



# **NAGARJUNA COLLEGE OF ENGINEERING AND TECHNOLOGY**

**Venkatagiri kote(P), Devanahalli(Tq),**

**Bangalore-562164**

**(An ISO 9001-2015 QMS Certified Institution)**

**Autonomous Institute, Affiliated to Visvesvaraya Technological University, Belagavi**

**Approved by AICTE, New Delhi**



## **IQAC ANNUAL REPORT 2020-2021**



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## **ABOUTNAGARJUNAEDUCATIONSOCIETY:**

The **Nagarjuna Education Society (NES)** stands as an icon for enriching education, ethics and practical learning for the benefit of the society and the young aspiring students. The philosophy and its purpose are rendered in its identity, committing to leadership and excellence in education.

For seeing the necessity of professional academic educational facilities that are imbibed in a strong value system, Nagarjuna Education Society was established in 1995, under the able guidance of its founder Sri. J. V. Ranga Raju, leading industrialist and philanthropist. NES is today pursuing its mission with some of the finest facilities in Education- from primary school to professional education.

These institutions include, Nagarjuna Vidyaniketan, Nagarjuna Pre-University College, Nagarjuna College of Commerce and Management Studies, Nagarjuna College of Management Studies and **Nagarjuna College of Engineering & Technology**. Year after year, these institutions which are well-known for their professionalism, and strong value system, are fulfilling the Society Vision by discovering and developing the potentials of thousands of young minds to their perfection.

NES enjoys the patronage of Nagarjuna Construction Company, which is India's fast growing Construction Company, and second largest in terms of turnover, according to 'Construction World NICMAR'. It's also the only construction company from India that found its place in the Forbes Asia list of 'Best under a Billion' in Asia Pacific.

### **Institutions run by Nagarjuna Education Society**

<b>Sl. No</b>	<b>Institution</b>	<b>Year of Establishment</b>
<b>1.</b>	Nagarjuna Vidya Nikethan	1995
<b>2.</b>	Nagarjuna PU College– Bangalore	2000
<b>3.</b>	<b>Nagarjuna College of Engineering &amp; Technology</b>	<b>2001</b>
<b>4.</b>	Nagarjuna Degree College –Yelahanka	2013
<b>5.</b>	Nagarjuna College of Management Studies	2015
<b>6.</b>	Nagarjuna PU College– Devanahalli	2015

## **ABOUT THE INSTITUTION:**

**Nagarjuna College of Engineering & Technology** has crafted the vision to be among the Top Engineering Colleges in Karnataka. All the strategies and policies that we plan have this over-arching goal as a guide. The college has very good infrastructural facilities and the people at NCET are among the best in their fields. The world is changing at exponential rate such that future is no more an extrapolation of the past and the present. It is important to be innovative to keep pace with the world. Science & technology have a great role to play in building India into a developed nation.

The Nagarjuna College of Engineering and Technology is strategically located on the Bangalore-Hyderabad National Highway, a road that falls on the Golden quadrangle. Its proximity to the International airport at Bangalore gives it strategic location and commutability. The lush green campus is spread across 72 acres with on-campus residence for boys and girls. The hostels have amenities like mess, recreation room and state of art Gymnasium etc. Students are encouraged to actively participate in outdoor games as well.

**NCET** is a tribute to nation from the business house of Nagarjuna Construction Company Ltd. The college is proud to be associated with such a prestigious organization.

## **About IQAC**

An internal mechanism for sustenance, assurance and enhancement of the quality culture of education is imparted by NCET. NCET have established the Internal Quality Assurance Cell (IQAC) as a post accreditation quality sustenance activity. NCET, enlisted/recognized under section 2(f) and eligible to receive central assistance under Section 12B of the UGC Act, 1956 and fit to receive General Development Assistance.

Internal Quality Assurance Cell (IQAC) maintaining the momentum of quality consciousness is crucial. Internal Quality Assurance Cell, in fact, is a mechanism to build and ensure a quality culture at the institutional level. NCET have an internal quality assurance system, with appropriate structure and processes, and with enough flexibility to meet the diverse needs of the stakeholders. The IQAC- NCET is meant for planning, guiding and monitoring Quality Assurance (QA) activities of the colleges.

The IQAC channelize and systematize the efforts and measures of an institution towards academic excellence. The IQAC-NCET became a driving force for ushering in quality by working out intervention strategies to remove deficiencies and enhance quality.

### **Goals of the IQAC- NCET:**

- To develop a quality system for to improve the academic and administrative performance of the NCET
- To promote measures for institutional functioning towards quality enhancement through internationalization of quality culture and institutionalization of best practices.
- Development and application of quality benchmarks/parameters for the various academic and administrative activities of the NCET;
- Arrangement for feedback responses from students, parents and other stakeholders on quality- related institutional processes;
- Dissemination of information on the various quality parameters of higher education;
- Organization of inter and intra institutional workshops, seminars on quality related themes and promotion of quality circles;
- Documentation of the various programmes / activities of the College, leading to quality

improvement;

- Acting as a nodal agency of the NCET for coordinating quality-related activities, including adoption and dissemination of good practices
- Development of the Annual Quality Assurance Report (AQAR) of the NCET based on the quality parameters/assessment criteria developed by the relevant quality assurance body (like NAAC, NBA) in the prescribed format;

## IQAC Committee Members

Sl. No	Name	Designation	Role
1	Dr. Jitendranath Mungara	Principal, NCET	Chairman
2	Prof. Dr. Gopala Krishna S G	Director, NES	Member
3	Dr. Yogeesh H C	COE & Prof. in Mechanical Engineering	Member
4	Dr. Nagesh K N	HOD – Elec. & Communication Engg.	Member
5	Dr. Anitha Patil	HOD – Computer Science & Engg.	Member
6	Dr. Kantharaj D G	HOD – Mechanical Engg.	Member
7	Dr. Venkatesh Babu D L	HOD – Civil Engg.	Member
8	Mr. Bhargava R	Asst. Prof. – Computer Science & Engg.	Member
9	Dr. Srikanta Murthy K	Vice Chancellor – Sri Sathya Sai Centre for Human Excellence, Gulbarga	Member
10	Mr. Mahesh C S	CEO – Spaneos Software Solutions Pvt Ltd	Member
11	Mr. Robin Dillon Rodrigues	1NC18IS042 – Student - IV Sem, Dept. of ISE	Member
12	Dr. Rohith S	Assoc. Professor – ECE	Member Secretary, Coordinator-IQAC

## Criteria Wise Summary

### 1. Curricular Aspects

Nagarjuna College of Engineering and Technology was affiliated to Visvesvaraya Technological University, Belgaum till 2014-15. We have received Autonomous status from Visvesvaraya Technological University and Government of Karnataka from the academic year 2015-16. From 2001 to 2014 the college was following the curriculum framed by Visvesvaraya Technological University from time to time. From the academic year 2015, curriculum will be framed by the Board of Studies for each engineering programs, which consisting of senior faculty members, academicians from other institutions and industry experts to prepare draft syllabus and reviews after getting feedback from all the stakeholders. In the view of rapid technological advances, there could be gaps that need to be addressed. In this regard, institute has a practice of preparing curriculum in consultation with the stakeholders and also based on feedback on syllabus from academia and industry experts along with stakeholders.

The calendar of events for each semester will be prepared by the institute as per university guidelines by including weekly working days, holidays, internal assessment test dates, practical exam dates, Technical Seminar/Workshop schedule, industrial visit dates, parent teachers meeting schedule, sports day, cultural day, graduation day, last working day of the semester along with tentative dates for semester end examinations. The calendar of events will be prepared through strategic perspective plan of the institute, considering the strategic perspective plan of all the departments and advisory cells. The CIE will be effectively conducted by all the departments, which will be monitored by the Controller of Examination (COE) of the institute.

The question paper for the semester end examination will be prepared by the experienced teachers from the institute along with external papers received by the other institutions. The question paper follows the Choice Based credit System (CBCS), which provides flexibility in framing the curriculum. Student's knowledge is enriched through Industry tieups, Workshops, Conferences, FDPs and Invited talks will add more value to the student knowledge and make them to compete with external world. Institute strongly believes in integrating professional ethics, gender equality, human values and environmental sustainability with a view to ensure holistic development of the students.



## **2. Teaching-Learning and Evaluation**

The institution follows admission process to all the programs, both UG and PG as per Rules and Regulations of the Government of Karnataka, based on the performance in the entrance examinations CET/COMEDK and PGCET respectively. The students admitted come from different background and hence an orientation Program on General Mathematics, English Communication and personality development will be conducted for newly admitted students before the actual commencement of regular classes.

The institution has dedicated, well qualified and experienced faculty with doctoral degree and many are pursuing their research. The institution has effective teaching and mentoring process. Each mentor has about 20 students for counseling. The slow and advanced learners are identified based on internal assessment and their learning abilities and accordingly special classes will be arranged to enhance their performance.

The academic calendar detailing the events of entire semester is prepared accordingly to facilitate teaching-learning strategies to intend learning outcomes. The subject for the teacher will be allotted based on the preference before the commencement of semester. Teachers will prepare the lesson plan and course material for the same. The course outcomes, program outcomes and program specific outcomes are prepared in each program and are communicated to teachers and students through website or any other means. The attainment of outcomes is done using both direct and indirect assessment methods. A diary is maintained by the teacher indicating the lesson plan, portion covered etc. The portion covered is compared with lesson plan to ensure coverage of the syllabus. The student centric methods like experimental learning, participative learning and problem solving methods are employed for enhancing learning experiences for effective teaching-learning. The institute adopts the streamlined mechanism for the continuous evaluation of the students through CIE and SEE. The student grievances related to assessment are addressed in transparent, time-bound and efficient manner. The average pass percentage of final year students is more than 95%, which serves as the evidence of the excellence in performance.

Parent Teacher meetings are conducted periodically to keep the parents informed about their ward's progress. The feedback from the students and parents is also discussed during the meetings and corrective measures are initiated. Two feedbacks will be taken by the students about the teaching of the faculty during the semester and feedback will be given to the faculty for rectifying the deficiency, if any. The Institution provides support to its faculty members for their overall growth and development. They are granted leave for higher studies and are sponsored for seminars, workshops and conferences at National and

International level.

### **3. Research, Innovations and Extensions**

NCET has established R&D cell to conduct all the research activities inculcating research culture among students and faculty members. Empowerment of knowledge is achieved with strong theoretical knowledge, interdisciplinary skills, creativity, innovation, and hands on expertise and professional ethics. Research activities in the institute foster these needs. The institute has set up seven research centers affiliated to VTU in various departments (EC, CS, ME, CV, Chemistry, Physics and Management Studies). Institute has also made financial provisions to cater the needs of research along with the funding agencies. Faculty members are always supported to publish and present papers. 50 research Scholars are pursuing Ph.D. under the guidance of our faculty. Many Projects were funded by the various funding agencies like DST, ISRO, DRDO, VTU, VGST, Institute of Engineers, KSCST and many more. Many of our final year student projects were sponsored by KSCST every year.

The institute has taken a proactive measures to implement the R&D policy to conduct various activities such as conferences, workshops, Faculty development Programs, during the last five years. In the pandemic situations, a series of webinars were conducted by different departments to inculcate the R&D culture. Institute has MOUs with many industries and organizations like NCC, IIT Bombay, Cisco, NASCOM, etc. The college has a consultancy cell to carry out consultancy work which caters to various Government and Private Organizations.

### **4. Infrastructure and Learning Resources**

The institution has spread over 100 acres and has pollution free environment with state of the art infrastructure with adequate facilities for effective teaching and learning. The infrastructure facilities are provided by abiding the regulations from the state Government. The infrastructure facilities include, on-campus residence for faculties and students (boys and girls). The hostels have amenities like mess, recreation room and state of art gymnasium etc. The institute is strategically located on the Bangalore-Hyderabad National Highway, a road that falls on the Golden quadrangle. The transportation connectivity to the campus assures hassle free commuting from major parts of the Bangalore city.

Institute has 45 class rooms which are well ventilated, 3 seminar halls with adequate facilities. Laboratories, tutorial facilities, R&D centers are satisfying the curricular and co-curricular requirements. Round the clock Security is provided to the hostel and campus. The college has hygienic canteen and mess facility. The placement and training cell is well

established with GD,

Interview rooms and seminar halls. The College is having a computer center with LAN connected systems. Further, 100 MBPS Wi-Fi facilities and licensed software are also available.

### **5. Student Support and Progression**

The institution has a very good student support and progression mechanism that includes scholarship benefits, career guidance and internship opportunities by the NCC. NCET has Alumni association through which guidance will be provided for every student. The few list of student support and progression:

### **6. Governance, Leadership and Management**

Governance of the institute is highly enabling and empowering at all the levels. All policies in the matter of planning human resources, recruitment, training, performance appraisal and financial management are carried out systematically considering the overall interest of the institution and stakeholders.

## Research and Development details in AY 2020-21

### Research Projects by Funding Agencies

Sl.no.	Name of Faculty	Department	Name of the Funding agency	Funds Received
1	Dr. K Kumar	Civil Engineering	Karnataka State Council for Science and Technology	5000
2	Dr. Nagaraj V K, Ms. Chaya S	Civil Engineering	Karnataka State Council for Science and Technology	4000
3	Mrs. Geetha SD, Ms. Chaya S	Civil Engineering	Karnataka State Council for Science and Technology	3000
4	Dr. Nagaraj V K	Civil Engineering	Karnataka State Council for Science and Technology	4000
5	Dr Venkatesh babu DL and Mr Sandeep	Civil Engineering	Water Institute	10000
6	Dr N Kapilan	Mechanical Engineering	All India Council for Technical Education	15,00,000
7	Mr Shashikanth G S	Mechanical Engineering	Karnataka State Council for Science and Technology	6000
8	Mr. Subramanya S G	Computer Science and Engineering	Karnataka State Council for Science and Technology	6000
9	Dr. Nagseh K N	ECE	All India Council for Technical Education	3,89,000
10	Dr. Nagesh K N	ECE	All India Council for Technical Education, MODROB	8,00,000
11	Dr. Rohith S	ECE	Karnataka State Council For Science And Technology	5000
12	Dr. H Venkatesh Kumar	ECE	Karnataka State Council For Science And Technology	5500
13	Mr.Sreenivasulu K N	ECE	Karnataka State Council for Science and Technology	5500
14	Ms. Jyothi S K	ECE	Karnataka State Council for Science and Technology	5500
15	Mr. Srikanth	ISE	Karnataka State Council for Science and Technology	5000
16	Dr. Rohith S	ECE	All India Council for Technical Education	93000

## Research Guide and Research scholar details

Department	No. of Guides	No. of research scholars
Civil Engineering	03	18
MBA	02	06
Electronics & Communication Engineering	03	10
Mechanical Engineering	02	09
Physics	01	01
Computer Science & Engineering	03	18
Chemistry	01	04

## MOU signed in AY 2020-21

Sl. No	Organisation with which MoU	Duration
1	Karnataka State Council for Science and Technology(KSCST)	5 years
2	National Association of Software and Service Companies(NASSCOM)	11 Months
3	Institute for Engineering Research and Publication(IFERP)	11 Months
4	BLUE PRISM	1 Year
5	Prakruthi Institute of Environmental Studies (PIES)	1 Year
6	UNISEC, INDIA	1 Year
7	Sri Shasha Prayathi Technologies Pvt. LTD	5 years
8	Eduskills Foundations	3 years
9	Central Manufacturing Technology Institute(CMTI)	5 years
10	BCIC	1 Year
11	Uipath Academic Alliance	1 Year
12	National Higyways Authority Of India (NHAI)	5 years

## Research Papers Published By Faculty in Journals

Name of the author/s	Title of paper	Name of journal	ISSN number
Mrs Chaitra DM	Experiment on Strength Properties of High Performance Concrete with the Incorporation of Activated Fly Ash	International Research Journal of Engineering and Technology (IRJET)	2395-0056
Mrs Chaitra DM	Study on performance of activated flyash and silica fume in HPC	International Research Journal of Engineering and Technology (IRJET)	2395-0056
Ms Chaya	Performance and strength Evaluation of concrete by using Alccofine and slag sand	International Research Journal of Engineering and Technology (IRJET)	2395-0056
Dr Nagaraj V	A review om durability properties of alkali activated composites- Material science and manufacturing Technology	ICMSMT 2020	2395-0056
Dr. Manohar	Shear Strength characteristics of Geosynthetic Reinforced Rubber-Sand Mixtures	Geotextiles and Geomembrane	0266-1144
Dr. L Pinky	Conversion of conventional building to Net Zero Energy Building	IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE)	2278-1684
Dr. L Pinky & Narendra	Implementation of Building Information Modelling (BIM) in Construction Industry: A Review	IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE)	2278-1684
Dr L Pinky Devi & Mrs Chaitra DM	Indoor air quality of classrooms and occupants comfort in an institutional building	Taylor and Francis	Under review
Dr L Pinky Devi & Mrs Chaitra DM	Comparative study of green building and conventional building	Taylor and Francis	Under review
Dr Shantakumar B Patil	Elucidation: Scantiness of Electricity and its Effective Utilization during Peak Hours.	International Journal of Electrical and Computer Engineering (IJECE)	2088-8708
Ms.Vidya V	Novel DIP Method based Detection of Malaria Parasite	International Journal of Research in Engineering, Science and Management(IJRESM)	2581 - 5792
Mr.Pramoda R	Smart Agriculture Monitoring System using ML	International Journal of Engineering and Advanced Technololgy(IJEAT)	2249-8958
Mr.Bhargava R	Automated system to detect alcohol in automobiles for safety	International Journal of Research in Engineering, Science and	2581 - 5792

		Management(IJRESM)	
Dr. Anitha Patil	Aquarium monitoring system	Test Engineering and Management	0193 :4120,
Mr.Raghavendra B	Design and Implementation of Heart Diseases Predict or Using Machine Learning Algorithm over Live Cloud infra structure	Journal of Emerging Technologies and Innovative Research (JETIR)	2349 5162
Mr.Pramoda K V	Smart Supervisory Stick for Blind Using Raspbe	Journal of Emerging Technologies and Innovative Research (JETIR)	2349 5162
Mr.Raghavendra T K	Anti poaching of trees and wildlife monitoring	Journal of Emerging Technologies and Innovative Research (JETIR)	2349 - 5162
Ms.Priyanka	Chronic Kidney Disease Prediction Based on Naïve Based Technique	International Research Journal of Engineering and Technology (IRJET)	2395 0056
Dr. S Mohan Kumar	Wavelet Packet Transform-Based Image Classification for Computer-Aided Glaucoma Diagnosis Using Naïve Bayes Classifier	Springer	2661-8907
Dr. S Mohan Kumar	Brain Image Classification by Deep Neural Network with Pyramid Design of Inception Module	Analns of the romanion society for cell biology	1583-6258
Mr.Gopinath A R	Automated Driving License Evaluation	International Journal of Scientific Research in Science and Technology (IJSRST)	2395-6011
Mr.Gopinath A R	Smart Pedestrian Crossing System	International Research Journal of Engineering and Technology (IRJET)	2395-0056
Mr.Gopinath A R	Light Weight Cloud Storage Auditing With De-Duplication Supporting Strong Privacy Protection	Journal of Emerging Technologies and Innovative Research (JETIR)	2349-5162
Mr.Gopinath A R	Credit Card Fraud Detection Using Machine Learning	Journal of Emerging Technologies and Innovative Research (JETIR)	2349-5162
Mrs.Swathi S	Automatic number plate recognition using deep learning and open CV	IJSRST	2395-6011
Mrs.Swathi S	Chatbot for disease prediction and treatment recommendation	Turkish Journal of Computer and Mathematics Education	2908-3421

		(TURCOMAT)	
Mr.Sudhakara reddy M	Rtc Based Exam Paper Leakage Protection System	International Journal of Research in Engineering, Science and Management(IJRESM)	2582-3930
Mr.Sudhakara reddy M	Screening System For Early Detection of Diabetic Retinopathy	International Journal of Research in Engineering, Science and Management(IJRESM)	2582-3930
Mr.Sudhakara reddy M	High Accuracy Phishing Detection Based on Convolutional Neural Network	International Journal of Research in Engineering, Science and Management(IJRESM)	2395-6011
Mr.Sudhakar Reddy	Aquarium Monito ring System	Test Engineering and Management	0193 - 4120
Mr.Sudhakar Reddy	Low- cost Real- time logistic s tracking	International Journal for Research in Applied Science and Engineering Technology (IJRASET)	2321 - 9653
Mr. Subramanya S G	Crop Loss Predicti on using IoT	International Journal for Research in Applied Science and Engineering Technology (IJRASET)	2581 - 5792
Mr. Subramanya S G	Ai Base D Shoo T At Sight Missi Le	International Journal for Research in Applied Science and Engineering Technology (IJRASET)	2581 - 5792
Mr. Subramanya S G	Android Based Sign Board Detecti on with Image and Voice Alert System	Journal of Emerging Technologies and Innovative Research(JETIR)	2349 - 5162
Mr. Subramanya S G	Agriculture Agro App Development	Journal of Emerging Technologies and Innovative Research(JETIR)	a714-a717
Mr. Subramanya S G	Design and Analysis of IoT Based Intelligent Robot	International Journal of Scientific Research in Science and Technology	480-485
Mr. Subramanya S G	Chatbots: Cross-Domain Engineering Applications	Turkish Online Journal of Qualitative Inquiry (TOJQI)	8414 - 8424
Mr. Subramanya S G	Design and Development of Automated Emission Monitoring for General Vehicle	Journal of Emerging Technologies and Innovative Research	b109-b113
Mrs.SEEMA J	Doctor_Chatbot_ - _Smart_Health_Prediction	International Journal of Scientific Research in Science and Technology	2395-6011
Mrs.SEEMA J	AI_Driven_Planetary_Bot_for_Fut ure_Vision	International Journal of Scientific Research in	2395-6011



		Science and Technology	
Dr Mohan Kumar S	Farm Management System	International Journal of Scientific Research in Science and Technology	2395-6012
Dr Mohan Kumar S	Automatic Skin Cancer Detection	International Journal of Scientific Research in Science and Technology	2395-6012
Dr Mohan Kumar S	Burglar Prevention IOT Model	International Journal of Scientific Research in Science and Technology	2395-6012
Dr Mohan Kumar S	Resource Allocation Techniques in Edge/Fog Computing	IEEE	1803-7232
Dr. Muthukumar Subramanian	Disease Detection through Deep Learning Over Data Analytics from Healthcare Communities	International Journal of Aquatic Science	2008-8019
Dr. Muthukumar Subramanian	A Conceptual Distributed Framework to Support the Role of Cloud Computing in Marketing Management	EFFLATOUNIA - Multidisciplinary Journal	1110-8703
Dr. Muthukumar Subramanian	Machine Learning Systems in Image manipulation and Fake detection	Turkish Journal of Physiotherapy and Rehabilitation	2651-4451
Dr. Muthukumar Subramanian	Efficient Coded OFDM with high Performance for wireless Lan	Oeconomia Copernicana	2083-1277
Dr. Muthukumar Subramanian	Empirical Analysis of Student Performance Using Data Mining Approaches	Design Engineering	0011-9342
Dr Jitendranath Mungara	Voice Assistance for Dumb People Based on Hand Gestures	International Journal of Scientific Research in Science and Technology	2395-6011
Dr Jitendranath Mungara	Prediction of Cancer in situ using Machine Learning	International Journal of Scientific Research in Science and Technology	2395-6011
Dr Jitendranath Mungara	IOT Based Camouflage Surveillance Robot	International Journal of Scientific Research in Science and Technology	2395-6012
Dr Jitendranath Mungara	Password Authentication Using Gaze Based Eye Tracking	International Journal of Scientific Research in Science and Technology	2395-6012
Dr Jitendranath Mungara	Farm Management System	International Journal of Scientific Research in Science and Technology	2395-6012
Dr Jitendranath Mungara	Automatic Skin Cancer Detection	International Journal of Scientific Research in Science and Technology	2395-6012
Dr Jitendranath Mungara	Burglar Prevention IOT Model	International Journal of Scientific Research in Science and Technology	2395-6012
Mr. Vivek	A Survey of Text Steganography	International Journal of	2395-6011

Sharma	Methods	Scientific Research in Science and Technology(IJRST)	
Mr. Vivek Sharma	Evaluation of Women Protection using Machine Learning	Volume-6, Issue-2 Journal of Data Mining and Management	2456-9437
Mr. Vivek Sharma	Review Process on URL Phishing	International Journal of Scientific Research in Science and Technology	2395-6011
Mrs.Swathi S	Trust Aware Data Aggregation mechanism for malicious node identification in WSN	Turkish Journal of Computer and Mathematics Education (TURCOMAT)	1309-4653
Mr. Srikanth M S	Voice Assistance for Dumb People Based on Hand Gestures	International Journal of Scientific Research in Science and Technology	2395-6011
Mr. Srikanth M S	Prediction of Cancer in situ using Machine Learning	International Journal of Scientific Research in Science and Technology	2395-6011
Mr. Srikanth M S	IOT Based Camouflage Surveillance Robot	International Journal of Scientific Research in Science and Technology	2395-6012
Mr. Srikanth M S	Password Authentication Using Gaze Based Eye Tracking	International Journal of Scientific Research in Science and Technology	2395-6012
Mr.Vivek sharma	Track and monitor platform for election commission using altered voter ID card to make compulsory voting	International Journal of Scientific Research in Engineering and Management (IJSREM)	2582-3930
Mr.Basavaraj G M and Mr.Ashok Kusagur	A Real-time framework for detection of abnormal activities in videos using CFS and BoF classifiers	PENSEE	0031-4773
Mr.Basavaraj G M and Mr.RajashekharB. Somasagar	Security Issues & Solutions in Cloud Computing	Journal of Telecommunication Study	2582-5712
Dr. Rohith S and Harish V	A Reversible Data Hiding Scheme in Encrypted Images for Medical Applications	International Journal of Advanced Research in Science, Communication and Technology	2456-2165
Ms.Jyothi S K, Mr.Sreenivasulu K N	Modeling and Analysis of Parallel Boost Converter	International Journal of Innovative Science and Research Technology	2456-2165
Mr.Rohith S, Mr.Kasetty Ram Babu and Mr.Chandrashekar M N	FPGA Implementation of 8-Bit Vedic Multiplier for DIT-FFT Application Using Urdhva Tiryagbhyam Sutra	International Journal of Advanced Research in Science, Communication and Technology	2581-9429

			ISSN (Print) 2581-XXXX
Dr. Nagesh K.N	Target Tracking System Using Passive Radar: A Survey	RESEARCH REVIEW International Journal of Multidisciplinary	2455-3085
Mr.Komal Srivastava, Dr. Ajay Kumar Dwivedi, Dr.Anand Sharma	Circularly Polarized Dielectric Resonator Based MIMO Antenna with Pattern and Polarization Diversity for Vehicular Applications	International Journal of Circuit Theory and Applications, Wiley	1097-007X
Dr. Ajay Kumar Dwivedi, Dr.Anand Sharma, Dr.Pinku Ranjan	Dual-Band Modified Rectangular Shaped Dielectric Resonator Antenna with Diversified Polarization Feature	International Journal of Circuit Theory and Applications, Wiley	1097-007X
Dr. Anand Sharma, Dr. Ajay Kumar Dwivedi, Dr. Nagesh K.N, Dr. A. Gupta, Dr. D.K Tripathi	Broadband Dielectric Resonator Antenna with Dual-Frequency Circularly polarized response for WLAN and WiMAX Applications	International Journal of Circuit Theory and Applications, Wiley	1097-007X
Mr. A. Kumar, Dr. Nagesh K.N, Dr. H.Venkatesh Kumar, Mr. S. A Siddique, Dr. B. Mishra, Dr. Ajay Kumar Dwivedi	High-Isolated WiFi-2.4 GHz/LTE MIMO Antenna for RF-Energy Harvesting Applications	AEUE - International Journal of Electronics and Communications, Elsevier	1434-8411
Ms.Sunitha.M	Smart farming using IOT	International Journal of Scientific Research in Science and Technology	2395-6005
Mr.Yashwanth N, Mr.Yogeshwary B H	Sensor Node Localization and Visualization in Underwater Sensor Networks	International Journal of Advanced Scientific Innovation (IJASI)	2582-8436
Mr.H.Venkatesh Kumar, Mr.Venkata Mohan Reddy, Mr.B. Samarasimha Reddy,	Live Streaming of Agriculture Market Statistics to the Remote Village Areas Using Amateur Radio	International Journal of Innovative Science and Research Technology	2456-2165
Mr.Mahesh M R	Arduino based Human Following ROBOT	International Journal of Advances in Engineering and Management	2395-5252
Mr. H.Venkatesh Kumar, Mr.Yadu Prasad	Remote Monitoring of Live EEG on 5G Networks	International Journal of Advanced Research in Electrical, Electronics and Instrumentation	2320-2765

		Engineering	
Dr. H. Venkatesh Kumar, Pavan Kalyan B S, P Sai Kumar	Department Announcement System Using Arduino	International Journal of Scientific Research in Science and Technology	2456-2165
Mr.H. Venkatesh Kumar, Ms.Surabhi. G, Ms.Neha V,Mr Sandesh. Y. M, Mr.Sagar Kumar	Tracking Of Aircrafts Using Software Defined Radio (SDR) With An Antenna	International Journal of Scientific Research in Science and Technology	2456-2165
Ms.Jyothi sk, Mr,Sai Roshan, Ms.Monika, Ms.Tanushree, Bharat Reddy	IoT based Air and sound pollution Monitoring system	International Journal for Research in Applied science & Engineering Technology	2321-9653
Mr.Sreenivasulu. K. N, Mr.Aishwarya. B. K,	Real Time Face Mask Identification using AI-Deep Learning Neural Network	International Journal for Research in Applied science & Engineering Technology	2321-9653
, Chandan. L			
, Ganesh. B,Harshitha. C			
Dr. Rohith S	Voice Controlled Wheel Chair for Persons with Disability	International Journal of Scientific Research in Science and Technology	2456-2165
Mr. Kasetty Ram Babu, Mr.Pruthvi D , Mr. Mandle Veneesha , Ms.Pramodini,Ms . Sushma H D	Phone Call Controlled Obstacle Detection Robot	international Journal of Scientific Research in Engineering and Management (IJSREM)	2582-3930
Dr. Rohith S	Night Vision Patrolling Navigation System For Women's Safety	International Journal of Creative Research Thoughts	2320-2882
Dr. Brijesh Mishra, Dr.Ramesh Kumar Verma, Dr.Yashwanth N, Dr.Rakesh Kumar Singh	A Review on Microstrip Patch Antenna Parameters of different Geometry and Bandwidth Enhancement Techniques	International Journal of Microwave and Wireless Technologies	1759-0787
Dr. Mamatha G	Object recognition for visually impaired using Machine Learning	International Journal of Research in Engineering, Science and Management	2582-3930
Dr. Mamatha G	Crowd sourcing Towards Block chain	International Journal of Research in Engineering, Science and Management	2581-5792
Dr. Mamatha G	Object Recognition for aged	International Journal of	2581-

	people	Research in Engineering, Science and Management	5792
Dr. Mamatha G	Introduction to Mobile Technology 6G- A Revolution	International Journal of Research in Engineering, Science and Management	2581-5792
Ms.Mounika N	A study on E-learning and Cloud computing	International Journal of Research in Engineering, Science and Management	2348-1269
Ms.Mounika N	Smart traffic Automation system	International Journal of Research in Engineering, Science and Management	2581-5792
Ms.Ashwini S S	Speech to Gesture Interpreter	International Journal of Research in Engineering, Science and Management	2581-5792
Ms.Ashwini S S	A Smart Helmet on IoT technology for safety and Accident Detection	International Journal of Research in Engineering, Science and Management	2581-5792
Mrs.Geethanjali G	A Study on Challenges & Prospects of Startups w.r.t Covid-19	Shodh Sarita	2348-2397
Mr. Amaresh Gunge	Mechanical and Dynamich behaviour of Acetylation treated plane oven banana reinforce bio degradable composites	Advance Composites and Hybread Materials	42114
Dr. D.G.Kantharaj	Contribution of Solar Photovoltaic technology in making India leader in renewable energy	IOSR-Green Energy Technologies,	2278-1684
Dr. D.G.Kantharaj	Optimization of biodiesel production parameters using Bauhinia variegata oil	IOSR-Green Energy Technologies,	2278-1684
Mr.Vijaykumar M Patil	Experimental Study On Performance of Shell and Tube Heat Exchanger Using Baffled Twisted Tapes as Tube Inserts	IOSR-Green Energy Technologies,	2278-1684
Mr.Vijaykumar M Patil	Effects of additives on the performance of Diesel engine	IOSR-Green Energy Technologies,	2278-1684
Mr. Shashikanth G S	Optimization Of Tribological Properties Of Al6061, Boron And Graphite MMCs Using Taguchi Method	IOSR-Green Energy Technologies,	2278-1684
Mr.Prashanth Kumar S,	Experimental Investigation on Performance and Emission Characteristics of Blended fuels in Diesel Engine	IOSR-Green Energy Technologies,	2278-1684
Mr. Shashikanth G S	Fabrication of the solar air coller	IOSR-Green Energy Technologies,	2278-1684
Dr Anil Kannur	Identificaton of reasons behind infant crying using acoustic signal processing and deep neural network for neonatal intensive	International Journal of Information Retrieval Research	2155-6377

	care unit		
Dr. Sandhya G	An Iot Based Smart Helmet To Prevent Road Accidents	Design Engineering	0011-9342
Dr Anil Kannur	Classification of Natural, Accidental and Artificial Body Marks Using Machine Learning Techniques	Design Engineering	0111-9342

### Book/ Book chapter/Article in conference Proceeding

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	ISBN/ISSN number of the proceeding
1	Dr. Vala Ghanshyam Kantilal	Innovations in Technology, Business and Management	An Empirical Study on Customer-Buyer Behaviour and its impact on customer satisfaction with special reference to maruthi cars at mandovi motors Bengaluru.	International Conference on Innovations in Technology, Business and Management	978-93-86891-19-8
2	Dr. Praachi Beriwal	Innovations in Technology, Business and Management	Women Entrepreneurship actual and national Barriers: A Study in Karnataka with Special reference to Bangalore District	International Conference on Innovations in Technology, Business and Management	978-93-86891-19-8
3	Dr. Geethanjali G	Innovations in Technology, Business and Management	A Study on Challenges & Prospects of Startups with reference to covid-19	International Journal of Advance and Innovative Research	ISSN-2348-2397
4	Dr. Geethanjali G	Proceedings	Accounting For Business	BOOK	ISBN 978-93-90515-10-3
5	Mr. Arun Kumar S	Advances in Intelligent Systems and Computing	A survey on Graphical Authentication System Resisting Shoulder Surfing Attack	Advances in Artificial Intelligence & Data Engineering	ISSN - 2194-5357
6	Dr N Kapilan	Role of IoT in Green Energy Systems	Challenges and Issues of IOT Application in Heating Ventilating		ISBN13: 9781799867098

			Air Conditioning Systems		
7	Mr.Amaresh Gunge	Viscoelastic response of polyvinyl alcohol composites	Dynamic mechanical analysis/thermo-mechanical analysis of treated polyvinyl alcohol reinforced natural fiber composites		In- Print
8	Dr. Anil Kannur	Deep Learning and Its Application in Big Data Information	“Identification of Reasons behind infant Cry Using Acoustic Signal processing and Deep Neural Network for Neonatal Intensive Care Unit”	International journal of information retrieval research	In- Print
9	Dr. Anil Kannur	Computational Vision and Bio-inspired Computing	“Identification of Artificial body marks and Skin disorders marks using Artificial Neural Network Approach”	International journal of information retrieval research	In- Print
10	Mr Sreenivasulu K N	Proceedings	Detection of software intrusion based on machine learning techniques for IOT systems	International Conference on Research in Science, Engineering, Technology and Management (ICRSETM-2020).	
11	Dr. Rohith S	Proceedings	An Novel Hand Gesture System for ASL using Kinet Sensor based Images	International Conference On Computing, Communication And Control System (I3CAC) 2021	978-1-63190-306-9 ISSN 2593-7642
12	Dr. Sandhya G	Data Science	Data Science book	Book	987-93-91987-04-6
13	Ms. Komal Srivastava, Dr. Ajay Kumar Dwivedi, Dr. Nagesh K.N, Dr. Anand Sharma	Lecture Notes in Electrical Engineering (LNEE), Springer	Dual Band, Dual Port Dielectric Resonator Based MIMO Antenna with Bi-directional Pattern Diversity using PRS	VLSI, Communication and Signal Processing	In-Print
14	Mr. A.K	Lecture Notes in	Modeling and	VLSI,	In-Print

	Singh, Dr. Ajay Kumar Dwivedi, Dr. Nagesh K.N, Dr. V. Singh, Dr. R.S Yadav	Electrical Engineering (LNEE), Springer	Investigation of Novel Two-Port UWB- MIMO Antenna with Enhanced Isolation	Communication and Signal Processing	
15	Mr. Mallanna S D, Mr. Sreenivasa T V, Dr. Nagesh K.N, Dr. Ajay Kumar Dwivedi	American Institute of Physics (AIP) Conference Proceedings	Design and Analysis of Four Port MIMO Antenna for n77 and MTI Wireless Edge 5G Applications	International Conference on Industrial Electronics Mechatronics, Electrical & Mechanical Power	In-Print
16	Mr.S. Jadhav and Mr.K. N. Nagesh	Proceedings	Impairment impact on the wireless communication system	2021 2nd Global Conference for Advancement in Technology (GCAT)	978-1-6654- 3070-8
17	Dr. Rohith S, Dr.Basavaraj G M, Mr.Mahesh M R,Bhavya Sree, Vijay Yellapu	Proceedings of IEEE International Conference on Mobile Networks and Wireless Communications (ICMNV	Image Encryption Scheme Using Combined Key Sequence of Logistic and Tent Map for Medical Applications	2021 IEEE International Conference on Mobile Networks and Wireless Communications (ICMNVWC)	In-Print
18	Dr. Shantakumar B Patil	Proceedings	Computer Peripherals and its Organization A Teacher Handbook		979- 8631389250
19	Dr. Premjyoti Patil, Dr. Shantakumar Patil	Proceedings	Computer Peripherals and its Organization: A Teacher Handbook	NA	979- 8631389250
20	Dr. Rohith S	Proceedings of International Conference on Advances in Electronics, Computers and Communications	Image Encryption and Decryption Using Key Sequence of Triple Logistic Map for Medical Applications	2020 Third International Conference on Advances in Electronics, Computers and Communications (ICAECC)	978-1-7281- 8045-8
21	Dr N Kapilan	Food-Energy- Water Nexus: Resilience and Sustainable Development	"Biodiesel : A sustainable energy source for compression ignition engine",	Food-Energy-Water Nexus Resilience and Sustainable Development	ISBN 978-3- 030-40051-4
22	Dr N Kapilan	Applications of	Applications of	Applications of	9.7818E+12



		Nanomaterials in Agriculture, Food Science, and Medicine	Nano Materials in Cold Storage	Nanomaterials in Agriculture, Food Science, and Medicine	
23	Mr.Sriram	Proceedings	Oppurtunity available for Start Ups in Andaman and Nikobar Islands, with speacial reference to women Entrepreneurs	International Conference on Innovations in Technology, Business and Management	978-93-86891-19-8
24	Ms.Rajeshwari	Proceedings	The Role of Information Technology in Shoping of Economic Development in India	International Conference on Innovations in Technology, Business and Management	978-93-86891-19-8

### Statistics of Patents filed and granted in AY 2020-21

Department	Patents Applied	Patents Granted
Electronics & Communication Engineering	02	00
Computer Science & Engineering	15	08
Mechanical Engineering	01	00
Civil Engineering	02	02

## Workshop/ FDP/ Seminar Organized in AY 2020-21

Sl. No	Resource person Name	Designation	Title	Date	Type of event
1	Mr. Vinay S	Manager - Training and Education, Coneptia Konnect	What Industry Needs from Engineering Graduates	06.05.2021 @ 2.30PM	Webinar
2	Dr. K V Gangadharan/ Mr. Ravi Y V/ MR. Balaji Y S	Mechanical Engg, NITK Suratkal	Mechanical ENgineering lab virtual labs	06-05-2020 to 13-05-2020	FDP
3	Mr. Aman Ghimare	Engg Technical Service, Design Tech	Skill set for Mechancial Engineers	10-02-2020	Webinar
4	Mr. Prasanna Poojari	Managing Director, Lokahh Internationals	Free education in europe	04-12-2020	Webinar
5	Mr. Jose Vincent	Techincal Director, USPL Airlabs	Robotics and Automation	02-12-2020	Webinar
6	Dr. K. Gopalakrishnan	Secretary General, UNISEC-India, Dean R&D, NHCE	"Intellectual Property Rights (IPRs) and IP Management for Startups"	15-05-2021	webinar
7	Dr.sheik mohammed S	Assistant professor in EEE, TKM college of engineering	Introduction to electric mobility&design of electric tri wheeler	17-05-2021	webinar
8	Dr. Veena M.B	Associate Professor, B.M.S. College of Engineering	Overview on Underwater Communication	13-05-2021	Webinar
9	Dr. Aravind B N	Professor and HOD, Rajeev Institute of Technology	Image Denoising	15-05-2021	Webinar
10	Mr.Rakesh prasad	Engineering/proj ect manager, Fluke technologies	Work Diversity	15-05-2021	webinar
11	Dr. S.V Sathyanarayana	Professor and HOD, JNNCE	"Cryptography and its application in data security	28-05-2021	Webinar
12	Dr. Somak Bhattachayya	Assistant Professor, Indian	:"High Frequency Applications in	31-05-2021	Webinar

		Institute of Technology (BHU)	Communication System"		
13	Mrs. Saraswathi Sreenivasulu	Technical Expert, Infineon Technologies Pvt. Ltd.	"Career Projection and Insider view on Software"	29-05-2021	Webinar
14	Mrs. Anisha Rebinth	Research Scholar, SRM College of Engineering and Technology	"Soft Computing Based Discrimination for Computer Aided Diagnostic Model for Glaucomatous Image Classification"	08-05-2021	Webinar
15	Dr. Sangeetha V	Assistant Professor, Ramaiah Institute of Technology	" Machine Learning and It's Applicatons"	08-05-2021	Webinar
16	Prof. Shivanand Poojara	Research Scholar, University of Tartu	"Trends in Cloud Computing and Security"	15-05-2021to 17-05-2021	3-Days Workshop
17	Mr. Bharath P	Business Development Manager, Vedantu Pvt Ltd	"Building up Career"	22-05-2021	Webinar
18	Mr. Arun Murthy Battula	CEO & Vice Chair-Europe India Centre for Business & Industry	Change Management	12.05.2021	Webinar
19	Mr.Banudas Athreya	Startup evangelist & CFO	Personal Money	21.05.2021	Webinar
20	Dr. Radhakrishna	Professor and Head, RV College of Engineering	Fundamentals of Geopolymers- A Promising Building Material	28-05-2021	Webinar
	Er. Vimal Kumar	Engineer, M/s Graphisoft Asia Ltd	Building Informarion Modelling and its applications	12-05-2021	Webinar
22	Er. Yogesh Babu M V	Engineer, Anagha engineering consultancy	INTELLIGENT SEISMIC ISOLATION SYSTEM USING AIR BEARINGS AND EARTHQUAKE EARLY WARNINGS"	25-05-2021	Webinar
23	Er. Sunil R K	Engineer, 3 E services	Repair and Rehabilitation of Structures with Case studies	12-05-2021	Webinar

24	Er. Nagesh Ramamurthy	Engineer, Aadhya Global Advisory Private Limited	Learning from Project Progress	27-05-2021	Webinar
25	Dr. Jagadish Vengala	Associate Professor, PVP Siddhartha Institute of Technology, Kanuru	Special Concretes and Its Application	29-05-2021	Webinar
26	Dr. Chandramouli S V	Professor, PES University	Structural Monitoring of Bridges - Case study on Significance Of monitoring Temperature and Humidity	21-05-2021	Webinar
27	Mr. Varun Ramesh Kumar	Project Leader, Saint-Gobain Sekurit	“GERMANY” ‘HIGHER STUDIES AND CAREER OPPORTUNITIES’	29-05-2021	Webinar
28	Dr. Kousik Deb	Associate Professor, Civil Engineering Department, IIT Kharagpur	STONE COLUMN-IMPROVED GROUND: RECENT ADVANCES	31-05-2021	Webinar
31	Dr T V L Ranganath	Professor, HIGHER COLLEGE OF ENGINEERING	Fundamental and Design concepts of Prestressed Concrete	15-05-2021	Webinar
32	Mr.Darpan Majumder	Principal Engineer, Symbol Technologies India Pvt.Ltd,Bangalore	Edge Computing	08-05-2021	Webinar
33	Dr. Manjunath T N	Professor, BMSIT, Yelahankha, Bengaluru	Data science using python	15-05-2021	Webinar
34	Dr.Anand Babu J	Associate Professor, MCE	Data Science and its Applications	11.05.2021	Webinar
35	Dr. K. Gopalakrishnan	Secretary General, UNISEC-India, Dean R&D, NHCE NHCE	How to Plan for Start-Ups and Legal & Ethical Steps	15-05-2021	webinar

### Workshops, FDP/STTP Attended by Faculty members

Sl. No	Name of Teacher who attended the Program	Title of the Program	Duration (from – to) (DD-MM-YYYY)
1.	Mrs. Sharada T	Five days Webinar on " Food Safety for Well - Being"	5 Days (20-09-2021 to 24-09-2021)
2.	Dr. Rajeshwari R	Analysis, Design & Testing of Towers	5 Days (13-09-2021 to 17-09-2021)
3.	Mrs. Chaitra D M	Analysis, Design & Testing of Towers	5 Days (13-09-2021 to 17-09-2021)
4.	Dr. L Pinky Devi	Analysis, Design & Testing of Towers	5 Days (13-09-2021 to 17-09-2021)
5.	Ms. Rajeshwari G V	Five-day Virtual FDP on “Changing Dimensions of IPR in India - An Intellectual Deliberation”	5 Days (12-08-2021 to 17-08-2021)
6.	Mrs. Chaitra D M	Failure of Bridges and its Rehabilitation & Retrofitting	10 Days (11-08-2021 to 20-08-2021)
7.	Dr. Rajeshwari R	Failure of Bridges and its Rehabilitation & Retrofitting	10 Days (11-08-2021 to 20-08-2021)
8.	Dr. L Pinky Devi	Failure of Bridges and its Rehabilitation & Retrofitting	10 Days (11-08-2021 to 20-08-2021)
9.	Ms. Gagana B	Failure of Bridges and its Rehabilitation & Retrofitting	10 Days (11-08-2021 to 20-08-2021)
10.	Mr. Kiran S	Failure of Bridges and its Rehabilitation & Retrofitting	10 Days (11-08-2021 to 20-08-2021)
11.	Mr. Shashikiran S	Failure of Bridges and its Rehabilitation & Retrofitting	10 Days (11-08-2021 to 20-08-2021)
12.	Ms. M G Vidhyashree	Failure of Bridges and its Rehabilitation & Retrofitting	10 Days (11-08-2021 to 20-08-2021)
13.	Mr. Rachith K	Failure of Bridges and its Rehabilitation & Retrofitting	10 Days (11-08-2021 to 20-08-2021)
14.	Ms. Rajeshwari G V	5 Days International Faculty Development Program entitled "Experimental Teaching - Corporate Cognizance"	5 Days (09-08-2021 to 13-08-2021)

15.	Dr. Roshini G R	5 days Online FDP on Mathematical Developments in Cryptography and Data Science	5 Days (09-08-2021 to 13-08-2021)
16.	Ms. Gagana B	Emerging Technologies in Electric Vehicles	2 Weeks (02-08-2021 to 14-08-2021)
17.	Dr. Rajeshwari R	Industrial Revolution 4-0: Future Opportunities and Challenges in Civil Engineering	3 Days (28-07-2021 to 30-07-2021)
18.	Mr. Vinod Kumar R	FDP on “Recent Advances in Antennas for Wireless Communications”	5 Days (27-07-2021 to 31-07-2021)
19.	Dr.Syed Naimatullah Hussain	FDP on “Recent Advances in Antennas for Wireless Communications”	5 Days (27-07-2021 to 31-07-2021)
20.	Mr. Ravikumara H S	Futuristic Trends in Civil Engineering	6 Days (26-07-2021 to 31-07-2021)
21.	Mrs. Chaitra D. M	Futuristic Trends in Civil Engineering	6 Days (26-07-2021 to 31-07-2021)
22.	Ms. Chaya S.	Futuristic Trends in Civil Engineering	6 Days (26-07-2021 to 31-07-2021)
23.	Dr. Rajeshwari R	Futuristic Trends in Civil Engineering	6 Days (26-07-2021 to 31-07-2021)
24.	Dr. L Pinky Devi	Futuristic Trends in Civil Engineering	6 Days (26-07-2021 to 31-07-2021)
25.	Ms. Gagana B	Futuristic Trends in Civil Engineering	6 Days (26-07-2021 to 31-07-2021)
26.	Mr. Kiran S	Futuristic Trends in Civil Engineering	6 Days (26-07-2021 to 31-07-2021)
27.	Mr. Rachith K	Futuristic Trends in Civil Engineering	6 Days (26-07-2021 to 31-07-2021)
28.	Mr. Shashikiran S	Futuristic Trends in Civil Engineering	6 Days (26-07-2021 to 31-07-2021)
29.	Ms. M G Vidhyashree	Futuristic Trends in Civil Engineering	6 Days (26-07-2021 to 31-07-2021)
30.	Ms. Gagana B	Green Technology & Sustainable Development	5 Days (19-07-2021 to 23-07-2021)
31.	Ms. Gagana B	RS & GIS Applications in Civil	3 Days (15-07-

		Engineering	2021 to 17-07-2021
32.	Mr. Srinivasulu K N	Recent Trends in Photonics	6 Days (14-07-2021 to 19-07-2021)
33.	Mr. Arun Kumar S	FDP on Research Perspectives on Data Science and Deep Learning	5 Days (12-07-2021 to 16-07-2021)
34.	Mr. Vinod Kumar R	Vitual FDP on Technology Enablers for Smart Manufacturing using Industry 4.0	5 Days (12-07-2021 to 16-07-2021)
35.	Mr. Vijay Kumar M Patil	Vitual FDP on Technology Enablers for Smart Manufacturing using Industry 4.0	5 Days (12-07-2021 to 16-07-2021)
36.	Mr. Shashikanth G S	Vitual FDP on Technology Enablers for Smart Manufacturing using Industry 4.0	5 Days (12-07-2021 to 16-07-2021)
37.	Ms. Rajeshwari G V	3 Day Workshop on Blooms Taxonomy	3 Days (08-07-2021 to 10-07-2021)
38.	Mr. Ravi Y V	Online Elementary FDP on 3D Printing and Design	5 Days (06-07-2021 to 10-07-2021)
39.	Ms. Rajeshwari G V	5 Day FDP on "Exploring Entrepreneurship & Startup Opportunities"	5 Days (05-07-2021 to 09-07-2021)
40.	Dr.Syed Naimatullah Hussain	FDP on "Recent Trends in Artificial Intelligence and Machine Learning & its Applications"	5 Days (05-07-2021 to 09-07-2021)
41.	Mr. Mandeep B V	FDP on Intelligent Transport Systems	5 Days (05-07-2021 to 09-07-2021)
42.	Mr. Ramesh S	Recent Trends and applications in Arc GIS	6 Days (21-06-2021 to 26-06-2021)
43.	Mr. Mandeep B V	Latest Innovations in Transportation Engineering and Infrastructure Developments	6 Days (21-06-2021 to 26-06-2021)
44.	Mr.Sujith S K	Recent Trends and Applications in Arc GIS	6 Days (21-06-2021 to 26-06-2021)
45.	Mr. Shashikiran S	Recent Trends and Applications in Arc GIS	6 Days (21-06-2021 to 26-06-2021)
46.	Mr. Sandeep D R	Recent Trends and Applications in Arc GIS	6 Days (21-06-2021 to 26-06-2021)
47.	Mr. Srinivasulu K	Life Skills Management- ROAD -	5 Days (21-06-

	N	Leadership & Excellence	2021 to 25-06-2021)
48.	Ms. Sreevani N	IoT and Robotics	5 Days (21-06-2021 to 25-06-2021)
49.	Dr. Yashvanth	Mobile Robotics	5 Days (16-06-2021 to 20 -06 -2021)
50.	Mrs. Kavitha G	International Conference on Examination - IDEA 2021	4 Days (08-06-2021 to 11-06-2021)
51.	Dr. Rajeshwari R	Advance Applications of Structural Concrete in Civil Engineering	5 Days (07-06-2021 to 12-06-2021)
52.	Ms. Jyothi S K	Design, Modeling and Simulation of Sustainable Building Energy Systems	5 Days (07-06-2021 to 11-06-2021)
53.	Dr. Rajeshwari R	Earthquake Resistant Structural Systems and Design for Building and Structures	5 Days (07-06-2021 to 11-06-2021)
54.	Ms. Sunitha M	GIS & Remote Sensing and its Applications	5 Days (07-06-2021 to 11-06-2021)
55.	Ms. Sreevani N	VLSI Design, Verification and Testing	5 Days (07-06-2021 to 11-06-2021)
56.	Mr. Ramesh S	Arc GIS Training on Environmental and Watershed Management	6 Days (07-06-2021 to 12-06-2021)
57.	Mrs. Shruthi K S	Online Course on Universal Human Values	8 Days (05-06-2021 to 12-06-2021)
58.	Dr. Manjunatha K	Online FDP on Managing Online Classes & Co-creating Moocs (Level 2)	2 Weeks (02-06-2021 to 16-06-2021)
59.	Mr. Srinivasulu K N	Recent Advances and Challenges in Nanoscale Devices: Design, Materials, and Applications Perspective	5 Days (01-06-2021 to 05-06-2021)
60.	Dr. Rohith S	Applied Data Science: Tools and Techniques	5 Days (29-05-2021 to 02-06-2021)
61.	Ms. Sunitha M	Global Warming & Impacts of Power Electronics towards Green Technology	5 Days (24-05-2021 to 28-05-2021)
62.	Mrs. Sharada T	Five days Online FDP on "Research skills and Techniques"	5 Days (24-05-2021 to 28-05-2021)
63.	Ms. Rajeshwari G	Online Webinar on Understanding	5 Days (24-05-



	V	Organisations and the role of Management in today's context	2021 to 28-05-2021)
64.	Ms. Rajeshwari G V	5 Day FDP on Impact of Covid on Higher Education and Research Initiatives	5 Days (24-05-2021 to 28-05-2021)
65.	Mr. Srinivasulu K N	Future Wireless Communication: Standards & Technologies	6 Days (24-05-2021 to 29-05-2021)
66.	Ms. Sreevani N	Advanced Excel with Data Visualization	6 Days (17-05-2021 to 22-05-2021)
67.	Mr. Mahesh M R	Advanced Excel with Data Visualization	6 Days (17-05-2021 to 22-05-2021)
68.	Dr. Yashvanth	Modern Techniques for Wireless Communication	5 Days (17-05-2021 to 21-05-2021)
69.	Mr. Srinivasulu K N	Advanced Excel with Data Visualization	6 Days (17-05-2021 to 22-05-2021)
70.	Dr. Anil Kannur	Trends in Cloud Computing and Security	3 Days (15-05-2021 to 17-05-2021)
71.	Ms. Sreevani N	Electric Vehicle Technology	6 Days (03-05-2021 to 08-05-2021)
72.	Ms. Sunitha M	Next Generation Wireless Communication: 5G & Beyond	6 Days (03-05-2021 to 08-05-2021)
73.	Ms. Sreevani N	Artificial Intelligence and 5G Communication Technology	6 Days (26-04-2021 to 01-05-2021)
74.	Mrs.Seema J	Application of NI lab View-Phase 3	One Week (21-04-2021 to 27-04-2021)
75.	Dr. Rohith S	Application of NI lab View-Phase 3	One Week (21-04-2021 to 27-04-2021)
76.	Dr. Yashvanth	Application of NI lab View-Phase 3	One Week (21-04-2021 to 27-04-2021)
77.	Mr. Srinivasulu K N	Application of NI lab View-Phase 3	One Week (21-04-2021 to 27-04-2021)
78.	Mr. Mahesh M R	Application of NI lab View-Phase 3	One Week (21-04-2021 to 27-04-2021)
79.	Ms. Jyothi S K	Application of NI lab View-Phase 3	One Week (21-04-2021 to 27-

			04-2021)
80.	Ms. Zaiba	Environmental Impact on Assesment	5 Days (19-04-2021 to 23-04-2021)
81.	Ms. Sreevani N	Emerging Trends on Networks & IoT	One Week (16-04-2021 to 22-04-2021)
82.	Mr. Sunil Kumar B S	Engineering Statistics and Linear Agebra	3 Days (15-04-2021 to 17-04-2021)
83.	Mr. Nanda Kishore C V	Engineering Statistics and Linear Agebra	3 Days (15-04-2021 to 17-04-2021)
84.	Mr. Srikanth M S	Cisco CCNA	2 Weeks (15-04-2021 to 30-04-2021)
85.	Mr. Arun Kumar S	Blue Prism Foundation Traininig	5 Days (09-04-2021 to 13- 04-2021)
86.	Dr. Rohith S	Electric and hybrid electric vehicles and charging infrastructure	5 Days (06-04-2021 to 10-04-2021)
87.	Mr. Arun Kumar S	BootCamp	3 Days (30-03-2021 to 01-04-2021)
88.	Dr. Roshini G R	International Conference on Mathematical Techniques and Applications(e-ICMTA-2021)	3 Days (24-03-2021 to 26-03-2021)
89.	Dr. Sarvesha S	5 day Statewise Data Science Boot Camp on Data Science	5 Days (01-03-2021 to 05-03-2021)
90.	Mr. Srinivasulu K N	Research Methodology and Scientific Writing for Engineering and Management	5 Days (16-02-2021 to 20-02-2021)
91.	Mrs. Swathi S	Human Centre Computing	5 Days (01-02-2021 to 05-02-2021)
92.	Mr. Gopinath A R	Human Centre Computing	5 Days (01-02-2021 to 05-02-2021)
93.	Mr. Gopinath A R	Artificial Intelligence	5 Days (27-01-2021 to 31-01-2021)
94.	Mrs. Swathi S	Artificial Intelligence	5 Days (27-01-2021 to 31-01-2021)
95.	Mrs. Chaitra D. M.	An Overview of Teaching Techniques in Design of Steel Structural Elements	5 Days (27-01-2020 to 31-01-2020)

96.	Mrs. Kavitha N	An Overview of Teaching Techniques in Design of Steel Structural Elements	5 Days (27-01-2020 to 31-01-2020)
97.	Mrs.Seema J	Application of NI lab View-Phase 2	8 Days (25-01-2021 to 01-02-2021)
98.	Ms. Sreevani N	Application of NI lab View-Phase 2	8 Days (25-01-2021 to 01-02-2021)
99.	Ms. Sunitha M	Application of NI lab View-Phase 2	8 Days (25-01-2021 to 01-02-2021)
100.	Mr. Srinivasulu K N	Application of NI lab View-Phase 2	8 Days (25-01-2021 to 01-02-2021)
101.	Ms. Jyothi S K	Application of NI lab View-Phase 2	8 Days (25-01-2021 to 01-02-2021)
102.	Mr. Gopinath A R	Applications of Artificial Intelligence towards Industry 4-0	6 Days (18-01-2021 to 23-01-2021)
103.	Mr. Pramoda R	Machine Learning	5 Days (18-01-2021 to 22-01-2021)
104.	Mrs. Swathi S	Quantum Computing	4 Days (18-01-2021 to 21-01-2021)
105.	Mr. Gopinath A R	Quantum Computing	5 Days (18-01-2021 to 22-01-2021)
106.	Ms. Chaya S.	An overview of teaching techniques in analysis of determinate structures	6 Days (13-01-2020 to 18-01-2020)
107.	Ms. Jyothi S K	Green Technology & Sustainability Engineering	5 Days (11-01-2021 to 15-01-2021)
108.	Dr.L Pinky Devi	"Labview for Engineering Applications"	5 Days (06-01-2020 to 10-01-2020)
109.	Dr. Sarvesha S	5 days Online FDP on Human Centre Computing organised by AICTE Training and Learning (ATAL) Academy	5 Days (01-02-2021 to 05-02-2021)
110.	Ms. Jyothi S K	Energy Engineering	5 Days (25-12-2020 to 29-12-2020)
111.	Mrs.Seema J	Application of NI lab View-Phase 1	5 Days (07-12-2020 to 12-12-2020)

112.	Mr. Shashikiran R	Applications of NI labview-1	5 Days (07-12-2020 to 12-12-2020)
113.	Mr. Srinivasulu K N	Wearable Devices	5 Days (14-12-2020 to 18-12-2020)
114.	Ms. Jyothi S K	Power Electronics application in Machine Drives and Power System	5 Days (01-12-2020 to 05-12-2020)
115.	Dr. Venkatesh Babu	Effective Engineering Teaching Practice	6 Days (23-11-2020 to 28-11-2020)
116.	Ms. Jyothi S K	Quantum Computing	5 Days (23-11-2020 to 27-11-2020)
117.	Mr. Srikanth M S	FDP on Blockchain	5 Days (03-11-2020 to 07-11-2020)
118.	Mr. Srinivasulu K N	Fundamentals of Image Processing and Computer Vision using Python Programming	5 Days (02-11-2020 to 06-11-2020)
119.	Mr. V B Ramesh Gowda	FDP on Emerging Trends in Applied Mathematics	5 Days (31-08-2020 to 04-09-2020)
120.	Mr. Vinod Kumar R	Materials Processing & Characterization	5 Days (31-08-2020 to 04-09-2020)
121.	Mr. Balaji Y S	Advanced Nano Materials, Nano Fabrication Techniques & Devices	5 Days (10-08-2020 to 14-08-2020)
122.	Mr. V B Ramesh Gowda	Faculty Development Programme on Outcomes-based Education	3 Days (19-08-2020 to 21-08-2020)
123.	Mr. V B Ramesh Gowda	National e- Conference on Examination Transformation - 2020	5 Days (10-8-2020 to 14-08-2020)
124.	Mrs. Archana B S	National e- Conference on Examination Transformation - 2020	5 Days (10-8-2020 to 14-08-2020)

## **Achievements of NCET**

Nagarjuna College of Engineering and Technology has following Accreditations and Approvals, Certifications, Awards Rankings:

- Approved by AICTE, New Delhi.
- Approved by UGC, New Delhi.
- Accredited by NAAC with 'A' Grade.
- NBA accredited till 2022 (E&C, IS&E, & Mechanical, Civil).
- Autonomous College under Visvesvaraya Technological University, Belagavi.
- ARIIA (Atal Ranking of Institutions on Innovation Achievements)– Ranked Institution – 2020.
- Recognized by Government of Karnataka.
- ISO 9001:2015 for Quality Management System.
- ISO 27001: 2013 for Information Security Management System.
- ISO 14001:2015 for Food Quality & Safety in Cafeteria & Mess.
- ISO 22000:2018 for Environment Management System.
- Certified Institution 5 Star \*\*\*\*\* Place to work.
- Certified Institution Perfect workplace for women.
- Institute of Excellence - MHW – Rankings – 2021 – A3 Band – Institute of Excellence.
- Award: – “Most Promising Engineering & Technology College of the Year 2021” Karnataka Award under “Quality Education & Placements”.
- Award: - “Most Promising Engineering & Technology College of the Year 2021” Karnataka Award under “Outstanding Performance in Virtual Knowledge Delivery during Pandemic”.
- Award: -Best Engineering College in Karnataka 2021- 15<sup>th</sup> Rashtriya Shiksha Gaurav Puraskar Ceremony 2021.
- Award: - Most Promising Business School in Karnataka - Global Education Forum -2021-
- Award: - Outcome Based Education- OBE Ranking 2021 – Certificate of Excellence -2021

## OBE RANKINGS 2021 OUTCOME-BASED EDUCATION

### Certificate of Excellence

IN PURSUIT OF EXCELLENCE TOWARDS OFFERING OUTCOME-BASED EDUCATION, THIS CERTIFICATE IS PRESENTED TO

**NAGARJUNA COLLEGE OF ENGINEERING AND TECHNOLOGY**

Ranked in  
A2 Band : Institution of Academic Excellence

R  
World Institutional  
RANKING

Executive President

## MHW RANKING 2021

### Certificate of Excellence

IN PURSUIT OF EXCELLENCE TOWARDS BEST INSTITUTE FOR CAMPUS LIFE, THIS CERTIFICATE IS PRESENTED TO

**NAGARJUNA COLLEGE OF ENGINEERING AND TECHNOLOGY**

Top Ranked in  
A3 BAND - Institute of Excellence

Executive President

Reimagine Inc

**OUR RANKINGS**

36<sup>th</sup> Top Engineering Institute

27<sup>th</sup> Top Private Engineering Institute

17<sup>th</sup> Top Engineering Institute (South India)

Times Engineering Survey 2020

**Certificate of Appreciation**

This is to certify that  
**Nagarjuna College of Engineering And Technology, Bengaluru**  
is categorized as 'Band B' institution (rank between 26-50) in category of Private or Self-Financed College/Institutes in Atal Ranking of Institutions on Innovation Achievement (ARIIA) 2020 announced on 16<sup>th</sup> Aug 2020.

Dr. Anil D Sahasrabudhe  
Chairman, AICTE

Sh. Amit Khare  
Secretary (HE), MHRD

Dr. Abhay Jere  
Chief Innovation Officer  
MHRD's Innovation Cell

**Perfect Workplace for Women Certified**

S.No. CoR 9102540 U.V. Code 5927405 QR Code

**NAGARJUNA COLLEGE OF ENGINEERING AND TECHNOLOGY**

Registration No. 2329408

Registration Date 2021-06-24

Certificate Expiry Date 2023-06-27

For & on behalf of AIR&CL Head Office (UK)

Place of Issue UK

Date of Issue 2021-06-28

For the issuing officer: AIR&CL Head Office (UK)

Management Representative (Chief Executive)

**Artificial Intelligence Registration and Certification Limited**

For current validity of this certificate, visit website: [www.air&cl.com](http://www.air&cl.com)

**Place to Work Certified**

S.No. CoR 2335890 U.V. Code 84985 QR Code

**5 Star \*\*\*\*\* Place to Work**

This Certificate is awarded to  
**NAGARJUNA COLLEGE OF ENGINEERING AND TECHNOLOGY**

Registration No. 3417256

Registration Date 2021-06-24

Certificate Expiry Date 2023-06-27

For & on behalf of AIR&CL Head Office (UK)

Place of Issue UK

Date of Issue 2021-06-28

For the issuing officer: AIR&CL Head Office (UK)

Management Representative (Chief Executive)

**Artificial Intelligence Registration and Certification Limited**

For current validity of this certificate, visit website: [www.air&cl.com](http://www.air&cl.com)





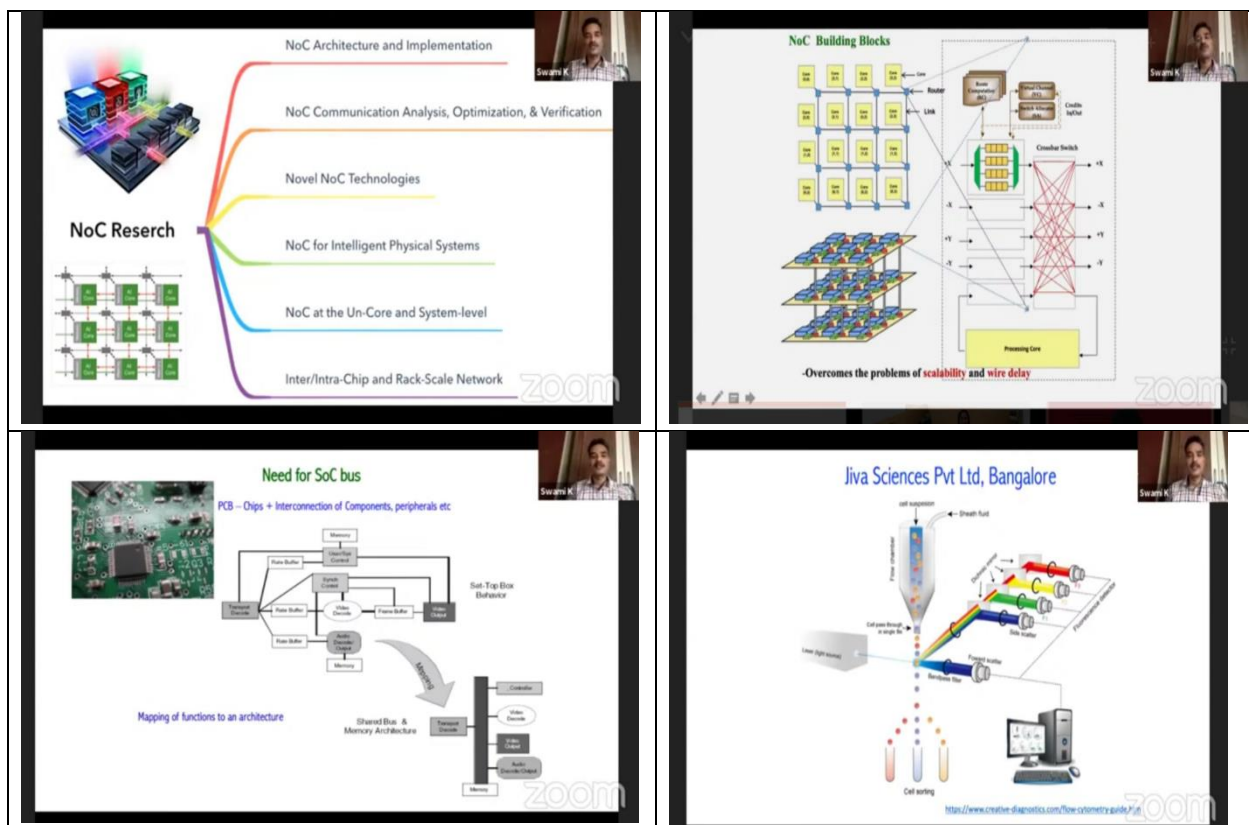




## Glimpse of Activities in AY 2020-21

### a) Webinar on “Research Trends on Network on Chip(NOC)” on 10/06/2020

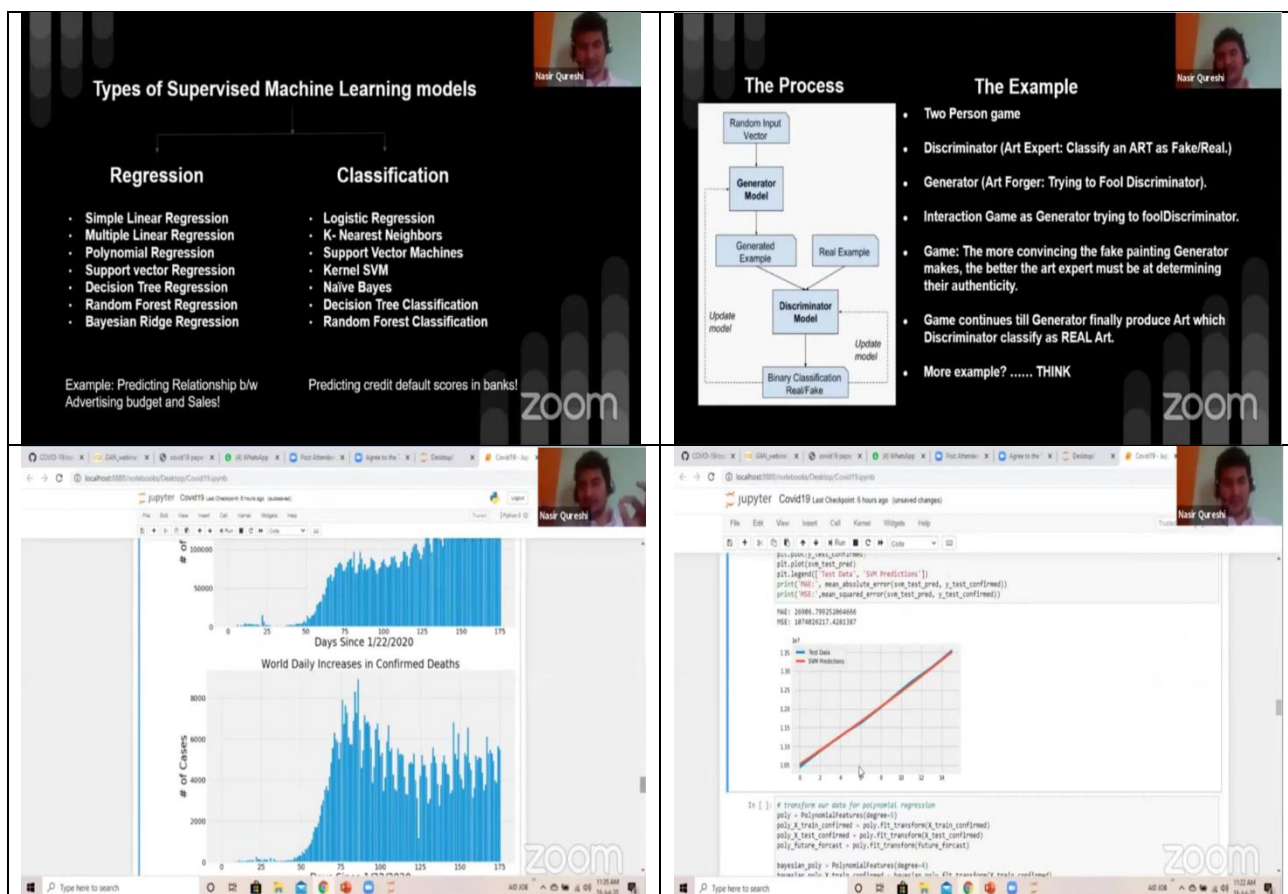
The session was chaired by Dr. S G Gopalakrishna, Director, NES, Dr. Srikanta Murthy K, Principal, NCET, Guest speaker, Dr. Swaminathan K, Head- FPGA Design Team, Jiva Sciences Pvt. Ltd., Bangalore, Dr. Jitendranath Mungara, Dean, NCET, Dr. P Harisha, Vice Principal, NCET, Prof. Dr. Nagesh K N, HOD-ECE, NCET, Organiser and Coordinator Dr.Rohith S, along with internal and external faculty members and students. A total of 385 participants from various colleges registered for the webinar.



Glimpses of Webinar on “Research Trends on Network on Chip(NOC)” held on 10/06/2020

### b) Webinar on “DECODING RECENT TRENDS OF MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE” on 16/07/2020

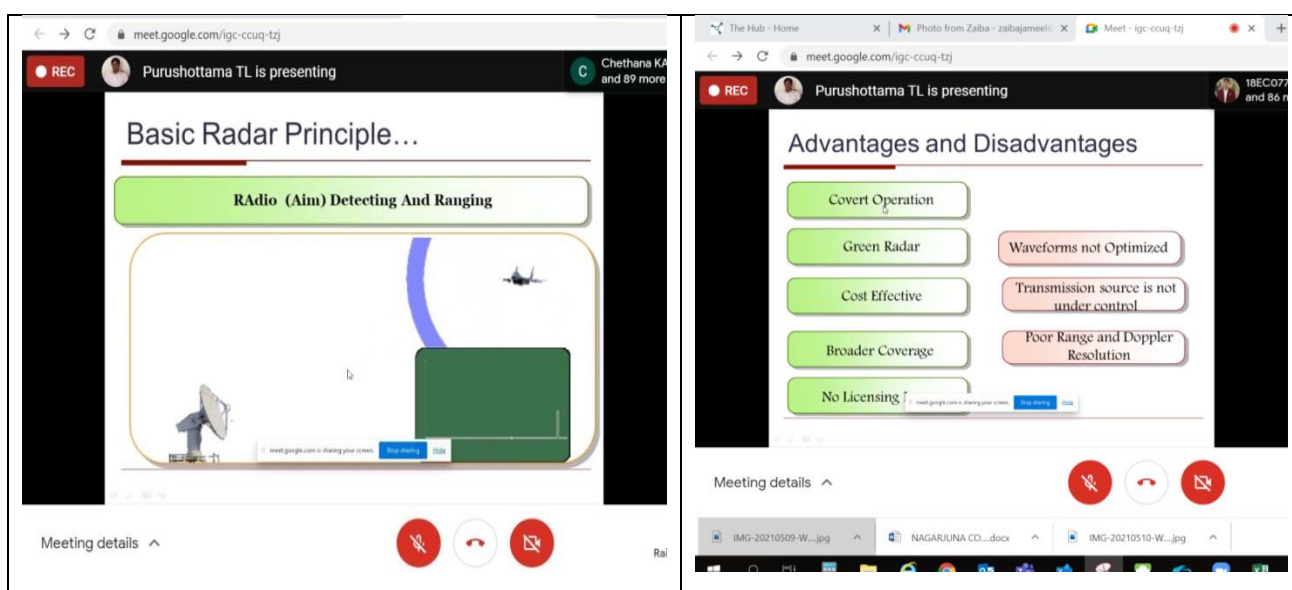
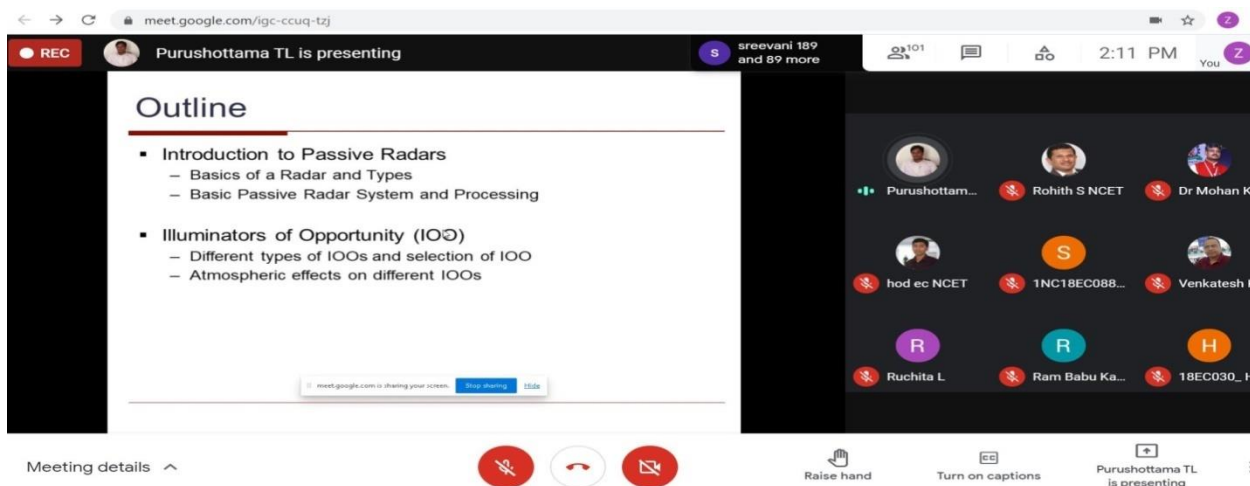
The session was chaired by Dr. S G Gopalakrishna, Director, NES, Dr. Srikanta Murthy K, Principal, NCET, Guest speaker, Mr. Mohamed Nasir Qureshi, Shiv Nadar University, Bangalore, Dr. Jitendranath Mungara, Dean, NCET, Dr. P Harisha, Vice Principal, NCET, Prof. Dr. Nagesh K N, HOD-ECE, NCET, Organiser and Convener Dr.Rohith S, Associate Professor, ECE, coordinators Mr. Vinay Kumar (Assistant Professor, ECE) and Ms. Jyothi (Assistant Professor, ECE), along with other faculty members of the department and students. A total of 100 participants attended the webinar.



**Glimpses of Webinar on “Decoding Recent Trends of Machine Learning and Artificial Intelligence”  
held on 16/07/2020**

### **c) Webinar on “QUALITATIVE OVERVIEW OF PASSIVE RADARS AND THEIR APPLICATIONS” on 10/5/2021**

The session was chaired by Dr. Jitendranath Mungara, Principal, NCET, Guest speaker, Mr. Purushottam T L, Research scholar NITK Suratkal, Prof. Dr. Mohan Kumar S, Dean-QA, Prof. Dr. Nagesh K N, HOD-ECE, NCET, Organiser and Convener Dr. Rohith S, Associate Professor, ECE, coordinators Mr. Harish V (Assistant Professor, ECE) and Mrs. Zaiba (Assistant Professor, ECE), along with other faculty members of the department and students.

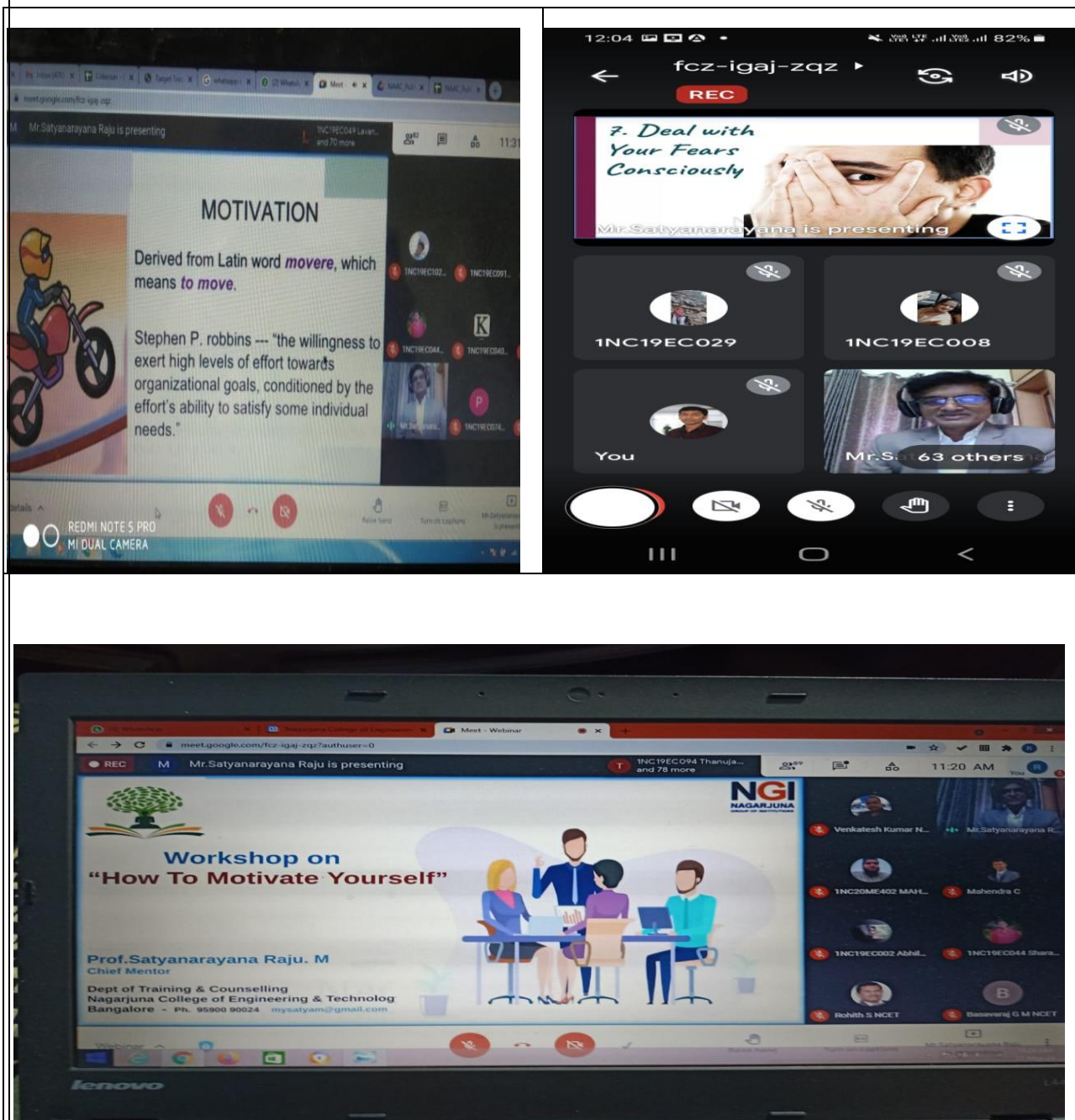


**Glimpses of Webinar on “Qualitative Overview of Passive Radars and their Applications”  
held on 10/5/2021**

The guest speaker, Mr. Purushottam T L, gave an insight into general principle of RADAR and its range resolution and also spoke about the various categorization in RADARs. With the architecture of the passive bistatic RADAR and multistatic RADAR, the basic processing steps were illustrated. He also listed the advantages and disadvantages of passive radar systems. Total of 139 participants attended the webinar.

#### d) Webinar on “HOW TO MOTIVATE YOURSELF” on 13/5/2021

The session was chaired by Dr. Jitendranath Mungara, Principal, NCET, Guest speaker, Prof. Satyanarayana Raju M, Mentor, NCET, Prof. Dr. Mohan Kumar S, Dean-QA, Prof. Dr. Nagesh K N, HOD-ECE, NCET, Organiser and Convener Dr.Rohith S, Associate Professor, ECE, coordinators Mr. Kasetty Rambabu (Assistant Professor, ECE) and Mr. Mahesh M R (Assistant Professor, ECE), along with other faculty members of the department and students.



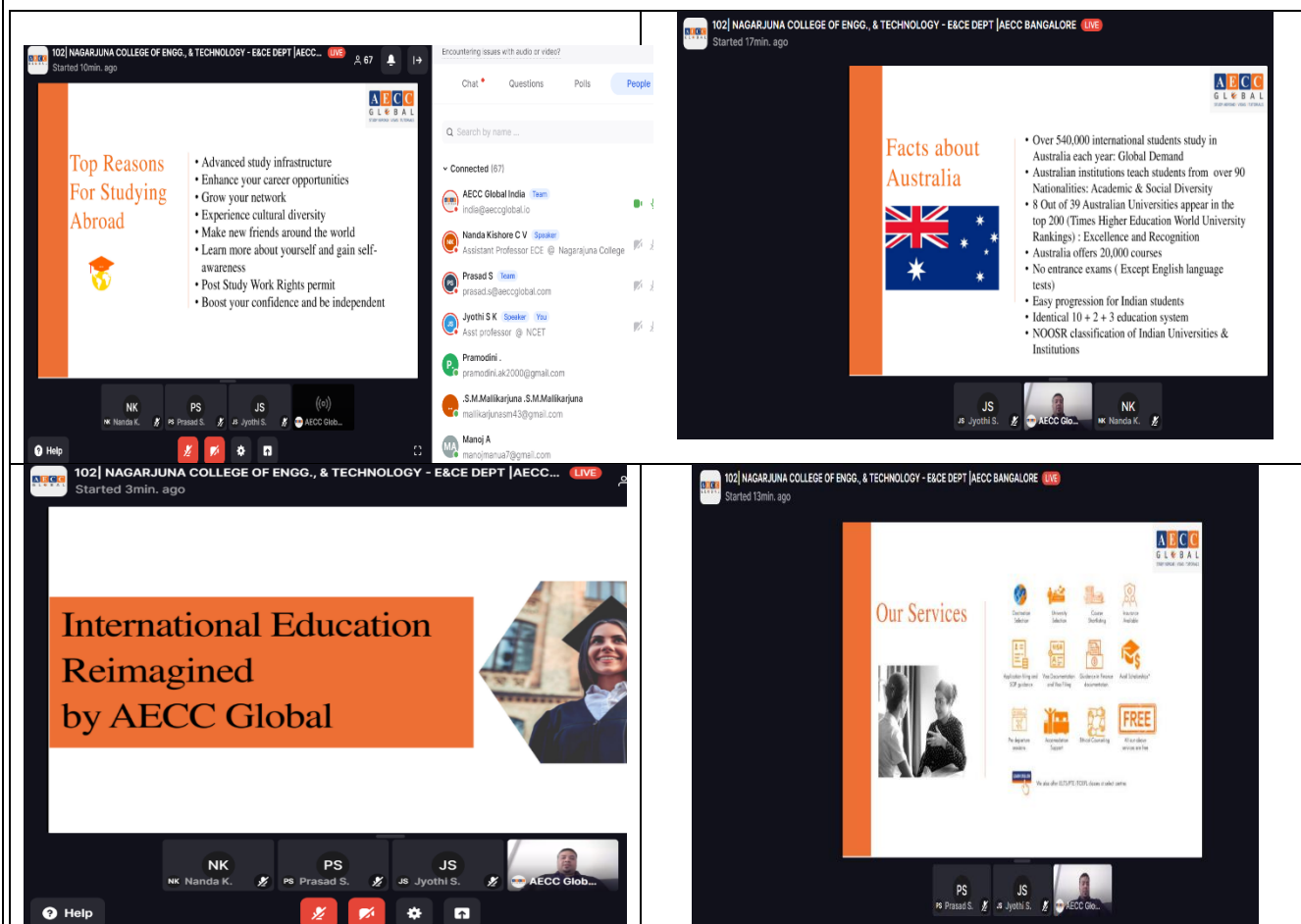
Glimpses of Webinar on “How to Motivate Yourself” held on 13/5/2021



Mr. Satyanarayana Raju briefed on how to motivate yourself and it was the much awaited webinar for students during this corona pandemic as the students were feeling lonely and demotivated from studies because of this unforeseen situations. Total of 101 participants attended this webinar.

#### e) Webinar on “Career Pathways and Study Abroad Opportunities” on 13/5/2021

The session was chaired by Dr. Jitendranath Mungara, Principal, NCET, Guest speaker, Joel Noronho, Head Of Operations- Karnataka & Kerala, AECC Global India Pvt. Ltd., Karnataka, Prof. Dr. Mohan Kumar S, Dean-QA, Prof. Dr. Nagesh K N, HOD-ECE, NCET, Organiser and Convener Dr.Rohith S, Associate Professor, ECE, coordinators Mr. Nanda Kishore C V (Assistant Professor, ECE) and Ms. Jyothi S K (Assistant Professor, ECE), along with other faculty members of the department and students.



#### Glimpses of Webinar on “Career Pathways and Study Abroad Opportunities” held on 13/5/2021

Speaker Joel gave a deep insight into shaping career by studying abroad. He added, Overseas study is a great opportunity to learn through experience

#### f) Webinar on “OVERVIEW ON UNDERWATER COMMUNICATION” on 13/5/2021

The session was chaired by Dr. Jitendranath Mungara, Principal, NCET, Guest speaker, Dr. Veena M B, Associate Professor, B.M.S.College of Engineering, Bangalore, Prof. Dr. Mohan Kumar S, Dean-QA, Prof. Dr. Nagesh K N, HOD-ECE, NCET, Organiser and Convener Dr.Rohith S, Associate Professor, ECE, coordinators Ms. Jyothi S K (Assistant Professor, ECE) and Ms. Jyothi J (Assistant Professor, ECE), along with other faculty members of the department and students.

Guest Speaker, Dr. Veena M B started the webinar by giving an introduction on Under Water communication. Underwater acoustic communication is a technique of sending and receiving messages below water. Total of 80 participants attended webinar.

### Introduction

- UWC plays a significant role in deployed underwater applications, which has an influential impact on the **wireless network**.
- The deployment of communication network setup in underwater systems consist of fixed and anchored **sensor nodes** with the seabed, floating unmanned underwater vehicle nodes (UUVs) or autonomous underwater vehicle (AUVs), signal receiver processing towers, floating devices (buoy), submarines, ships and onshore base stations.

Types of Technology	Distance	Propagation Speed(m/s)	Frequency	Bandwidth	Data rate	Attenuation	Affecting factors determine channel quality
RF	Very short distance (Up to 10 m)	$2.25 \times 10^8$	30-300 Hz	MHz	Mbps	Frequency conductivity dependent (dB/m)	Conductivity and permittivity of channel (3.5-5)
Optical waves	Short distances (Up to 100 m)	Almost same as RF ( $2.25 \times 10^8$ )	$10^{12}$ - $10^{14}$ Hz	MHz	Gbps	0.70 dB/m (Ocean) and 11 dB/m (Turbid water)	Absorption, scattering, turbidity, suspended and organic matter of channel link
Acoustic	Long distance (Up to 20 km)	1500	10-1 kHz	Hz	kbps	Distance and frequency dependent (dB/m)	Absorption, scattering, pressure, temperature and salinity of water medium

### UWC Technologies

Fig 1: Scenario of existing RF-Acoustic UWC

### UWC Applications

- Autonomous Underwater Vehicle (AUV)
- Pollution monitoring
- Ocean currents monitoring
- Equipment monitoring and control
- Seismic monitoring
- Remotely operated vehicle (ROV)
- Acoustic navigation technology for multiple AUVs
- Solar Powered AUVs
- Disaster detection & early warning
- Defence

### Acoustic Modems

Adanya AUV-India's Submarine launched Autonomous Underwater

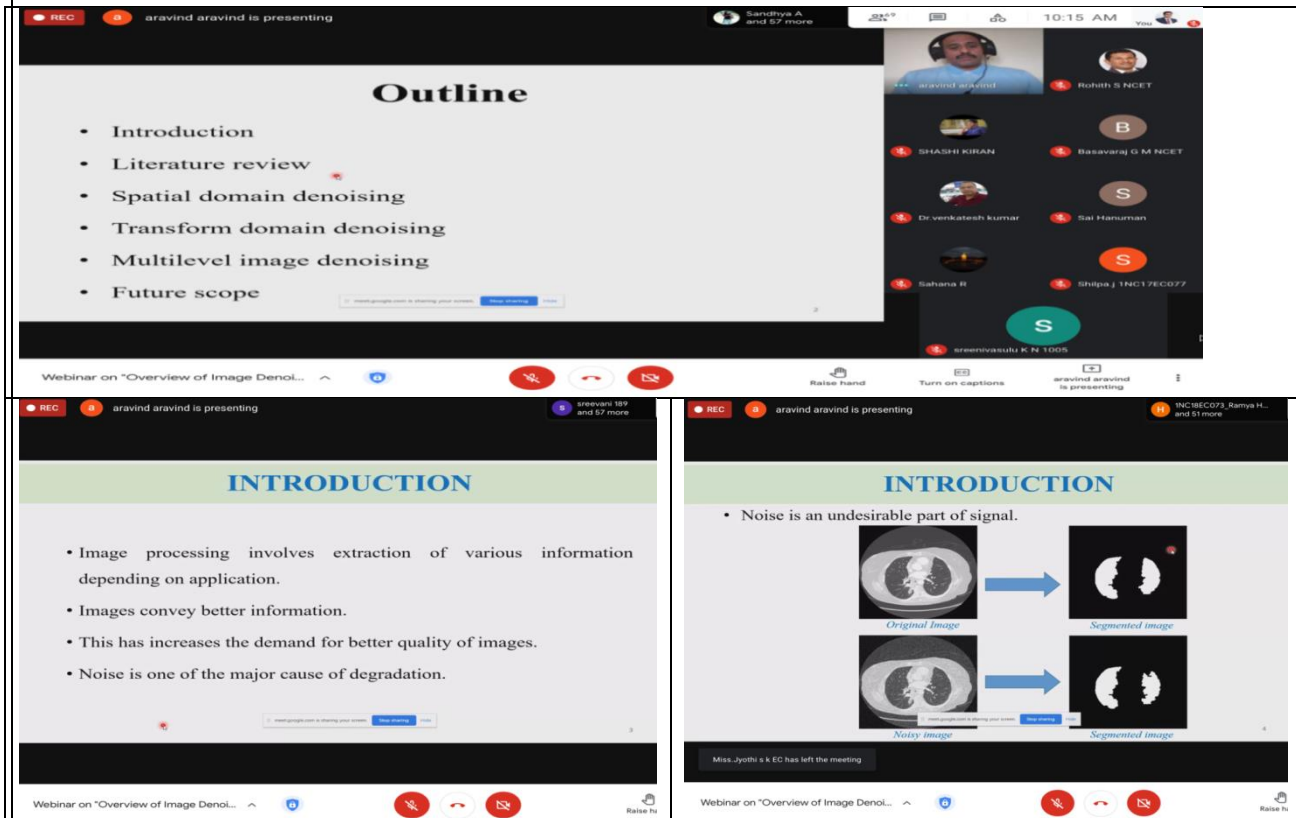
- Modem Specifications:**
  - OFDM Modulation, Convolutional, Golay & LDPC codes
  - 50-75 kHz frequency band
  - Source level -185 dB @ 1m
  - 500 m - 1.5 km range, Up to 15 kbps data rate
  - Demonstrated error-free performance up to 15 kbps at a range of up to 1.5 km

## Glimpses of Webinar on “Overview on Underwater Communication” held on 13/5/2021

### g) Online Webinar “Overview of Image Denoising” on 15/5/2021

The session was chaired by Dr. Jitendranath Mungara, Principal, NCET, Guest speaker, Dr. Aravind B N, Professor & HOD, RIT, Hassan, Prof. Dr. Mohan Kumar S, Dean-QA, Prof. Dr. Nagesh K N, HOD-ECE, NCET, Organiser and Convener Dr.Rohith S, Associate Professor, ECE, coordinators Dr. Yashwanth N (Associate Professor, ECE) and Mr. Shashikiran R (Assistant Professor, ECE), along with other faculty members of the department and students.

The objective of the webinar is to give a general introduction to the concept of Image Denoising. Starting with the properties of an image, Dr. Aravind B N spoke about the fundamentals of image denoising. He explained the different denoising methods like spatial domain denoising and transform image denoising. Total of 70 participants attended the webinar.

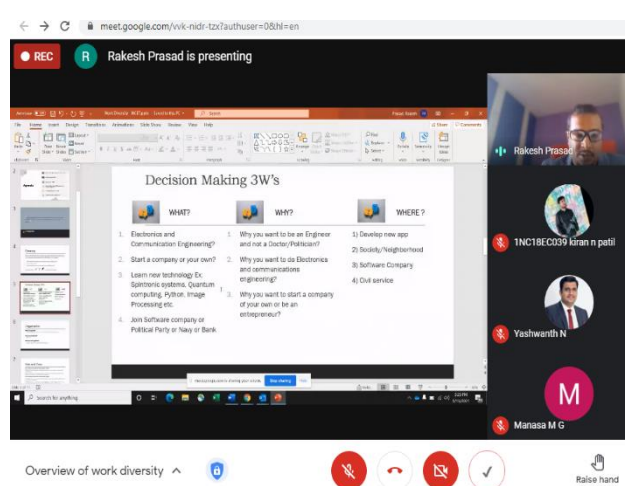
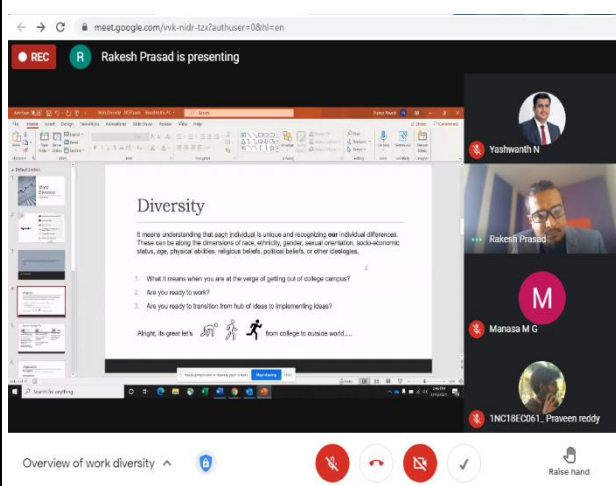
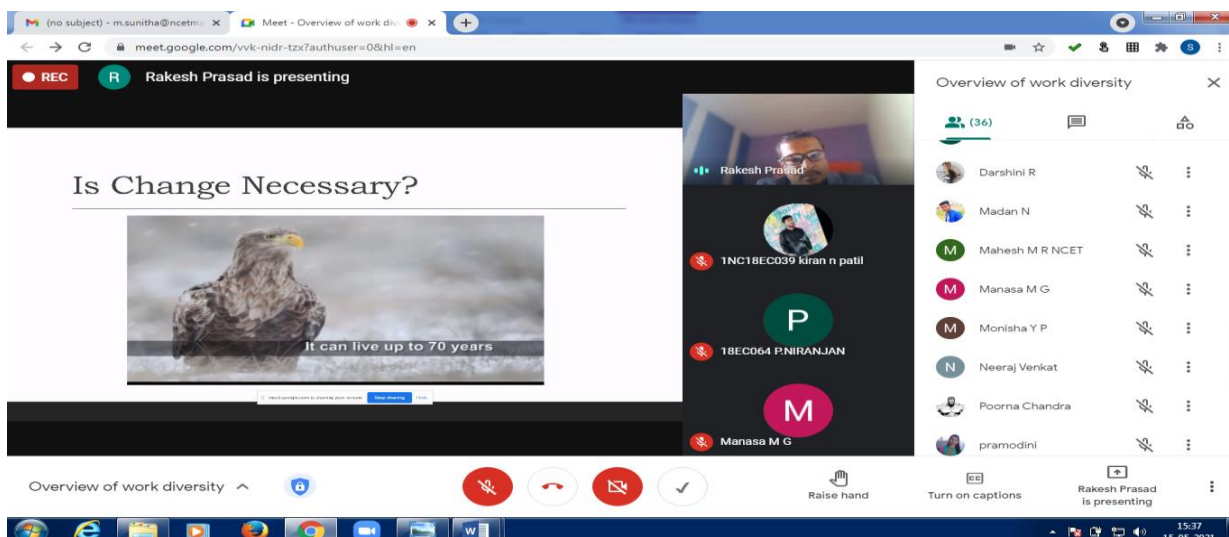


**Glimpses of Webinar on “Overview of Image Denoising” held on 15/5/2021**

#### **h) Webinar on “OVERVIEW OF WORK DIVERSITY” on 15/5/2021**

The session was chaired by Dr. Jitendranath Mungara, Principal, NCET, Guest speaker, Mr. Rakesh Prasad, Project/Engineering Manager, Fluke, Bangalore, Prof. Dr. Mohan Kumar S, Dean-QA, Prof. Dr. Nagesh K N, HOD-ECE, NCET, Organiser Dr.Rohith S, Associate Professor, ECE, Convener Dr. Basavaraj G M, Associate Professor, ECE, coordinators Mrs. Sunitha M (Assistant Professor, ECE) and Mrs. Manasa M G (Assistant Professor, ECE), along with other faculty members of the department and students.

Guest Speaker, Mr. Rakesh Prasad started the webinar by giving an introduction on Work Diversity. Diversity means understanding that each individual is unique and recognizing our individual differences. There can be along the dimensions of race, ethnicity, gender, socio-economic status, age, physical abilities, religious beliefs, political beliefs, or other ideologies. Total of 86 participants attended the webinar.

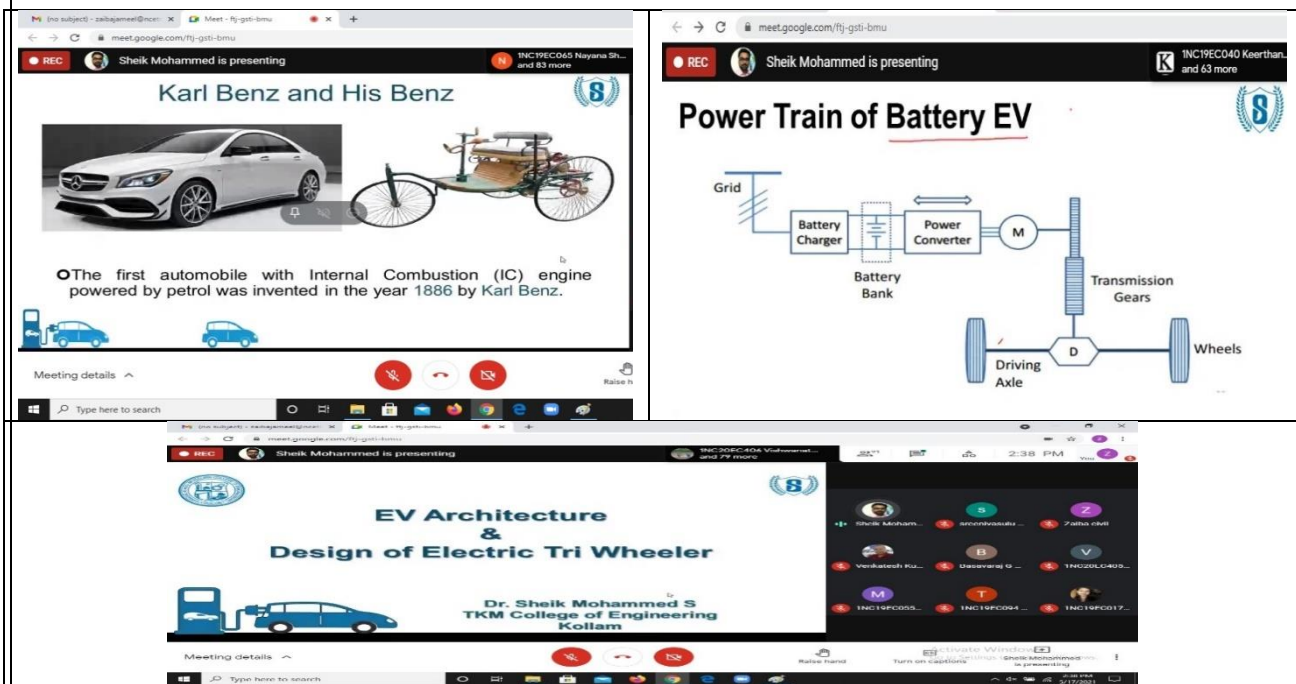


### Glimpses of Webinar on “Overview of Work Diversity” held on 15/5/2021

#### i) Online Webinar on “INTRODUCTION TO ELECTRIC MOBILITY & DESIGN OF ELECTRIC TRI WHEELER” on 17/5/2021

The session was chaired by Dr. Jitendranath Mungara, Principal, NCET, Guest speaker, Dr. Sheik Mohammed S, Assistant Professor, TKM college of Engineering, Kerala, Prof. Dr. Mohan Kumar S, Dean-QA, Prof. Dr. Nagesh K N, HOD-ECE, NCET, Organiser Dr. Rohith S, Associate Professor, ECE, Convener Dr. H Venkatesh Kumar, Professor, ECE, coordinators Mrs. Zaiba (Assistant Professor, ECE) and Mr. Srinivasulu K N (Assistant Professor, ECE), along with other faculty members of the department and students. Guest speaker, Dr. Sheik Mohammed S, gave a general introduction to the concept of Electric mobility & design of Tri-Wheeler. In the webinar, different types of electric vehicles, automobiles were discussed and its correlation with electronics engineering. Total of 100 participants attended the webinar.

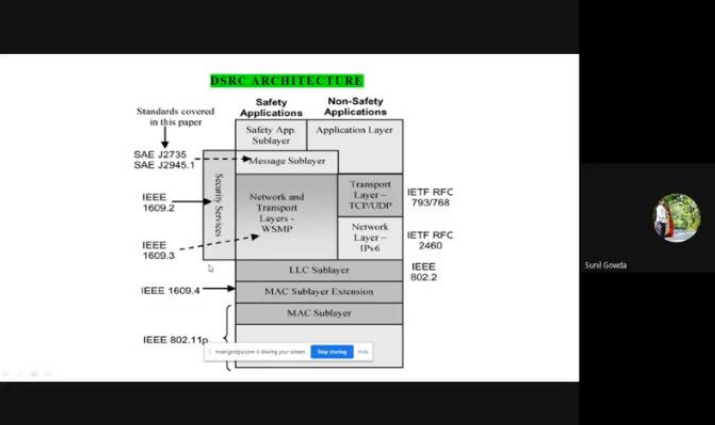




Glimpses of Webinar on “Introduction to Electric Mobility & Design of Electric Tri Wheeler” held on 17/5/2021

## IQAC WEBINAR GLIMPSES:

## Formula to Start a Tech Startup in India Opportunities and Challenges - Research & Innovation"



The screenshot shows a presentation slide titled "Inventive Thinking" in a red serif font. The slide is divided into two main sections: "5 Attitudes" on the left and "5 Techniques" on the right. Each section has a small portrait of a man (likely a historical figure associated with the concept) and a list of five items. The "5 Attitudes" section has a red background, and the "5 Techniques" section has a green background. The presentation is displayed in a window titled "Inventive Thinking - PowerPoint Presentation", and a small video feed of a man is visible in the bottom right corner.

**Inventive Thinking**

**5 Attitudes**

- Passion
- Burning desire
- Open mind
- Creative dissatisfaction
- Challenging assumptions

**5 Techniques**

- Inventive questions
- Breaking rules
- Metaphoric tools
- Combining the unusual
- Simulation games