



**SRM**  
INSTITUTE OF SCIENCE & TECHNOLOGY  
(Deemed to be University u/s 3 of UGC Act, 1956)

The Newspaper of SRMIST

# SPECTRUM

For private circulation only

Volume 13 Number 7

**SRM Medical College Hospital...  
Clinical Trial Site for Covid-19 Vaccine !**







## Scaling New Heights: SRMAP win Three Hackathons in a Row

### STAFF WRITER

The unstoppable team of Next-Tech Lab of SRM University-AP, has again brought laurels to the University by winning three hackathons in a row. During this lockdown while some devoted their time to newfound hobbies, our young researchers successfully developed a fresh multiplayer virtual reality game - 'Whack A Mole' and a cloud-based multiplayer FPS in Virtual Reality - 'Desert Shooter'. The three-member team has successfully bagged the second prize in the International / Professional Award at SKYHacks2020; Best echoAR Hack at Silicon Valley Hacks; and Best AR/VR hack at HackNow, organized by Cal Hacks, a non-profit organization at the University of Berkeley, California.

When asked how the idea of making such a game crossed their minds, Epperla Karthik, a 2nd Year student of Computer science and Engineering and a member of the team, said, "My family loves attending

Tradeshows, every time we attend one my dad and I challenge each other to win a game of Whack A Mole. But, due to strict quarantine that my family is following, it's been a while now for such challenges. My teammates and I, being gaming and virtual reality enthusiasts, decided to develop a VR version of 'Whack A Mole.'"

'Whack A Mole' is a multiplayer virtual reality game that allows users to play against the computer or their families or both! One can use it on iOS or Android. It is built on Unity3D, on top of Photon PUN and GoogleVR SDK. It is also integrated with Google Firebase. "This was the very first time we were working on the development of virtual reality games and networking. As we had to run the game on our phone to record the gameplay, the output video on YouTube is a bit blurry," explained Khushboo Sharma, another member of the team and a 2nd-year student of Computer Science and Engineering. "We completed the development of

the game in only 20hrs, starting from scratch. We developed a few of our own UI elements and game assets. I feel the User-Interface of the app and the effects are pretty cool. VR development is real FUN! Moreover, there are a lot of API and SDK that unity supports," exclaimed Koushik Bhargav, a 3rd-Year student of Computer Science and Engineering and the third member of the team.

The team has plans to make this game to be a cross-platform game. Therefore, their next plan of action is to make the web version of it. The team is also planning to release it to production so that users can have an immersive experience of modern gaming techniques.

'Desert Shooter' is another multiplayer virtual reality game developed by the team that allows users to play against the computer or their families or both. You can connect with your friends and play together. The game consists of a swarm of robot ships moving towards you and you have to protect yourself from them. "The interesting part is that all of this happens in Mixed Reality which makes the game immersive. We built it on Unity3D, on top of Photon PUN and GoogleVR SDK, Echoar. It is also integrated with Google Firebase and the assets are stored in echoar cloud. This project won the best AR/VR hack at "Hack: Now" which is organized by the University of California Berkeley," said Epperla Karthik.

It is again proved that pure talent can never be put in quarantine. It will always find a way to express itself to the world. Our young developers have brilliantly used the ample time and opportunity to put their brains in best use and to bring recognitions from nationally and globally acclaimed competitions.

## Concretus 2020 - Celebrating the Built Environment

### DIKSHA AVIRAL

"Tell me and I forget, teach me and I may remember, involve me and I learn."

With this invigorating mantra in their hearts and minds, hundreds of students came together recently to participate in the national level technical fest, Concretus. Concretus '20 was a national level technical fest held by the Department of Civil engineering, SRM Institute of Science and Technology in association with the Indian Concrete Institute. The fest offered a huge array of events and workshops to students pursuing undergraduate and postgraduate work in civil engineering.

Various competitions like Davitovits for geopolymer concrete for novel construction, Aitcin for high performance concrete, Curva Geometrica for complex transportation problems, Geowall for mechanical stabilization of earth fill took

place. In addition to these, competitions like Geovideo for pictorial representation of basic geotechnical concepts and Consolid for full-fledged city planning, kept everyone attending the fest on their toes.

Concretus '20 also hosted a number of workshops and hands-on training sessions to enhance the knowledge of students in specific topics of interest such as BIM, Q-GIS, self-compacting concrete, practical applications of analysis and design, coconut shell concrete, rapid 3D modelling using Arc-GIS and prestressed concrete.

They say, you can learn more about a man in two hours of play, than in two days of conversation. Thus, in the spirit of fun and fellowship Concretus '20 also hosted several sporting events like badminton and chess.

It's safe to say that Concretus '20 did indeed help lay a concrete foundation toward the experience and learning of all its participants.

## Smart India Hackathon – SRM Edition

### SADHANA UPENDRAN MANOJ VAMSEE

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. 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.

The SRM edition was an internal competition amongst SRM participant teams to send the selected team combination of both hardware and software teams to the finals facing multiple other teams from different bases. The duration of the competition was about 29 – 30 hours with four internal inspections happening almost every 6 hours once. The whole event was held in a time span of 3 days.

This national level competition has holistically helped to harness creativity and expertise of students and build funnel for the 'Start-up India' campaign. It also helps to crowd source solutions for improving governance and quality of life while giving opportunity to citizens to provide innovative solutions to India's daunting problems.

**“It is again proved that pure talent can never be put in quarantine. It will always find a way to express itself to the world. Our young developers have brilliantly used the ample time and opportunity to put their brains in best use and to bring recognitions from nationally and globally acclaimed competitions”**

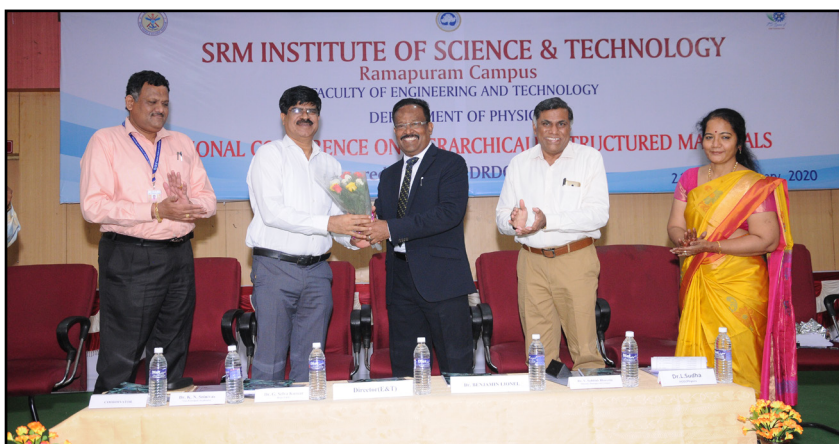


# Scope of Hierarchically Structured Materials

## STAFF WRITER

The Department of Physics, SRM Institute of Science & Technology, Ramapuram campus organised the 8th National Conference on Hierarchically Structured Materials (NCHSM 2020) recently. The conference was sponsored by Council of Scientific and Industrial Research, Defence Research and Development Organization New Delhi. Dr. C. Muthamizhchelvan, Director (E&T), SRM IST presided over the inaugural function and he outlined the significance of gathering researchers and faculties to work for the advancement of science and technology. He also stated the role of science serving industrial purposes, and to determine the problems in the physical sciences. Dr. G. Selvakumar Dean (E&T) and Dr. Dr. K.N. Srinivas, Vice Principal (Academic), SRM Institute of Science & Technology, Ramapuram campus felicitated the gathering. Dr. Benjamin Lionel, Director, Instruments Research and Development Establishment (IRDE), Defence Research and Development Organisation (DRDO), Dehradun graced the conference as a Chief Guest. He delivered the inaugural and keynote address and précised the scope of Hierarchically Structured Materials, how it engrosses in integration of science and technology and released the conference proceedings. About 150 faculty members, Scientists & Research scholars from various educational institutions with various Research & Development laboratories across the country attended the conference and presented their research findings. Dr. L. Sudha, Professor & Head of the Department of Physics, Convener of NCHSM 2020 welcomed the august gathering and presented the overview of the conference. Eminent scientists from prestigious institutions presented plenary and invited talks on a range of topics. Dr. M. Saravanan, Asst. Prof. (S.G), Organizing Secretary of NCHSM 2020 proposed the vote of thanks. Renowned professionals like Prof. S. Balakumar,

Director, National Centre for Nanoscience and Nano technology, University of Madras, Chennai delivered his plenary talk. Dr. Sreekuttan M.U, Scientist - Academy of Scientific & Innovative Research (AcSIR), CSIR-CECRI Chennai Unit, CSIR Madras Complex, Taramani, Chennai, TamilNadu, Dr. J. Arokiaraj, Senior Principal Scientist, 3M, Bengaluru, Dr. J. Ramajothi, Department of Physics, Madras Institute of Technology, Dr. P. Murugavel, Associate Professor, Department of Physics, IIT Madras, Chennai, TamilNadu, Dr. Shanmugasundaram Sakthivel, Team Leader and Scientist-F, Centre for Solar Energy Materials, International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Balapur Post, Hyderabad and Dr. U. Madhusoodanan, Senior Scientist Radiological Safety & Environmental Group, Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, Tamilnadu delivered their invited talk which enthused the young researchers for technology transfer. Research Scholars and Scientists from leading Universities, Colleges and R&D laboratories contributed and presented their research findings on topics such as Nanomaterials, Crystal Growth and Characterisation, Magnetic and Semiconducting Materials, Materials Characterization, Electronic Structure of Materials and thin films. Based on the most innovative and challenging areas of conference, the best oral and poster presentations were awarded. This was a big boost for the budding scientists to carry on with their interest on research. In the valedictory function, Dr. U. Madhusoodanan, Senior Scientist Radiological Safety & Environmental Group, Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam addressed the significance of research work in the field of hierarchically structured materials and mentioned that the conference which was conducted would enormously facilitate the academic community to allocate their knowledge for the betterment of society.



Dr. C. Muthamizhchelvan, Director (E&T), SRM IST honouring the Chief Guest Dr. Benjamin Lionel, Director, Instruments Research and Development Establishment (IRDE), Defence Research and Development Organisation (DRDO), Dehradun in NCHSM 2020 on February 21 & 22nd 2020.

# SRMAP welcomes Prof VS Rao, as Vice-Chancellor

## STAFF WRITER

SRM University- AP, Andhra Pradesh welcomes its new Vice-Chancellor Prof VajjaSambasiva Rao. Prof V.S. Rao is joining the University from July 1st 2020.



Prof V.S. Rao

Prof V. S. Rao is an eminent academician who has been the vanguard of leading excellence in higher technical education in India. An alumnus of BITS, Pilani and the University of Bielefeld, Germany, Prof V. S. Rao previously served as the President of NIIT University and Acting Vice-Chancellor and Director at BITS, Pilani.

Dr P. Satyanarayanan, the President of the SRM University-AP, shares in his welcome note, "I am delighted to announce the appointment of Professor V. S. Rao as the new Vice-Chancellor of SRM University-AP. Dr VS Rao is a renowned academician with over four decades of experience in Academics and Administration. I am optimistic that his strategic and operational skills combined with his deep knowledge in academic research, will help SRM AP scale greater heights in its pursuit to be a truly global research-intensive educational institution."

Prof D. Narayana Rao, the Pro-Vice-Chancellor of the University, cordially welcomed him on campus saying, "Prof VS Rao, an institution builder, has developed BITS, Hyderabad as a highly reputed institution in a short time. With his rich and vast experience at BITS - Pilani and also as the Director, BITS Hyderabad, I am sure that he will take SRM University - AP to greater heights."

Dr D. Gunasekaran, the Registrar of SRMAP, opined, "Prof V S Rao's joining the SRM University AP is wonderful news for us. We are certain that his values and collaborative leadership approach will help the University to make a visible difference to the world. The faculty members, students and staff of SRM University AP welcomes the Vice-Chancellor, Prof V S Rao."

As the University embarks on an exciting period of development in an immensely challenging and competitive environment with an ambitious strategy that builds on the well-established reputation for ground-breaking research, innovation and cross-disciplinary academic activity, it is the high time to demonstrate the capability to make a difference to the lives of individuals, communities and societies in the region and around the world. Prof V. S. Rao, the man of the hour himself supported the notion asserting, "I am looking forward to contributing

to the internationally acclaimed SRM Group, through my best efforts. We at SRMAP would like to see that every student graduating from here would be industry-ready, and get numerous opportunities during their career. I consider myself fortunate to have this opportunity to be part of such an excellent

institution in the sphere of higher education, that has been delivering quality teaching and learning, and research relevant to the society."

During his career spanning over forty-two years, Prof V. S. Rao has made significant contributions in the arena of education. As the President of NIIT University (NU), Neemrana, Rajasthan, he has led many initiatives at NU starting from curriculum innovations, faculty expansion and development to the introduction of new Programmes and digital learning. He apprehended the importance of Industry linkage with academia and committed to upholding it. Prior to joining NU, Prof V. S. Rao had a vigorous association with BITS, Pilani for over 44 years including six years of his Graduation.

He played a crucial role in the establishment of BITS Pilani, Hyderabad campus in terms of strategy and conception. He worked very closely with Dr Y S Rajasekhar Reddy, the then Chief Minister, in realising his vision of establishing BITS Pilani campus in Hyderabad, a state-of-the-art campus with innovative ideas.

His research interest included synthetic organic chemistry, natural product research, green chemistry etc. He has guided four PhD students and published several research papers in reputed journals. His passion for teaching has earned accolades from several batches of BITS students.

Prof. V. S. Rao obtained his M. Sc and PhD degrees from BITS Pilani. In 1998, at the invitation of the German Foundation for International Development, he attended a four-month training programme on Educational Economics & Educational Research at the University of Bielefeld, Germany. His philosophy and utilitarian standpoint as an educator have been moulded by his pragmatic ideology and productive wisdom as an administrator.

Prof V.S. Rao is on the advisory board for various colleges, institutions and universities across the country. He is also an avid explorer who has extensively travelled across the globe to visit international universities of repute.





*Inspiration beyond the classroom: SRM Achievers Connect 2020*

## Achieving to Inspire - SRM Achievers Connect 2020

SHRUTI

The Directorate of Alumni Affairs was proud to organize SRM Achievers Connect 2020, an event that allowed young students to learn more about the journeys of some of SRMIST's successful alumni. Held recently at the medical auditorium, the event witnessed the presence of 11 stellar alumni.

The alumni who shared their success stories this year included Mr. Madhavan Unni, Mr. Karthigeyan, Mr. Karthik Balu, Mr. Neeraj Krishnamoorthy, Mr. Rahul Kumar, Mr. Rakesh Gupta, Mr. Sagar Choudhary,

Mr. Roshan Keshavan, Ms. Yashika Khater, Ms. Devanshi Seth, and Mr. Krishna Kumar Suresh. From founding their own companies to rising through the ranks in successful corporations, this panel of alumni had a vast number of achievements to their name. Each one of them spoke about their journey to success, and provided tips and tricks to the students present, to make the most of their college lives. They also discussed the various aspects of the field of information technology. The students were fortunate enough to interact with the panel and ask them questions pertaining to internships and career pathways.

Students learned about different ways to achieve their professional goals and land their dream jobs. The panel taught the students about the various qualities that a company looks for in a graduating student, as well as the resume one must build in order to start off their career the right way. The young students were quite enthused upon learning about the alumni's experiences, and let every bit of advice they were given, sink in. Without a doubt, Achievers Connect 2020 was as insightful and rewarding as the students hoped.

The students and alumni were all smiles after the successful event.



*The entrance to bliss and exuberance*

## Diversity Embodied

VAISHNAVI

An eternal adage "unity in diversity" characterizes not only India, but the hues and the realms of tradition that accompany our nation. The diversity of India was strongly unified and perfectly merged by the "Bazaar" adrift with flavour, tasteful, glorious and rich goods, eatables and collectibles from the corners of shores and mountains. Standing tall in campus the Bazaar provided a welcome relief from the monotonous and grim college life that has ensnared us all. From uniquely flavoured tea to delicious waffles, the joy and festive spirit was blowing in the wind. The pretty tribal earrings and jewellery made a sufficient commentary on the value of glitter and fashion. From trying leather collections to gobbling momos, the Bazaar appealed to the angels and fairies

in each and every one of us. It had something for everyone. The instant images, ethnic dresses, beautiful designer handbags, sophisticated and elegant footwear had a lot of ladies buzzing around it. That tasty and aromatic aura of amazing delicacies provided a powerful lens to peer into our culture, fascinating fashion, culture design, food, photographers, cooks, stylists and artists and illustrators of the decade.

The Bazaar proved to be all the states and traditions in a miniature cosmopolitan environment. Spectators lost themselves to the divine, happy atmosphere, soaking in the spirit of togetherness and festivities. The rapport between the shopkeepers and the customers, the electrifying vibes floating in and out- it was a spectacle to behold! Standing majestically with charm and blithe, we were entreated to an Adventure of a Lifetime.

## Enriching Minds ... Altitudes 2020

SHRUTI

The Department of Mathematics was established in the year 1985 and has ever since guaranteed the best education to its students with 91 highly qualified faculty members, which include 53 Doctorates and 71 Research Scholars.

It conducts extra-curricular activities like seminars, Olympiads, workshops which provide students with an edge, assisting them in reaching their potential and enriching their lives. ALTITUDES 2020 is one such event, which was held recently at TP Ganesan Auditorium. It was a Math Fest which had multiple interactive,

entertaining and educational activities. The mission for holding the event was to enhance the analytical, logical and reasoning skills of the participants, hence uplifting the student's abilities and knowledge up by a notch, which it clearly was able to achieve, by the involvement of various diverse activities.

The fest included six events in total. The introductory events were Paper Presentation— which included topics like Application of Statistics in various fields, Mathematics in Cryptography, Astronomy, and Modern Technology, and Poster Presentation— covering topics like Joyful Learning through Riddles, Recent advancements

in mathematical applications and Evolution of Mathematics. It also had interactive events like Mathematical Olympiads, Dumb Charades and Connexions, which revolved around topics related to algebra, statistics, operations research, differential equations, Fourier series, calculus and famous mathematicians. Finally, graphs and models cannot be ruled out when it comes to mathematics. Thus, a mathematical and statistical modeling event was conducted as well. It revolved around recreational mathematics. The event was a success in achieving its goal to uplift students' interest and knowledge and in furthering their curiosity in mathematics



*The Department of Mathematics believes in enhancing application based mathematics.*

along with making it easier for them to understand complex theorems and logic through interactive and amusing events.

Thus, the event proved the efficiency of the faculty and students of the Mathematics Department of SRMIST.



# ICMR Selects SRM Medical College Hospital as Clinical Trial Site For COVID -19 Vaccine

## A STAFF WRITER

SRM Medical College Hospital and Research Centre (SRM MCHRC), Kattankulathur has been selected by Indian Council for Medical Research (ICMR) as a clinical trial site of the country's first indigenous COVID-19 vaccine (BBV152 COVID Vaccine). SRM Medical College Hospital and Research Centre is one among the 12 institutions in India to have been chosen by ICMR for undertaking human clinical trials of India's first indigenous vaccine developed by ICMR- National Institute of Virology, Pune. ICMR has partnered with Bharat Biotech International limited, Hyderabad. SRM MCHRC is also the only medical institution to be selected from Tamil Nadu

for this purpose. Dr. Satyajith Mohapatra, Associate Professor from the Department of Pharmacology, SRM Medical College Hospital and Research Centre has been chosen as the Principal Investigator for the clinical trials at SRM MCHRC.

This is the first indigenous vaccine being developed by India and is one of the top priority projects which is being monitored at the topmost level of the Government. The Indian Government has envisaged launching the vaccine for public health use latest by 15th August 2020 after completion of all clinical trials. This comes at a time when the entire world is reeling under the COVID-19 pandemic and there is a dire urgency to launch the vaccine. Praising Dr. Satyajith Mohapatra



role in this, President of SRM Medical College Hospital and Research Centre, Dr. P. Sathyanarayanan said, "This is great news for us. I appreciate Dr. Satyajith Mohapatra and his team in making our institution a part of this prestigious project. We

will provide him with all the necessary support to perform this exercise towards saving mankind. My best wishes to him and the entire team for the successful completion of this project." SRM MCHRC serves a population of over 3,00,000 in and around Kattankulathur.

SRM Medical College Hospital and Research Centre (SRM MCHRC) offers a plethora of opportunities to climb the career ladder as well as to change this world to be better and healthier by providing sophisticated treatment.

## COVID -19 and the Teaching Learning Process at SRMIST

### DR. SRIDHAR KRISHNASWAMI

The world has been witness to many an infectious disease in the last several decades; but not like the one it is witnessing since December 2019 when it was first reported out of Wuhan, China. Billed as the Coronavirus, or known globally as COVID-19, more than 4 million have been infected in close to 190 countries and territories. Not a continent has been spared—rich or poor, developed or developing, big or small. A country like the United States has seen the infection of some 3 million across the 50 states and a death toll of around 130,000 at the time of writing. India too has not been spared—close to 675,000 people have been infected and nearly 20,000 persons have died with states like Maharashtra and Tamil Nadu having to bear an extraordinary amount of strain.

The coronavirus has literally impacted every aspect of a country and every segment of society. International Financial Institutions are stressing that there is no easy or early solutions to a problem that has dented global economic growth and set it back by at least two years. That being the case, education is no exception and for the whole world. Schools, colleges and universities have shuttered since mid-

March and there is no exact telling when the doors would be thrown open again; examinations have been postponed or outright cancelled; and many institutions in the West have left this big question mark as to when the teaching-learning process will begin and if it does in what fashion this is going to be.

The SRM Group of Institutions has made the conscious decision not to skip a beat in the teaching-learning process. Switching quickly to the online mode of teaching faculty members from all disciplines have been reaching out to the student community to finish the course work, set in motion online examinations and in general to make them feel comfortable in a highly unsettled environment. Faculty and students at SRMIST have used the period to also organize and participate in a number of webinars to keep the flow of knowledge. And at the SRM Medical College and Health Center, a dedicated team of doctors, technicians and nursing community are providing round the clock first rate and high class medical treatment to those unfortunates who have come to be infected with the virus.

From a non-academic and medical perspective the SRM Family has gone the extra mile in providing comfort and

housing to migrant workers coming from different parts of Tamil Nadu and heading to their homes as well as providing essential food grains to stranded migrant workers in and around Greater Chennai besides ensuring the needs of the villages that have been adopted by SRMIST. And student volunteers of the National Service Scheme (NSS) have done their best in not only creating awareness of the

COVID-19 but also addressing the seriousness of the virus. All this is not to forget the role of the Directorate of Campus Life in the safety of the campuses, making sure that teaching, non-teaching and administrative staff entering the premises are indeed fit to resume duties.

Here is a glimpse of what SRMIST has done and is doing at a very difficult time ....

### Teaching, non-teaching and administrative staff of the SRM Group of Institutions donate Rupees 1.15 Crores

#### STAFF WRITER

Teaching, non teaching and administrative staff of the SRM Group of Institutions have donated Rupees 1.15 Crores towards battling the COVID 19 virus at a time when the world is struggling to come to terms with a pandemic that has affected more than 200 countries.

The Founder Chancellor of the SRM Group, Dr. Paarivendhar, who is also a Member of Parliament of Lok Sabha from the Perambalur constituency, has transferred the



Dr. Paarivendhar

money collected to the Tamil Nadu Chief Minister's Public Relief Fund.



# COVID - 19 Pandemicity Awareness Webliners at SRM IST


SUJITH.R.

Corona Virus awareness measure towards the raising COVID Pandemicity, Directorate of Research, SRMIST hosted a webinar series for the benefit of our students, faculties, staffs and the society at the national level was organized by Dr. Kantha Deivi Arunachalam Dean – Centre for Environmental Nuclear Research (CENR) and coordinated by Sujith. R. Adjunct Faculty of CENR and Faculty of Microbiology Department, SRM Medical College encouraged by Dr. K. Ramasamy Director (Research) as per the visionary laid by our honourable Vice Chancellor Dr. Sandeep Sanchetti. Starting from 27th, April, 2020, COVID -19 a series of webinar lectures showcased various domains pertaining to COVID-19 awareness delivered through a mixture of 35 eminent National and International Speakers in

total. Based on a Google form opinion poll circulated in mass mailer this webinar series was conducted at 3 PM daily at a convenient time opted by the participants as well as our faculties and students to login.

What not was covered in this webinar series? Personal Protection Equipment for COVID, Immunity development against COVID through Nutraceutical Supplements, Ayurveda, Siddha, treatment plans, Impact of diabetics and hypertension with COVID, Adjuvant therapy, Food Safety and Quality during COVID period, Role of Artificial Intelligence in COVID, Living with COVID, Money management during troubled times, Digital Health Transformation, witnesses to this new crisis!, Impact of online teaching and about protecting our devices from externals – Cybercrime were the various domains this webinar has touched.

Dr. Rajesh Kesavan (Pediatric Surgeon & Director of Hycare Super specialty Hospital), Dr. Sheela Sasikumar (Head of Clinical Research & Development), Hycare Super Specialty Hospital), Dr. K. Alagusundaram (Chairman of FAD 3 & Deputy Director General of the Agricultural Engineering and Natural Resource Management, Indian Council of Agricultural Research, New Delhi), Dr. Mohanasundaram (Kilpauk Medical College), Mr. Neel Mehta (Deputy Manager of Adani Group of Companies), Dr. Aarth Arunachalam (Emergency Medicine Physician from Howard University, Washington DC, USA), a dual role play talk by Mr. Srikanth Meenakshi (Financial Advisor - Finetech Entrepreneur) with Mr. V. Pattabhiram (Author of renowned Financial Books) and a NGO group Trustee Mr. Rajesh R Trivedi are the notable speakers who delivered a splendid talk through our SRM COVID



## GET TO KNOW EVERYTHING ABOUT COVID-19 FROM THE EXPERTS.

Take part in our webinar series conducted by SRMIST's Directorate of Research.

We'll cover one topic per day. Each webinar will be around 30-40 minutes and will be followed by a Q&A session.

**A FEW OF THE TOPICS THAT'LL BE COVERED:**

- Ayurveda and COVID-19
- Agriculture and COVID-19
- Sanitizers and COVID-19
- Water, sanitation and COVID-19
- Food (Nutraceuticals) during COVID-19 pandemic
- Infectious Waste disposal during COVID-19 pandemic
- IoT / AI and COVID-19
- APPs for data analysis for COVID-19
- Why Social Distancing is necessary?
- Veg vs Non-veg during COVID-19 pandemic
- Indian / Tamil Culture and COVID-19

If you'd like to be a speaker or be a part of the audience, kindly reach out to:

**PROF. KANTHA DEIVI ARUNACHALAM**  
DEAN  
Center for Environmental Nuclear Research  
E-mail: dean.cenr@srmist.edu.in  
Phone: 044 27417144  
Mobile: +91 99622 11166

SUGGESTIONS REGARDING TOPICS ARE WELCOME.

Awareness Webinar Series. Many of SRM IST faculties have addressed the SRMIST family members and their extended society through this forum representing SRM Institute of Science and Technology. To proudly mention, an invite as a speaker to Jain University, Bangalore knocked the doors of Dr. Chitra Pandian, Vice Principle of SRM College of Pharmacy through our webinar and its wide publicity through e-flyers, website and social media reach. On due course, this webinar series encountered

many National and International speakers approaching voluntarily to deliver their talk with around 1500 participants registered in total. COVID - 19 webinar has a wide reach and unconditional invite among the communities and our SRMIST'ians which was all showed as posted in the chat box during webinar. SRM IST has bagged a massive outreach and public infusion as well has shown our responsibilities and support to fight against CORONA Virus through COVID -19 Webinar missionized by our honourable Vice Chancellor.

## Covid – 19 Pandemic: Strategies adopted in SRM Medical College

A STAFF WRITER

SRM Medical College Hospital and Research Centre was identified by the Government of Tamilnadu as one of the major hospitals in Chennai to treat COVID positive and suspect patients.

In March 2020, the hospital facilities were modified to treat 200 patients in 4 COVID wards

and 6 ventilator beds in COVID ICU. The Ground floor of SRM Hospital was divided into three Zones. Zone 'A' comprising (i) Casualty (ii) Fever clinic in adjoining areas, Zone 'B' for screening and entry of Medical staff. Zone 'C' for screening and entry of patients attending various clinics.

All persons visiting the hospital undergo thermal scanning before

entry. Patients with suspected COVID are directed to the Fever clinic in Zone 'A' and those being admitted in COVID ward go through a cordoned off pathway in Zone 'A' to the first floor COVID ward which has 100 beds (50 male & 50 female) with secluded area for donning and doffing for health care workers. Another 100 beds are located in 2nd floor

similar to the wards in first floor. A 6 bedded COVID-ICU is located in the ground floor with ventilators. Equipments are adequate and sufficient PPEs have been sourced and kept ready. The wards are also made patient friendly, by providing a separate dining hall, TV facility and two way communication to persons outside the wards.

In addition, an innovative Voice to text software has been installed in the computer inside the COVID ward with connectivity to a computer outside the ward, where case sheet is printed. This has been done to eliminate the use of paper records inside the ward to prevent spread of the virus and also avoid typing and contaminating the keyboard.

The patients in COVID wards and ICU are monitored round the clock by doctors, nurses and other health care workers. All the doctors, nurses and sanitary workers have been well trained in the use of PPE including donning and doffing.

Honorable Minister of Health and Family Welfare, Government of Tamilnadu accompanied by Director visited the Hospital in April and expressed profound

satisfaction with the arrangements made.

A Hospital Administrative group was created in March 2020 with Pro-VC, Medical & Health Sciences as Chairman. Other members of the Committee are Dean (Medical), Deputy Dean / VP (Medical), Medical Superintendent, Deputy Medical Superintendent, HOD Medicine, Nursing Superintendent, Administrative Heads of HR, Finance, Biomedical Engineering, Operations & Maintenance, IT and AGM Public Relations. Problems faced are discussed and instant solutions arrived after discussion. This practice has proved to be effective with immediate response to situations, flexibility and creativity, more so at present with rising number of COVID infections.

Since April 2020, the hospital has attended to over 750 patients in Fever clinic and treated over 150 patients in the wards and ICU. Since Mid May, Siddha treatment (Kabsurakudineer & drumstick leaf soup) is also offered to patients under a Research Project undertaken by AYUSH, Govt. of India. The results are promising.



Donning and Doffing of personal protective equipment training being rendered to Health Care Workers Doctors, Nurses and ward attendants



# Awareness Activities At SRM@ Delhi-NCR, Sonapat

## A STAFF WRITER

Awareness lecture on Corona Virus was organized in association with the Indian Red Cross Society at SRM University, Delhi-NCR, Sonapat on February 20, 2020. Prof. V. Samuel Raj delivered his talk on Declassifying the Effects of Corona Virus: A Global Health Alarm. He highlighted his talks on Coronaviruses, Origin of COVID-19 and Preventive measures: Coronaviruses are a large family of viruses that cause illness ranging from the winter common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV), Severe Acute Respiratory Syndrome (SARS) and COVID-19. The SARS-CoV-2 capsid is made up by four structural proteins known as Spike, Envelope, Membrane and Nucleocapsid. The Spike protein that forms a sort of crown on the surface of the viral particles acts as an anchor allowing virus attachment, fusion and entry inside the host cells through the binding of Angiotensin Converting Enzyme 2 (ACE2) receptors. In December 2019, Wuhan, the capital of Hubei, China experienced a sudden rise in the cases of serious illness causing pneumonia and death. The outbreak was initiated from the Huanan seafood market (where the live animals are frequently sold such as frogs, bats, birds, snakes, marmots and rabbits) and rapidly infected more than 50 peoples in Wuhan city. He suggested implementation of strict measures such as practicing quarantine, social distancing, avoiding social gathering to reduce the number of COVID-19 cases and use immunomodulators as a food supplements for curtaining COVID-19. SRM University Sonapat organized an exclusive webinar on the topic, "Leadership at the time of COVID Crisis" on May 18, 2020. Our Guest Speakers for the session were, Dr. Theodore Roosevelt Malloch, CEO, Roosevelt Group & Co-Director, iGTB Oxford, School of Transaction Banking, Oxford, UK and Dr. John Samuel, Former Special Secretary, Ministry of Communications, Government of India & Chief Postmaster General. They highlighted their talks on India is facing an unprecedented health emergency with its 130-crore people joining the global lockdown to counter the new coronavirus outbreak. The Covid-19 outbreak cannot match the destruction caused by some of the earlier pandemics such as cholera, bubonic plague,

smallpox, and influenza in terms of human cost, it is expected to be equally devastating for the global economy. When there is a global pandemic, it is important to think beyond the narrow nationalist perspective. Viruses don't know religion, caste or creed; they don't respect national borders. The new coronavirus, or Covid-19, is a truly global pandemic that requires a global solidarity of humanity. Each of us are not only responsible for our own health, but also for the health of others. Our well-being is inherently linked to the well-being of others; hence our happiness is dependent on the happiness human beings across the world. An epidemic anywhere is a threat to the entire humanity. What matters during times of crises is a human solidarity across the world. We need to think and act like citizens of planet earth, because we are more interconnected than ever. It is here that the state, market and the civil society need to work together with a sense of solidarity. We need more love in the times of coronavirus. — love that can help transcend fear. Love provides a healing touch in the face of crises and fear.

The Department of Biotechnology, Microbiology & Biomedical Engineering organized a Webinar on the topic "COVID-19 challenges & possible treatments" on May 19, 2020. The Guest Speaker of the session was Padma Bhushan Prof. (Dr.) Nirmal Kumar Ganguly, Distinguished Professor, SRMUH & Former Director-General – ICMR.

People with no symptoms are either asymptomatic or pre-symptomatic. Some develop symptoms some days or a week later, but they begin shedding the virus and infecting others even before they develop symptoms. Young, healthy people are more likely to have a milder disease than older people and those with chronic illnesses. To detect community transmission, we need to scale up testing, continue testing all severe acute respiratory testing for surveillance, and trace, test and quarantine all contacts of laboratory-confirmed cases, irrespective of whether they develop symptoms or not. In a vindication that government is doing all that it can to make accessible healthcare a reality for India's 1.34 billion, the

**Exclusive Webinar on Leadership at the time of COVID Crisis**

**Guest Speaker**  
**Dr. Theodore Roosevelt Malloch**  
 CEO, Roosevelt Group & Co-Director, iGTB Oxford, School of Transaction Banking, Oxford, UK

**Dr. John Samuel**  
 Former Special Secretary, Ministry of Communications, Government of India & Chief Postmaster General

**18.05.2020 (Monday)**  
**2:30 PM**

Mode: **zoom**

For Registration, Contact: Prof. V. Samuel Raj | Email: deanacademic@srmuniversity.ac.in

**COVID-19: Zoonotics, Vaccines, Drug Discovery**

**A discussion with Prof. Peter C. Doherty**  
 Winner of the Nobel Prize in Physiology or Medicine, 1996  
 Doherty Institute  
 The University of Melbourne, Australia

**19 June 2020 | 9:30 AM**

**Panelists:**  
**Prof. Vishwa Mohan Katoch**  
 (former DG, ICMR & Secretary, Health Research; President, JIPMER)  
**Prof. Virander Singh Chauhan**  
 (EC Chairman, NAAC; Former Director, ICGB & Chairman, UGC)

**Lead Discussant:**  
**Ms. Subhra Priyadarshini**  
 Chief Editor, Nature India

Contact: Prof. V. Samuel Raj (Dean Academics & Director, C4D)  
 Email: deanacademic@srmuniversity.ac.in

**ATTEND EXCLUSIVE WEBINAR ON "COVID-19 CHALLENGES & POSSIBLE TREATMENTS"**

**Date: 19<sup>th</sup> May 2020 (Tuesday)**  
**Time: 2:00 pm**

**Organized by**  
 Department of Biotechnology, Microbiology & Biomedical Engineering

**MODE: zoom**

**www.srmuniversity.ac.in**

**PADMA BHUSHAN Prof. (Dr.) NIRMAL KUMAR GANGULY**  
 • Distinguished Professor, SRMUH  
 • Honorary Senior Research Professor, ILBIST Faridabad

**Exclusive Webinar on COVID 19 INTERNATIONAL PERSPECTIVE**

**Chief Guest**  
**Prof. (Dr.) Mahendra G Patel**  
 Ph.D. FRPharmS FHEA, University of Bradford, UK  
 National Board Member Royal Pharmaceutical Society (RPS)  
 Fellow of Indian Pharmaceutical Association (IPA)

**June 6 1:00 PM**

**Organised by**  
 Department of Biomedical Engineering, Biotechnology, Microbiology & C4D

**Guest of Honour**  
**Dr. Sooraj Ratnakumar**  
 Ph.D. (Cambridge)  
 Founder Scientist  
 Swagene-Molecular Medicine for effective healthcare

**www.srmuniversity.ac.in**

government made a bold commitment to achieve Universal Health Coverage by 2030. The promise covers every aspect of healthcare, from financial risk protection to access to quality essential health-care services, effective and affordable essential medicines and vaccines for all, said Prof. N K Ganguly.

The Department of Biotechnology, Microbiology & Biomedical Engineering organized an Exclusive Webinar on COVID 19 International Perspective on June 6, 2020. The Chief Guest of the session was Prof. Mahendra G Patel, University of Bradford, UK, Royal Pharmaceutical Society and Guest of the Honour of the session was Dr. Sooraj Ratnakumar, Founder Scientist, Swagene-Molecular Medicine for effective healthcare. The Webinar on "COVID-19: Zoonotics, Vaccines, Drug Discovery" was organized on June 19, 2020. Prof. Peter Doherty (Nobel Laureate) from the University of Melbourne, Australia was the Chief Guest. The expert's members present in the panelist were Former DGs ICMR Prof NK Ganguly, Prof VM Katoch, Founder Director NII Prof GP Talwar, Former Director ICGB, Executive Chairman, NAAC, Prof VS Chauhan. The event got a start by a welcome address of

Ms Shubhra Priyadarshini (Chief Editor, Nature India). She invited our honourable Chancellor Dr Ravi Pachamoothoo to give the opening remark. In his opening remarks Dr Ravi Pachamoothoo complimented this platform of webinar for being at the right time with right people. COVID-19, as we all know, is testing the limits of science, healthcare, economies and societies. The global health emergency is affecting 216 Countries and territories. There is no specific vaccine or drug available for the treatment of COVID-19. Worldwide, the coronavirus has already infected over 8.5 million people and killed more than 450,000 as of June 19, 2020. India is in the 4th place with more than 380,000 Covid-19 cases with 12,500 deaths. Billions of US dollars are being spent on discovering new vaccines and drugs to arrest the pandemic. Prof. Doherty spoke on the implications of COVID-19 on global health and economies. On the zoonotic origin of the novel coronavirus SARS-CoV 2, he said shrinking forest area is increasing the exposure of humans to various animals thereby facilitating the spread of diseases faster, as seen in the case of HIV in Africa. Human issues such as population size, pressure on food supplies

and deeply embedded cultural practices could be triggers for zoonotic diseases, he said.

Prof. Doherty said the world should have learnt a lesson from the SARS and MERS outbreaks and started developing broad-spectrum class-specific antivirals for coronaviruses long back in order to be much more ready for the COVID-19 pandemic. He said just as the CEPI (Centre for Epidemic Preparedness Initiative) has platform technologies for vaccine development, there should be a CEPI for drug development.

Prof G.P. Talwar who was also part of the panel had few good news to share regarding the work on MW vaccine which is going on under his vision and leadership by CSIR. He recommended this vaccine to be a part of vaccination program as it is showing encouraging results for longer period of time. This vaccine has approval of FDA and drug authority of India. Subhra Priyadarshini broached important discussions spanning the latest in vaccine development, new drugs, antimicrobial resistance, immunology, genetics and many other burning aspects of the novel coronavirus pandemic. The detailed discussion is available here @ <https://youtu.be/tbYlr-cftJ0>.



## Translational Research Platform based on plant based bio-molecules

### STAFF WRITER

Dr. S. Anandhakumar, Associate Professor, SRM Research Institute has submitted a research proposal entitled “Translational Research Platform based on plant based bio-molecules to synthetic drug molecules for Covid-19: From Early Detection and Synthesis of Conjugated Drugs to Clinical Trials and Mass production of Drugs” against the special call of DST for COVID-19. This proposal was developed to find out the best implementation of appropriate disease control strategies for COVID-19. So far, neither vaccines nor direct-acting antiviral drugs are available for its treatment. However, worldwide many efforts have been directed to develop therapeutic agents against the viral infection, but a limiting factor is the degree of cross-protection rendered by the drugs due to their extensive sequence diversity. In this proposal, various options have been exploited for the listed drugs potency, efficacy, and safety. Most of the therapeutic drug options

listed in the project are based on their earlier reported potential in treating viral infections in human. The major constraints for the lack of commercially available therapeutic agents against these kinds of virus are the lack of interest among the pharmaceutical companies for new drugs. Usually, the demand for drugs or therapeutics lasts only for a limited period and secondly the number of infected individuals is smaller while comparing its global drug market. So, by the time a new drug or therapeutic materials developed, there won't be any patients, thus the pharmacy industry lose its margin. However, this kind of unexpected and critical situation all over the world urges the researchers, technician, physicians, clinicians, pharmacist, etc., to look for emergency medical requirements. Hence, this proposal has been designed on high priority basis to develop therapeutic bio-molecules from plant and synthetic source for target-based treatment of COVID-19 at molecular level.

## Roles of phyto-compounds from poly herbal formulation

### STAFF WRITER

Dr. R. Pachaiappan, Associate Professor, Dept. Bio-Tech has submitted a research proposal to DST entitled “Roles of phyto-compounds from poly herbal formulation against the Coronavirus (CoV2) life cycle involving proteins” This proposal is mainly focused on the Coronaviruses (CoVs) belonging to the positive-sense RNA viruses family which causes human illnesses ranging from the common cold to severe and lethal respiratory disease. There are currently no direct treatments for these viruses, nor is there a vaccine which induces broad protection from infection. However, several stages in the virus lifecycle are promising targets for therapeutic intervention. Cell entry is mediated by the large glycoprotein spike, which binds to host receptors and mediates fusion of the viral and host membranes. Coronaviruses, whose genomes are several times larger than other positive-strand RNA viruses, encode a unique proofreading exoribonuclease

(ExoN) in nonstructural protein 14 (nsp14-ExoN) that is distinct from the nsp12- RNA-dependent RNA polymerase (nsp12-RdRp). Expression of the viral structural proteins involves the RNA synthesis complex carrying out discontinuous strand synthesis to produce a nested set of viral mRNAs with truncations of the 5' open reading frames. The processing of the glycoprotein spike requires the protease. The immune-modulatory effects of selected herbal formulations or botanicals containing compounds will be evaluated in silico against the proteins that are involved in several stages in the Coronavirus life cycle. The proposed studies will illuminate novel targets for antiviral therapy. The immune-modulatory hydro-alcoholic poly herbal formulation will be done and thorough screening of phytoconstituents of botanicals will be done by using GC-MS, LC-MS and LC-MS/MS. The active compounds will be studied for the interactions of Coronavirus lifecycle involved proteins like glycoprotein spike, RdRp and

nsp14-ExoN, and protease for processing virions in silico. This proposed research will define determinants of Coronavirus fidelity and fitness, identify new targets for antiviral inhibitors, and will lead to new strategies to develop antiviral therapy. The specific aims are: 1. Chemo-profiling of immunomodulatory novel poly-herbal formulations which will elucidate the potential antiviral compounds; 2. To determine the compounds from poly herbal formulation with the viral lifecycle involved proteins such as spike glycoprotein, RdRp and nsp14-ExoN, and protease for processing virions in silico. We will use highly accurate physics-based computational platform such as Schrödinger software to examine the types of interactions with viral proteins and also will quantitatively measure binding affinity. Finally, these studies will establish new tools for the perceptive study of CoV replication and fitness, and will define new vulnerabilities in CoVs that can be targeted by viral inhibitors.

## Emerging trends and challenges in advanced research areas of science and technology

### STAFF WRITER

Amidst the COVID-19 crisis, a webinar series titled “Emerging Trends and Challenges in Advanced Research Areas of Science and Technology”, was organized by Directorate of Research, SRM IST recently. About 19 eminent researchers from different parts of the world shared their research outputs through the webinar series. The webinar series ushered a diverse gathering of academicians, students, researchers, and industry experts together and discussed the progress and advancements in various fields, such as health sciences, material sciences, intellectual property management, “how to write a research proposal”, energy, waste management, etc in the period of COVID-19. This webinar series was inaugurated by Prof. Sandeep Sancheti, Vice-Chancellor, SRM IST and introduced the first speaker, Prof. M. Ashok kumar, Assistant Deputy, Vice-Chancellor International, University of

Melbourne, Melbourne, Australia and Editor in Chief, Ultrasonics and Sonochemistry (Impact Factor: 7.3). Prof. Ashok kumar delivered a talk on the importance and various applications of ultrasound and how to explore and expand this area of research into food and bio-processing. On the second day Dr. Dhruva J. Biswas, Raja Ramanna, Fellow Former Head Laser & Plasma Technology Division, BARC, Mumbai shared his insights through his lecture on “A glimpse of the laser and its application on mankind as one of the major inventions of the 20th Century”. Prof. W. Choi, POSTECH, South Korea, Advisory Board member of Energy and Environmental Science Journal (IF: 33.25) discussed about solar energy based hydrogen economy in detail. Dr. R. Brakaspathy, Former Secretary, SERB-DST gave his suggestions on How to write a Research Proposal. Dr. V. Subramanian, Chief Scientist, Head Professor—AcSIR, Centre for High Computing

CSIR-CLRI, Chennai and Prof. Koustav Ganguly, Institute of Environmental Medicine (IMM), Karolinska Institute, Sweden gave lectures on “repositioning of drug for SARS-COV-2 using molecular modelling methods and Known unknowns” and “unknown unknowns” of COVID-19, respectively, which are of utmost importance given the crisis situation. Further, the Emerging Trends in Healthcare – Infection and multidisciplinary approaches to address the challenges was discussed on the 7th day of webinar series by Prof. A. Subrahmanyam, Department of Physics, IIT Madras, Chennai. The next two days consisted talks related to energy and environmental remediation. Prof. C. T. Aravindakumar, Pro Vice-Chancellor, Mahatma Gandhi University, Kerala who elaborated on Fate of Emerging Pollutants in the Environment followed by Dr. SSV Ramakumar, Director (R&D), Indian Oil Corporation Limited, R&D Centre, Faridabad on Hydrogen

as future fuel. The 10th day of webinar series comprised of detail discussion on the Heath technology assessment by Dr. M Muniyandi, Scientist-D & HoD, Dept. of Health Economics, ICMR-National Institute for Research in Tuberculosis, Chennai. Prof. A.B Pandit, Vice Chancellor, Institute of Chemical Technology, Mumbai gave an exclusive lecture on cavitation transformations, opportunities and challenges. In the following day, status of municipal solid waste management in India was explained by Dr. Rajkumar Joshi, DST. On the 13th and 14th day of webinar series, Dr. Tata Narasinga Rao, ARCI, Hyderabad and Prof. M. S. Ramachandra Rao, IIT Madras, discussed the field of material chemistry including energy materials and development of Diamond technology respectively. The webinar series on the 15th day was conducted in collaboration with ACS publications and the presenter was Prof. Prashant Kamat, University of Norte Dame, Editor in chief of ACS Energy Letters (IF: 16.33). The talk was on how to prepare effective tables of content graphics and the participants

were provided with a certificate from ACS Publications. A clear and detailed insight on dissecting the intracellular signaling and fate of a DNA nanosensor by super resolution and quantitative microscopy by Prof. Francesca Cavalieri, Vice Chancellor Senior Fellow/Associate Professor at RMIT University, Melbourne, Australia, Editorial Board Member of Ultrasonics Sonochemistry with the Impact factor 7.3 was given on the 16th day of webinar series. The next talk was by Dr. S. SubashBabu, MBBS, Ph. D, Scientific Director, National Institutes of Health NIRT Center for Excellence in Research NIRT, Chennai on Tuberculosis basics: understanding TB and the immune response. Finally, Dr. H. Purushotham, Chairman & Managing Director, National Research Development Corporation, DSIR Ministry of Science and Technology Govt. of India, New Delhi gave his views on IP and Innovation management in academics. So far, the webinar series have used the expertise of eminent scientists with fruitful scientific discussion, collaboration initiatives amongst the researchers and future opportunities for joint research proposals.



## Monitoring of community waste water for early signaling the spread of COVID-19 in Chennai City

### STAFF WRITER

Dr. Paromita Chakraborty, Associate Professor, SRM Research Institute has received an international project titled: "Monitoring of community wastewater for early signaling the spread of COVID-19 in Chennai City" supported by the Swiss Agency for Development and Cooperation (SDC), Swiss Cooperation Office India, Embassy of Switzerland, New Delhi. The objective of this project is: (1) To track the SARS-CoV-2 virus in the wastewater in Waste Water Treatment Plant (WWTP) and discharge points, in order to have information on the community viral load. This should serve as an early warning system for health surveillance. (2) To check the spread from WWTPs and direct discharge points, map the presence of the SARS-CoV-2 virus in two locations downstream of Buckingham Canal which meets the Cooum River. Without a vaccine and

without herd immunity to combat the spread of SARS-CoV-2, a highly populated country like India will be requiring constant vigilance to contain infection hot spots. When people are not sure whether they are infected or not, an intervention of real-time community sewage detection can be taken as early as possible to restrict the movements of that local population, working to minimise the pathogen spread and threat to public health. Before patients show any symptoms and the disease is diagnosed clinically, there is a genuine reason to suspect evidence of the virus in a city's wastewater, even before the residents of that city have been tested. This project is being jointly implemented by SRMIST, The Energy and Resources Institute (TERI), New Delhi and Mu Gamma Consultants Pvt Ltd (MGC), Gurugram. We aim to monitor wastewater from treatment plants, sewers and freshwater bodies of river Cooum.

## COVID-19: Here To Stay...or not?

ARPITA RAVI  
MANOJ VAMSEE

The novel coronavirus (nCoV), a strain of virus previously not identified in humans is causing a worldwide panic due to its ability to spread fast and prove fatal in many cases. With a global emergency declared, it is no surprise that people everywhere are on full alert, wearing masks and carrying sanitizers. Currently, 84 countries are affected, with China, South Korea and Italy taking the top spots. With the number of those infected increasing by the day, one wonders; will this become the plague of 2020?

India has also been hit with the virus, with many people testing positive in Delhi, Rajasthan, Kerala and Hyderabad. Airports have increased security and have commenced screening all the internationally arriving passengers. Many schools across the country have declared holidays, and students giving the board exams are now sanctioned to carry a mask and a hand sanitizer with them. Many laboratories are working



*Thanks to social media, awareness has increased, with preventive measures being taken*

on developing vaccines for the virus, with many other labs going to be established for the same. India started sending funds to open a lab in Iran, to test Indians before they come back into the country. The virus outbreak has brought with it a widespread change in lifestyle, with people being vigilant enough and taking preventive measures. Most of those infected experience mild illness with mundane symptoms such as fever, cough and cold, but recover. It can be severe in

other cases, and the majority of these patients already have an underlying disease. This is the main reason why this disease is fatal for some people. The patients in Kerala have been discharged, giving newfound hope to fellow Indians that the others affected will recover. As of now, with a fatality rate dangling between 2-3%, it does not look like it will be as severe as the earlier plagues seen in the world; but stay safe, wear masks and hope for the best!

## A review through online @ FSH

### A STAFF WRITER

During this challenging pandemic situation where all educational institutions have been shut down, conduct of online classes enhances the learning of the student by engaging them in productive activities. The small advantage for students and teachers at the Faculty of Science and Humanities was that the relevant course materials had been completed and all were only waiting for the start of Model Examinations when news of the full closure came.

Hence for the entire month of April online classes were scheduled for all course cutting across streams. The added feature at the FSH was that the Department of Journalism and Mass Communication delivered Guest Lectures in Journalism courses to students of English Literature at SRMIST's sister institution SRM University, Sikkim. The lectures spanned over a period of two weeks with enthusiastic students from Sikkim braving weather and connectivity issues to sit through every one of the scheduled lectures.

The online sessions at the Kattankulathur campus were conducted to revise unit-wise topics related to all theory courses and procedures

related to the Lab courses, to clarify the doubts raised by the students on specific important topics, to discuss key answer points of important questions in every unit of the syllabus, to conduct reviews of the major project work of the final year UG & PG students and to encourage interaction between the Research scholars and Research Guides.

In order to effectively conduct online classes with respect to the convenience of the faculty members and students, schedule was prepared in three cycles from 06-04-2020 to 30-04-2020. With the complete support and involvement of all Heads of the Departments and all faculty members, the schedule was implemented successfully to provide students the benefit of greater learning. Students who were unable to connect to the online sessions were shared the soft copy of the content delivered by the respective course teachers and encouraged to clarify their doubts to ensure their academic success.

Even though there was network connectivity problem and perceived security threat in using Zoom, students and parents are very much happy about Online Lecturing sessions conducted as it provided the students opportunity to use technology for effective learning.

## Perambalur MP allocates ₹ 1 crore to combat COVID-19 spread

### STAFF WRITER

Chancellor of SRM group of Institutions, Indhiya Jananayaga Katchi chief and Perambalur Constituency MP, Dr. T. R. Paarivendhar has come forward and allocated a total of Rs 1 crore from his MPLADS (Members of Parliament Local Area Development Scheme) fund to combat the spread of coronavirus in his constituency. The allocated amount will benefit the six regions that come under his constituency.

"I wish to allocate Rs.1,00,00,000/- from Perambalur parliamentary constituency MPLADS towards combating COVID-19 detection, prevention, and treatment of coronavirus in my constituency," said the Member of Parliament (Lok Sabha).

The amount is to be divided for all six assembly constituencies in his parliamentary constituency as mentioned below:

1. Perambalur Assembly Constituency - ₹ 40,00,000/- (Rupees forty lakhs only)
2. Lalgudi Assembly Constituency - ₹ 10,00,000/- (Rupees ten lakhs only)
3. Manachanallur Assembly Constituency - ₹ 10,00,000/- (Rupees ten lakhs only)
4. Thuraiyur Assembly Constituency - ₹ 10,00,000/- (Rupees ten lakhs only)
5. Musiri Assembly Constituency - Rs 10,00,000/- (Rupees ten lakhs only)
6. Kulithalai Assembly Constituency - Rs 20,00,000/- (Rupees twenty lakhs only)

"These funds will be utilized effectively for the purchase of personal protection equipment kits for the medical personnel, ICU ventilators, face masks, gloves, sanitizers, and any other medical equipment recommend by the Union Ministry of Health and Family Welfare," he added.



# SRM AP student developes Face Shield 2.0

## STAFF WRITER

During the unprecedented crisis, when the world is slowly falling into despair, the talented students of SRM University- AP are using the time for brainstorming and innovation. It is believed that a safe face shield is the need of the hour for people to valiantly engage in their work without being infected by the Coronavirus. Attesting the signs of a true researcher, P. Mohan Aditya, a 2nd - year Mechanical Engineering student, represents the future generation well by developing a highly useful face shield that costs less than a plate of snacks.

Mr. Aditya has named it "Face Shield 2.0". The face shield is very lightweight, easy to wear, comfortable yet durable. It protects a person's entire face from hazards with a thin layer of transparent plastic film that serves as an outer defence. It is a piece of protective equipment to guard the face against exposure to potentially infectious materials. This face shield is biodegradable as the headband is made of cardboard (paper) which is 100% degradable material and the plastic can be reused.

The Face Shield 2.0 was manufactured using the CNC (Computer Numerical Controlled) machine through which Aditya designed a headband, and the shape of the transparent plastic film was created using CAD (Computer-Aided Design)



Student Mohan Aditya with his face shield

software. "I gave this CAD model as an input to the CNC machine. Now the CNC machine software analysed the CAD model and started to cut the cardboard and transparent sheet according to the drawing provided as an input. Thus, I managed to bring down the production time for manufacturing and assembling the Face shield in less than 2 minutes," explained Aditya. A 3 Ply Corrugated Cardboard Sheet had been used in making the headband so that the headband becomes durable, comfortable and lightweight. The Bursting Strength of the Cardboard sheet is 16kg/sq.cm. A thick 175-micron transparent plastic sheet has been placed over the headband to protect the person against the virus. This also forms a barrier that keeps people from easily touching their faces. The transparent film also helps in allowing the visibility of facial expressions and lip movements



Face Shield Inaugural; Education Minister Adimulapu Suresh, MP Nandigam Suresh, SRM University, AP Student Mohan Aditya, University PRO Venugopal

for speech perception. The other innovative features of the face shield are - a cushioning type of structure has been attached to the headband so that the person wearing it for a long time does not get strained. This structure helps the person to wear the face shield comfortably. By providing the elastic band to this face shield, any person with different head circumferences can wear it easily.

Wearing this 'Face Shield 2.0' will help the police, medical personnel, municipal workers, people working in sanitizing department, people working in the essential goods sector by not getting infected by the virus. It can also be used by virus-infected patients so that the chance of spreading the virus to a healthy person can

be decreased. Moreover, several lakhs of students of schools, colleges and universities could use the Face Shield 2.0 when they come back to the educational institutions after the lockdown is lifted.

This Face Shield prepared by Mohan Aditya was unveiled at the Velagapudi Secretariat, where the student was seen wearing the Face Shield and preparing them. The Sophisticated Corona Face Shield was handed over to Adimulapu Suresh, the Minister of Education, Andhra Pradesh, and Nandigam Suresh, MP from Bapatla district of Andhra Pradesh. The masks were circulated among the police and paramedics, who appreciated Mohan Aditya for this initiative. The management of SRM AP applauded the

research work of Mohan Aditya, praising his new and inspiring invention that is useful to the society. Dr. P Sathyanarayanan, President, SRM University-AP, and Prof. D Narayana Rao, Pro Vice Chancellor, SRM University-AP, celebrated the commendable intelligence of the student and congratulated him for developing the face shield using new technology.

Mohan Aditya always wanted to make a difference. So, when he read in many articles and newspapers that there is a huge shortage of the PPE (Personal Protective Equipment) in the world, the idea of making a face shield crossed his mind. "I thought to make a face shield which is 100% biodegradable, low in cost and also gives protection to the facial area and associated mucous membranes (Eyes, Nose, Mouth) which are the possible entries for a virus to infect people," said Aditya.

Mohan Aditya wants to be a successful engineer in life. He is very passionate about making useful gadgets. His previous endeavour with his team successfully ended up in making an Electric bicycle by using a 24V 250Watt DC motor powered a 12V and 12Ah battery. At present, they are working on the retrofit of an old IC Bike into brand new Electric Bike. Our young engineer P. Mohan Aditya truly one of those people whom the future world can rely upon.

## SRM AP faculty designs a cost-effective shield against Coronavirus at ₹ 20

### STAFF WRITER

Dr. Panchagunula Jayaprakash, Assistant Professor, Department of Mechanical Engineering, has designed a FACE SHIELD embedded with 3D printing technology. During this pandemic

that has led to an unprecedented global crisis, this face protection devised to protect users from the Novel Coronavirus, is made available at the minimum rate of Rs. 20 per Face Shield. This face mask alleviates the limitations of the regular masks currently

used by doctors, policemen, and journalists. The regular masks barely cover the nose and mouth, whereas the Face Shield will be able to protect the eyes, mouth, nose, and ears so that one cannot get infected by the virus. Some of the medical

and police personnel who use the N95 masks suffer from facial irritation, making the Face Shield a comfortable and more effective alternative for all government officials on CoVID duty. "While manufacturing the Face Shield, 3D printing technology is used for designing a headband, upon which a 100 micron thick transparent plastic sheet is attached to ensure superior protection against the virus. It prevents air, dust, and liquids that are contaminated to come in contact with people. Also, there are no probable side effects on using the mask. If the government approves of its marketing, the face mask can be distributed among the public to prevent the widespread of Novel Coronavirus", says Dr. Jayaprakash. The management

of SRM AP, Andhra Pradesh applauds Dr. Jayaprakash on designing the mask after relentlessly working on it for several days. Prof. Narayana Rao, Pro Vice-Chancellor of the University, has written to Adimulapu Suresh, Minister of Education, Andhra Pradesh, and Allakalikirishna Srinivas, Deputy Chief Minister of Andhra Pradesh, Minister for Health, Family welfare and Medical Education, Andhra Pradesh, highlighting the importance of the facial cover and the many ways it can be regarded as a boon to the society as a whole. He said that the Face Shield would be beneficial to millions of students who would be attending regular classes once the educational institutions reopen.



Dr. Panchagunula Jayaprakash designs an improved alternative to N95 masks

“... there are no probable side effects on using the mask. If the government approves of its marketing, the face mask can be distributed among the public to prevent the widespread of Novel Coronavirus..”





## SRM Hospital cures with Allopathy & Siddha medication in five days

A STAFF WRITER

Thirteen Coronavirus patients admitted at SRM Medical College Hospital and Research Centre, Kattankulathur have been successfully treated with the help of Allopathy and Siddha medication in five days. The treatment was done in association with National Institute of Siddha, Tambaram. This was announced at a press conference held at the hospital premises. Present for the meet were Pro Vice Chancellor (Medical and Health Sciences) Dr. Lt Col. A. Ravikumar Dean Medical Dr. A. Sundaram, Medical Superintendent Dr. K. Thangaraj, General Manager Mr. A. Vijaykumar and Director, National Institute of Siddha, Tambaram Dr. R. Meena Kumari. Among those admitted 10 of them have been discharged while 2 are still under hospital observation. Along with the prescribed government medication, the patients were also administered kabasurakudineer. Those discharged have been asked to consume kabasurakudineer three times a day along with the prescribed Allopathy medicines. Among those treated was a high risk patient Ramachandran. This 63 year old male patient had recently undergone a heart surgery and also has diabetes and asthma. He has been cured of coronavirus and is to be discharged. Everyone had

responded to the treatment well and have been cured of Coronavirus in five to seven days. Speaking at the press conference held at the hospital, Pro Vice Chancellor (Medical and Health Sciences) Dr. Lt Col. A. Ravikumar said, "Our government has approved and allowed us to treat patients. Four wards have been prepared for the same. Everything has been sterilised and prepared well. Our staffs are also prepared to battle this disaster." "This combined treatment was done on a trial basis and in agreement with the patients," he added. Director, National Institute of Siddha, Tambaram Dr. R. Meena Kumari said, "In five days we have been able to treat and cure patients. We did this as a study and have succeeded. Apart from the Government approved treatment we included kabasurakudineer." Medical Superintendent Dr. K. Thangaraj, "We did this combination approach with the help of National Institute of Siddha, Tambaram. The treatment has been effective and the patients have all responded well. Now we will keep monitoring those who have discharged as well so make sure that there is no relapse of the virus." The patients thanked SRM Medical College Hospital and Research Centre for the treatment. Our official website for reference – [www.srmist.edu.in](http://www.srmist.edu.in)

## COVID19: SRM's NSS unit donates food for civic workers in Minjur village

STAFF WRITER

The NSS Unit 3 of SRM Institute of Science and Technology, Kattankulathur cooked and served breakfast and lunch to the conservancy workers in Minjur village, Ponneri Taluk, Thiruvallur District recently.

While the entire medical community is battling to help people cope-up with COVID19, the conservancy workers are almost forgotten. This small group has been working tirelessly in keeping our streets and roads clean.

This community in Minjur village has been working rigorously as the Government of Tamilnadu declared Thiruvallur District as Red Zone recently. Most of them were not getting meals and to help them, the NSS unit of SRMIST provided food packets to Municipality workers for breakfast and lunch. This was done with the help of the local volunteers. Food was prepared with the help of youngsters from



the village, who also volunteered to regulate the public visiting marketplaces, common places, ration shops in order to maintain social distancing.

This was done after acquiring proper permission from police personnel and district management.

The team was led by program officer Mr. Inian and Mr. Senthilraja with the guidance of Dr. T. Rajasekaran, NSS Program coordinator. They were supported

and directed by SRMIST's Registrar Dr. N. Sethuraman and Director (Engg and Tech) Dr. C. Muthamizhchelvan.

The NSS unit in SRMIST is involved in various activities towards fighting this deadly Coronavirus. This includes conducting awareness campaigns with slogans and posters circulated in social media, taking a pledge to ensure social distancing and be safe from being affected by this pandemic.

## Reaching out to villages in Chengalpattu

STAFF WRITER

SRM group of Institutions, under the patronage of its Founder Chancellor and Perambalur MP Dr. T. R. Paarivendhar distributed 1000 packets of relief materials containing rice, wheat, dhal and other groceries worth Rs.5 lakhs to the needy people

of its 8 UBA adopted villages through the Chengalpattu district administration. In an event held at the District Collector's office, District collector, Mr. John Louis IAS, in the presence of Ms. Priya, DRO, Mr. Selvam, RDO inaugurated the token distribution for 30 households of Anjur village. The event was

attended by Project director Mr. Sridhar, Director of Hotel Management of SRMIST Dr. Antony Ashok Kumar and SRMIST's Associate Director & UBA nodal officer Dr. V. Thirumurugan. The rest of the relief items will be distributed to the people with the help of volunteers.





# SRMIST In Global SDGs Ranking For 2020

## STAFF WRITER

SRMIST participated in 4 out of 17 SDGs in THE (Times Higher Education) Sustainable Development Goals (SDGs) Impact Ranking for Universities in 2020. Totally 800+ International Institutions, and 30 Indian Institutions, participated in the SDGs Impact Ranking 2020. With 46.7-61.4 points, SRMIST ranked in 400-600 range worldwide.

SRMIST — THE SDG rankings include, SDG6: Clean Water and Sanitation ranked 51st in the world and 6th in India, SDG7: Affordable and Clean Energy ranked 100-200 in the world and 9th in India, SDG11: Sustainable Cities and Communities ranked 301-400 in the world and 7th in India, SDG17: Partnership for the goals 101-200 in the world and 3rd in India. THE overall Impact ranking 401-600. SRMIST has scored higher points among the participating institutions in India rankings.

In subject wise rankings SRMIST had the following rating: for Clinical, Pre-Clinical & Health 601+; Engineering & Technology 801+; Computer Science 601+ and THE World University Rankings at top 1001+ by 2020. For more information please visit [www.thewur.com](http://www.thewur.com). Prof.

SRM IST – THE World University Impact Ranking 2020				
SDG's	India Ranking	World Ranking	SDG's points	Overall
<b>SDG 6: clean water and sanitation</b>	6	51	59.1	46.7–61.4
<b>SDG 7: Affordable and Clean Energy</b>	9	101–200	48.4–62.3	46.7–61.4
<b>SDG 11: Sustainable cities and communities</b>	7	301–400	33.4–46.7	46.7–61.4
<b>SDG 17: Partnership for the goals</b>	3	101–200	70.7–80.6	46.7–61.4

Kantha D. Arunachalam, Dean, Center for Environmental Nuclear Research (CENR), said “In addition to the existing 10 Centre of Excellence (CoEs), SRM will create CoE in areas that address critical issues around disciplines like the Environment and Sustainability Centre. CoE’s primary objective is to pursue an interdisciplinary approach to the study of sustainable systems, alignment with the concepts of engineering, social science to establish action-oriented policies related to long-term environmental issues”.

SRM has a long-term commitment to water conservation and clean sanitation

that SRM will reduce water use by 15 percent by the end of 2022. SRM has implemented air quality monitors to minimize emissions and help mitigate climate change impacts, to minimize GHG emissions to meet all Indian goals. SRM conducts more than 20 sustainable programs in and around the campus in association with Unnat Bharat Aayan, Pond Restoration, Swachh Bharath, NSS, Tree Planting Campaign, Environment Club, Lake Clean Up (Keelkattalai lake), Earth Day and Environment Day celebrations every year by raising awareness of sustainability among students, faculty, and

public by Dr. Thirumurugan, Associate Director, Campus Life and Dr. Rajasekaran, SRMIST - NSS, Coordinator.

SRMIST’s. THE Impact ranking is a pioneering initiative to recognize universities globally for their social and economic impact based on the United Nations’ Sustainable Development Goals. The ranking is done with THE SDG Impact Dashboard which offers a benchmarking of all performance indicators against peer group and an analysis of the strengths and weaknesses of the institution.

## The World Environment Day 2020

### SURIYA PRAKASH

World Environment Day (WED 2020), observed every June 5, is one of the biggest days of recognition for encouraging people worldwide to save and protect the environment from different challenges the world is facing today. The theme of World Environment Day 2020 “Celebrate Biodiversity” was celebrated at SRMIST, Kattankulathur but due to COVID19 pandemic it was conducted entirely through online mode with the following events. WED 2020 included four awards, nine competitions, and three workshops were conducted. The WED 2020 was a Zero budget program

### AWARDS

1. SRM Green Guardian Award
2. SRM Green Ambassador Award
3. SRM Phoenix Project Award
4. Strategies In Revolution Green Award

### COMPETITIONS

1. Awareness video / Short films
2. Eco building - zero energy (student)

3. Best Environment Research – E poster
4. Slogan / Poetry Competition
5. Nature’s Candid - Best Phone Photography
6. Power In-sight (Essay competition)
7. Green to Heal - Cooking competition
8. Online Zoom Debate
9. Zoom environmental audition on best practices – for kids

### OTHER ACTIVITIES

- Workshop 1: Demonstration on Soap making
- Workshop 2: Demonstration on Terrace Gardening
- Workshop 3: Demonstration of Prana-yama

At the celebrations via Zoom, Dr. Kantha Deivi Arunachalam, Dean-CENR given the welcome address, followed by event reported by Sujith. R, Faculty, SRM MCH&RC. WED 2020 presidential address given by Dr. Sandeep Sancheti, Vice Chancellor, SRMIST who announced the SRM Green Guardian Award; and felicitation by Dr. N. Sethuraman, Registrar,

SRM Green Guardian Award

Celebrating Environment Day

Nature's Candid - Best Phone Photography

Staff category Winner - S Lora

Student category Winner - Sarthak Chawla

Soap making Workshop

Terrace Gardening Workshop

Prana-yama Workshop

SRMIST who gave away the SRM Green Ambassador Award. SRM Phoenix Project Award was announced by Dr. Kantha Deivi Arunachalam, and Strategies In Revolution Green Award were announced by Dr. K. S. Lakshmi,

Dean, SRM College of Pharmacy. Followed by the awards programme, the coordinators announced the prizes for the competition winners. A total of 7 awards and 28 prizes were given away to participants.





## SRM student develops realtime Corona info tracker

### STAFF WRITER

Just when Coronavirus has taken the world by fear, a student of SRM Institute of Science and Technology, Kattankulathur has come up with an app that provides live information on the virus.

The app named, CoronApp, was developed by Anupam Tiwari, a student of SRMIST, who is now an exchange student doing his startup semester in mechatronics (electrical engineering and computer science - EECS) at UC Berkley. He along with his teammates came up with this idea.

Speaking about the app, Anupam said, "With the Coronavirus fear at a peak, I thought having a proper app containing all information about the same will be helpful."

He created a prototype overnight and pitched it to his friends, who loved the idea and decided to work on it with him.

CoronApp for mobile browsers, now available, allows users to click on red dots on a map to get updates on virus cases.

It integrates COVID-19 data from Johns Hopkins University, the Centers for Disease Control and the World Health Organization (WHO), and a Twitter feed provides the latest curated news.

"The process was tiresome," he said and added, "When we were developing this application, to begin with, there were no other similar applications. There were only websites that provided chunks and chunks of information. We spent sleepless nights and massive brainpower on this.

We gave ourselves one week because time was sensitive. In the end, everything was worth it." Talking about the app, he further explained, "We wanted to create a platform that had all the information one should know about the Coronavirus; from statistics to basic precautions, and one can also input information manually. The app is updated in real-time as it is powered by data provided by the CDC and WHO." Asked about how their app is different from the ones that already exist, he responded, "All apps seem to focus only on world data but our application provides people with localized user experience. Using the phone's location, the Geo-map automatically zooms into the user's location on the map, allowing them to see the reports of cases around them. This is the most important information people are looking for, and now, they can find it within seconds."

His team consists of Anushka Purohit, Year 2 from Hong Kong University of Science and Technology (HKUST); Sahil Mehta, Year 1, EECS UCB; Ean Hall, Mechanical Engineering, UCB; Akonkwa Mubagwa, Haas School of Business, MBA, UCB; Manuel Smith, Haas MBA, UCB; Daniel Smith, Software developer and Sevith Rao, Haas MBA, and Doctor.

Dr. T.R. Paarivendhar Founder Chancellor, SRMIST, Pro Chancellors Mr. Ravi Pachamoothoo and Dr. P. Sathyanarayanan, Vice Chancellor Dr. Sandeep Sancheti, Registrar N. Sethuraman congratulated the proud student.

## Chancellor steps in to help constituency stuck in Varanasi

### STAFF WRITER

A total of 56 people from the Perambalur constituency, who had been on a pilgrimage to Varanasi, are now held up there.

After coming to know of this, Perambalur MP Dr.T.R Paarivendhar wrote to Prime Minister Narendra Modi, Uttar Pradesh Chief Minister and Tamil Chief Minister, urging them to ensure security and safety of the 56 stranded people.

Following that, Dr.T.R Paarivendhar called them up telephonically to seek clarity on their situation.

Further, the Perambalur MP also provided Rs. One lakh twelve thousand (Rs. 1,12,000) from his personal fund to the Kasi Sri Kumara Swamy Mutt, where they were staying, for their food expenses.

As most of the stranded people are old and diabetic, he urged them to stay safe and assured them further help in case of emergency.



## WHO nominates SRM Epidemiologist in its fight against COVID-19

### STAFF WRITER

A faculty member of SRM Institute of Science and Technology, Kattankulathur has been named by WHO (World Health Organisation) in its fight against the Coronavirus. Dr. Rajan Patil,



Dr. Rajan Patil

an Epidemiologist and public health expert from SRMIST has been selected by WHO in its global fight against COVID-19 pandemic.

Dr. Rajan is currently serving as an Epidemiologist & Infectious Disease Surveillance Expert as part of the Global Outbreak Alert & Response Network (GOARN).

He is posted in Nepal, but may soon be internationally deployed by WHO in any country based on emergency needs.

During outbreaks, GOARN ensures right technical expertise and skills are available in places where and when they are needed most.

It is a collaboration of existing institutions and networks, constantly alert and ready to respond. The network pools human and technical resources for rapid identification, confirmation, and response to outbreaks of international importance.

WHO coordinates international outbreak response using resources from GOARN.

Dr. Rajan is also the recipient of the Yusuf Hamied Fellowship and has been selected as a Visiting Fellow to Columbia University's Mailman School of Public Health (New York)





An intense discussion in UNGA SOCHUM surrounding a working paper to provide comprehensive solutions

# 'Developing' Boundaries

SADHANA UPENDRAN

Under-developed, developing and developed – these words are traditionally used more commonly in social science textbooks throughout the Indian education system than in English textbooks to teach types of tenses. Through the evolution of humankind, individuals have associated themselves with their birth place, ethnicity and land. Hence, the intuitive enquiry of “where do I belong?” awaits all at the crossroads of time.



The dawn of a new era

## A Usual MUN-day

PRIYANKA SRINIVAS

SHREYA KEWALRAMANI

The SRM Model United Nations (SRMMUN) is the brain child of a cohort of debate enthusiasts sitting in a hostel room, finding ways to bring this conference into their university. Several years later, we are witnessing the 9th edition of SRMMUN. It was organised recently and saw significant participation from several other prestigious colleges across the country.

Inaugurated by the esteemed Guest of Honour Mr. S. Bharath, a 5th generation advocate, a judge and an activist, the Opening Ceremony was graced by a splendid dance performance by the SRM Dance Club- a beautiful blend of western and classical dance forms. Following the festivities, Tejash Bagri, the Secretary General, declared SRMMUN 2020 open and extended his best wishes for the

conference to all participants and observers. The delegates of all the 15 committees, led by the competent Executive Board members, put forth well-researched arguments with in-depth data and statistics and deliberated over the agendas. Across the plethora of committees were discussed several significant and towering issues that plague the global political diaspora. The goal of a Model United Nations is to ensure that the voice of the youth is channeled towards the current world problems in politics, healthcare, human rights, crisis resolution, environment activism and financial balancing among others.

The conference was extremely successful with about 850 participants. To acknowledge the winners, a Valediction Ceremony was held and the conference was declared closed. All in all, the entire conference was an informative window to the current global issues for everyone involved.

Since the advent of the Industrial Era that changed the phase of the earth forever (both literally and metaphorically), countries have been categorically divided on the basis of economy, industrial growth, service and general standard of living after a range of multiple invasions and colonisations in the late 20th century. However, at the grassroot level, how does such ‘labels’ affect the citizens and the economy?

The United States of America has recently removed India from its list of developing countries that are exempt from investigations into whether they harm American industry with unfairly subsidized exports. India has been removed from the list on account of it being a G-20 member and having a share of 0.5% or more of world trade. The move has cast a shadow on India being able to restore preferential benefits

“Through the evolution of humankind, individuals have associated themselves with their birth place, ethnicity and land. Hence, the intuitive enquiry of “where do I belong?” awaits all at the crossroads of time.”

under the Generalized System of Preference (GSP) as part of its trade talks with the USA, as only developing countries are eligible for it. On a personal level, citizens of the developing or under developed countries have an innate sense of inferiority leading them to move to the so-called developed countries in the name of progress. Even

though this could be accounted under individual choices, the influence of such labels on career decisions is an indisputable fact. Even though they are economical terminologies, are they so important that whole countries of people are generalized on the basis of certain categories of progression? The answer, my friend, is blowing in the wind.

## SRM docs remove huge hairball from teen's stomach

STAFF WRITER

Doctors in SRM Medical College Hospital and Research Centre, Kattankulathur performed life-saving surgery on a teen ager by removing a huge hairball from her stomach.

This 16-year-old suffered from a psychological illness called Trichophagia, which is eating hair since childhood.

She ended up having Trichobezoar (a huge ball of hair) being removed from her stomach through laparoscopy.

Although such surgeries have been done twice before in this hospital, this is the first-of-its-kind performed through laparoscopy. Anusha (name changed) came

to the hospital with complaints of abdominal pain, vomiting, and bad breath. She was also unable to eat. Her mother said that she had a peculiar habit of eating hair since childhood. Doctors performed various tests on her and found out that she had a huge hairball about 15×10 cm stuck in her stomach. They operated her immediately through laparoscopy to avoid having a scar on her stomach considering her young age. A team of doctors led by Dr. R. Balamurugan, Deputy Medical Superintendent, and Consultant Laparoscopic Surgeon at SRM Medical College Hospital and Research Centre under the guidance of Dr. A. Sundaram, Dean – Medical, operated on her and removed the hairball

(Trichobezoar) successfully through an hour-long surgery. The doctors inserted an Endobag (a plastic cover used to remove infected material) to takeout the hairball out of her stomach so that it does not contaminate other organs in the abdomen. Speaking about the surgery, Dr. R. Balamurugan said, “The stomach is capable of removing only a few strands of hair but the girl has been habitually eating hair from childhood and it remained in her stomach. She is lucky that the hairball did not enter the intestine which would have caused even more severe problems and could have even endangered her life.” Anusha is now recovering well from the surgery and receiving psychiatric counseling so that



she does not resume her habit of eating hair. The team that operated on her include, Dr. Balamurugan, surgeons Dr.

Periasamy, Dr. Narendran, Dr. Athira, Dr. Sivaamariswaran, Dr. Aswinraja and anesthetist Dr. Saravanan and Dr. Karthik.





Worldwide Gems under one roof

## From France to the doorsteps of SRM

JELSIA ALEX

The Department of Chemistry of SRM Institute of Science and Technology (SRMIST) organised the 4th International Conference on Recent Advances in Material Chemistry (ICRAMC) Recently in association with Alternative Energies and Atomic Energy Commission (CEA), and Université Paris-Est Marne-la-Vallée, France.

More than 300 technical papers were presented in 10 sessions and the presented papers were submitted as full manuscripts for possible publication in technical journals - Materials Today Proceedings (Elsevier). The participants from various countries such as France, USA, South Korea, Taiwan, Chile, China, USA, Japan, Thailand, Turkey etc. contributed for those technical papers that were staged during the conference. The

conference addressed the recent research advancements in the field of Materials Chemistry and new strategies for the progression in new materials for global requirement.

The inaugural function was held at Dr. T.P. Ganesan Auditorium. The Chief Guest, Prof. S. Natarajan from Indian Institute of Science, Bangalore inaugurated the conference and released the proceedings. Prof. C. Muthamizhchelvan, Director (E & T), SRMIST presided over the conference. Dr. D. John Thiruvadigal, Dean of Sciences complimented the invited speakers. Dr. M. Arthanareeswari, Convenor, ICRAMC 2020 welcomed the delegates. Moreover, Dr. K. Ananathanarayanan, Coordinator, ICRAMC 2020 addressed the chief guest and Dr. S. M. Mahalingam, Associate Professor, SRM IST delivered the vote of

thanks. The invited speakers were globally esteemed experts in their respective fields - Dr. Eric Doris, Research Director, Alternative and Atomic Energy Commission CEA, France, Prof. Rajdurai Chandrasekar, University of Hyderabad, Prof. G. Vaitheeswaran, University of Hyderabad, Dr Alberto Bianco, Institute of Molecular and Cellular Biology, University of Strasbourg, France, Dr. Laurent Devel, Service d'Ingénierie Moléculaire des Protéines (SIMOPRO), CEA Saclay, Prof. Jean-Yves Saillard, Institut des Sciences Chimiques de Rennes, Université de Rennes 1, France, Prof. Nicolas Tsapis, Université Paris-Saclay, France, Dr. T.S.N. Sankara Narayanan, UNIST, Ulsan, Republic of Korea, Prof. G. Sekar, IIT Madras, India, Dr. Grégory Pieters, SCBM, CEA, France.

## Mission Smile

TANYA AGGARWAL

They say, "A little bit of joy, mixed with great enthusiasm and happiness, sprinkled with love and kindness makes for a child-happy face." Keeping this very thought in mind, the Initiating Fusion branch of the IT Association of SRM Institute of Science and Technology, Kattankulathur, organized a visit to Patravakkam Panchayat Union Middle School recently.

The members of ITA conducted various exciting and interesting activities for the children present there. To bring out the Picasso in every child, Initiating Fusion arranged a painting competition for the students from classes one to eight. Every student was provided with drawing sheets and paints and the children surprised everyone with their creativity. Apart from this, a story recitation competition also

took place where the students performed equally well. The fun did not end here; various action-packed games like car racing, break the pyramid, and number-sum were played. However, the highlight of the event was the tattoo stall and the excitement of the children on seeing it was palpable. The members also helped the students in decorating their classrooms. At the end, the children attended a health camp that was set up by the team and took a hygiene pledge. The ITA provided the students with lunch, gifts and goodies too.

Ms. M. Safa, President of the IT Association and Dr. V. Thirumurugan, Associate Director (Campus Life) made the event possible with their unparalleled support and are certain to conduct many more of these occasions where they can spread joy and happiness.



Happy faces galore.

## A Glowing International Highlight at ICloT 2020

PRINCE SAMUEL S

The second edition of International Conference on Internet of Things (ICIoT) was organized by the Department of Computer Science and Engineering at SRM Institute of Science and Technology, Kattankulathur. Graced by the hallowed presence of the chief guests, Dr. Vidhyacharan Bhaskar, San Francisco State University and Dr. Raghavendra Belur Jana, Skolkovo Institute of Science and Technology, the conference proceedings, printed in the form of a book of abstracts, were released

on the day of inauguration. Over 300 student groups from different educational institutions showcased their innovations at the conference. Registrar Dr. N. Sethuraman made a hearty commentary on the necessity of the interdisciplinary research, which was corroborated by Dr. Jana in his chief guest address. "This is a chance to see what others are doing and learn from it. It is important to become interdisciplinary, so don't restrict yourself to a particular subject. Expand your horizon and flourish in other fields also", remarked Dr. Jana. This was followed by an innate and interesting

presentation by Dr. Bhaskar on the varied definitions of IoT as well as the wide spectrum of opportunities, characteristics and the current trends in the field of IoT. Dr. B. Amutha, HOD Department of CSE and Organising Chair, ICIoT 2020 thanked the delegates for their painstaking efforts and their presence at the venue.

Technical experts and professionals from all across the globe were invited to partake in the festival of ideas, expertise and a consortium of knowledge. Staying true to its goals of establishing a pedestal

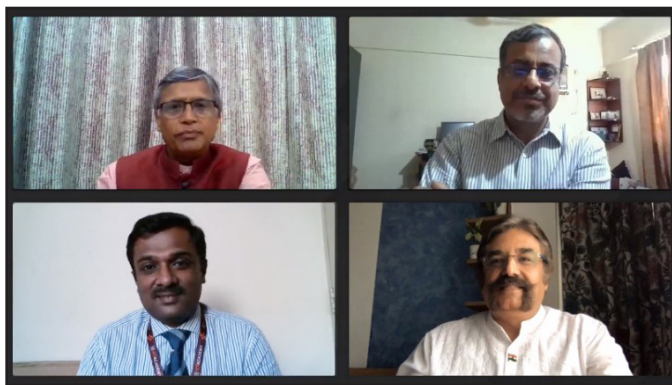


Dignitaries in the dais

for academic and industrial communities to address new trends and challenges in IoT.

The erudition and flow of ideas in the conference was one to cherish forever.





## Certainty is not there but attempt has to be there for sustainable growth

### STAFF WRITER

Dr Sandeep Sancheti, the Vice Chancellor of SRM Institute of Science and Technology addressed 3600 educators from the Higher Education across the Country through an online webinar “SkyCampus” organized by ICT Academy

On his address he stated that, Change is the essential element of life. Certainty is not there but attempt has to be there for a sustainable growth. With reference to education, there

should be more focus on research and experiential learning. By rise of digital interventions, there will be developments in virtual labs, webinars, etc. In our present day education system, the internships were still not up to the mark and project based learning has to develop.

He also endorsed the term “Driving Dozens” referring to the technology for the future. 3D Printing, 5G, Cloud, Biometric eye tracking, Text to speech and vice versa are some of those. He concluded with the fact that the obstacle for change is our own inertia and we should be more open to change. ICT Academy through its SkyCampus platform is organizing this digital knowledge series with an objective of providing industry expert sessions on various topics relevant to the context of today and future. The Season 2 of Digital Knowledge Series was on the theme ‘Leading in a VUCA World’. The other speakers of the season included Dr. Anil Sahasrabudhe Chairman AICTE, Mr Lakshmi Narayanan, Emeritus Vice Chairman Cognizant, Mr Sivakumar CEO ICT Academy, Dr. K K Aggarwal, Chairman NBA, Dr Manish Kumar MD & CEO of NSDC among various Industry Leaders. The Sessions are moderated by Dr B Anubuthambi, President, ICT Academy and have been witnessed by 5000 educators on every day morning 10 am to 11.30 am. The session schedules can be seen at [www.ictacademy.in/skycampus](http://www.ictacademy.in/skycampus)

ICT Academy is an initiative of the Government of India in collaboration with the state Governments and Industries, established to train the higher education teachers and students thereby exercises on developing the next generation teachers and industry ready students.

“ICT Academy is an initiative of the Government of India in collaboration with the state Governments and Industries, established to train the higher education teachers and students thereby exercises on developing the next generation teachers and industry ready students.”

## Milan Colosseum 2020: Sportsmanship and Beyond

### PRAKHAR ALOK CHAUDHARY

Milan Colosseum’2020, the national level sports festival was organized recently in SRMIST, Kattankulathur by the Directorate of Student Affair of SRMIST. Red Bull athlete and motorbike celebrity, Alisha Abdullah inaugurated the fest and inspired the students with anecdotes and motivational words. The grand inaugural was followed by an FMX show, decorously performed by the Red Bull athlete and Russian freestyle motor cross ambassador, Alexey Kolesnikov. The show left a lasting impression on everyone who witnessed it, with one participant from VIT AP, Nikhil adding, “I was fortunate enough to witness freestyle FMX stunts and it made my day. I am really off the pressure for the upcoming matches.”

The tournament commenced with much energy and enthusiasm, having more than 500 participants from 40 colleges to compete and



Slam dunk of success: Participants during the basketball match

win the champions trophy in various sporting events, some of which include basketball, chess, cricket, soccer, badminton and athletics.

The Directorate of Student Affair SRM conducted the event efficiently. The participants with their zeal and excitement competed actively in the tournament which was noteworthy. JLU University, Bhopal smashed a decisive victory in soccer while Loyola College took first place in

cricket. Sathyabhama Institute of Science and Technology bagged the first place in basketball. Deepak Shankar from A.M. Jain College Madras University, won the champion title in chess.

Mr. Samresh, Chief Arbiter, adds with delight, “The level of the players was outstanding. It was as if it were a FIDE rating tournament. I am expecting competitions at this level in the upcoming years”.

## A Moot Battle of Wits

### ARPITA RAVI DRUTHI JITHENDRA

A three-day extravaganza, the State Level Tamil Moot Court Competition, the first of its kind, was held in SRM Institute of Science and Technology recently. A total of 27 teams participated from various parts of Tamil Nadu such as Madurai, Tirunelveli, Tiruchirappalli, Salem, etc. Each team had 3 students; two students were speakers while one was a researcher. The researchers had to take an exam as well. The entire event was held in Tamil, to encourage the students to expand their vocabulary and language skills to communicate better, since the objective of a moot court is to practice developing an argument. They tackled issues such as misuse of DNA (privacy laws), CAA, Section 370, and many other pressing issues faced by Indians today. The panel of judges in the spectacular final round consisted of a retired High Court Justice and highly



Tamil Moot Court finals in Mini Hall-2, TP Ganesan Auditorium.

renowned academicians from various law colleges across Tamil Nadu. The winners of the event were the students from the Tiruchirappalli Government Law College, while the runners up were from the Tirunelveli Government Law College. Awards for Best Speaker, Best Advocate and Best Memorial were also given to the students.

The highlight of the event was definitely the importance given to Tamil, which imparted such confidence to students that they could argue and debate in a language other than English. With this event becoming a huge success, the Law Department hopes to conduct more of such unique competitions.





Dr. Sandeep Sancheti honoring Dr. Riaz Kamel Abbas in the presence of Dr. N. Sethuraman and Mr. Kartar Singh.

## International Day of Women and Girls in Science 2020: Syrian Ambassador visits SRMIST

**B.KAVYASHRUTHI**

SRM Institute of Science and Technology, Kattankulathur, observed the International Day of Women and Girls in Science recently. The chief guest was honorable Dr. Riad Kamel Abbas, Ambassador, Embassy of the Syrian Arab Republic, India. Dr. Abbas delivered an enlightening speech that shed light on how women are equal counterparts in our society. He encouraged the advancement of science and education in pursuit of a better life, especially for women. He also added, "Our (Syria's) aim is to make men and women equal. It is for this reason that we are providing free education

and medicine in Syria." The welcome address was given by Dr. D. John Thiruvadigal, Dean (Sciences). He highlighted the numerous benefits that SRMIST provides to the women of research. Dr. Sandeep Sancheti, the Vice-Chancellor, emphasized that families and institutions must give women the power to grow, insisting that they have to deal with several battles—professionally and domestically. Director (International Relations), Mr. Kartar Singh, pushed the students to step up and work on projects and researches that empower women. Dr. N. Sethuraman, the Registrar, added on how the institution motivates the welfare of its women.

Following this, Dr. Abbas handed out course completion certificates to Syrian graduates of Diploma in English. Research assistant professor, Dr. P Shoba delivered an edifying presentation on 'Women Raising the Hidden Barriers through Science' followed by a session 'Women of Value from Flesh to Bone' by 4th-year B.tech-Biotechnology student and researcher, Ms. Akshaya Narayanan. The event was compelling and educational and earned widespread appreciation. Before the curtain fall, the audience witnessed entertaining cultural performances by SRMIST students.

## India-Norway cooperation Project

**STAFF WRITER**

SRM Institute of Science & Technology is proud to receive funding from the Norwegian Embassy in India and the Norwegian Ministry of Foreign Affairs for the project: "India-Norway cooperation Project on Capacity building for Reducing Plastic and Chemical Pollution in India (INOPOL)".

Dr. Paromita Chakraborty is the Lead Project Investigator of this project. The INOPOL project builds on a well-established and successful partnership between Norwegian Institute for Water Research (NIVA) and expert Indian institutions such as SRM Institute of Science & Technology (SRMIST), Central Institute of Plastics Engineering & Technology (CIPET), Mu Gamma Consultants Pvt. Ltd. (MGC), The Energy and Resources Institute (TERI) and Toxics Link.

INOPOL aims to address the highly interlinked challenges of marine litter, micro-plastics and Persistent Organic Pollutants (POPs). It will investigate the land sources, river fluxes and ocean input of plastic and POPs pollution through a knowledge-based scientific approach that seeks to enhance ongoing

efforts by key stakeholders (e.g. ministries, scientific institutions, NGO's) to reduce pollution in Gujarat State. The project will develop a pilot study that may be used to scale up of efforts at national level later on. Key goals and ambitions are the building of knowledge and capacity of different groups of stakeholders, experts, and civil society to help reduce the releases and impacts of plastic pollution and the 'new' POPs listed under the Stockholm Convention and developed by the Government of India.

Through its outputs and outcomes, INOPOL will contribute to the overall impact of the Norwegian Development Assistance Program Against Marine Litter and Microplastics to prevent or to substantially reduce the scope of marine litter from sources in developing countries. Through its implementation, the project will build capacities that aim at preventing and reducing marine pollution and hazardous waste in India.



## Maha Shivratri 2020 - Cosmic Congregation at Coimbatore

**VAISHNAVI**

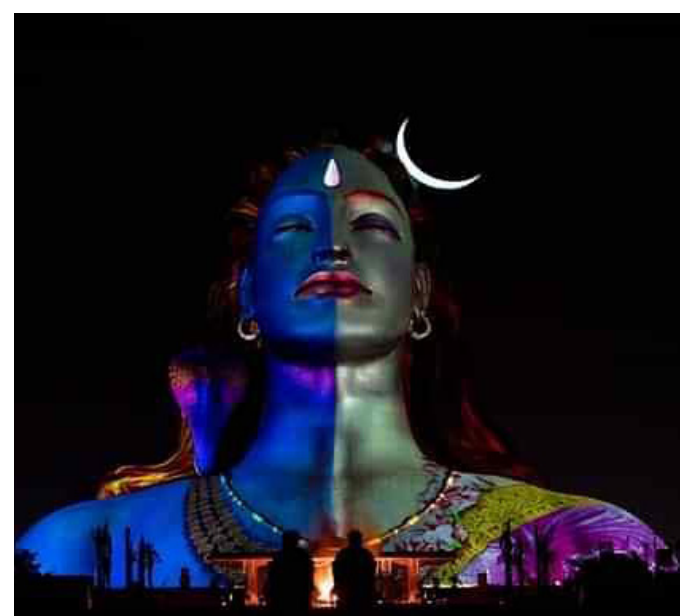
Mahashivratri, the great night of Shiva, is considered one of the most sacred festival nights of India. Mahashivratri is significant because of the immense spiritual benefits it offers due to natural planetary positions. Celebrated recently the "darkest night of the year" saw Shiva devotees immersed in devotion at the Isha Yoga Center in Coimbatore. With Shiva in their hearts and 'Shambho' on their lips, the devotees chanted mantras, fasted and prayed all day. Venkaiah Naidu, the Vice President of India, was the Chief Guest at the celebrations and released the much awaited book 'Death – An inside story'

authored by Sadhguru, Founder, Isha Foundation. Sadhguru welcomed the Vice President to light the Maha Yoga Yagna to symbolize the spread of Yoga through the world.

Sadhguru spoke about how the human system can benefit by staying awake on this night, adding, "The idea of Mahashivaratri is that on this day, the planetary positions, particularly in the northern hemisphere are such that there is a natural upsurge of energy in the human mechanism. This is not about worship, this is not about a particular belief system. This is about enhancing the human beings that we are. It is my wish and my blessing

that this night should not be just of wakefulness but also of awakening."

An eclectic mix of artists that included a Lebanese band, Parthiv Gohil and his troupe, singer Karthik, Sounds of Isha as well as several classical dancers including students of Isha Samskriti and folk artists performed throughout the night. The performances were interspersed with discourses by Sadhguru as well as meditation sessions. Thousands of people participated either in person or through live relay in the much anticipated powerful midnight meditation led by Sadhguru. The Maha Annadanam, which is an offering of food to everyone who visits the Center



on Mahashivaratri, was served to all visitors. Visitors also

received a rudraksha bead and the Sarpa Sutra as prasadam.





Artists posing on the inaugural day of the Khajuraho Dance Festival

## The cultural fusion at hajuraho Dance Festival

NISHANT SAGAR

The 47th Khajuraho Dance Festival was organized by the 'Kala Parishad' under the Madhya Pradesh government from 20th to 26th February 2020. The enthralling event was inaugurated by Dr. Vijayalakshmi Sadho-department of AYUSH and the honorable minister for culture, medical education, Government of Madhya Pradesh. This seven-day long festival was a fusion of youth and experience which paid homage to several dance forms like Odissi, Bharatnatyam, Manipuri, Kuchipudi, and Sattriya.

On the day of the inauguration, acclaimed Kathak and Sattriya dancers Mrs. Uma Sharma and Mr. Jatin Goshwami were awarded the National Kalidasa Honour for the year 2017 and

2018 respectively. Both the artists were bestowed with a shawl and a cash prize of two lakh rupees from the Madhya Pradesh administration.

The eve of 20th February saw legendary performances by Uma Sharma(Kathak), Jatin Goswami(Sattriya) and Meera Das(Odissi). On the second day of the festival Pujita Krishna(Vilashini Natyam), Krishna Mohan Mishra (Kathak) and Lata Singh Munshi(Bharatnatyam) performed memorable pieces. The third day had a powerful line-up with the likes of Shobana Chandrakumar Pillai (Bharatnatyam), Suprava Barve (Odissi) and Anand Shankar Jayant (Bharatnatyam) showcasing their breathtaking talent.

The fourth day continued to move people with captivating dance numbers by Y. Asha Kumari(Odissi), Kshitija Barve(Bharatnatyam) and Ragini Makkhar(Kathak). The fifth day was devoted to the show-stealing duets- a Bharatnatyam duet by N. Srikanth and Aswathy Srikanth, a Veena -Dhanya Mohinoyattam duet by Nair sisters and a Bharatnatyam by Narthaki Natraj. The 6th and 7th day staged renowned performers like Bhadra Sinha, Gayathri Sharma Richa Joshi, Srividya Angara.

Held at two of the most prominent temples of Khajuraho-Chitragupta and Vishwanatha Temple, the festival was a joyous celebration of art and the beauty of human emotions.

“...two of the most prominent temples of Khajuraho-Chitragupta and Vishwanatha Temple, the festival was a joyous celebration of art and the beauty of human emotions.”

## Research Day'20: Igniting Minds

AISHIKI HALDER

Research has always played an essential role in the fields of education, science and business, and has been vital in uncovering truths and discovering valuable information. To encourage all the young minds eager to learn and explore, SRM Institute of Science and Technology organized Research Day recently. The event was graced by His Excellency Daniel Chuburu, Ambassador of the Argentine Republic. Other dignitaries who were present included Dr. T.R. Paarivendhar, Founding Chairman of SRMIST and Prof. Giridhar U. Kulkarni, President

of Jawaharlal Nehru Center for Advanced Scientific Research.

His Excellency Daniel Chuburu stressed on how India and Argentina can help each other in boosting research. “India and Argentina have strong points which can be of use to each other. A strong point of India is its expertise in information technology while Argentina’s strength lies in its high-level knowledge in agriculture,” said the Argentine Diplomat. Prof. Kulkarni said that more women should be involved in research and that better efforts should be made to ensure their participation. Nearly 2500 students, research

scholars and faculty members from the schools of Engineering, Basic Sciences, Humanities and Medical and Health Sciences submitted their abstracts, out of which 932 abstracts were selected after screening by the research committee. Winning students and researchers were felicitated with gold and silver medals to enhance their zeal and enthusiasm. Research Day was pivotal in inspiring many young minds by providing better research opportunities and bringing out innovative ideas that contribute to society, science and technology and promises to return next year.



Research Day Celebration in SRMIST on 28th February in T.P. Ganesan Auditorium

## The Grammys

SRISHTI C.

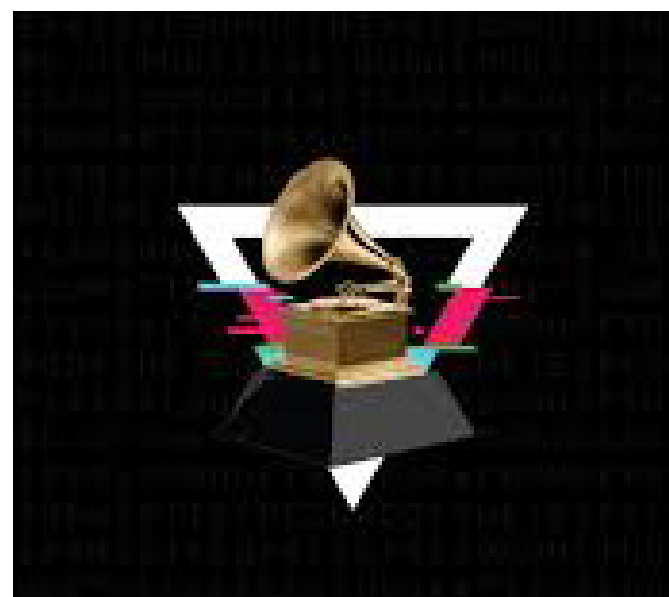
When we hear about the acme of the music industry, the famous Grammy Awards usually strike our thoughts first. The Grammys are held annually to celebrate the peaks of creativity and diversity of various artists in their musical endeavors. The winners of this event are considered as geniuses in their respective genres of music, which they create music and win awards in.

The 62nd Grammys were held recently. As usual, it was a glamorous event, filled with talented personalities and performances. This year, the event was hosted by Alicia Keys, which escalated the hype of the event even further.

The event lived up to the expectations of people. Although a wide variety of artists won many awards, the individual who really stole the show was Billie Eilish, who won several awards this year. Speaking of stealing shows, there was quite

an assembly of performances which were breathtaking. Some of the most iconic performances were by Camilla Cabello, Jonas Brothers, Ariana Grande, Rosalia, Lil Nas X with BTS, Lizzo, Billie Eilish and Tyler the Creator. But the real tear-jerking events were by Demi Lovato who took us along her journey through her rehab with her song, “Anyone”, and Alicia Keys, who performed

a tribute for Kobe Bryant and his daughter. When it comes to winning, most major category awards were won by Billie Eilish, sweeping 5 in total, including album of the year, best new artist, song of the year, record of the year, and best pop vocal album. Considering her age, she broke a lot of records with her wins and made a breakthrough as a force to be reckoned with.



The Grammy Awards





## NCRTMA'20

### STAFF WRITER

The Department of Mathematics of SRM Institute of Science and Technology, Vadapalani, organized and hosted the 4th National Conference on Recent Trends in Mathematics and its Applications (NCRTMA'20) recently. As the name of the event suggests, it is an amalgamation of all developments in the Mathematics field through which interested and expertised scholars can present their findings. In superb SRM fashion, NCRTMA'20 saw participation from across the country and state with over 120 papers during for the event.

The inauguration ceremony was presided by Dr.T. Ravimanickam, Director of the School of Science Tamil Nadu Open University, along with Dr.K. Duraivelu, Dean (E&T) SRMIST Vadapalani. Other members of the dais were Dr.A. Govindarajan,

Professor and HOD Mathematics, SRMIST Kattankulathur, and Dr.V. Thangaraj, Former Director and Head of RIASM University of Madras. Dr.B. Baskaran, HOD Mathematics, SRMIST Vadapalani, proposed the welcome address to the esteemed guests on the dais, highlighting the magnitude of this year's NCRTMA conference and the happenings of previous editions. The Chief Guest, Dr.T. Ravimanickam provided insight on the Gross Enrollment figures of our country, showing the rising interest in the field of Mathematics. Having done a PHD programme in Biotechnology, Dr.T. Ravimanickam substantiated the need for mathematical modelling in research work of all disciplines citing a rather interesting anecdote on the mathematical modelling used by the founder of crude oil.

Dr.K Duraivelu, Dean E&T

further supported these statements by providing various examples in which mathematics proved essential to ground-breaking discoveries. The speakers highlighted how mathematics helps us understand, analyse, and predict the behavior of any system.. The wide range of uses for mathematics allows scientists of any discipline to understand the underlying processes of their research, providing concrete evidence of its existence.

The conference's objective is to provide a space for introducing and updating research trends to further deliberate the significance of mathematics in the modern world. The participants as well as the esteemed guests lauded the successful organization of the conference and expressed their appreciation for the all-round interest in the world of mathematics portrayed by all those present.

## A fashion faux pas of societal norms

### SADHANA UPENDRAN

Don't judge a book by its cover- a phrase we've heard along the course of travel through our life but seldom do we actually incorporate it. We've grown into a society of "first impressions" judging each other's color of skin, texture of hair & sense of style rather than growing to understand one another from the core. Even though beauty is in the eyes of the beholder, the multi-million dollar industry made of cosmetics, skin care, weight-loss, clothes & accessories is the truth of this world.

Even though we're all beautiful

in our own sweet ways, what actually defines one's beauty? Who defines it? Are there any universal standards of beauty? We've talked and debated enough about inclusion and diversity for years now, let's now see the data. Though the concept of color inclusion had risen in the late 20th century itself, beauty brands didn't pay much heed to them till recently. If discrimination based on color was not sufficient, even unrealistic beauty standards were set, primarily euro-centric, a souvenir of colonialism with progress came beauty pageants & according to statistics most of the winners early on were

selected due to their race and the countries they belong to, so much so that some countries were not even allowed to even take part let alone bag the title. But again, with progress came understanding, beauty in diversity was seen evidently in the recent historical win of black women in some of the top beauty pageants dominated by others otherwise.

But clearly crowns and pageants don't define beauty standards, it's our mind set as a society which does. So the next time you catch yourself admiring in front of the mirror, you just redefined your definition of beauty!

## Oscars: A night of fame and Glory

### DRUTHI JITHENDRA MANOJ VAMSEE

"Nothing can take the sting off the world's economic problems like watching millionaires present each other golden statues." -Billy Crystal

A night of anticipation for actors and movie connoisseurs alike, the Oscars act as the ultimate nod a movie can receive from its storyline to its music score. This year's Oscars was special as the Korean movie "Parasite" became the first international Non-English movie to win awards in major categories such as Best Direction and Best Picture.

The movie "Parasite" directed by Bong Joon-ho, is a representation of different classes of society and their ways of life. It follows the life of an impoverished family and their schemes against an affluent family so that the former family can lead a stable life at the expense of the latter family. It perfectly captures the different realms of society. Filled with metaphors, this movie is a pot of gold under the rainbow. Nominated in six categories, Parasite swept through four

of them which included Best Director, Best Screenplay, Best Foreign Language Film and Best Picture while also being nominated for Best Production Design and Best Film Editing.

Joaquin Phoenix winning the best actor for his wonderful portrayal of the Joker and Toy Story 4 winning the best animated film for reigniting the innocence in kids and adults alike were some of the other highlights of the event. Performances from major artists such as Elton John, Billie Eilish and Idina Menzel also added to monumentalise the event. The night was truly one of the biggest nights for some artists while a night of lament for the others.

**“The night was truly one of the biggest nights for some artists while a night of lament for the others.”**

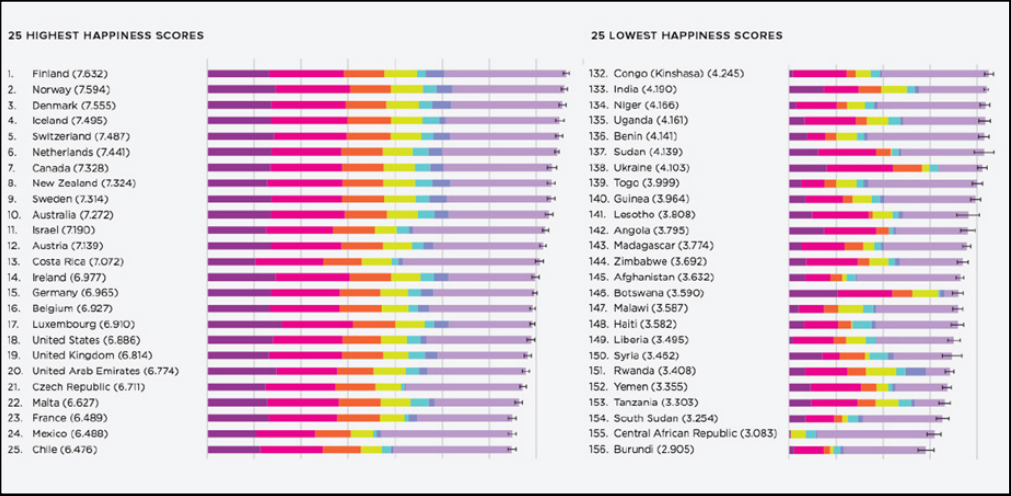


the cast and crew of Parasite on the Oscars red carpet



Billie Eilish performing at Oscars 2020





# Are we happy?

AISHIKI HALDER

Happiness as defined by dictionary is “a state of wellbeing and contentment”. Happy people are more productive which, in turn, leads to a happy nation. Collecting its data from the World Gallop Poll, the UN has been releasing the World Happiness Report since 2012. The Nordic countries have consistently topped this list for being the happiest countries in the world. However, India was last ranked 140 among the 156 countries.

“It has been observed that countries with a better social support system in terms of family and government...”

There are six factors that affect a nation’s happiness: GDP per capita, social support, healthy life expectancy, freedom to make life choices, generosity, and perceptions of corruption. A common misconception is that of a country’s GDP being proportionate with its happiness. Hence, higher prosperity in a nation represents a balance of life where one is neither too rich nor too poor. However, despite the USA’s GDP increasing by over a trillion dollars in the past four years, their rank fell by 5 spots. But in the Nordic countries, citizens are happier to pay higher taxes on clothing and eating out, in return for free public services. It has been observed that countries with a better social support system in terms of family and government have a more satisfied and productive population. Most of the Nordic countries have generous parental leave plans and low-cost education

and health systems for people from all economic statuses. Such support and assistance provides individuals with ample freedom to make important life choices. Contributing to the internal problems might also be the issue of a country having a homogenous or heterogenous culture. The top-ranking countries tend to have tight knit groups of very culturally similar people with many of them enforcing unfavorable immigration and refugee policies. The 2018 happiness report focused on the contentment of the refugees and immigrants of a country and found that a countries social wellbeing and immigrant satisfaction were inter-related. While happiness can be hard to quantify, the World Happiness Report gives a perspective into the current wellbeing of the world. With the average happiness index being 5.38, the world today stands at a precarious position waiting to be saved.



The western wind was wild and dank with foam

# NOT ENOUGH

SHREYA KEWALRAMANI

The character of Laxmi Agarwal that Deepika Padukone portrays on screen in the movie ‘Chhapaak’ is the sad reality of India. Truly, it has awoken the citizens from their slumber to heed the crimes of violence against women. Acid attacks are not unheard of in this country- about 300 cases are reported every year.

At this crucial juncture, we are faced with the ever-pertinent question: are the victims getting justice? The conviction awarded to the offender may vary from ten years in prison to life imprisonment, often bordering on the death penalty. Despite this, a convict in Uttar Pradesh was allowed to walk free after just one month in jail, in complete disregard for the Supreme Court’s ruling. In terms of conviction as per the Indian Penal Code, a lot is left a-begging. The years 2016-17 saw a meagre 25 case completing trial out of a total

of 67 reported cases, while a total of 849 cases were sent for trial in these 2 years. Even when attackers are charged, it can take between 5-10 years for a conviction. Although the State is engaged with providing compensation to the victim, 8 lakh rupees can in no way suffice the agonizing pain, mental disturbance and the multiple surgeries the victims undergo.

Bangladesh saw a decline in acid attacks due to introduction of laws restricting the sale of common chemicals. Despite the presence of similar laws in India, a social experiment reveals that acid is still readily available on the streets. There exists a tremendous bridge between rights and reality. Legislation is the first step, but social change is the need of the hour. Breaking down the cultural norms that encourage these attacks is a greater struggle than rectifying the glacial pace of India’s Judiciary.



In solidarity with our sisters through thick and thin

# Are you a Beachaholic?

VAISHNAVI SINGH THAKUR

Not many backpackers have had the innate pleasure of making their acquaintance with the sea-facing Varkala cliffs- a cheap backpacking destination in Kerala. Tucked away from the rest of the world, in a little serenading corner of its own, I made my own personal journey through serendipity and introspection amidst the hue and clamour of Nature. It takes considerable effort to reach Varkala Cliffs, being located 30 kilometres from Trivandrum- the closest city with an airport, train and bus facility from all cities.

As I rambled across the ravines and the cliffs, I discerned that the North cliff stretched for around two kilometres till a helipad, after which the South cliff began. This promenade is bustling with vibrant cafes, hotels, souvenir and clothes stores, bookstalls, massage parlours and yoga centres all of which face the Arabian sea. While the South cliff is much calmer and serene, I set up camp in North cliff closer to the promenade. Sea has the potent power to trigger a chain of introspection and self-realization within the deepest

echelons of our hearts. The sea has the ability to set me free, to help me dream and rediscover myself- a blissful experience of relaxation, tranquillity and rest. There is a breath-taking world inside the sea, on which can only deign to fathom. The cliff is progressing rapidly in terms of tourism and the half of a kilometre walkway has hostels, resorts and restaurants aplenty. As like all good things, it must come to an end. Trudging back to the monotonous and mundane city lives of yore, I looked back forlornly at the picturesque sea as it beckoned to me one last time to settle into its bosom.



# End of the desert spring

SADHANA UPENDRAN

Sultanate of Oman – a country known for its turquoise blue waters, an expanse of beautiful deserts, camels, frankincense, earthenware and most importantly for its people with a calm and patient demeanor; people who respect themselves and others equally, people who prefer peace over war, people who respect and love other cultures as much as they love theirs, people who loved their king as their father – His Majesty Sultan Qaboos bin Said Al Said. We seldom come across situations in the course of history when a ruler was respected, honored, loved and above all worshipped by his people without being forced to do so. HM Sultan Qaboos was one among them. His reign lasted for fifty glorious years (23 July



Late HM Sultan Qaboos bin Said Al Said

1970 – 10 January 2020) after he took over from his father by executing a bloodless coup amidst the Dhofar rebellion. The growth of modern Oman as a leading economy in the Persian gulf with significant developments in the fields of infrastructure, oil & crude trade, infrastructure and power production are some of his

major achievements within a short span. But the crown jewel amongst his achievements is the 'Foreign Policy'. Nurturing healthy relations with other countries was an utmost priority for Omanis. An ace statesman, he often played an important role in being the harbinger of peace between the west and the Middle East. Perhaps after all this time when we look back into the life of this great visionary leader, his untainted smile and his trust with truth and justice are conspicuous.

A conformist transition of reign to His Majesty Haitham bin Tariq Al Said after his demise in one of the most volatile regions in the world is his greatest victory and hence "Baba Qaboos" will remain immortal in the hearts of Omanis, resident expatriates and everybody else who knew him.



An Infusion Pump: A Biomedical Device

## A Program on Medical Devices, Product Development and IPR.

SRISHTI C

The Department of Biomedical Engineering was established in the year of 2004, and since its commencement, it has always upheld its standards high enough to provide knowledge-based, timely, cost-effective and high-quality services. And they ensure to stay consistent about these standards, by conducting a Faculty Development Program to sustain the best quality service providing system, and to update with times in terms of medical devices. The entrance for the event required a pre-booking at a fee, which included kits for the workshop and refreshments, along with the obvious incomparable presentations and speeches from industrialist, scientific officers, lawyers and patents.

The event started off with introduction to Quality management and Standards regarding Medical Devices by Mrs Rama Venugopal, the Executive Director of M/S Value Added Corporate Services Pvt Ltd, which was followed by a break and a Materiovigilance Program- a pretty descriptive overview, conducted by Dr D. Gandhiraj from Royal Care Super Specialty Hospital, Coimbatore. After the overview, we were given another break, which was succeeded by a workshop

on Patent Writing by Ms S. Nithya, an Advocate and Patent Agent. After which a workshop on Copyright and Designs was supervised by Mr A. K. Balaji, an advocate and senior associate at R K Dewan & Co.

The audience consisted of people from every scientific field possible, engineers, research scholars, entrepreneurs as well as scientists.

The event was the definition of success, with a crowd that was filled with a diverse audience and enthusiastic participants, engrossed purely in learning and acquiring experience, which couldn't have been possible without such knowledgeable and an ineffable group of speakers.

“ The audience consisted of people from every scientific field possible, engineers, research scholars, entrepreneurs as well as scientists. ”

## Engineers without borders win hearts

DIKSHA AVIRAL  
MANOJ VAMSEE

Engineers Without Borders SRM KTR Chapter is a team of students aspiring to avail unprivileged areas in and around Chennai with their innovative conceptions and sustainable engineering projects. EWB-SRM partners with corporate and social organizations to offer development goals from Water Supply, Proper Sanitation and Health to Energy and Education.

EWB-SRM organised 4th edition of SRM Indian Energy

Conference recently. SRMIEC was one of the first energy conferences in India predicated on the guidelines of Model United Nations. It has simulated 5 committees that deals with different areas of energy research namely, 'Continuous Energy Crisis Committee', 'World atomic energy efficiency committee', 'European Council for Energy Development', 'Committee on climate change' and 'India energy forum'. The sustainable development goals are a new and innovative way to achieve a cleaner and greener tomorrow. The conference itself presented a

plethora of ideas, set in a simple village panchayat office. Another effort by engineers without borders was their lake cleanup drive. Throngs of students gathered on the banks of Potheri Lake with resolve and garbage bags, to make the world a better place with rubber gloves and paper masks. The technical team of engineers without borders has been constantly diligent.

These innovative projects, formulated to help people in need, show us that technology is more than just moving machine parts and a series of 0s and 1s.



Lake cleanup drive at potheri lake organized by EWB-SRM.





Greta rallying for action on climate change at a UN summit

## Are the Nobel Prizes noble?

ARPITA RAVI

“It’s not the awards and prizes that add value to one’s work, it’s the work that adds value to the awards and prizes.” If Abhijit Naskar was to be taken as a Gospel, indeed today we would be hanging off a pedestal, hard to fathom. Indeed, among the several erudite scholars who grace the golden hall in Oslo and Stockholm every year, the penchant of the mighty to attract the hydra-headed demon called controversy is askew. Prestigious as those awards may be, the critiques were far and many and dissent of the laureates has never been scarce, with the peace prize facing most of the heat due to its political nature.

The Peace Prize awarded to eminent political personalities like Barack Obama and Aung San Suu Kyi resulted in a political whirlwind which refused to subside. Although many people believed that Obama’s efforts justified the award,

Geir Lundestad, director of the Norwegian Nobel Institute, later disagreed and regretted awarding Obama. Aung San Suu Kyi was under house arrest in 1991 when she was awarded, as the Burmese military refused to allow her to attend the award ceremony. In 2017, rumours of mass genocide committed by the military and legitimized by her, against Rohingya Muslims, an ethnic minority in Myanmar surfaced. The discovery of the DNA structure was shrouded in controversy as Watson, Crick and Wilkins did not acknowledge the contributing work from Avery and Franklin, who had died by the time of the nomination.

Recently, teen climate activist Greta Thunberg and the movement “Fridays for Future” were nominated for the 2020 Nobel Peace Prize. Although Greta has millions of supporters, some critics doubt the legitimacy of her claim. Yet another controversy in 2020, maybe?

### Reporting for Spectrum

- Contributing reports should be confined to a maximum of 250 words and must be written by students only.
- Accompanying pictures must have captions. Pictures without caption will not be published
- Request for coverage in Spectrum by its editorial team must be made well in advance with an accompanying note and the invitation to sridhark@srmist.edu.in
- Coverage of a certain event or receipt of an article does not guarantee publication. -Editor



## 19 Indonesian Universities sign MoU with SRM

STAFF WRITER

Nearly 19 Indonesian Universities signed a Memorandum of Understanding with SRM Institute of Science and Technology, Kattankulathur recently. The delegation consisting of around 30 senior faculty and members of institutions from Indonesia visited SRMIST to have academic tie-ups. The focus of this visit was on IT and Computer Science. The Memorandum of Understanding signed by these universities will facilitate movement of students between two institutes; movement of faculty, scholars and staff between

two institutes; development of joint curriculum, including dual degree programmes; research collaboration in the fields with mutual interest between research staff, departments, and schools of both institutes; exchange and sharing of teaching and academic materials, publications, reference, and other pertinent information.

Speaking at the event, Vice Chancellor of SRMIST, Dr. Sandeep Sancheti said, “Our USP is ‘Semester Abroad Programme’, which will facilitate students to study abroad as part of their curriculum. Apart from that

we are also promoting virtual labs, distance education, and online education mode. These aspects will make the MoU more valuable and interesting. We can also look into jointly publishing research papers.”

Registrar of SRMIST, Dr. N. Sethuraman said, “We have a separate research institute, and SRMIST will be able to offer help in different forms.”

The delegation also visited the various facilities, infrastructure, and lab in SRMIST to know about the facilities provided to students here.

## Pondy Bazaar- Chennai’s latest attraction

ARPITA RAVI

Chennai was abuzz with the introduction of a pedestrian plaza at Pondy Bazaar- the first for the busy metropolitan. The 1.5 km long plaza extends from Thanikachalam Road to the Pondy Bazaar Police Station and was inaugurated by the Chief Minister of Tamil Nadu- Edappadi K Palaniswamy. The Bazaar, once known for its streets with chock-full of vendors selling their merchandise, looked stellar with wide footpaths and ample parking space. This relieved shoppers from the city’s ever-present commotion. The streets of the plaza were scattered with a few benches for everyone to catch a quick break, and play areas were installed for kids to enjoy their day out- on monkey bars and see-saws. The shops that were initially spread out on the streets were asked to shift to the ‘Platform Shop Owners Business Complex’. Started as an initiative for the new

Smart City scheme, services such as free battery-operated shuttle carts and cycle stands were introduced, encouraging environment-friendly practices. The walls were painted with bright murals, giving a cheerful look to the area. Plans to conduct exhibitions and concerts at the plaza are being brought to fruition. Although many appreciated the makeover, some felt that the bazaar did not have the spark it once did- with the hawkers, the streets filled with their voices-

only being drowned by the visitors’ excitement. Furthermore, the issue of maintenance of public space was pointed out. However, officials from the Greater Chennai Corporation mentioned the presence of a contracted cleaning and repair work. Additionally, word has spread across the city about developing a new plaza, due to the positive responses from the current one. The bazaar is a must-visit city hotspot.



An aerial view of the facelift given to the once crowded Pondy Bazaar



# Lohri'20: An Evening of Joy and Splendour

SHRUTI

The Directorate of Student Affairs of SRM Institute of Science and Technology recently organised an event in celebration of Lohri, a Punjabi festival that traditionally marks both the end of the winter season and the beginning of the harvest season. With nothing but immense festive

spirit, students from all across the campus began to flock to the SRM Auditorium Grounds to enjoy what would become an evening full of joy and laughter.

The celebrations began with enthralling dance performances that had the crowd moving. The Bhangra performance certainly enthused everyone present even further. This was followed by Giddha, a folk dance customarily

performed by Punjabi women. No Lohri celebration is complete without a bonfire lit as homage to the Sun gods for the blessing of warmth and soon after the performances, this tradition was also fulfilled. Students then encircled the bonfire and continued to dance as the embers crackled.

Shayaris were uttered and traditional songs were sung

as students ensured that their spirits roared with festivity. The energy in the air was electric as everyone sang and danced until they were sore. In the spirit of Lohri, boondi prasad was distributed to all those who attended. The festivities ended by 8:30 p.m., and everyone dispersed with reluctance. Without a doubt, Lohri'20 was one for the books.



The traditional bonfire roars at the Lohri celebration

## Huggable

SRISHTI CHAKRABORTY

I was introduced to you when you had spent your sixth month on earth, by your father. He wanted you to have friends at an early age, to make up for his minimal presence, unaware that my small, stubby, non-human like bear features would terrify the living life out of you. The first few months you would hide my face, to be only invited to your royal tea parties and pirate escapades later. You saw the life in me that people failed to see in everyday faces. More joined our little bubble but few lasted.

Soon third grade came and so did the judgement of our bond, from your friends. You took every word of criticism to heart, dissolving your warmth for me, in bloodstream. Your heart as cold as the corner of the dusty cupboard, where all your nostalgia made home. I was a shame to your reputation and existence. Realizing, sabotaging your social life was not on top of my to-do list, I waited.

Then summer finally arrived, and you took me out. But everything about you was cold and dead. You were looking for the same warmth that you



Huggable, lovable and dispensable

deprived me of, years ago. I couldn't give you the love you needed. This wasn't the summer I was waiting for. But the longer you held me, the sooner warmth began to creep inside your bruised crevices. I liked this. Now, I am fond of the frigid conditions in the corner, because that ensures endless summers for you.

## Fatal Fashion

SRISHTI CHAKRABORTY

"Fashion is an armour to survive the reality of everyday life." – Bill Cunningham.

Indeed, a great quote in its essence, to which we can all agree to a great extent. In retrospect, fashion aids us in our attempts at diverting our attention from the black and grey parts of our monotonous and generic life, provides a boost in confidence and embraces individuality. Unfortunately, like most great things it comes at an underlying price which most cannot predict.

Personalities, who create and critique fashion, are at the zenith of this pyramid. They utilize our favorite influencers to showcase their authentic aesthetic, at influential events such as The Met Gala. Our minds get engrossed with expensive and extravagant outfits, which we mimic subconsciously. A single dress can cost up to \$35000 at such events. This is economically illogical since it will

eventually end up as a magnum opus either by the designer or the wearer, after a few hours of usage. This results in waste of material and unintentionally creates a taboo against reusing clothes. This is a grave problem since the fashion industry is the second biggest contributor to the polluted condition of our planet. Chemicals that offer colours to our individuality strip away the shades of green from Earth. Fast fashion is also to be blamed for this dilemma. They design cheap and environmentally detrimental clothes.

The solution is to eradicate the mentality of shame around redundant fashion. This can be achieved by renting and buying used clothes, hence preventing redundancy in one's fashion, controlling over-production. With the added boon of being cost efficient to both people and brands, it plays its tiny role in saving the Earth from burning up, just like that hole in your pocket!

## Joaquin Phoenix delivers an alluring speech at the Golden Globes

ANANYA.E

Hollywood has had its fair share of controversies over the past decade. Joaquin Phoenix who played Arthur Fleck in yet another spin-off of the DC classic- The Joker, delivered a rather controversial acceptance speech at the Golden Globes held in January 2020.

Joaquin has been vocal about his distaste for awards shows and has had little to nothing pleasant to say about them. After winning the award for the best actor, the hall filled with hushed anticipation preceding a well-deserved round of applause. He started off by expressing his gratitude for the acknowledgment of his effort and dedication. He was also thankful to share the nominations with several

talented actors. He proceeded to deliver a confusing speech on climate change that was a cocktail of ill-timed jokes and a stream of expletives. Despite being timid, his message was well received.

Ignorance is becoming a major issue that is speeding up the annihilation of our species.



Joaquin Phoenix delivering his speech at the Golden Globes

At a time like this, we look to celebrities and social media influencers to use their outreach to spread awareness. Joaquin Phoenix took matters into his own hands as he aimed a friendly jibe at his colleagues and urged them to not use private jets to go to Palm Springs. It is truly wonderful to see a person of Phoenix's caliber stand up for something important. This showed the versatile actor's dedication towards wanting to make the planet better, one voice at a time. He also appreciated The Hollywood Foreign Press for their bold move of making the day's menu vegan. Things took a surprising turn when -days later Phoenix was arrested at a climate change march for addressing the harmful repercussions of meat and dairy industries on the environment.



Katy Perry at The Met Gala, 2019





People wade through flood water in St. Mark's Square, the city's iconic centre. (AP Photo/Luca Bruno)

## 2019 Venice Floods: The Right Approach

**B.KAVYASHRUTHI**

'Climate emergency' was the Oxford Word of the Year in 2019 and with good reason. Wildfires, heat waves, cyclones and floods ravaged countries all over the world. The November 2019 floods in Venice, Italy showed no mercy either.

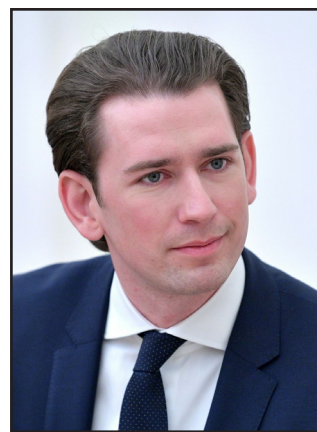
The usually charming phenomenon of Acqua Alta, the periodic tide peaks in the Northern Adriatic Sea, has become a source of worry in the recent years. In November 2019, Venice encountered the worst flooding in 53 years. The tide gauge reached 187 cm above sea level submerging 80% of the city on 12th November. Vigorous winds, storms bringing in heavy rains and violent sea waters led to massive livelihood and economic destruction. Mayor Luigi Brugnaro declared 'a state

**“Venice has seen more devastating floods in the past, their high frequency in the last decade has to be heeded. Sea-level rise as a result of global warming is a major cause.”**

of emergency' in Venice and blamed climate change for the \$1 billion worth damages that had occurred in homes, businesses and historic landmarks.

Though Venice has seen more devastating floods in the past, their high frequency in the last decade has to be heeded. Sea-level rise as a result of global warming is a major cause. However, in addition to it, subsidence of land

due to excessive ground water extraction and tectonic plate movements have also caused the city to sink. When looking for solutions that can save Venice, it is wise and imperative to consider all factors. Climate action is undoubtedly an immediate need but one must not hurry and must bear in mind other factors to create a sustainable and durable unit of existence.



Young heros (L) Sebastian Kurz, 33, Chancellor of Austria and the youngest serving head of state in the world (R) Sanna Marin, 34, Prime Minister of Finland and the second youngest serving head.



## Young Leaders of Today: Last String of Hope

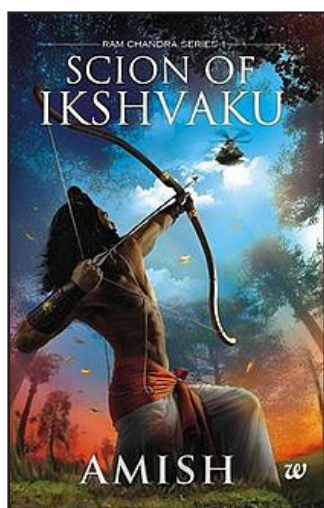
**B.KAVYASHRUTHI**

Sebastian Kurz, 33, Chancellor of Austria abdicated Sanna Marin, 34, Prime Minister of Finland as the world's youngest accommodating head of state after an unexpected coalition of the Conservatives with the Greens. "We have succeeded to unite the best of both worlds... It is possible to protect the climate and border" said Kurz. Sebastian Kurz had previously held the position of chancellor from December 2017 to May 2019. He has also been serving as the Chairman of the Austrian People's Party since May 2017. He's an active and expeditious leader.

Sanna Marin had assumed office on the 10th of December 2019, after she had been elected by the Social Democratic Party to succeed Antti Rinne who had resigned from his position. Marin heads a 5-party coalition regime in which 12 out of 19 ministers in the cabinet are women. She believes in accepting and acknowledging a rainbow

of backgrounds. Proximally behind them is Ukraine's Prime Minister Oleksiy Honcharuk, 35.

Even in times before, the world had witnessed men and women assuming leadership at a very young age. Alexander the Great had commenced expanding his territories at a tender age of 18. Joan Arc was only 17 years old when she rode off to war. Thus, young leadership isn't a new ideology for us. What is different today then? Our rapidly changing world demands high energy and expertise from the younger generation to crack highly involute issues, majorly arising from the dilemma of priority- technological growth or environmental protection, capitalism or communism, conservative standards or boundless culture. Thus, innovation and growth mindset paired with empathy is what we call for in a leader today. "The need for leadership development has never been more urgent", says a Harvard Business Review. Invest in becoming a leader; Inspire forever.



Ram Rajya. The Perfect Land. But perfection has a price. He paid that price.

## The story of an unloved Prince

**NISHANT SAGAR**

After the prosperity of the Shiva Trilogy, Amish Tripathy, one of the eminent authors of contemporary India comes up with the most awaited "Shree Ramchandra series". The first book of the series titled The Scion of Ikshvaku is an excellent piece of literature. At the very outset, the author claims that the book is just a fiction. The best thing about this book that makes it different is the brilliant art of storytelling that Amish Tripathy possesses.

All the characters in the book are authentic with no traces of godliness or magical powers that we are accustomed to knowing in the epic. It is this attribute of the book that has attracted an astronomically immense number of readers amongst generation Y who otherwise seem to be less intrigued with reading epics. Amish has brilliantly utilized his imagination to create powerful character sketches of every individual character in the book. He has presented different images making it seem akin to

an authentic story. The way of writing is lucid and the book keeps you engaged. Simple English, understandable by anyone and close to heart approach makes the book astonishing. The books of Amish follow a storyline where there are two sides-the good and the malignance. His precedent series 'Shiva Trilogy' was all about Somras. The good and the evil fight was going on until they found what true evil is. Somras which everyone believed as good as the real culprit. He seems to follow the same technique in this

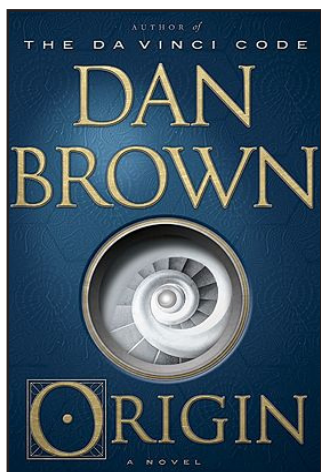
series. He manages asuras. As per my research, the same logic perpetuates here. Ram goes on in search of something evil. Here it is Ravana. It is also about making Somras available to all. Amish has given a personal and informal touch to the story when we visually perceive that the younger brothers of Ram call him "Dada" instead of "Bhratashree" as we perceive in Ramanand Sagar's Ramayana. I praise the author for acquainting the contemporary youth to the great epical characters. It's the adventure melded with history, which makes the book wonder literature for the contemporary era.



## Science and faith with Dan Brown

SWATHI BALAJI

For bookaholics, Dan Brown is not an unfamiliar name. Despite following the rulebook to the letter, he takes his readers on captivating, immersive and breakneck excursions. Walking hand in hand with the Da Vincis and Newtons of the world, the award-winning author helped nurture the fad of dark academia. The pages of this book are crowded with buildings and fleeting adventures mixed with the thrill



*"May our philosophies keep pace with our technologies. And may love, not fear, be the engine of change." — Dan Brown, Origin*

of saving the world alongside the protagonist. The fifth installment in his Robert Langdon series- The Origin- takes place in Spain. The story follows Robert and his accomplices- Ambra Vidal and the high-tech AI Edward. They join forces to uncover their late friend Edmond Kirsch's discovery regarding the origin and demise of our species. They try to dig up contemporary answers to ancient questions. On the run from religious fundamentalists, they try to reveal secrets that might shake the foundation of faith. The author creates a perfect harmony between Abbeys and Teslas and Chapels and LED lights. Blurring the line between Newtonian Laws and Artificial Intelligence, he provides a quirky twist to his age-old formula. The finale reveals breakthroughs that will leave the readers reflecting on their foreboding plot predictions.

Visual companions and videos showcasing the places from the book help elevate the experience. Overall, this novel is a must-read for people who want to escape reality for a while and for anyone willing to admire modern advancements through ancient eyes.

## Team Rudra Emerges Victorious at Indian Rover Challenge

PRAKHAR ALOK

The 'Indian Rover Challenge', a widely celebrated robotics and space exploration competition that encourages students to build Mars rovers, was organized by the Mars Society of South Asia at Vellore Institute of Technology, Chennai, recently. Thirty five teams showcased their talent at this event and Team Rudra from SRM Institute of Science and Technology triumphed over every single one of them to win laurels. The teams were given specific conditions and requirements through a problem statement and were asked to design their rovers accordingly. The most challenging part of the competition was to build the rover while also keeping in mind the given constraints. The team lead of Rudra, Rahul



*A jubilant Team Rudra after winning the Indian Rover Challenge*

Aggarwal, a fourth year student from the Department of Aerospace Engineering, believes that patience and effective team work is the key to their success and has helped them win numerous titles in the past. Rudra approached the contest with a clear and systematic methodology and that is what led them to eventually build a successful Mars rover.

When asked about their future plans, the team said they were looking forward to collaborating with other technical clubs from SRMIST and participating in the 'University Rover Challenge'.

Given their dedication and diligence, Team Rudra is certain to win many more accolades in the days to come.

## Reaching out to a better tomorrow

DIKSHA AVIRAL

A recent WHO report about Mental illness in India highlighted the fact that 80% of Indians with mental health issues do not seek any sort of treatment. Suicide is responsible for more deaths than malaria, breast cancer, war or even homicide, according to the WHO. In an age where the suicide rates are skyrocketing, why is it that we are ignoring the root of the problem. The stigma surrounding mental illness makes it very difficult for people to actually come forward with their problems and seek help. Thus, in times like these, it is imperative that we learn how to listen to the silent cries of help of the people suffering at the hands of their own minds. If a friend or loved one doesn't seem themselves, how do you spot the difference between a bad mood and something more serious?

Here are some common symptoms that could help you determine if a person around you needs help:

There is a drastic change in their sleep habits, loss of appetite or a decline in personal care.

They experience dramatic mood



*"Your illness does not define you, your strength and courage does."*



*"There is hope, even when your brain tells you there isn't."*

changes. They have withdrawn themselves socially or no longer enjoy activities they previously did. They are usually nervous or anxious. They are exhibiting behaviour unusual for them. They are experiencing a loss of initiative or any desire to participate. The above are just some of the common behavioural

patterns that a person struggling with a mental illness might exhibit. Mental illness should not be taken lightly. Just like any other disease, it eats away at your mind and body. If you notice someone struggling with a mental problem, please reach out. Your mere words might help save someone's life.

## Smart India Hackatho; Internal Rounds Reap The Best Teams

PRINCE SAMUVEL S

Smart India Hackathon is a National level hackathon which is recognized by the Ministry of Human Development of India. The initiative Involves around 2 lakh students from 2200 institutions with over 500 problem statements provided by various organizations from across the country. SRM Institute of Science and Technology held an internal round to select their best teams to represent them. The event took place at TP Ganesan Auditorium and the FAB lab for the software and hardware editions respectively



*"No power on earth can stop an idea whose time has come"*

in the Kattankulathur campus. 44 student teams with a footfall of over 400 young minds had a chance to prove their skills. After almost 30 intensive hours of brainstorming, 14 teams were chosen to pitch their ideas to a panel of judges out of which 7 were put through to the finals. Projects like Aerem, an air purifier which not only cleans air but also reduces its carbon dioxide content and a project creating a robotic arm for the maintenance of tanks on ships by team Humanoid got selected in the hardware edition. A map based crime reporting application which can be used by the police department done by team CodeRed and an application which predicts air pollution using AI/ML techniques done by team Runtime Error along with teams Apollo, God's Eye and Carboxy were selected in the software edition. The finals is tentatively announced to be held in various nodal campuses across the nation.





## My Journey with SRM

**Ms. Anushka Bhargava (B.Tech - CSE) Speaks about her journey from SRM to Microsoft.**

**Campus Placement Topper 2020 CTC 41.6 Lakhs**



# About my School & Studies:

## STAFF WRITTER

I have attended 4 different schools in different places. I have spent the first 10 years of my life and 6 years of schooling in Lagos, Nigeria. I owe my strong basics and keen interest in learning and growing to this place. Further, I studied in Goa and Kutch for short durations after which we moved to Bhavnagar, Gujarat where I spent the last 5 years of schooling at Silver Bells Public School. This is the place which gave me perspective and shaped me as a person. I still look up to my teachers for guidance. I was always involved in a lot of extracurricular activities, be it dance, sports or organizing events and was also awarded the Student of the Year in class 10 and class 12. All round development is what helped me do better in academics. I was always a ranker in my school life and strived to be the best.

### What made you to choose SRM, SRMJEE and finally B.Tech CSE?

After I got over with my 12th standard boards, I started looking for career option to select which stream I would take up. I was fascinated by computers since I was a kid. Hence, it was not a tough choice. I was eager on taking up CSE and not any other branch. I had heard about SRM being a good place to learn with a lot of opportunities and so decided to give SRMJEE. My experience was quite good, and I was pretty confident of securing a good rank which would help me secure a seat in CSE. Counselling was organized very well, and I was glad to pursue exactly what I desired.

### About your home town, support from parents to study at Chennai

I am born in Delhi, basically from Rajasthan and have been living in Gujarat since a long time. Having moved a lot since childhood, adjusting to new places is not tough for me. My parents knew this and were very supportive of letting me study in Chennai. They have always let me take my own decisions and have extended support for me to achieve my goals. It makes me the happiest seeing them so proud.

### About your hostel life at SRM?

I have lived in the hostel for all 4 years of college life and I can't stress it enough that the memories you make in hostel are simply the best. The infrastructure of the newly built M Block is quite good in addition to all facilities available in the hostel campus itself. If you are lucky to find great friends in hostel, there is nothing like it.

### About SRM Campus and Infrastructure

SRM has a great infrastructure and there are ample things you can take up to be more productive and learn and grow. The labs are well equipped, library is wonderful and how can we forget the auditorium! SRM provided abundant opportunities for those who know how to make the right use of them.

### About Student Clubs & Chapters, Student Start-Ups

I have been the Vice-Chairman of SRM IET On Campus, Committee Head in Aaruush and volunteered for SRM MUN. All these experiences have added to my confidence, ability to solve problems and think out of the box to tackle situations. We have a lot of teams in our college which focus on technical work and others which focus on events. I would encourage everyone to

pursue their technical interests but also have some experience in organization and management as it adds to a lot of skills like team work, leadership, time management which play a great role in your placements as well as life ahead.

### A brief about what to expect during placement rounds?

Placements is not a word to fear but is a word to take as a challenge. It is a culmination of all that you've done and learnt in the past 3 years at college. Make every year count. Though I did not attend the actual placement as I was offered a PPO after my summer internship at Microsoft, I do have some tips for the upcoming batches. First and foremost, be thorough with basic aptitude and verbal concepts. The syllabus taught in our course is enough, but practice everything well. Do the aptitude course not for the grade but for your learning. Do not take it lightly. Also, I cannot stress enough on the importance of data structures and algorithms. But before that have your basic coding and OOP concepts clear (for software jobs). Always remember, the panel is not here to scare you but to help you get the job you aspire for. Be thorough with all you have in your resume. Know the how and why of each thing. And it's totally fine to not know things, accept it instead of cooking up answers or guessing. Be confident, be humble and you can sail through every interview!

### What are the challenges faced in the interview?

We had an online coding round in January which had 3 questions. Most of you would expect the level of questions to be hard, but it was easy-medium. I could easily solve 2 of them in 10 mins and the 3rd one after a

bit of brainstorming. It focused on our basics. The interview for the selected students was conducted in March. There was 1 pen and paper coding round and 3 personal interviews. There were just 25-30 of us left after the pen-paper coding round out of 150+. It was scary! There were 2 technical interviews which were focused on coding only and 1 HR + problem solving round. The interviewers were very helpful and would provide hints on getting stuck. I would explicitly mention the importance of the CCC training given. There were a few questions directly asked from the ones done during the training. If you follow the training religiously and practice on your own, things will turn out to be good. Never underestimate your capability. Try your best always.

### Support from Faculty and others during your course

The CSE faculty has been very encouraging throughout. Be it learning or other processes, I have always received help and guidance. Also, I would thank the Placement Cell for helping me throughout.

### About your internship at Microsoft, work style, adaptability and Work From Home experience?

Microsoft has been a great place to work. The 2 months as a summer intern was quite a learning experience. It is known to have one of the best intern programs in the country. Interns are treated and given work valuable for the company's products. The feature I worked on in my summer internship, has reached the users across the globe and I feel happy to contribute to such a large product as Microsoft Excel! Apart from work, we had an intern learning week, where we painted, had fireside

chats, talent show and a lot more activities. At Microsoft, you are encouraged to do everything that interests you, have a balanced work life and work as per your comfort. Being a 6-month intern now and working from home, the support the company provided is commendable. Hope to deliver the new feature I am currently working on soon. Looking forward to joining as a Full Time Employee in a few months!

### Overall feedback

"It is a matter of pride and fulfilment of my dream to have been placed at the exceptionally prestigious organization, Microsoft. SRM provides a platform and infrastructure to go beyond academics and be an all-rounder. It encourages students to nurture their interest and grooms them to excel in that field. The 4 years at SRM have not only made me industry ready, but have also helped me enhance my soft skills to grow personally and professionally. I would like to thank the Institute for all the learning opportunities extended and for guiding me to kick start my career with Microsoft."

Overall, SRM provides a bunch of opportunities. If you're focused and leverage it in the right way, there is a bright future ahead!

### Faculty mentor words of appreciation :

Ms. Anushka Bhargava is one of the best student in the class. She is good at her academics and other activities. She is more responsible in all her endeavors. Her problem solving skills were remarkable. She has a good attitude and always supportive as a team coordinator. I feel proud to have her as my student said, Mrs. R. Lavanya, Assistant Professor, Computer Science and Engineering, SRMIST, KTR Campus.