



MEENAKSHI SUNDARARAJAN ENGINEERING COLLEGE

363, Arcot Road, Kodambakkam, Chennai – 24
Approved by AICTE & Affiliated to Anna University
email Id: principal@msec.edu.in
Website : www.msec.edu.in

3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

Project/Awards	Year
TOYCATHON	2021
RADIATION EXPOSURE LEVEL MONITOR FOR PROXIMITY WORKERS	2021
LOW COST PORTABLE VENTILATOR FOR COVID-19 PATIENTS	2020
SUPPORTING RURAL AREA THROUGH AGRO-ENTERPRISE DEVELOPMENT	2020
INVADER AND SPARROW	2020
AWARD FOR LEADING ENGINEERING COLLEGE 2020	2020
KURUKSHETRA AWARD	2020
COGNIZANT'S "THE BIG IDEA 2K17" CONTEST.	2017

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TOYCATHON

- Students of MSEC grabbed the unique opportunity to conceptualize novel toys and games based on Indian civilization and history by participating in TOYCATHON,an initiated by our Hon'ble Prime Minister, Shri. Narendra Modi under the 'Aatma Nirbhar Bharat Abhiyan.
- A total of 7 teams participated in the event and 3 of them entered the final round.
- An innovative team named MSEC(Magnificent Sustainable Engineers under Construction) along with their team mentor Mr.S Elangovan participated and won the competition by making V-Mult calculator which is used to solve 2 and 3 digits multiplication.
- Another team which entered finals through digital mode is the Coin conqueror team.



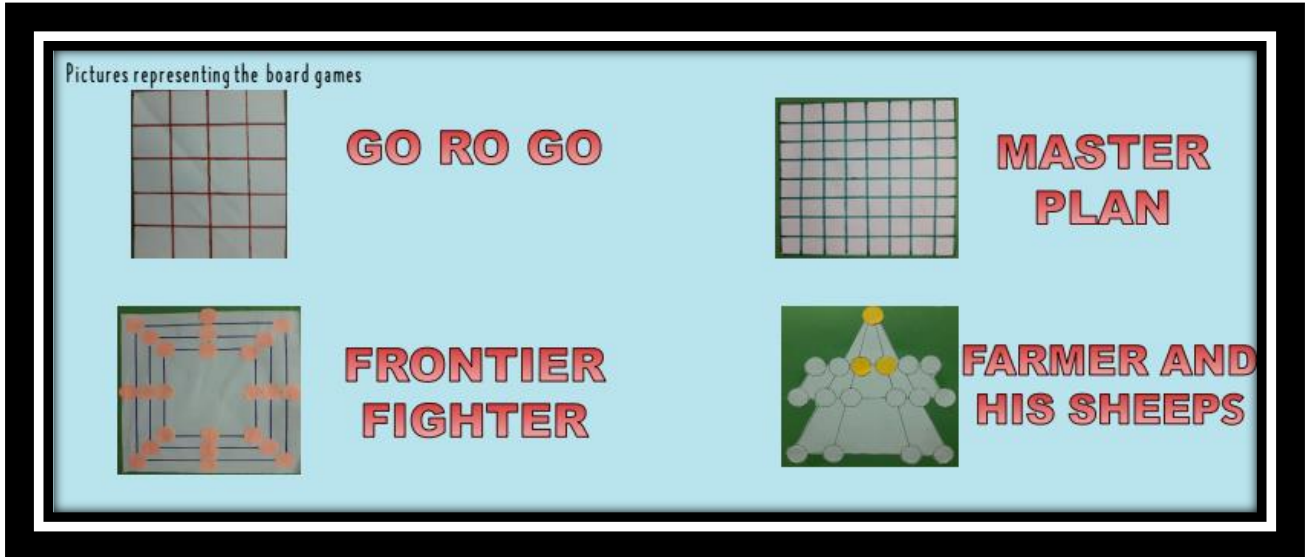
V-Mult calculator

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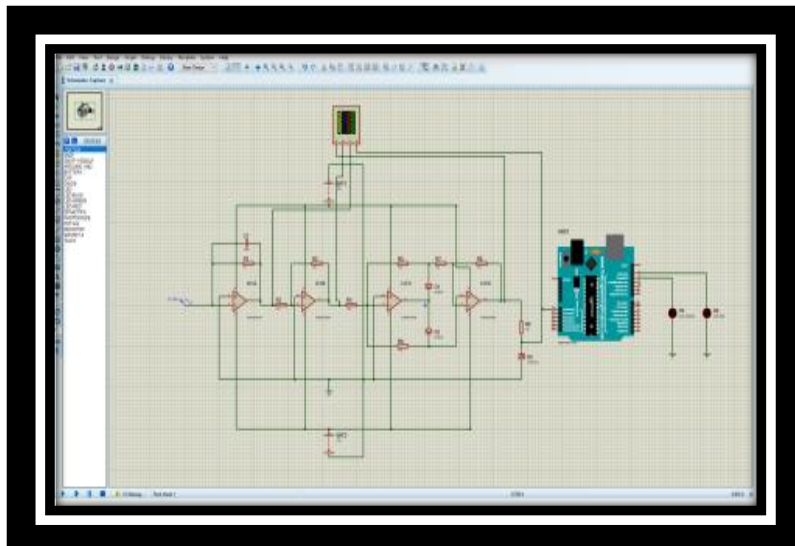
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Coin conqueror

RADIATION EXPOSURE LEVEL MONITOR FOR PROXIMITY WORKERS

- Innovation starts with spotting a need. With this idea in mind, a very innovative project called Radiation Exposure Level Monitor For Proximity Workers which solely focuses on improving the lives of proximity works of nuclear power plants has been proposed by the students of MSEC in the guidance of Dr. Srinivas Talabutta an Associate Professor of Electrical Communication Engineering.
- The project was proposed in Foundation for Advancement of Education and Research (FAER) and is currently in its research and funding state.
- The objective of the project is to focus on the maintenance workers working in nuclear power plants are exposed to nuclear radiation in the long run, despite precautions.
- In some cases, the dosage of nuclear radiation can increase which might create the risk of side effects such as cancer.
- The ideas has been simulated using Proteus 8 Professional 8.6 software.



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LOW COST PORTABLE VENTILATOR FOR COVID-19 PATIENTS

- Low Cost Portable Ventilator for Covid-19 patients that will inspire the budding engineers to benefit the society has been developed by Mr.Kishore Kumaran, an alumnus of MSEC who has signed MOU with MSEC for Engineering services along with six students of MSEC that addresses the issue of rapid spread of covid-19 which resulted in increased demand for respiratory aiding systems. The prototype developed in a bid to bridge the shortage of ventilators was much less than their estimated cost of 11,500/-
- The prototype was build in 17 days and has also been shortlisted by the National Innovation Foundation for its C3 competition.
- The innovative prototype was recognised by the press media and was published in THE HINDU newspaper.

Chennai youth jointly fight COVID-19

Meenakshi Sundararajan Engineering College opens gates for researches

Kishore Kumaran ushers in start up culture

Chennai, April 26:
We have all been thrown into a new environment, terms like social distancing, isolation, green zones and red zones have become common. Large communities around the world are enveloped in fear. Despite these unprecedented difficulties, a group of young minds in Chennai are finding purpose in this moment of crisis.

Kishore Kumaran, an Alumnus of Meenakshi Sundararajan Engineering College, and the founder of Missile Ingeniator, A Research and Product Development start-up, collaborated with students from the same college to develop the prototype of a "Low - Cost Portable Ventilator".

The Ventilator has a pressure monitoring system and works in an assist-control-mode for invasive and non-invasive conditions. It is designed by considering necessary medical parameters such as Respiratory Rate and Inspiration to Expiration Ratio.

"The machine can check breathing rate, blood oxygen levels, and blood pressure levels. These values will be displayed on an Organic Light-Emitting Diode (OLED) screen," says Kishore Kumaran.

There are 4 buttons to set parameters by the doctor according to patient requirements. Upon pressing the START button, two motors start driving piston gears on either side. This, in turn, presses an Artificial Manual Breathing Unit



Kishore Kumaran
founder of Missile Ingeniator

(AMBU) bag depending on the given inputs.

"Based on the inhalation and the exhalation pressure, the doctor can modify the given inputs, and thereby the oxygen supply. A buzzer has also been installed to act as the alarm during emergencies, to indicate any abnormalities," he says.

Amid the lockdown crisis, this simple device is portable and works on low power. " The cost of producing one ventilator is Rs.11,500. It can be plugged into any socket as it consumes only 12 volts of power to run the motor. We are also working on a battery backup for the ventilator," says Kishore.

The rapid spread of COVID 19 has resulted in an increased demand for respiratory aiding systems. In a bid to bridge the shortage of ventilators in the country amid rising cases, a team comprising eight members,



Vasupradha
a third-year student who has been associated with Missile Ingeniator

emerged with a prototype of the ventilator. The team includes Kishore Kumaran, undergraduate, and former students of Meenakshi Sundararajan Engineering College.

Vasupradha, a third-year student who has been associated with Missile Ingeniator for one year believes anything is possible if you will put your mind to it. "Apart from having online classes and regular assignments, I wanted to be part of something bigger and prove my abilities. Working every Sunday has paid off," she says.

The first version of their prototype was developed with available components and will be upgraded further in the upcoming versions. The team is now heading towards government and testing laboratories for official guidance to develop the prototype into a functioning product that can serve the mass.

The team expressed their

gratitude to doctors for their medical guidance, Tamilnadu Police, Government Officials, and Hardware Suppliers for their constant support throughout the development process. They also thanked Meenakshi Sundararajan Engineering College for supporting them all the way.

M Roshini



Inspired by Kalam, propelled by dream

All our dreams can come true, if we have the courage to pursue them. The future belongs to those who believe in the beauty of their dreams. Hold fast to dreams, for if dreams die, life is a broken-winged bird that cannot fly... so said former President Abdul Kalam, and in a bid to bridge the shortage of ventilators in the country amid rising cases, a team comprising eight members, emerged with a prototype of the ventilator.

The team includes Kishore Kumaran, undergraduate, and former students of Meenakshi Sundararajan Engineering College.

Ventilator Project Team details:
1. Vasupradha - 3rd Year ECE B
2. Sneha - 3rd Year ECE B
3. Vidhyashree - 3rd Year ECE B
4. Smruthi - 2nd Year ECE B
5. Kartick - 2nd Year ECE A
6. Thulasiram - ECE 2019 Batch
7. Yashwanth - ECE 2019 Batch


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THE HINDU ePaper Search here

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CHENNAI

COVID-19 offers students a chance to showcase their skills

R. Sujatha

CHENNAI, APRIL 22, 2020 17:51 IST
UPDATED: APRIL 22, 2020 17:51 IST

SHARE ARTICLE PRINT A | A | A

Student groups have come up with apps and low-cost ventilators

Several engineering college students in the city have come up with apps, websites and in some cases, prototypes of low-cost ventilators.

A group of students from Meenakshi Sundararajan Engineering College have developed a prototype for a low cost ventilator (₹11,500) which has now been shortlisted by the National Innovation Foundation for its C3 competition.

Kishore Kumaran, a 2017 batch ECE graduate leads a team of six juniors, four of whom are currently students at the college. It took them 17 days to develop the prototype. "It is an opportunity for shared learning," says Mr. Kishore.

A third year CSE student S.R. Sankar Narayanan has developed a website for tracking COVID-19 <http://coronanewapp.herokuapp.com/>. He uses government data for the purpose.

மீனாட்சி சுந்தரராஜன் என்ஜினீயரிங் கல்லூரி முன்னாள் மாணவர்கள் உருவாக்கினர்

கொரோனா நோயாளியைக் காப்பாற்ற ரூ.11 ஆயிரத்து 500 விலையில் வெண்டிலேட்டர் தாளாளர் பாபாய் பெருமிதம்

சென்னை, ஏப்.22-
கோடம்பாக்கம் மீனாட்சி சுந்தரராஜன் என்ஜினீயரிங் கல்லூரியின் முன்னாள் மாணவர்கள் ஒன்று சேர்ந்து ரூ. 2 லட்சம் மதிப்புள்ள செயற்கை கவாசக் கருவியை (வெண்டிலேட்டர்) ரூ. 11 ஆயிரத்து 500 விலையில் உருவாக்கி சாதனை படைத்துள்ளனர்.



கல்லூரி தாளாளர் பாபாய் சுந்தரராஜன் ஊக்கமளித்ததால் இது செயல்படுத்த முடிந்தது என்று முன்னாள் மாணவரும், மிசைல் இன்ஜினீட்டர் நிறுவன டைரக்டருமான கிஷோர் குமரன் தெரிவித்தார்.
கிஷோர் குமரன் ஒருங்கிணைப்பில் இந்த குழுவில் முன்னாள் மாணவர்கள் சினேகா, வசுபிரதா, ஸ்ம்ருதி, வித்யாபூர், கார்த்திக், துளசிராம், யஷ்வந்த் மற்றும் சாய் பிரகாஷ் பங்கேற்று ஆராய்ச்சி செய்தனர்.
ஏற்கனவே மார்க்கெட்டில் கிடைக்கும் பொருட்களை வைத்து மாதுரி வெண்டிலேட்டர் உருவாக்கப்பட்டது. இதில் தேவைப்படும் பொது நவீனப்படுத்த வசதியும் சேர்க்கப்பட்டுள்ளது. இந்த மாதுரி அரசு பரிசோதனை ஆய்வகத்துக்கு



அனுப்பப்பட்டுள்ளது. அங்கீகாரம் கிடைத்தவுடன் தொழில் ரீதியில் உற்பத்தி செய்யப்படும் என்றார் அவர்.
இந்த குழுவினருக்கு மீனாட்சி சுந்தரராஜன் என்ஜினீயரிங் கல்லூரி தாளாளர் பாபாய் சுந்தரராஜன், எலக்ட்ரானிக்ஸ் கம்யூனிகேஷன் துறை பேராசிரியர்கள், ஆராய்ச்சி

பிரிவு நிபுணர்கள் ஆதரவு அளித்தனர் என்றார்.
நுரையீரல் கவாச பிரச்சினைக்கு துல்லியமாக உதவ இந்த வெண்டிலேட்டர் உதவும். பல்வேறு டிஜிட்டல் கணக்கீடு கருவிகள் இதில் உள்ளன.

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SUPPORTING RURAL AREA THROUGH AGRO-ENTERPRISE DEVELOPMENT

- Urban and rural areas can benefit from each other if well connected. With the desire to improve the lives of rural area workers who not only suffer from lack of resources and assets, but also are affected by major changes in the agricultural sector brought about by globalization and market integration, students of MSEC Vasupradha S and Sneha M have come up with an idea to support rural areas through agro-enterprise development providing a web application based solution.
- It provides policy advice and technical assistance related to market-oriented farming and small- and medium-scale agroenterprise development.
- Objectives –
 - Recognize and adjust to trends in farm commercialization .
 - Develop reliable farm-to-market and farm-agribusiness linkages
 - Establish roles of the public sector as service providers in marketing and business management.
 - Provide the private sector essential marketing, finance, business and input supply services.
 - Support producer organizations
 - Overcome constraints to participation in export and high value product market channels.
- The idea has also received VISHWAKARMA award.





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INVADER AND SPARROW

- Another innovation by young MSECians with a desire to raise the perspective towards developing advanced ideas is an innovation called SPARROW and INVADER designed with the technical support of HYORISTIC INNOVATIONS PVT LTD.
- The innovation by TEAM INVADER ranked 290th in 2020 by the International Rover Design Challenge (IRDC).
- Team INVADER won 26th by competing with top universities worldwide.
- The team has participated in events like MARS SOCIETY South Asia and International Rover Challenge.
- Team SPARROW is going to be a part of International Planetary Aerial System Challenge.



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AWARD FOR LEADING ENGINEERING COLLEGE 2020

- MSEC believes in collaborating with industries and placements so that students can obtain best possible exposure to multiple learning experiences.
- MSEC has received an award presented by BEGINUP RESEARCH INTELLIGENCE PRIVATE LIMITED in NATIONAL EDUCATIONAL EXCELLENCE AWARDS AND CONFERENCE 2020 for emerging as the Leading Engineering College of the year 2020, Tamil Nadu in the category of industrial collaborations and placements.



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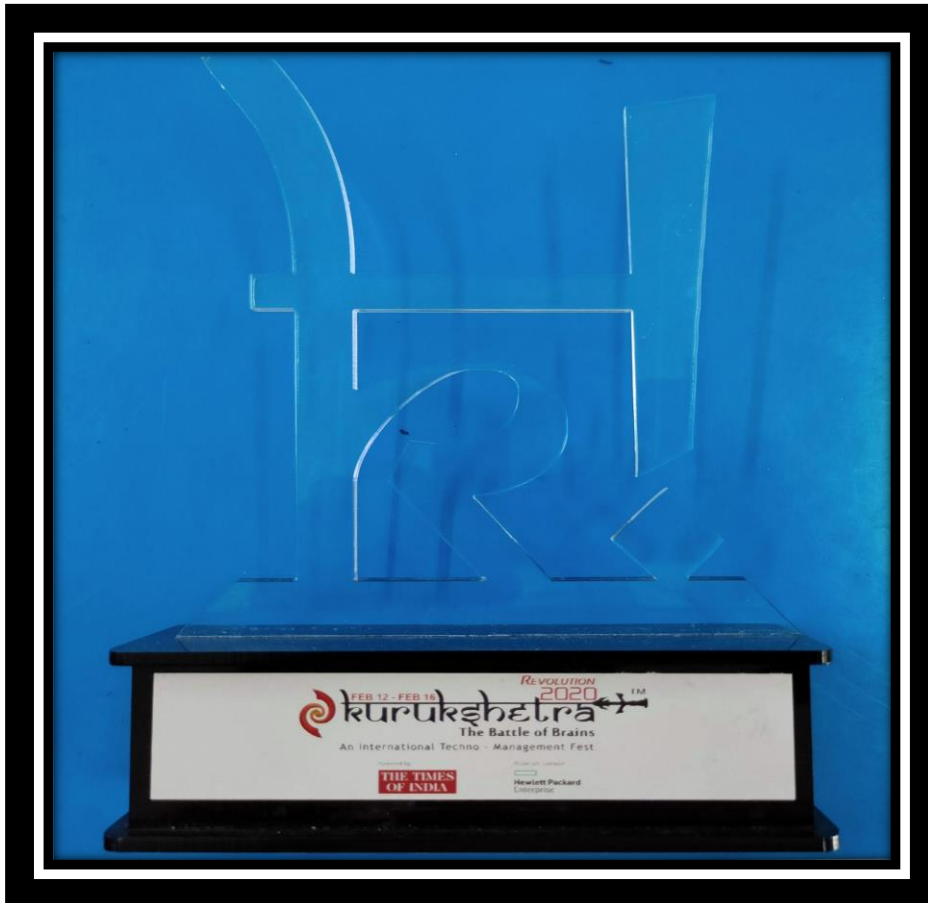


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KURUKSHETRA AWARD

- Students of MSEC won KURUKSHETRA award for project presentation.



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COGNIZANT'S "THE BIG IDEA 2K17" CONTEST.

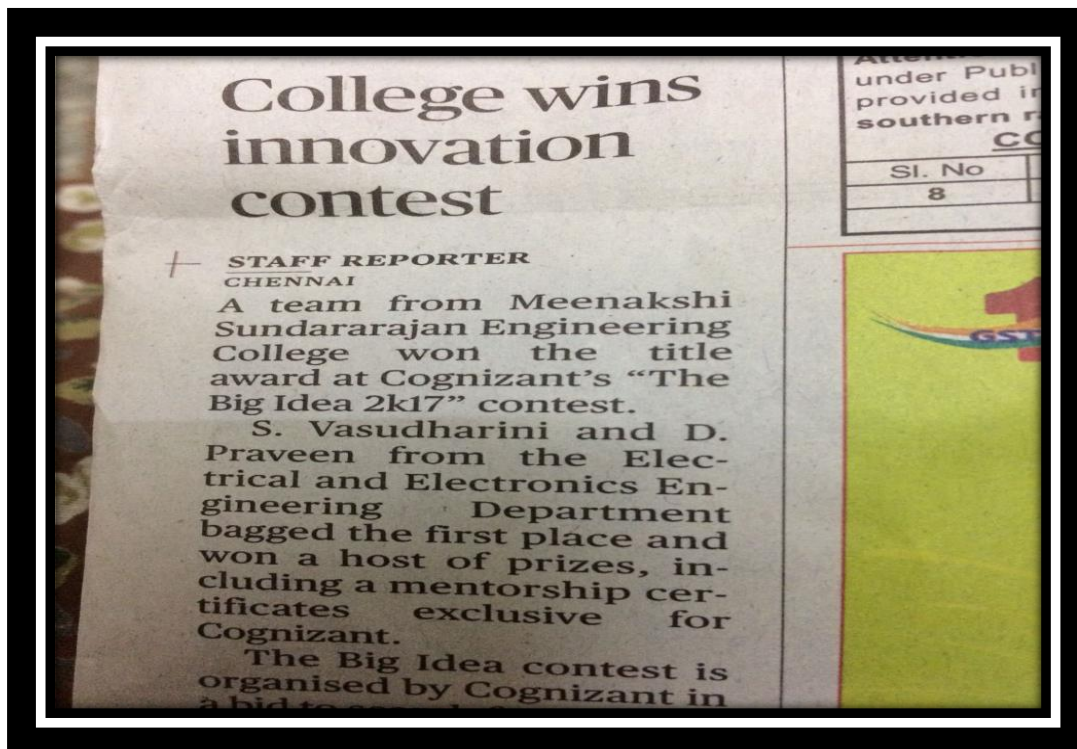
A team from Meenakshi Sundararajan Engineering College won the title award at Cognizant's "The Big Idea 2k17" contest.

S. Vasudharini and D. Praveen from the Electrical and Electronics Engineering Department bagged the **first place** and won a host of prizes, including a mentorship certificates exclusive for Cognizant.

The Big Idea contest is organised by Cognizant in a bid to search for and promote creativity and innovation among young talent. The contest was based on themes such as Future Database Systems, Migration of Software Platforms, Software Programs Of 2030 and New Emerging Technologies. The contestants were required to go through two rounds of examinations.

According to a press release, the college emerged victorious from among 23 institutions which participated in the final rounds.

While the contest kick-started with an online idea submission round that saw the participation of nearly 2,000 students, 10 teams competed in the idea presentation round which was held on October 7.




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