

Lr. No: MRCET/R&D/JNTUH-Report/2020-2021/01

23.10.2020

To

The Director-R & D

Jawaharlal Nehru Technological University Hyderabad
Kukatpally,
Hyderabad-085.

Respected Sir,

Sub: MRCET – Research Centre Status – Reg.

Ref: Lr. No: JNTUH/DRD/Research Centre (Vol-III)/99/2017-20, Dt.:08.10.2020

Greetings from Malla Reddy College of Engineering & Technology (Autonomous Institution, UGC, Govt. of India)...

With reference to your letter regarding the R& D activities of MRCET is herewith enclosed as a report for your kind perusal and consideration.

Our MRCET R& D Cell is an integral part of the academic activities of Malla Reddy College of Engineering and Technology. MRCET R&D cell is one of the wings of the institute which facilitates, channelizes, records, and regulates all the academic, sponsored, collaborative research projects and consultancy works in the Institute. In a world increasingly propelled by technology, academic research forms the mainspring of a nation's economic growth.

MRCET R&D cell aspires to transform the lives of young budding engineers, research scholars and faculty through their innovative ideas to contribute for research at academic level. MRCET R&D cell is closely working with core industries to train the students in this direction. This objective will be very close to the heart of the industry in the direction of producing ready to be employed engineers. The key goal of the Institute is to provide a creative atmosphere in which higher studies and research thrive amongst the faculty and students. It also promotes and manages Institute-Industry interaction.

We have enclosed the list of activities under our R&D Cell of MRCET for Ac. Yr 2019-2020.

Dr.V S K Reddy
P R I N C I P A L

Encl:

1. MRCET R&D Activities Report

R&D ACTIVITIES CARRIED IN THE A.Y. 2019-20:

1. PROGRESS WORK OF RESEARCH SCHOLAR:

Details of the Student admitted to the PhD programme:

Name of the Candidate : **KIRAN BABU SANGEETHA**
Reg. No : **19N3PH0801**
Research Topic : **A Novel Video Coding Algorithm for 5G Communication.**
Date of joining : **2nd December 2019**

Work Progress: He has carried out extensive literature survey by reviewing several survey papers of both International journals and conferences through IEEE, Springer, ACM, Elsevier, Science Direct etc. He has applied for his Ph.D-Course Work. He has attended workshops and seminars which were held on topics related to his research work in order to gain more insight into the chosen topic.

Publications:

Kiran Babu S, VSK Reddy, "A survey on - Performance comparison of video coding algorithms for 5G communications", Springer's International Conference on Soft Computing and Signal Processing (ICSCSP 2020). August 21-22, 2020, Springer AISC Series. ISSN 2194-5357.

2) IN-HOUSE PROJECTS

In-house projects are developed and executed by the students under the supervision of the Senior Faculty members of MRCET and associated with R & D Cell.

The list of the projects are:

S.No.	H.T.No.	NAME OF STUDENTS	TITLE OF THE MAJOR PROJECT	NAME OF THE FACULTY	DOMAIN
1	16N31A0408	AKASH TAH	Analysis of Smart helmets and Designing an IoT based smart helmet: A cost effective solution for Riders	Mr.M.Arun Kumar	VLSI
	16N31A0459	RISHU KUMAR			
	16N31A0460	G MANISWARAN REDDY			
2	17N35A0408	JALAGAM SWATHI	NODE MCU Based Weather Monitoring & Agricultural supporting System	Mr. M. Ramanhaneyulu	ES
	17N35A0409	JELLA SHIVA GANESH			
	17N35A0410	KADAVRUGU MADHU			
3	16N31A04D1	MALLU SRINIDHI	LORA IOT Based Agriculture Monitoring Systems (InHouse)	Mrs.P.SWETHA	ES
	16N31A04H4	PINDI JAYA TEJA			
	16N31A04H5	POLASA SUSHMA			
4	16N31A04D7	MD FARAAZ HUSSAIN	IOT BASED INDUSTRIAL MONITORING SYSTEM	Mr.ANIKETH	ES
	16N31A04E3	MOHAMMAD AMJAD PASHA			
	16N31A04E5	MOHAMMED SAILANI			
5	16N31A04E0	MERGU KALYAN	Asterisk Enabled PBX System (InHouse)	Mr.R.CHINNA RAO	CS
	16N31A04H3	PELLURI V S S N ANVESH			
	16N31A04H8	PRATHIK MAHAGOWLI			
6	16N31A04K2	S S SANJEEV KOUSHIK	DESIGN OF LED DISPLAY UNIT USING ZED BOARD	Mr.M.ANATHA GUPTHA	VLSI
	16N31A04K0	RYAKALA SAITEJA			
	16N31A04P4	YENUMULA NAGA SAI			
7	16N31A04K8	SANGANI HARSHITHA	SOLAR TRACKING SYSTEM USING SUNFLOWER THEORY	Mr.N.Suresh	ES
	16N31A04K9	SEELAM SAI PALLAVI			
	16N31A04L3	SIDDHA PAVANKALYAN			
	16N31A04L8	SUNCHU CHANDU			

3) SPRINGER INTERNATIONAL CONFERENCE (ICSCSP-2020); AUGUST 21-22, 2020:

Organized International Conference ICSCSP 2020 in association with Springer in Hybrid model (Offline and Online). R & D Cell has taken the major role for the successful organization of the conference on 21-22 August 2020.



4) FACULTY PUBLICATIONS

R & D Cell of MRCET always encourages our internal faculty members to publish their research papers and articles in reputed publications. With this, In 2019-2020 academic year many of our internal faculty members have been published their research papers and articles in International Journals and Conferences indexed with Scopus, Springer, Web of Science, IEEE etc.

5) ATAL RANKINGS

R&D Cell has taken the major lead in updating the information related to ATAL rankings. We are happy to inform that our college is placed in **BAND – A Institution (All India 06-25 Rank) by ARIIA – 2020 (ATAL), Govt. of India.**



6) INSTITUTION INNOVATION COUNCIL (IIC) CELL

MRCET R&D Cell is constantly encouraging and supporting the students to come out with their innovation ideas and providing the required platform to execute their ideas. So many innovative ideas are implemented and the same thing is also forwarded to IIC Cell, Govt. Of India. We are happy to receive that we got 5 star rating based on the performance and the projects implemented.



7) HACKATHON PROGRAMME

Smart India Hackathon 2020

Smart India Hackathon 2020 is a nationwide initiative to provide students a platform to solve some of the pressing problems we face in our daily lives, and thus inculcate a culture of product innovation and a mindset of problem solving.

The last edition of the hackathon saw over 5 million+ students from various colleges compete for the top prize at 65+ locations.

In SIH 2020, the students would have the opportunity to work on challenges faced within various Ministries, departments, Industries, PSUs and NGOs to create world class solutions for some of the top organizations including industries in the world, thus helping the Private sector hire the best minds from across the nation. It can help to:

- Harness creativity & expertise of students
- Spark institute-level hackathons
- Build funnel for 'Startup India' campaign
- Crowd source solutions for improving governance and quality of life
- Provide opportunity to citizens to provide innovative solutions to India's daunting problems

The first three editions SIH2017, SIH2018 and SIH2019 proved to be extremely successful in promoting innovation, out-of-the-box thinking in young minds, especially engineering students from across India.

MRCET R&D Cell has conducted Internal Hackathon on January 18th as for Selecting Teams for final upload as per directions of SIH2020.

Total 29 teams has participated out of which 13 teams has been uploaded into SIH portal which includes both software and Hardware.



Jury for the selection of teams are

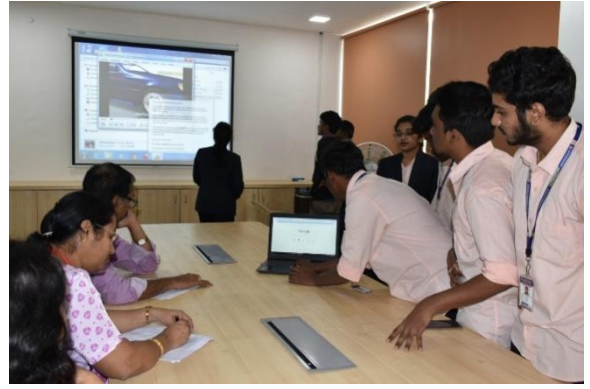
1. Dr.S.Srinivasa Rao, Professor & HOD, ECE.
2. Dr. D Sujatha, Professor & HOD, CSE.
3. Dr. G. Sharada, Director, IT.
4. Dr. N.S. Gowri Ganesh, Professor & HOD, IT.
5. Dr. P H V Sessa Talpa Sai Director (R&D)
6. Mr. M. Jayapal, College SPOC

The event was launched by Principal, Dr VSK Reddy in TBI & Startups Center and has motivated and encouraged students to come up with various innovation Ideas and Startups, He also Quoted that the startup center is open for students who wish to carry out research . More than 180 students has participated to present their Prototype.

Teams Participated are:

S.No	Team Name	Team Leader	Problem statement
1	Farmer Trades	Kotte Jashuva	Portal for farmers to sell their produce at better rate
2	Team Agri Tech	M.Thirumal	Portal for farmers to sell the produce at a better rate
3	Techmonks	Akanksha Agarwal	Electric Vehicle (EV) Ecosystem
4	Rise up	P. Manikanta	Road maintenance record-keeping system
5	Theerrors	K Harshavardhan	Web, Portal And Apps For Facilitating Reporting Of Offences For Registration Of FIR With Provision OCR Based Signature Along With Aadhar Based Digital Signature's Info
6	Secure Bike	Rayala Sai Vinay	Anti theft systems for 2 wheeler
7	Dominatorz	P Yuvaraj	Development Of Business Models For Collection And Utilisation Of Single Use Plastics And Various Other Industrial
8	Advitiya	K Mohsina Kauser	Portal For Farmers To Sell The Produce At A Better Rate
9	Pegasus	Pavarna Nyavanandi	People come to cities because of better health facilities. What should be done to improve the health facilities in the city and also provide equitable access for all?
10	Team Overwatch	Prashanth Proddhaturi	Soldier strap
11	Demolition crew	M. Dhanush	Last mile delivery in a multi storey building of a society
12	Mechanizes	T. Raja Gopala Chary	Waste Management (Recycling Of Plastic Debris)
13	Mechanical United	M V Sai Srikar	Anti theft system for 2 wheelers

S.No	Team Name	Team Leader	Problem statement
14	Astra	Torsha Nandy	Soldier Strap
15	Tech savvy	K. Anil kumar reddy	Lack of technological intervention in value addition of agriculture products produced by shgs /fpgs.
16	Agriculture	P Sai Kumar Reddy	Solar Powered Smart Irrigation System
17	Team SCS	B.Venkata Konda Reddy	To decrease accidents due to crossing the speed limit of an area
18	Stark tech	K.Vinay Kumar	Cyber crime prevention
19	Hammerheads	R Pavan Kumar	Laser Based Vibrations Sensor Operated Through Mobile
20	Drone Acharya	K.S.P Anirudh	Delivery of essential medicines by drones in hilly areas
21	The security	Nandyala Sivani Reddy	Web application for facilitating reporting of fir with provision of ocr based and aadhaar digital signature.
22	Unique thinkers	K.Sai Srikar	Information security through smart communication
23	Tech-Connect	N.Siddharth	Developing online platform for mentoring start-ups.
24	Medstat	M. Shravan Reddy	To Know Details Of A Patient Admitted In Hospital Immediately
25	Mohammed Haji Baba	Mohammed Haji Baba	Vehicle maintenance index
26	Hash it out	A.Gayatri Sowmya	Innovative apps for women safety specially in cyber space.
27	Lavensredder	Ajahn Tundla	Traffic Management System For Emergency Vehicles
28	Onecare	G.Anjaneya	App For Online OPD Appointment And Hospital Information System.
29	Rising India	B Sai Prasad	Portal for farmers to sell their produce at better rate



Final Results if Internal Hackathon

MRCET INTERNAL - SMART INDIA HACKATHON 2020 Results – JAN 18 TH												
Sno	Team Name	Team Leader	PS Code	Category	Dept	novelty of the idea	Feasibility of Product	Is It New Concept	Problem solving and Risk involved in the idea	Prototype	Presentation Skills	Total
1	FARMER TRADES	KOTTE JASHUVA	RA27	SW	CSE	2	3	2	4	2	4	17
2	TEAM AGRIL-TECH	M.Thirumal	RA27	SW	CSE	4	4	4	4	4	4	24
3	TECH-MONKS	Akanksha Agarwal	SS443	SW	CSE	4	3	4	4	4	4	23
4	RISE UP	P. MANIKANTA	AD358	SW	CSE	2	2	2	3	4	4	17
5	THE-ERRORS	K HARSHAVARDHAN	MS339	SW	CSE	4	4	4	4	5	5	26
6	SECURE-BIKE	Rayala Sai Vinay	UK151	SW	CSE	4	4	2	3	4	4	21
7	DOMINATORZ	P YUVARAJ	SG64	SW	CSE	3	2	2	3	2	2	14
8	ADVITIYA	K MOHSINA KAUSER	RA27	SW	CSE	2	2	2	2	2	3	13
9	TEAM PEGASUS	Pavarna Nyavanandi	BC77	SW	IT	3	4	3	3	4	4	21
10	Team Overwatch	Prashanth Proddhaturi	CK48	HW	ECE	3	1	3	1	1	3	12
11	THE DEMOLITION	M.Dhanush	AN318	HW	ECE	4	4	4	4	4	5	25
12	MECHANIZER'S	T. Raja Gopala Chary	IC490	HW	ME	3	3	3	4	2	3	18
13	Mechanical United	MV Sai Srikar	UK151	SW	ME	2	2	2	2	2	2	12
14	ASTRA	Torsha Nandy	CK48	HW	ANE	2	2	2	2	2	1	11
15	Tech savvy	K. Anil Kumar Reddy	NK100	SW	IT	3	3	3	3	3	3	18
16	AgreeCulture	P Sai Kumar Reddy	MR98	HW	ME	2	2	2	2	2	2	12
17	TEAM SCS	B.V KONDA REDDY	IC485	SW	ECE	3	2	3	2	2	3	15
18	STARK TECH	K.VINAY KUMAR	RK59	SW	CSE	3	3	3	2	2	3	16
19	HAMMERHEADS	R PAVAN KUMAR	PC59	HW	ANE	3	3	3	3	3	3	18
20	Drone Acharya	K.S.P Anirudh	SS44	HW	ANE	3	2	3	2	2	3	15
21	THE SECURITY	Nandyala Sivani Reddy	MS339	SW	IT	2	2	2	2	2	3	13
22	Unique Thinkers	K Sai Srikar	IC464	SW	IT	2	2	2	2	2	2	12
23	Tech-connect	N.Siddharth	SR272	SW	IT	2	2	2	2	2	2	12
24	Medstar	M. Shravan Reddy	IC471	SW	IT	3	2	2	2	2	3	14
25	CODE BLENDERS	Mohanmud Haji Baba	RA24	SW	IT	4	4	4	4	4	4	24
26	HASH IT OUT	A.Gayatri Sowmya	AS123	SW	IT	2	2	2	2	2	2	12
27	Larvensredder	Ajahn Tundla	AD362	HW	ANE	4	4	4	4	4	4	24
28	OneCare	G.Anjaneya	DA192	SW	IT	2	2	2	2	2	2	12
29	RISING SUN	Sai prasad	RA27	SW	IT	2	2	2	2	2	2	12
Name of the Judge			S.Srinivasa Rao	Dr. D Sujatha	Dr. G. Sharada	Dr. N.S. Gowri Ganesh						
Designation			Professor&HOD	Professor&HOD	Director	Professor&HOD						
Dept			CSE		IT	IT						
Signature												

8) Collaboration with T-Hub Foundation, Govt. of Telangana

MRCET R&D Cell is having association with T-Hub Foundation, Govt. of Telangana for providing Tek-Talks on latest topics, guest lectures, conducting workshops, providing their knowledge sharing and research activities for students of UG, PG and research scholars of MRCET.

9) Workshops & Training Programmes organized by R & D Cell of MRCET

1. A two week faculty development programme on “Python Programming with Industry Perspective” jointly organized by NIT Patna and R & D Cell, MRCET during 02-06 December 2019.
2. A two week faculty development programme on “Embedded UVM open source Emulation & Functional Verification” jointly organized by NIT Patna and R & D Cell, MRCET during 13-24 July 2020.

Dr VSK Reddy
PRINCIPAL