



R.M.K.

COLLEGE OF ENGINEERING AND TECHNOLOGY

RSM NAGAR, PUDUVOYAL-601206

(An Autonomous Institution)

*Affiliated to Anna University, Chennai/ Approved by AICTE, New Delhi
All Eligible Courses Accredited by NBA / NAAC "A" GRADE / ISO 9001-2015
Certified*

09.09.2023

Annual Report 2022-23

College Name	:	R.M.K. College of Engineering and Technology
IIC ID	:	IC201811617

A. About IIC Institute

Vision of IIC RMK CET

- To empower the students as well as faculty entrepreneurs with innovative ideas of social relevance and promoting a culture of entrepreneurship activity in campus.

Mission of IIC RMK CET

- To develop a system with required infrastructure that can enable students and faculty to innovate and prototype their ideas.
- To create vibrant local innovation ecosystem
- To support Start-up culture through IIC
- To develop better cognitive ability among budding entrepreneurs.
- To promote entrepreneurship in the key thrust areas of Engineering and Technology by strengthening industry- institute collaboration

Journey of IIC established at the Institute

- The RMK CET IIC Established in the year of 2018 as per the guidelines of MHRD and IIC.
- Further, various activities were conducted during the year 2018-2019 and achieved two-star rating from IIC

- Various programs were conducted in the area of Innovation, startup and Entrepreneurship and also our students participated in the National Innovation Contest.
- In the IIC 4.0, various programs were adopted by institution to promote the startup and entrepreneurship culture among students and faculty.
- In Q1 and Q2, we got Two stars, further submitted all the reports of Q3 and Q4. We hope this year also we will get maximum star rating.
- Our IIC has formulated NISP and implemented in our Institute. The same has been disseminated among students and Faculty.

Brief mention of key functionaries at the IIC Institute

S.No	Name	Designation & Department	Role
1.	Dr. DEVAN P.K.	Professor/MECH	President NISP Coordinator YUKTI Coordinator Incubation Centre
2.	Dr. SHANTHI K.G	Professor/ECE	ARIIA Coordinator NIRF Coordinator
3.	Dr. AKILA A	Assistant Professor/CSE	YUKTI- Coordinator Innovation Contest Coordinator
4.	Dr.K.KARTHICK	Asst.Professor/MECH	KAPILA Coordinator IPR Activity Coordinator Website update
5.	Mr. SATHYARAJ P	Assistant Professor/ECE	Innovation Ambassador portal update Startups ATL School,
6.	Ms. MS. KATHIJA NASREEN A	Assistant Professor/CSE	Incubation and Pre-incubation Coordinator
7.	Dr.V.BANUPRIYA	Assistant Professor/S&H	Social Media Coordinator
8.	Dr.NARMATHA SU	Assistant Professor/S&H	NISP Co-Coordinator

B. Portfolio/graphical/Tabular representation of Resource strength (human capital and Physical capital) of the IIC institution

S.No	Description	Count
1.	Total No. of IIC Members	284
2.	Total No. of IAs	23
3.	Total No. of faculty Mentors from Portal	88
4.	Pre-Incubation Units, If any	01 (RMKCET Pre-incubation Unit)
5.	Incubation Units, If any	01 (Venture Sprout)
6.	IP Facilitation Unit, If any	01 (RMKCET IPR Unit)

C. Highlight Facilities, Infrastructure of Pre-Incubation & Incubation kind and Student bodies/clubs engaged in promotion of Innovation and Entrepreneurship in the campus.

- MSME Incubator of RMKCET – “**VENTURE SPROUT**”
- Ministry of Micro, Small and Medium Enterprises (MSME), Government of India has recognized our Institute as Host Institute (Hi) / Business Incubator (BI), for Implementation of the scheme “Support for Entrepreneurial and Managerial Development of SMEs Through Incubator”.
- Through This Scheme Rs. 1.5 Crores has been sanctioned for developing ten Innovative Products.
- EDC organizes a chain of events to inculcate the entrepreneurial culture among the students. From EDII, under the DST-NIMAT scheme, EDC receives funds to conduct awareness camps.
- The ED cell of the college has registered under the EDI-IEDP programme to cater to the needs of students by organizing online programs.

D. Highlight Achievements




S.No	Description	Count
1.	Number and Different types of I&E and IPR activities Conducted	70
2.	No. of student's & faculty ideas generated	135
3.	No. of student's & faculty Innovation/prototypes developed	124
4.	No. of IPs generated, published and granted	19 numbers
5.	No. of Student & Faculty Start-ups/Ventures established	10 numbers
6.	Amount spent on promotion and awareness generation on Innovation Entrepreneurship in the campus	Rs 1 lakh
7.	Amount grant or fund supported to student & Faculty lead Innovations, start-ups and IPR	Rs 1 lakh
8.	No. of Technology Transfer and Commercialisation happened	=

E. Highlight few best IIC Faculty/Student members and their achievements/ Rewarded for the innovations at different forum

The following faculty members are actively participating all IIC related activities:

1. Ms. A.Akila, Asst. Prof/AI &DS & IIC Coordinator
Ms. A.Akila is actively participating in all IIC activities. She also guides and mentors the students to take part in Hackathons.
2. Mr.P.Sathyaraj, Asst. Prof/ECE, & IIC Coordinator
Mr.P.Sathyaraj has involved in moulding the students to take part Innovation contests, Hackathons and guiding them in preparing prototypes and making them to present in Contests.

F. Highlight selected best Innovations & images with mention of inventor/innovation name

S.No.	Patented Innovation	Inventors	Photo Images	Patent Status
<u>1</u>	Development of Portable Robot Base and Robotic Arm for Cleaning Inner Surface of the Tanks using Ultrasonic Sensors	Dr.P.K.DEVAN		Granted
<u>2</u>	Urban Agro-Farming In Rain Water Harvesting Channels	Dr.K.Sudhakar Dr.G.Devi		Reply submitted to FER
<u>3</u>	Eco Friendly Interlinked Hybrid Absorbent Polymer As Planting Medium For Reducing Frequency Of Irrigation	Dr.K.Sudhakar Dr.G.Devi		FER Issued
<u>4</u>	A Foldable Motorbike And The Method Of Manufacturing Therof	Dr.K.Vinothkumar or Dr.T.G.loganathan an Mr.A.Balajikrishnabharathi		Patent Filed

**G. Highlight selected start-ups established by students/faculties
with mention of founder/cofounder name**

Start-ups established by students

S.No	Name of the entrepreneur	Student batch	Branch	Name of the Company	CIN	DIN	UAN
1	Saivandana Palamani	2018	ECE	Getmaxe Academy Private Limited	U80900A P2020PT C116010	08912353	-
2	Pavan Sai Thota	2020	EEE	Getmaxe Academy Private Limited	U80900A P2020PT C116010	08912354	-
3	M.CHITH RARTH	2014	ECE	Exclametric Technologies	-	-	TN02D0066564
4	Krishnakumar	2014	ECE	Xtracut/ Weewooweb	-	-	TN02D0172225

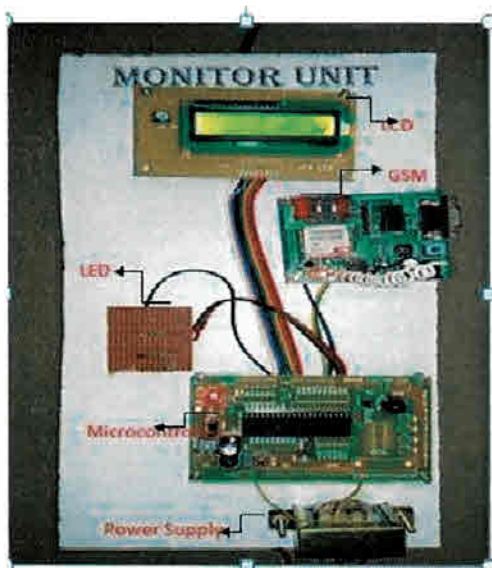
Start-ups established by Faculty Members

S.No.	Name of the Faculty	Dept.	Name of the Startup	GST NUMBER
1	Dr.P.K.Devan	MECH	KA Enterprises	33AKJPP9524D1Z4
2	Dr.S.Senthilkumar	MECH	SSK ENGINEERING SOLUTIONS	33BCOPS6072F1ZB
3	Mr.A.Balajikrishnabharathi	MECH	VV Elderly Needs	33AXSPB6140P1Z4
4	Dr.M.Arun Manika Raja	CSE	ASD Software Services	33BCCPA7835C1Z6
5	Mr.N.R.Rejin Paul	CSE	Aiden Software Services	33ANYPR5207R1Z0
6	Ms. Mary Selvan	AI&DS	CREDITIS EdTech	33CCJPS3741K1ZA
7	Ms.A.Akila	AI&DS	SANRITZ SPARK	33AMCPA4740P1Z5
8	Mr.P.Sathyaraj	ECE	SK E-Digital Solutions	33EBJPS5066N1ZY

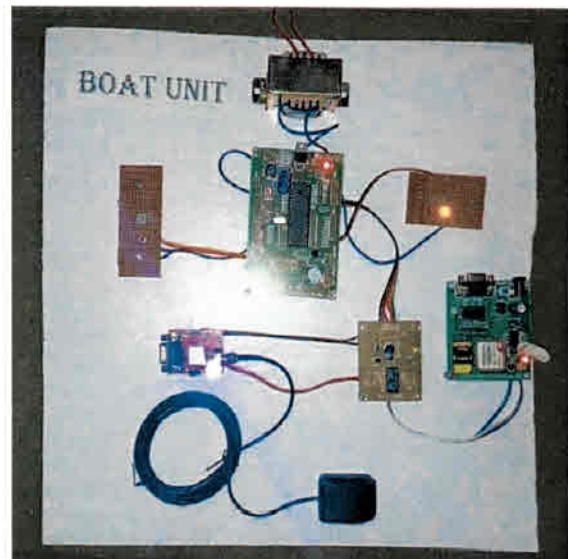
H. List if any break through Innovations / Technology Developed at the institute (2-3 technology with 2-3 lines about technology and innovation

Palk Strait Boundary Scanning and Boat

The sea or ocean also forms the borders of the islands, peninsulas, and coastal nations. Fishermen make up the majority of the population in coastal areas. Fishermen, in particular, frequently breach boundaries without being aware of restrictions. This is one of the causes of cruelty that crosses borders. Their boats are being taken, and they are being kidnapped. Sometimes it also causes a loss of life. Manual boundary line measurement and coordination with the navy are significant issues. Our primary goal is to prevent such incidents and warn passengers especially fisherman of boundaries. Border identification is carried out in our suggested system employing GSM, GPS, and embedded assisted boat tracking system for fishermen that solves maritime border issues and helps to save the lives of fisherman from both India and Sri Lanka. This system uses certain fundamental physics principles as well as efficient embedded system strategies.



Boat unit



Boat unit in safe zone


1. Patent On New Approach To Arrest Flammable Gases Using Microcontroller Operated Solenoids

The use of flammable gases is very high in our day to day life, at the same point of time the number of accidents that occur due to these flammable gases is also high. There is a serious note to overcome these accidents as it takes precious human life. So, there is high need in the world to develop a method which will prove to overcome the accidents caused by flammable gases, and this method proves to be well organized one to overcome these accidents. The solenoid valve of NO type serves in arresting the flammable gases and the electronic system that comprises of a gas sensor, arduino board, SPDT switch serves a in controlling the entire process of arresting the flammable gases at the time of leakage. The use of flame proof enclosure to make the electronic controls as a single unit and also to protect it in case of any accidents makes it much reliable. The key feature is the use of alarm, which produces alarm sound at the time of flammable gas leakage, which brings it to the notice of the person who is nearer to it.

2. New Methodology For Generating Spur Gear And Helical Gear Using Radial Drilling Machine

The two tier feed mechanism kept below the triangular structure gives 'X' and 'Y' linear translation motion so as to get required width and depth of cut. The index plate on one of the terminals of the bearing setup indexes the work piece on the other end according to the teeth width by the locking stopper pin arrangement on the triangular structure at the indexing end. The invented add attachment to cut gear in the radial drilling machine has three variable namely Spur Gear cutting, Helical Gear Cutting and varied number of teeth. This attachment is cost effective and enhances the functionality of the conventional radial drilling machine to the extent of gear cutting.

I. Participation of IIC-institute in various programs of Central and Stage Govt. Highlighting specially for the schemes or programs

	<p>R.M.K. College of Engineering and Technology, Thiruvallur is Positioned in the Band of 51-100 in the Innovation Category</p>
 <p>National INNOVATION and STARTUP Policy 2019 for Students and Faculty <small>A Guiding Framework for Higher Education Institutions</small></p>	<p>NISP Policy adopted and implemented in RMKCET as per the guidelines of MoE.</p>
<p>https://rmkcet.ac.in/NISPAbout.php https://rmkcet.ac.in/pdfviewer.html?&pdf=http://rmkcet.ac.in/IIC/events/RMKCET%20NISP%20POLICY.pdf</p>	
<p>Smart India Hackathon</p> 	<p>RMKCET students have submitted 26 ideas in the smart India hackathon and 02 team have gone to Grand Finale.</p>
<p>YUKTI</p>	<p>RMKCET students have submitted 135 ideas in the National Innovation Repository</p>
<p>KAPILA</p>	<p>21 patent applications have been submitted to KAPILA for funding.</p>
<p>Refer Institute for IIC registration</p>	<p>Nine Institutions have been identified and uploaded in IIC portal for further process sing.</p>
<p>ATL School Linkage</p>	<p>Three schools have been adapted by our Institution.</p>
<p>Innovation Ambassador</p>	<p>23 faculty members have completed IA training successfully and conducting IIC related activities.</p>

J. Detail of Social Media& Connections of IIC institute

	<p>https://www.linkedin.com/company/rmkcet-institutions/</p>
	<p>https://twitter.com/cetinstitution</p>
	<p>https://www.instagram.com/rmkcet_institution/</p>

K. Testimonials from IIC members and external about IIC institute and IIC of MoE's Innovation Cell

IIC – Resource Person



I have been in association with R.M.K. College of Engineering & Technology for quite long time. It is indeed a happy moment to be a part of IIC of R.M.K. College of Engineering & Technology. I am Dr.E.Bhaskaran, Joint Director, Dept. of Industries & Commerce, Govt. of Tamil Nadu. I acted as a Resource person for various workshops, Seminars and Invited talks in the areas of Entrepreneurship, Innovation, Startup. This institution has put in lots of efforts to make students undergo various workshops, seminars and exposure to various platforms to convert their ideas into product. I appreciate the IIC team members of R.M.K. College of Engineering & Technology for taking much care in bringing up new innovations and transforming the digital world by nurturing the students to make better India.

IIC – Resource Person



It is indeed a happy moment to be a part of IIC of R.M.K. College of Engineering & Technology. I am **Dr. E.Muthukumaran, Associate Dean (Research & Innovation)** Dr. B.R. Ambedkar Institute of Technology, Port Blair, Andaman and Nicobar Islands. I acted as a Resource person for the workshop organized by IIC on "Design Thinking, Critical Thinking/Product Design" during the year 2021-22. This institution has put in lots of efforts to make students undergo various workshops, seminars and exposure to various platforms to convert their ideas into product. Planning and execution of activities related with Innovation, Startup, IPR and Entrepreneurial culture are amazing. I appreciate the IIC team members of R.M.K. College of Engineering & Technology for taking much care in bringing up new innovations and transforming the digital world by nurturing the students to make better India.

IIC-Internal Faculty Member:



I am Mrs.A.AKILA working as an Assistant Professor in the Department of Artificial Intelligence and Data Sciences. I am happy to be one of the internal faculty coordinators of IIC in R.M.K. College of Engineering & Technology. MIC's Innovation Cell (MIC) is systematically upholds the culture of Innovation, Entrepreneurship, Incubation and start up amongst the students. We have organized lectures, talks, webinars and Panel discussions as part of IIC activities to the internal and external participants to nurture them to work with new ideas and transform them into prototypes, to organize ideathons and hackathons etc. I have mentored few student teams to implement their ideas and apply the same for hackathons. I have acquired the leadership skills by organizing the IIC activities on behalf of our department.

IIC-STUDENT MEMBER



I am Yeshwanth V G, IIC Student Member pursuing my 3rd year in the Department Electronics and Communication Engineering in R.M.K. College of Engineering & Technology. I have gained good experience by attending various events organized by IIC of our college. I am very much Inspired by entrepreneurship success stories and encouraged to participate in various innovative challenges and hackathons. I got the confidence and aspiration to be an entrepreneur in near future. I have attended IIC's e-sessions in the areas of Innovation, IPR and Start-up/Entrepreneurship as e-activities for all IIC-institutes

M. Images



ATL SCHOOL EXPOSURE VISIT



Organized an Inter/Intra Institutional Business Plan Competition and Reward Best Innovations - Manage through YUKTI-NIR on 06.06.2023 & 07.06.2023.



INNOVATION TO START-UP ECOSYSTEM on 30.08.2023



EMERGING TRENDS AND ISSUES WITH TECHNOLOGY VALUATION AND START-UP INCUBATION on 25.08.2023

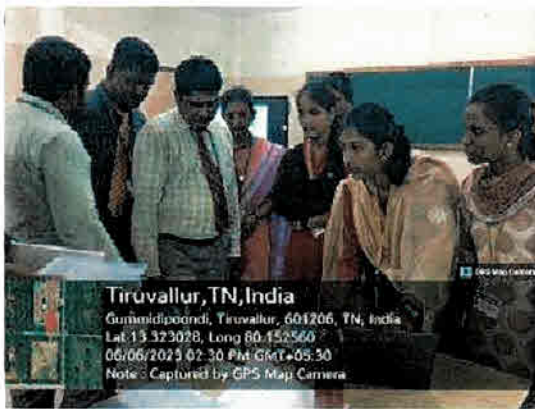


PRODUCT DEVELOPMENT PROCESS AND STAGES FOR COMMERCIALISATION –TECHNOLOGY TRANSFER"

On 23.08.2023.



IIC5-Q4-Session on Accelerators-opportunity for Students & Faculties-Early-Stage Entrepreneurs



HACKCET 2023



HACKCET 2023



NATIONAL SCIENCE DAY



NATIONAL SCIENCE DAY



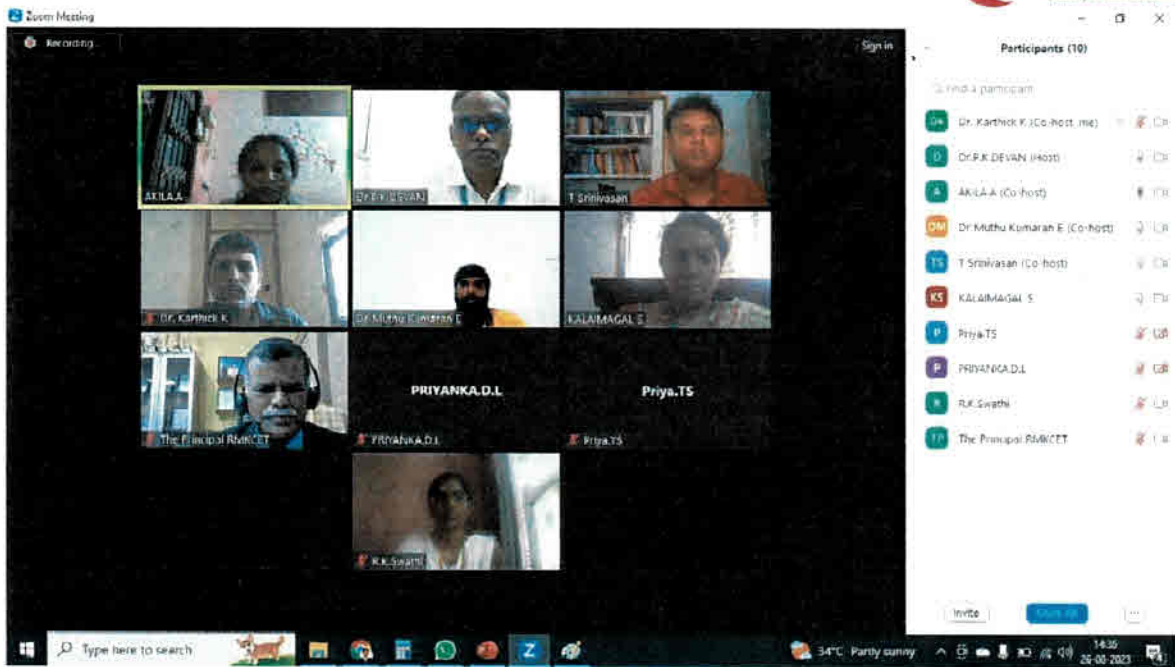
NATIONAL SCIENCE DAY



INDEPENDENCE DAY CELEBRATIONS

MSME Hackathon 3.0 (Women)

Organised MSME Hackathon 3.0 (Women) where 24 ideas have been submitted by students and Faculty members. First stage evaluation was conducted with Industrialist and Entrepreneur. From the first stage evaluation, 10 ideas have been recommended for second stage of evaluation.



MSME Hackathon 3.0 (Women) First stage Evaluation (Online)

Contact

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