Open Banking' on 03-07-2021.
- **Mr. Akarsh Shroff**, BITS, Pilani- 'Changing spirit in young minds' on 14-07-2021.
- **Mr. Prateek. S**, Director-North America, SkyscendPay- 'How to use the next 12 months to land your dream job or to create your dream company', on 09-07-2021.
- **Mr. Narendra Murthy**, Co-founder, The Treasure- 'How to select the specialization?' on 11-08-2021 and 13-08-2021.

#### Guest Lecture delivered by the department faculty

- **Dr. Y. M. Satish** - 'Social Cost-Benefit Analysis', Ramaiah College of Arts, Science & Commerce, 30-07-2021.
- **Dr. T. Mohanasundaram** – 'Online Refresher course in Econometrics', UGC-Human Resource Development Centre, from 3<sup>rd</sup> to 18<sup>th</sup> September 2021.

#### Funded Project

- **Dr. A. Mahalakshmi** – 'Digital Financial Inclusion for Empowerment of Micro-Entrepreneurs in the Rural Areas of Bangalore', Mahatma Gandhi National Council of Rural Education, Hyderabad

Grant Rs. 2,00,000.

## ARCHITECTURE

#### Paper presentation in National / International Conferences

- **Lavanya Viram, Dr. Monalisa Bhardwaj** – Assessment of Urban Wastelands using GIS and IoT', Council of Architecture, Bhopal and MANIT, Bhopal, on 26<sup>th</sup> and 27<sup>th</sup> June, 2021.

#### Guest Lecture/s - Invited

- **Mr. Ambuj Kumar** from Trezi, Bangalore – 'Experience Immersive Virtual Environmental Real Time Marketing Communication Virtual Mock-Up and VR - Ready Products and Materials', held on 4<sup>th</sup> August 2021.

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

- **Sanghamitra Saha** - student of '5T' got an opportunity to exhibit her Photographs in 'Rise Art and Photography' with Tobu Ovimaan Artist's Group on 25<sup>th</sup> and 26<sup>th</sup> September 2021 in ICCR Bengal Art Gallery.

## DEPARTMENT OF SPORTS



- Celebrated 75<sup>th</sup> Independence Day on 15<sup>th</sup> Aug. 2021- Flag hoisted by Sri. M R Seetharam Sir, Vice Chairman, GEF & Director MSRIT. and the program witnessed by Sri. B S Ramaprasad, Chief Executive, GEF (Engg. & GS) and Sri. G Ramachandra, Chief of Finance, GEF. Principles of other Ramiah sister institutions also present in the event.

## PLACEMENT & TRAINING

#### The main Highlights – 2022 batch

- **356 Companies** visited and **952 offers**
- Highest package: **Apple India**:  
Annual CTC: 31,37,930 LPA  
Annual CTC: 64,23,400 LPA
- **International Placement**: Sobha Construction LLC, Dubai: CTC: 5000 AED per month
- Highest Stipend: **Walmart Global Tech**: **90,000/- per month**



## Highlights of Ramaiah Institute of Technology

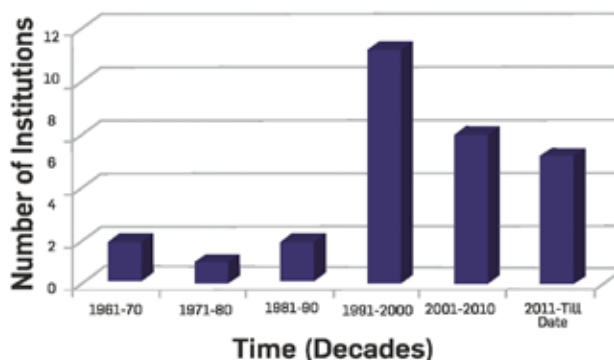
- Strategically located in the heart of Bengaluru City offering excellent connectivity and convenience.
- Proven track record spanning 58 years, in Engineering Education.
- Outstanding placement record up to 90-95% accomplished year on year.
- Faculty-Student the ratio of 1:15 among the best in the industry.
- 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 Educational Institution under Gokula Education Foundation (GEF)

Ramaiah Institute of Technology  
 Ramaiah Polytechnic  
 Ramaiah College of Arts, Science & Commerce  
 Ramaiah Composite Pre-University College  
 Ramaiah Vidyarniketan  
 Ramaiah College of Education  
 Ramaiah Institute of Management  
 Ramaiah College of Law  
 Ramaiah High School  
 Ramaiah Medical College  
 Ramaiah Institute of Physical Medicine & Rehabilitation  
 (Physiotherapy)  
 Ramaiah International Medical School  
 Ramaiah Institute of Nursing Education & Research  
 Ramaiah INDIC Speciality Ayurveda

Ramaiah Medical College Hospital  
 Ramaiah Memorial Hospital  
 Ramaiah Advanced Testing Laboratory  
 Ramaiah Clinical Research Centre  
 Ramaiah Harsha Hospital  
 Ramaiah Leena Hospital  
 Ramaiah Neha Prakash Hospital  
 Ramaiah Clinic  
 Ramaiah Public Policy Center  
 Ramaiah Innovation Centre for Healthcare Technologies  
 Ramaiah Sunrise Ayurveda Center, Penang, Malaysia  
 Ramaiah Officers IAS Academy  
 Ramaiah Quality Assurance Cell  
 Ramaiah International Centre for Public Health Innovation  
 Ramaiah University of Applied Sciences

### **Growth of the GEF family of Institutions**



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

### **RAMAIAH INSTITUTE OF TECHNOLOGY**

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