



R.M.K. COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution)



POLESTARS

@RMKCET

(A Quarterly Students' Newsletter)
Activities and Achievements of Students



OCTOBER 2022 | VOLUME 1 | ISSUE 1

Induction Day - Photos



Honourable Chairman Sir and Respected Vice Chairman Sir with Dignitaries



Honourable Chairman Sir addressing the Parents and Students



Respected Vice Chairman Sir awarding books to the First Year Students



Table of Contents

S NO	Title	Page No
1	Department of Artificial Intelligence and Data Science	2
2	Department of Computer Science and Engineering	5
3	Department of Electronics and Communication Engineering	9
4	Department of Electrical and Electronics Engineering	12
5	Department of Mechanical Engineering	15
6	Department of Science and Humanities	16

Editorial Board - Faculty

1. Dr. K. Ramar - Principal
2. Dr. K. Sivaram - Dean Research
3. Dr. S. Kalaimagal - Associate Professor / CSE
4. Mrs. G. Indra - Assistant Professor / CSE
5. Mr. T. P. Anish - Assistant Professor / CSE
6. Dr. K. Kannan - Associate Professor / ECE
7. Dr. V. Vijayaraja - Associate Professor / AI & DS
8. Dr. S. Senthil Kumar - Professor / MECH
9. Dr. K. Sudhakar - Assistant Professor / S&H
10. Ms. M. Ida - Assistant Professor / S&H

Editorial Board - Students

- | | |
|---|---|
| 1. Mr. R. J. Harish Kumar (Final Year, CSE) | 7. Mr. M. Indersarath (Third Year, MECH) |
| 2. Mr. J. P. Niranjan (Final Year, CSE) | 8. Ms. F. Jemina Sharona (Final Year, ECE) |
| 3. Mr. K. Gokul Raj (Final Year, CSE) | 9. Mr. Ganesh Nithin (Final Year, ECE) |
| 4. Mr. M. Muthu Yuvaraj (Third Year, CSE) | 10. Mr. R. Vasanth (Third Year, AI&DS) |
| 5. Mr. J. Muthuganesh (Third Year, CSE) | 11. Ms. Gayathri Thejusee (Third Year, AI&DS) |
| 6. Mr. P. Lokesh (Final Year, MECH) | 12. Mr. C. Ramasamy (Final Year, EEE) |

Department of Artificial Intelligence & Data Science

Prizes won in Symposiums

1. M.S.Archana and J.Divya won First prize in 'Clue a Word' competition conducted by RMK Engineering College.
2. M.Srinath won First prize in 'Paper Scape' , Second prize in 'Monitor Coding ' and Third prize in 'Cook a Bot' conducted by RMK Engineering College.
3. C. Manoj Kumar Reddy won Second prize in 'Mr.Webtician ' and Second prize in 'Cook a Bot'conducted by RMK Engineering College .
4. S.Praveen won First prize in 'Tech Pro Debugging ' and Second prize in 'Rendezvous' conducted by RMD Engineering College .
5. B. Thiruvikram Choudry won First prize in 'WEBCON' conducted by Saveetha Engineering College, Second prize in 'Mr.Webitician 'and Second prize in 'Cook a Bot' conducted by RMK Engineering College.
6. Dakshin Raja won First prize in 'Paper Scape' conducted by RMK Engineering College.
7. Y. Sawin Kumar won First prize in 'Coding Challenge' conducted by RMK Engineering College, Second prize in 'DATA HUNT', Third prize in' SWITCHROO' conducted by Saveetha Engineering College .
8. R.Inukurthi Dileep won First prize in 'Webcon', Second prize in 'Code and Debug' conducted by Saveetha Engineering College and First prize in 'Tech Pro Debugging, Second prize in 'Rendezvous' by RMD Engineering College.
11. I.P . Charan Teja won First prize in a Quiz competition conducted by RMK Engineering College.
12. S.Padmaja won First prize in 'Fun-o-fun' competition conducted by RMK Engineering College.

Prizes won in Sports Event

1. P.Kanishka won First prize in 200m, 400m race.
2. L.Srinithi won First prize in 1500m and Second prize in 400m.
- 3.M.Lavannaya won Third prize in Long Jump, First prize in Triple Jump and Third prize in relay.
4. G.Logeshwari won First prize in Badminton, Third prize in Relay.
5. J.Divya won First prize in Table Tennis.
7. R.Mahathi won First prize in Table Tennis and Carrom.
8. M.Rubika Julie won First prize in Table Tennis.
9. R.Haritha won First prize in Chess.
10. M.S. Archana won First prize in Badminton.

Internships

48 students took internships in the Companies listed below :

1. DLK Career Development Center
2. Pantech Solutions
3. Exposys Data Labs
4. Kaashiv Infotech
5. Fiit-web development

NPTEL Course Completion

53 students obtained NPTEL Certificates in the following Courses :

1. NPTEL- Introduction to Machine Learning
2. NPTEL - Programming, Data Structures and Algorithms using Python
3. NPTEL- Problem Solving through Programming in C
4. NPTEL- Joy of Computing in Python

Symposium Conducted

The Department of AI&DS conducted National level Symposium TEZAS 2k22 on 11 October 2022. The Chief Guest was Mr.N.L. Venkatesan, Manager, Erection Services Department, BHEL Boiler Auxiliaries, Plant, Ranipet . Students from various Institutions and Universities took part in the Symposium and participated in various Technical events such as “ MAKE RESPONSIVE”, “TECH INTELLECT-QUIZ”, “IDEA-THON”, “BUG SLAYING-JAM “ and “CODING CHALLENGE”.



AI&DS STUDENTS ASSOCIATION

Industrial Visit

The students of Artificial Intelligence and Data Science went on an industrial visit to SansBound technology located in T.Nagar on 25.11.2022.



AI & DS Students at Sans Bound Technology

Student Articles

WHAT IS 5G? WHY DOES IT MATTER?

To understand 5G better, let us go through the history of 5G first. The first generation of mobile technology, 1G, was about the ability to talk on a phone. The advent of 2G introduced small messaging features. The move to 3G provided the path for smartphones. On the other hand, 4G with its high data-transfer rates gave so many options like video buffering, virtual assistance, etc. Now, people are starting to experience 5G.

Since 5G has the potential to reach 20 Gbps speed, it is much faster than the previous generation networks. 5G offers speed as fast as 11Gbps. This would mean that the network can download a full HD movie in less than 10 seconds, compared to 10 minutes on 4G. With 4G networks, Bandwidth is around 40-50 milliseconds. With 5G it should be 1 millisecond or less than that. 5G will have a huge capacity, which means that the network will be able to manage better with many applications all at once – from connected cars and IoT Internet of Things devices to virtual reality experiences.

According to industry predictions, 5G applications in manufacturing will add USD 134 billion to the global GDP by 2030. It's also estimated that the number of IoT-connected devices would increase by 2025, many of which are industrial applications. As more devices are interconnected to smart factories, 5G plays a predominant role in the areas of flexible automation and streamlined supply chains.

The technology has authorized cost-efficient design and increased the speed of data flow. The powerful impact of 5G will authorize Organizations to follow new revenue opportunities and transform the Employment sectors. A cooperative model will identify the existing difficulties and interdependencies. The life-changing technology 5G can be completely realized only when it is combined with other disruptive technologies, such as AI, IoT and Quantum Computing.

P.Divya Harshitha -III YEAR

111620243041

B. Dharani –III YEAR 111620243006

Department of Computer Science And Engineering

Prizes won in Hackathons

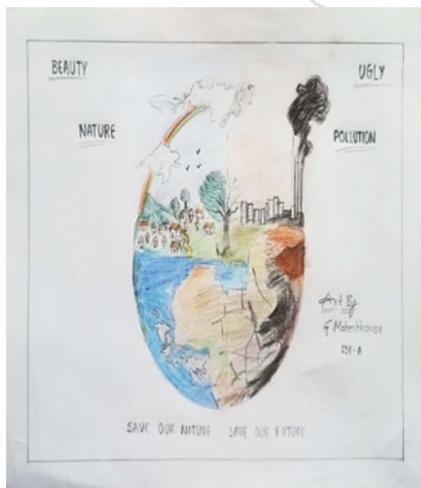
1. S. Sagaya Britto of IV year won the first prize in Virtusa Neural Hack Season 6.
2. Deepak Phani Krishna of IV year participated and got selected in KPIT Hackathon.

Prizes won in Symposium

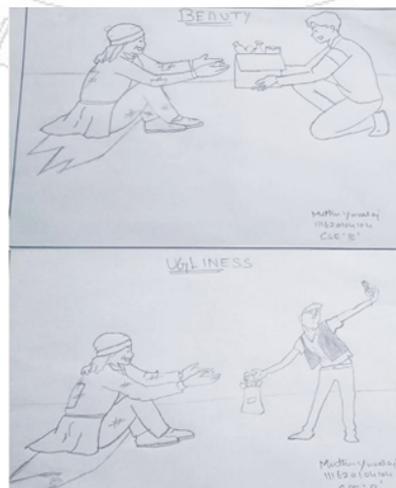
- 1.S.Sagaya Britto of IV year won Second Runner Up in two events in the Technical Symposium organised by RMD Engineering College.
- 2.K.S.Prakadeesh of II year and Mr S. Sakthi Sairam of II year won the First Prize in the event, “Analyticon”, conducted in the Technical Symposium organised by RMD Engineering College.
- 3.N.Gokul of II year won First Prize in the event “CONNEXION” conducted in the Technical Symposium, “DESIGNTRIX 22” organised by R.M.K Engineering College .
- 4.R.Deepthi of II year won the First Prize in the non-technical event “SURPRISE” conducted in the Technical Symposium organised by R.M.K College of Engineering and Technology

Creative Club Activity

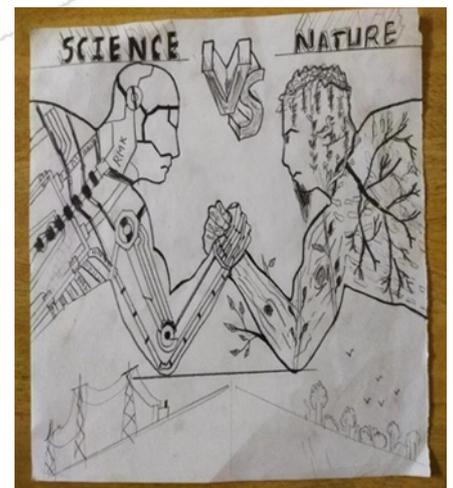
The Department organized Poster Art Contests under the auspices of the Creative Club Activities. 21 students from the II and III year participated and the winning entries were selected by Dr.P.Valarmathie HoD, CSE and Dr.S.Kalaimagal, Associate Professor, CSE



FIRST
G. Mahesh Kumar (III -A)



SECOND
M.Muthu Yuvaraj (III -B)



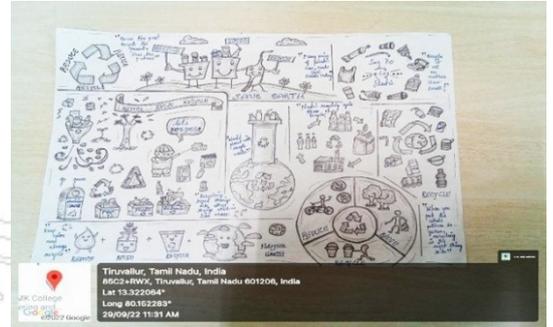
THIRD
Anish (II -A)

Eco Dirt Club Activity

The Department and Eco Dirt Club jointly conducted a “Drawing/Painting” Contest on the theme “Plastic Recycling Ideas” for the II year students on 29.09.2022 . Seven Students participated and the winners were A.Srinithi (II-D) and P.Bharath (II-A).



A.Srinithi (II-D)



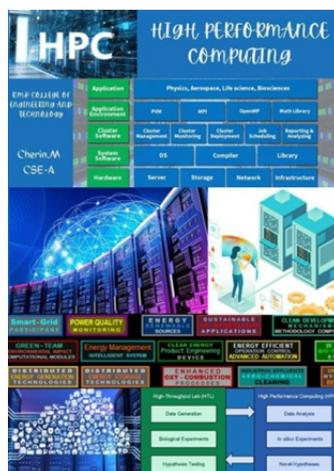
Bharath.P (II-A)



Participants & Judges Of Eco-Dirt Club

E-Poster Club Activity

The Poster Club of the Department conducted an E- Poster Design Contest on the theme “HIGH PERFORMANCE COMPUTING”. The winners were M. Cherin (II-A) and A.Ahamadulla Thasneem (II-A)



M Cherin II
CSE A



A. Ahamadulla Thasneem
II CSE A

Internships

23 students took Internship in the following companies:

1. BOSON Motors
2. Codingmart
3. KAAR
4. Virtusa
5. Zoho

NPTEL Courses

3 students completed NPTEL Courses in

1. Cloud Computing
2. Programming Data Structures and Algorithms using Python
3. Data Structures and Algorithms using Java



Symposiums conducted

The Department organized a National Level Symposium ,XENIOZ 2K22 on 11 October 2022. Mr.N.L.Venkatesan, Construction Manager, BHEL BAP, Ranipet was the Chief Guest.



The Students Association CSE



Prize Distribution

Industrial Visits

1.The III year students went on an Industrial Visit to L.V. Prasad Studios and Birla Planetarium on 21.09.22 and 5.10.22 respectively .



Students of IIIrd CSE at L.V Prasad Studios

2.The II year students went on an Industrial Visit to SansBound Software Solutions on 23.09.22 .



Students of IInd CSE at L.V SansBound Software Solutions

3.The III year students went on an Industrial Visit to Birla Planetarium on 5.10.22 respectively



Students of IIIrd CSE at Birla Planetarium

Department of Electronics & Communication Engineering

Papers presented in National/ International Conferences

1. Vangimalla Nagarjuna, Tathireddy Venkata Mahesh, Tamba Aravind Royal and Sagiraju Vivid Varma presented a paper titled “Detection of Stress in Humans Wearing Face Masks Using Machine Learning And Image Processing” in the Third International Conference on Electronics and Sustainable Communication Systems (ICESC 2022) organized by Hindusthan Institute of Technology, Coimbatore, India, from 17.08.2022 to 19.08.2022.

2. G.Sandhiya, K. Abinaya, Akula Sangeetha, T. Aruna and R.Aswini presented a paper titled “Performance Analysis of Vedic Multiplier and Modified Vedic Multiplier in Direct Digital Synthesizer” in the Third International Conference on Electronics and Sustainable Communication Systems (ICESC 2022) organized by Hindusthan Institute of Technology, Coimbatore, India, from 17.08.2022 to 19.08.2022.

3. Jahnvi S, M.Sreemouna and Sri Chandana presented a paper titled “A Telectasis, Cardiomegaly and Effusion Disease Prediction using Image Processing (Convolutional Neural Networks)” in the 4th International Conference on Inventive Research in Computing Applications (ICIRCA 2022) organized by R V S College of Engineering and Technology, Coimbatore, India, from 21.09.2022 to 23.09.2022

Participation and Prizes won in Hackathons

1. Purananda Rao, Rahul Kumar, Rajesh Babu and Mohammed Asif from III year won Runners Up in the Arai-Tchnovuus Mobility Hackathon held at Pune from 15-07-2022 to 16-07-2022.

2. V.R.Romy Ann, Jemima Sharon and K.Jeevitha from IV year won Runners-Up in SIH-2022 held at West Bengal from 25-08-2022 to 26-08-2022.

3. Mohammed Asif Abraham and Rajesh Babu from III year participated in IEE-HACKS 2022 held at Kottayam on 23.08.2022.

4. R.Sandhiya, N.Vaishali, S.Sidhesh, M.Sarvesh Kumar and C.B.Tarunsai developed a “Fall Detection and Alert system for deaf and hearing impairment” as part of SMART INDIA HACKATHON 2022-FINALE held at Coimbatore from 25.08.2022 to 26.08.2022.

5. Tarunsai, M. Sarvesh Kumar, S.Sidhesh, N.Vaishali, R. Sandhiya and G.Sravani from IV year participated in SIH-2022 hackathon held at Coimbatore from 25-08-2022 to 26-08-2022.

6. K. Jeevitha, E.Jemima Sharon, V.R.Romy Ann, R. Mahalakshmi, R.Gopal and S.Rex Milton developed a “Stock Market Prediction Using LSTM” as a part of SMART INDIA HACKATHON 2022 held at Coimbatore from 25.08.2022 to 26.08.2022.



SMART INDIA HACKATHON 2022



SMART INDIA HACKATHON 2022



ACM WOMEN HACKATHON



**STUDENT ASSOCIATION
INAUGURATION REPORT PICTURE**

7.S.Monisha , L. Lesy Larisha Mary and D. Nandhini developed a “Juvenile Geriatric Trinket” as a part of ACM WOMEN HACKATHON held from 13-10-2022 to 15-10-2022.

Internships

145 Students took internship in the following companies :

- | | |
|--------------------------------|-----------------------------------|
| 1. Pantech E Learning | 12. Origin tech |
| 2. Avishkar Tech Solutions | 13. Suen Consultants & Technology |
| 3. Trios Technologies PVT. LTD | 14. DLK career development |
| 4. Doordarshan Kendra | 15. Kodacy |
| 5. Bolt Iot | 16. ICF |
| 6. Enterkey Solutions | 17. TATA |
| 7. Kaashiv Infotech | 20. Integral Coach Factory |
| 8. Cisco | 21. VISA |
| 9. Code bind technologies | 22. CVRDE |
| 10. Engineering Monk | 23. Titan |
| 11. Uniq technologies | |

NPTEL Courses

48 students completed the following NPTEL Courses in

1. Programming in Modern C++
2. Programming in JAVA
3. Analog Communication
4. Python for Data Science

Industrial Visits

1. II ECE students visited the Integral Coach Factory, Villivakkam on 28.08.22 and 1.09.2022 .
2. II ECE Students visited Periyar Science and Technology Center, Chennai on 27.09.22
3. III ECE students visited Sansbound Networking School , Chennai on 22.08.22 and 23.08.22
4. III ECE students visited News7 Channel ,Chennai on 5.09.22 and 06.09.22
5. IV ECE students visited SHAR, Sriharikota on 18.08.22.

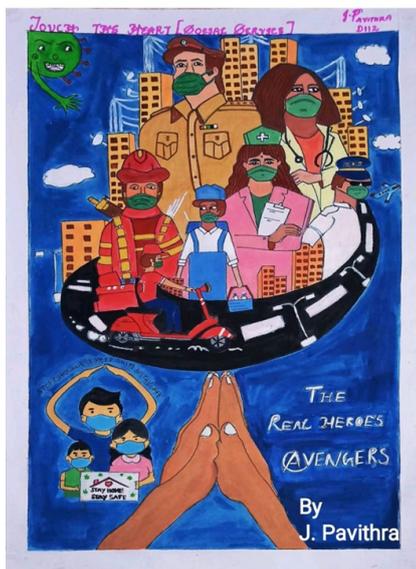
Student Articles

ALL ABOUT ME – AN ENGINEER!

The journey started with no clue
Getting ready with those untie lace of shoe
All at once I had a dream
To opt for the ENGINEERING stream
Complex circuits will makes your conditions worse
You will not find any words to express remorse
Of course EC is not that easy
But will definitely make my life cheesy
So that's why I had a dream
To opt for ENGINEERING stream
No matter how many jokes people crack
Had they not worked up, a magic our lives would lack!
I wanted to be a very clever engineer
That's much needed in every sphere
Day in day out I advance my skills
As machines cut, shapes and drills
I work with passion to pay my bills
From all semester's "Last Paper"
To
Last semester's "One last Paper"
I grow
I have The ability to INNOVATE
The ability to CREATE
The ability to SUSTAIN
The ability to REVAMP
Together I am an ENGINEER!

T.S. Reemitha
(111620106098)
III YEAR ECE B SECTION

Art



J.Pavithra - IV ECE B

Department of Electrical and Electronics Engineering

Poem - Child Labour

Today child tomorrow future
Remember childhood days,
The innocence and ridiculous face
Vigour of your hands and making by jove Not
bash for ourself but for yourself
We not Loth you but caught you from thee
Let the world know about your talent Making
visible the invisible,
Fighting with sparkle of tears in your eyes Come
out of the deadly world
And live the life of what you like.

R.R. Priyankaa
111619105016
EEE-FINAL YEAR
RMKCET

Poem-Make It Green

Lives are crying because its not clean ,
Earth is dying because it is not green!
Earth is our dear mother , don't pollute it,
She gives us food and shelter , just salute it!
With global warming, its in danger,
Lets save it by becoming a stronger ranger!
With dying trees and animals , its in sorrow,
Make green today and green tomorrow!
With melting snow, one day it will sink,
How can we save it , just think!
Trees are precious , preserve them,
Water is a treasure, reserve it !
Grow more trees , make mother earth green,
Reduce pollution and make her queen !!!

P.Yashwanth Prasad
111619105028
EEE – FINAL YEAR
RMKCET

Poem - Sustainable Development Goals

You people use my land, air, water and soil,
But keep on filling it with litter and allowing it to spoil, I provide you air, food,
and home to live,

With greedy lust, you destroy the nature I give,
And plot your own nature's death.

The air you fill with smoke, makes my breath choke;

You make my heart fill with strife-

By cutting down the green forests,

And pushing up the green forests,

What was once a clean sea and pure soil

Is now all barren; clogged with waste and oil.

How long can I stand the trouble?

I start to scream and tremble.

I give you all I have, unto my end;

But it's now all in your hands to defend and mend!

C. Vaitheeshwari
111619105024
EEE – FINAL YEAR
RMK CET

அம்மா

மறுபிறவியில் உன் கருவில் பிறந்து உன்

அரவணைப்பில் வளர ஆசை.....

உன் கைகளை பிடித்து கொண்டு தினமும்

நடை பழக ஆசை.....

உன் திட்டல்களை கேட்டு அதில் இருந்து என்னை

திருத்தி கொள்ள ஆசை.....

உன் மடியில் படுத்து உன் நெஞ்சில் சாய்ந்து உறங்கி ஓர்

பயணம் செய்ய ஆசை.....

நன்கு உறங்கும் போது உன் சேலையால் என்னை முழுமையாய்

அரவணைக்க ஆசை.....

நீ தினமும் என்னோடு வந்து சென்று விடும்

பள்ளிக்கு போக ஆசை.....

மாலை வீடு திரும்பிய உடன் நீ என் ஆடைகளை கழற்றி

முகங்களை கழுவி தலை வாற ஆசை.....

உன் இடது பக்கத்தில் படுத்து உன் வலது காதை

பிடித்து உறங்க ஆசை.....

தினமும் உன் கனவுகளுக்கு உயிர் கொடுக்க ஆசை.....

யஷ்வந்த் பிரசாத்.பி

EEE - 4ஆம் ஆண்டு

RMK CET

முடியாதது எதுவும் இல்லை

சாதி, மதம் எதையும் பார்த்தில்லை
சாதிக்க வேண்டும் என்பதை மறந்ததில்லை
சுயநலம் என்பதை அறிந்ததில்லை
சுகமான சுதந்திரத்தை ஒருபோதும் இழந்ததில்லை
பாதம் படாத தெருக்கள் இல்லை
பகிர்ந்து உண்ணாத உணவும் இல்லை
பாசாங்குடன் பழகியதும் இல்லை
அதனால் பயம் என்பதே மனதில் இல்லை
மழையோ, வெயிலோ தெரிந்ததில்லை!
மனதினிலே பாரம் என்றும் நிறைந்ததில்லை!
பார்த்து இரசிக்காத தேவதைகள் இல்லை
நாம் பார்த்து இரசிக்காதவர்கள் தேவைதயே இல்லை
ஏறிக் குதிக்காத பள்ளிச் சுவரும் இல்லை
ஏற்றதாழ்வோடு பழகி திரிந்ததும் இல்லை
சிந்தும் கண்ணீர் சிதறாமல் இல்லை
எரியும் கவலைகள் உன்னால் அணையாமல் இல்லை!!

யஷ்வந்த் பிரசாத் . பி

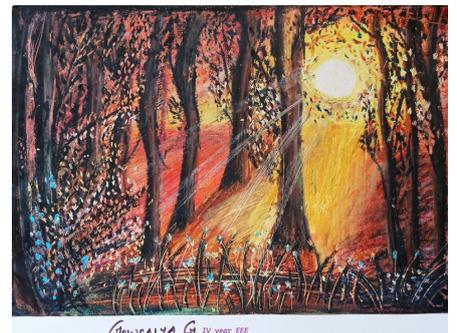
EEE 4ஆம் ஆண்டு

RMKCET

Art



S. Akshaya



G.Gowsalya

Department of Mechanical Engineering

Internship

60 students took Internship in the following Companies :

1. Madras Molds And Plastics
2. Kerl Tech Private Limited
3. Suven Consultants And Technology Pvt Ltd
4. Rajkumar Industries
5. K.C.P Limited
6. JBM Auto Limited
7. Carrier Airconditioning & Refrigeration Limited
8. NLC India Limited
9. Chennai Port Authority
10. Kwang Sung Brake India Limited
11. Dongsung Autoparts India Pvt Ltd
12. Pantech E Learning
13. Saravanan Plastics
14. Dlk Technologies
15. Elite Hydraulics Pvt Ltd
16. Engine Factory
17. Western Thomson Limited
18. Sundaram Fasteners Limited
19. Hyundai Motor India Limited
20. Cipet Institute Of Petrochemicals And Technology
21. Enterkey Solutions Pvt. Limited
22. India Redefined
23. Raja Sriram Pvt Ltd

NPTEL Courses

39 students completed NPTEL Courses in the following Subjects :

1. The Joy of Computing using Python
2. Future of Manufacturing Business
3. Product Design and Development
4. Automation Manufacturing
5. Machine Learning
6. Innovation by Design
7. Robotics
8. Advance in Welding And Joining Technology

Prizes won in Symposiums

1. R.S. Chidhamparam and B. Vignesh Prabhu from II year won First Prize in the Paper Presentation Competition held in SA Engineering College on 14.09.2022

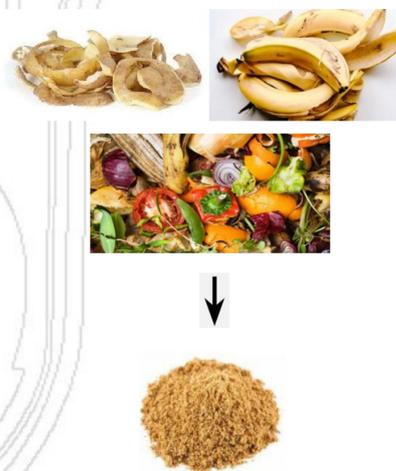
Super Absorbent Polymers

Introduction

A Superabsorbent polymer (SAP) is also called slush powder, is a water-absorbing hydrophilic homopolymers or copolymers that can absorb and retain extremely large amounts of a liquid relative to its own mass. Once absorbed, they do not subsequently release it. They are therefore a material for use in products.

Bio Degradable

Super Absorbent Polymer Bio degradable super absorbent materials are basically superabsorbent polymers which are biocompatible and are degradable. These materials are a combination of synthetic and renewable raw materials. They are used to absorb and retain fluid even under moderately high pressure. Scientists at the Indian Institute of Technology in Madras have developed a biodegradable superabsorbent polymer using chitosan obtained from seafood waste, citric acid and urea (CHCAURA). Superabsorbent polymer (SAP) is also called slush powder, is a water-absorbing hydrophilic homopolymers or copolymers that can absorb and retain extremely large amounts of a liquid relative to its own mass. Once absorbed, they do not subsequently release it. They are therefore a material for use in products.



Non Bio Degradable

Superabsorbent polymers are commonly made from the polymerization of acrylic acid blende sodium hydroxide in the presence of an initiator to form a poly-acrylic acid sodium salt (sometime referred to as sodium polyacrylate). This polymer is the most common type of SAP made in the toodrally .Other materials are also used to make a superabsorbent polymer, such as polyacrylamide copolymer, ethylene maleic anhydride copolymer, cross-linked carboxymethylcellulose, polyvinyl alcohol copolymers, cross-linked polyethylene oxide, and starch grafted copolymer of polyacrylonitrile to name a few . The latter is one of the oldest SAo forms Created. Today superabsorbent polymers are made using one of the three primary methods: gel polymerization, suspension polymerization or solution polymerization



Applications of SAP

SAP is a highly coveted product as far as the manufacture of water-proof tapes and ointments for sorts of cables are concerned; even, optical fibre cables use SAP. sandbags which, when coming in contact with water, quickly absorb it and expand to form a bag to the advancing water. Though we call them Sandbags, they actually do not contain any sand; are so-called because that is how they have been known traditionally

Applications of SAP in Agriculture

1. High absorption capacity in saline and hard water conditions
2. Optimized absorbency under load (AUL)
3. Lowest soluble content and residual monomer
4. Low price
5. High durability and stability in the swelling environment and during storage
6. Gradual biodegradability without formation of toxic species
7. pH neutrality after swelling in water
8. Photo-stability
9. Rewetting capability.

Recent Progress in SAP for Concrete

Scientific interest on superabsorbent polymers (SAPs) in conjunction with cement-based building materials has widened from mostly engineering aspects towards polymer physico-chemical topics over the past years. Here, we focus on the relationships between absorptivity in terms of absorption/desorption kinetics and retention of the absorbed liquid and the polymer physico-chemical principles. Based on such understanding, use and effects of SAPs in concrete outlined and explained mechanistically. They comprise modifying rheology, internal curing to mitigate plastic and autogenous shrinkage, self-sealing and self-healing of cracks, and improvement of freezing-and-thawing durability. Recent topics such as reduction of fire spalling and enhanced growth of plant species on green wall facades are also explored for advancing the applications of SAPs in cement-based materials.

V. Harini
I YEAR AI&DS

Hybrid Intelligence Vehicle

Hybrid Intelligence (HI) is the combination of human and machine intelligence, expanding human intellect instead of replacing it. HI takes human expertise and intentionality into account when making meaningful decisions and perform appropriate actions, together with ethical, legal and societal values.

Why Hybrid Intelligence Vehicle is the Future?

In the digital age, hybrid intelligence will do the significant heavy lifting, bringing human and artificial intelligence together to augment each other. Machine learning algorithms still struggle to apply knowledge to decision-making, planning, and creative activities and find it hard to adapt to dynamic environments.

Hybrid Intelligence is equally applicable and crucial to all industries where high-risk/high-reward expert decision-making plays a role.

1. Intelligence Industry

Data integration, deployment, tooling, technology selection, change management, and strategy a all part of the intelligent industry.

For example, a pharma R&D drug discovery transformation could entail implementing various technologies and techniques such as data analytics platforms, automation, collecting and purchanew data sets, mRNA, and new data architecture. All this is to collaborate smoothly within and beyond the department and organization.

2. Crisis Management

Hybrid intelligence-powered crisis management systems would significantly transform Crisis Management Hybrid intelligence-powered crisis management systems. Multidimensional big crisis data informatics encompasses massive amounts of data and diverse data sources (which can co of various data types). Each of these large-scale crisis data sources provides a distinct (but necessarily incomplete) view what occurred and why it occurred on the ground.

The 4 different types of Hybrid Vehicles

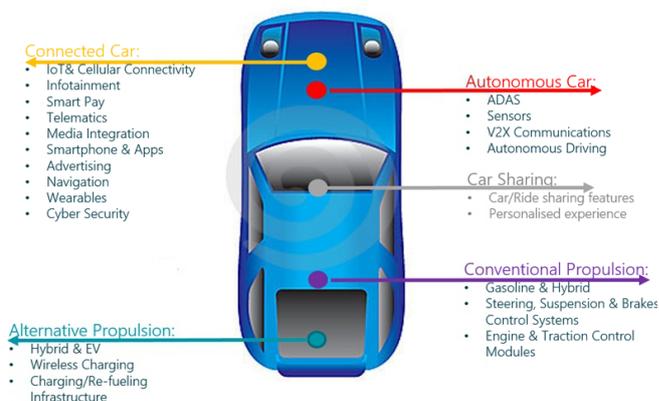
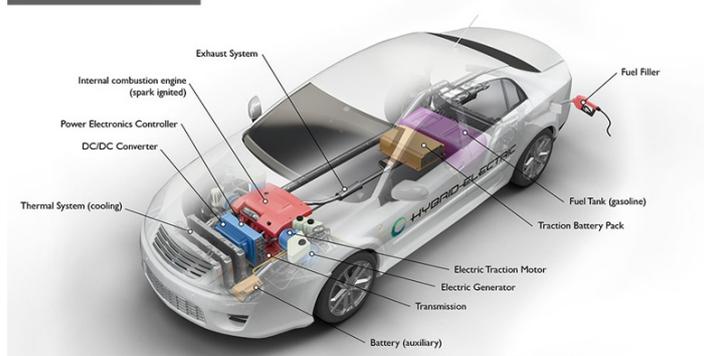
4Mild Hybrids(One of the newest innovations in hybrid technology is that of a “mild” hybrid system).

4Full Hybrids.

4Plug-In Hybrids.

4Electric Vehicles with Range Extender Hybrids.

Hybrid Electric Vehicle



How do smart Hybrid cars work?

Smart Hybrid is an advanced technology that helps increase fuel efficiency and enhances driving performance. The engine automatically stops when idle and silently starts when the optimal conditions are met in manual and automatic transmissions. It comes with a dual battery setup including a Lithium Ion Battery.

D. Rohit
I YEAR ECEI

Fairy Queen EIR 21

The Fairy Queen, also known as the East Indian Railway Nr. 22, is a steam locomotive built in 1855, restored by Loco Works Perambur, Chennai in 1997, and housed at the Rewari Railway Heritage Museum. It occasionally runs between New Delhi and Alwar. In 1998 it was listed in the Guinness Book of Records as the world's oldest steam locomotive in regular service. The Fairy Queen runs on the same route as the Palace on Wheels, the tourist train launched in 1982, and in 1999 was awarded a National Tourism Award. The locomotive was constructed by Kitson, Thompson and Hewitson at Leeds, in England, in 1855, and reached Kolkata, then known as Calcutta, in the same year. On arrival, it was given fleet number "22" by its owner, the East Indian Railway Company; it was named in 1895. Initially, the 5 ft 6 in (1,676 mm) gauge locomotive was used to haul light mail trains in West Bengal, operating between Howrah and Raniganj, and during the Indian Rebellion of 1857 hauled troop trains. It was later consigned to line construction duty in Bihar, where it served until 1909. The Fairy Queen spent the next 34 years on a pedestal outside Howrah station. In 1943, the locomotive was moved to the Railway Zonal Training School at Chandausi, in Uttar Pradesh, where it served as a curiosity object for many of the students based there.

The Fairy Queen was built by Kitson, Thompson and Hewitson at Leeds in England in 1855. The coal-fired engine is powered by two outside cylinders measuring 12 by 22 inches and has a power output of 130 horsepower (97 kW), producing a maximum speed of 40 kilometres per hour (25 mph). It carries 3,000 litres of water in an underslung water tank. The locomotive weighs 26 tonnes and the coal tender 2 tonnes. Built for the 5 ft 6 in Indian gauge, it has a 2-2-2 wheel arrangement, developed by Robert Stephenson and Company in 1833, with a driving wheel measuring 1,829 millimetres in diameter.



In 2011, it was discovered that rare locomotive parts that were "as good as irreplaceable" had been stolen, and the locomotive was moved to Perambur Loco Workshop at Chennai, in Tamil Nadu, for repair. On arrival, it was found that an estimated 50 to 60 parts had been looted, including "the boiler, condenser, lubricator and flow tubes". The Deputy Chief Mechanical Engineer at the workshops stated "What we received is a dead body, a piece of metal whose every removable part has been removed, leaving only the metal shell. The list of parts to be procured is huge." Officials estimated that it could take at least a year to restore the engine, even if suppliers of replacement parts could be found. Following a substantial rebuild, in which the workshops had to construct the missing parts themselves, the locomotive returned to service on 22 December 2012. The Fairy Queen served as the basis for Rajiv in Thomas & Friends: The Great Race. Fairy Queen will depart from Delhi on Saturday for an under three-hour journey to Rewari, Haryana. It was recognized by the Guinness Book of Records as the world's oldest steam locomotive still in operation. The world's oldest working steam loco 'Fairy Queen' is all set to chug again after a gap of nearly five years.

L. B. Tanishk Abinav
I YEAR CSE

Hologram Technology

This Technology is the upcoming version of computers. People previously thought that with existing consumer-grade hardware, it was impossible to do real-time 3D holography computations,” says Liang Shi, the study’s lead author and a PhD student in MIT’s Department of Electrical Engineer and Computer Science (EECS).

Realistic Holograms

In 1947, Dennis Gabor — a Hungarian-British physicist — developed today’s modern hologram theory while working on an electron microscope. However, optical holography didn't really advance until the advent of the laser in 1960. A laser emits a potent burst of light that only lasts a few nanoseconds.

This makes it possible to obtain holograms of high-velocity events, such as an arrow or bullet in flight. The first laser-based human hologram was created in 1967, which paved the way for numerous other applications of holographic technology. So, how do holograms work? Holography is a unique method of photography whereby 3D object are recorded using a laser and then restored as precisely as possible to match the originally recorder object. When illuminated via a laser, holograms are able to form an exact 3D clone of the object duplicate its features.



In order to produce an accurate visualization of a hologram at a certain point in space, two light waves must be coordinated in motion - a reference wave and an object wave. Both are formed by separating the laser beam.

The Future of Holographic technology

The future of holography lies at the intersection of AI, digital human technology, and voice cloning. The consistent increase in worldwide computing power will allow for the creation of digital human models that will render at an ever-accelerating pace that will make them more and more difficult to tell apart from real ones.

In turn, the evolution of holographic technologies will lead to their increasing availability and portability. Imagine if holographic content could one day be as accessible as streaming

Content

Holographic cinema, holographic theater, music shows.

Augmented reality will no longer require wearing special glasses but will be directly integrated into landscape objects. We already know how holographic pedestrian crossings and holographic advertising work. But we can only imagine how our cities and lives will be changed as the evolutionary pace of technology continues to accelerate.

S. Shriram
I YEAR ECE

Graduation Day



Our Honourable Chairman Sir Felicitating the Chief Guest , Mr.Singaravelu Ekambaram



Dr.V.Kamakoti, Director, IIT Chennai awarding the Degree Certificate to our Student



Mr.Singaravelu Ekambaram , Global Head of Delivery - Cognizant awarding the Degree Certificate to our Student



AFFILIATED TO
ANNA UNIVERSITY,
CHENNAI



APPROVED BY
AICTE, NEW DELHI

ACCREDITED BY
NAAC
NATIONAL ASSESSMENT AND
ACCREDITATION COUNCIL
WITH 'A' GRADE

TNEA
COUNSELLING CODE

1128

181 UNIVERSITY
RANKS
ONE GOLD
MEDAL



99.77%
OVERALL RESULT
IN 2018-22 BATCH



91.81%
GRADUANDS
FROM INCEPTION



BHARATHIYA
VIDYA BHAVAN
NATIONAL AWARD
IN 2015 FOR BEST
ENGINEERING COLLEGE
OVERALL PERFORMANCE



360°
STRUCTURED
TRAINING
PROGRAMS

93.21%
PLACEMENTS
FOR 2018-22 BATCH

25 LPA
OFFER MAXIMUM
SALARY

31 MoUs
WITH TOP MNCs &
INTERNATIONAL
UNIVERSITIES

13
INDUSTRY
COLLABORATIVE
COE LABORATORIES



★★★★★
4 STAR RATING TO
RMK CET IIC BY MINISTRY
OF HUMAN RESOURCE
DEVELOPMENT (MHRD)

AICTE-CII
BEST INDUSTRY
LINKED INSTITUTION

PLACED IN PLATINUM
CATEGORY

MSME
APPROVED
BUSINESS INCUBATOR

2.5 CRORES
FUNDED PROJECTS,
FUNDED EVENTS &
CONSULTANCY PROJECTS

786
RESEARCH PAPERS
PUBLISHED IN SCIE,
WEB OF SCIENCE, SCOPUS
JOURNALS

83 PATENTS
PUBLISHED

8 PATENTS
GRANTED

PUBLISHED
NATIONAL INNOVATION
START-UP POLICY (NISP)
BASED ON AICTE AND
STATE GOVERNMENT'S
POLICIES



ATAL RANKING
"EXCELLENT" BAND



EAT RIGHT CAMPUS AWARD
WITH FIVE STAR RATING
CERTIFICATION



SWACHHATHA
RANKING FINALIST

BEST PERFORMANCE
IN YOUTH RED CROSS
UNIT AWARD
FROM THE INDIAN
RED CROSS SOCIETY



ALL THE ELIGIBLE PROGRAMS ARE
ACCREDITED BY NBA, NEW DELHI



ISO CERTIFIED
AN ISO 9001:2015 INSTITUTION



MHRD - NIRF INDIA RANKINGS 2022
201-250 RANK BAND



THE 1ST INSTITUTION
IN TAMILNADU - AI POWERED
LEARNING CAMPUS

B.E. PROGRAMS

- COMPUTER SCIENCE & ENGINEERING (KNOWLEDGE PARTNER - TCS)
- ELECTRONICS & COMMUNICATION ENGINEERING
- COMPUTER SCIENCE AND ENGINEERING (CYBER SECURITY) (KNOWLEDGE PARTNER - TCS)

B.TECH. PROGRAMS

- ARTIFICIAL INTELLIGENCE & DATA SCIENCE (KNOWLEDGE PARTNER - COGNIZANT)

- Ranked 133rd among Private Engineering Colleges across India by THE WEEK HANSA RESEARCH - BEST COLLEGE SURVEY 2021.
- Ranked 104th Position across India by Times of India Survey 2022.
- Ranked 55th Position for remarkable Placement by Times of India Survey 2022.
- TIMES ENGINEERING INSTITUTE RANKING SURVEY 2021 conferred EXCELLENCE IN MECHANICAL ENGINEERING.
- Rated as AAA+ by CAREERS 360 in 2021.

R.M.K. COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution)

Approved By AICTE, New Delhi & Affiliated To Anna University, Chennai

All Eligible Programs Accredited By NBA

Institution Accredited By NAAC 'A' Grade , An ISO 9001-2015 Certified Institution

R.S.M Nagar, Pudukkottai, Gummidipoondi Taluk,

Tiruvallur District - 601 206, Tamil Nadu, India.

044- 6790 0679, Fax: 67900611

For further details, visit www.rmkcet.ac.in

principal@rmkcet.ac.in

