

SSE
NewsLetter



This Issue is dedicated to Our Beloved Nobel Laureate
SIR CV RAMAN

SIR CV RAMAN

Sir CV Raman named after Sir Chandrasekhara Venkata Raman, father of Indian Science was born in former Madras Province (7 November 1888 – 21 November 1970), carried out ground-breaking work in the field of light scattering. At an early age, Raman moved to the city of Visakhapatnam and studied at St. Aloysius Anglo-Indian High School. Raman passed his matriculation examination at the age of 11 and he passed his F.A. examination (equivalent to today's Intermediate exam, PUCPDC and +2) with a scholarship at the age of 13.

In 1902, Raman joined Presidency College in Madras where his father was a lecturer in mathematics and physics. He stood first and won the gold medal in physics. In 1907 he gained his Master of Sciences degree with the highest distinctions from University of Madras.

In the year 1917, Raman resigned from his government service after he was appointed the first Palit Professor of Physics at the University of Calcutta. At the same time, he continued doing research at the Indian Association for the Cultivation of Science (IACS), Calcutta, where he became the Honorary Secretary. Raman used to refer to this period as the golden era of his career. Many students gathered around him at the IACS and the University of Calcutta.

During a voyage to Europe in 1921, Raman noticed the blue colour of glaciers and the Mediterranean sea. He was motivated to discover the reason for the blue colour.

He carried out experiments regarding the scattering of light by water and transparent blocks of ice which explained the phenomenon. On 28th Feb 1928, he discovered the phenomenon behind the scattering of light and he named it Raman Effect. He was recognised internationally for his work and was awarded Nobel Prize in 1930. To honour this great scientist, in the year 1986, Government of India

Look at the resplendent colours
on the soap bubbles!

- Why is the sea blue?
- What makes diamond glitter?

Ask the right questions, and
nature will open the doors to
her secrets

C.V. Raman: A Biography.
Penguin Books India.
ISBN 978-0-14-306689-7.

“The change in the wavelength of light that occurs when a light beam is deflected by molecules. When a beam of light traverses a dust-free, transparent sample of a chemical compound, a small fraction of the light emerges in directions other than that of the incident (incoming) beam. Most of this scattered light is of unchanged wavelength. A small part, however, has wavelengths different from that of the incident light; its presence is a result of the Raman effect “

declared 28th Feb as the “National Science day” .

Sir CV Raman founded the Indian Academy of Sciences at Bangalore in 1934. In 1947, he was appointed as the first National Professor by the new government of Independent India. Later in 1948, Raman, through studying the spectroscopic behaviour of crystals, approached in a new manner fundamental problems of crystal dynamics. He dealt with the structure and properties of diamond, the structure and optical behaviour of numerous iridescent substances (labradorite, pearly feldspar, agate, opal, and pearls). Among his other interests were the optics

of colloids, electrical and magnetic anisotropy, and the physiology of human vision. Raman retired from the Indian Institute of Science in 1948 and established the Raman Research Institute in Bangalore, Karnataka, a year later. He served as its director and remained active there until his death in 1970, in Bangalore, at the age of 82. After a period of years, this institute has gained international stature with research activity in liquid crystals, astrophysics and radio astronomy. We at SSE are privileged in providing a short biography of our profound Indian Scientist. As a tribute and recognition, SSE feels proud to dedicate this issue to our great Scientist Sir CV Raman.

“When the Nobel award was announced I saw it as a personal triumph, an achievement for me and my collaborators -- a recognition for a very remarkable discovery, for reaching the goal I had pursued for 7 years. But when I sat in that crowded hall and I saw the sea of western faces surrounding me, and I, the only Indian, in my turban and closed coat, it dawned on me that I was really representing my people and my country. I felt truly humble when I received the Prize from King Gustav; it was a moment of great emotion but I could restrain myself.”

- SIR CV RAMAN

Shopping is always a fun part but standing in the never ending queue is something we all dislike. How would it be if there is a shop where we can take whatever we need and just walk out without the need to stand in the billing queue. Amazing right!! After 4 years of research, Amazon has opened its first shop this January which promises **“No lines, No checkouts, No registers”**.

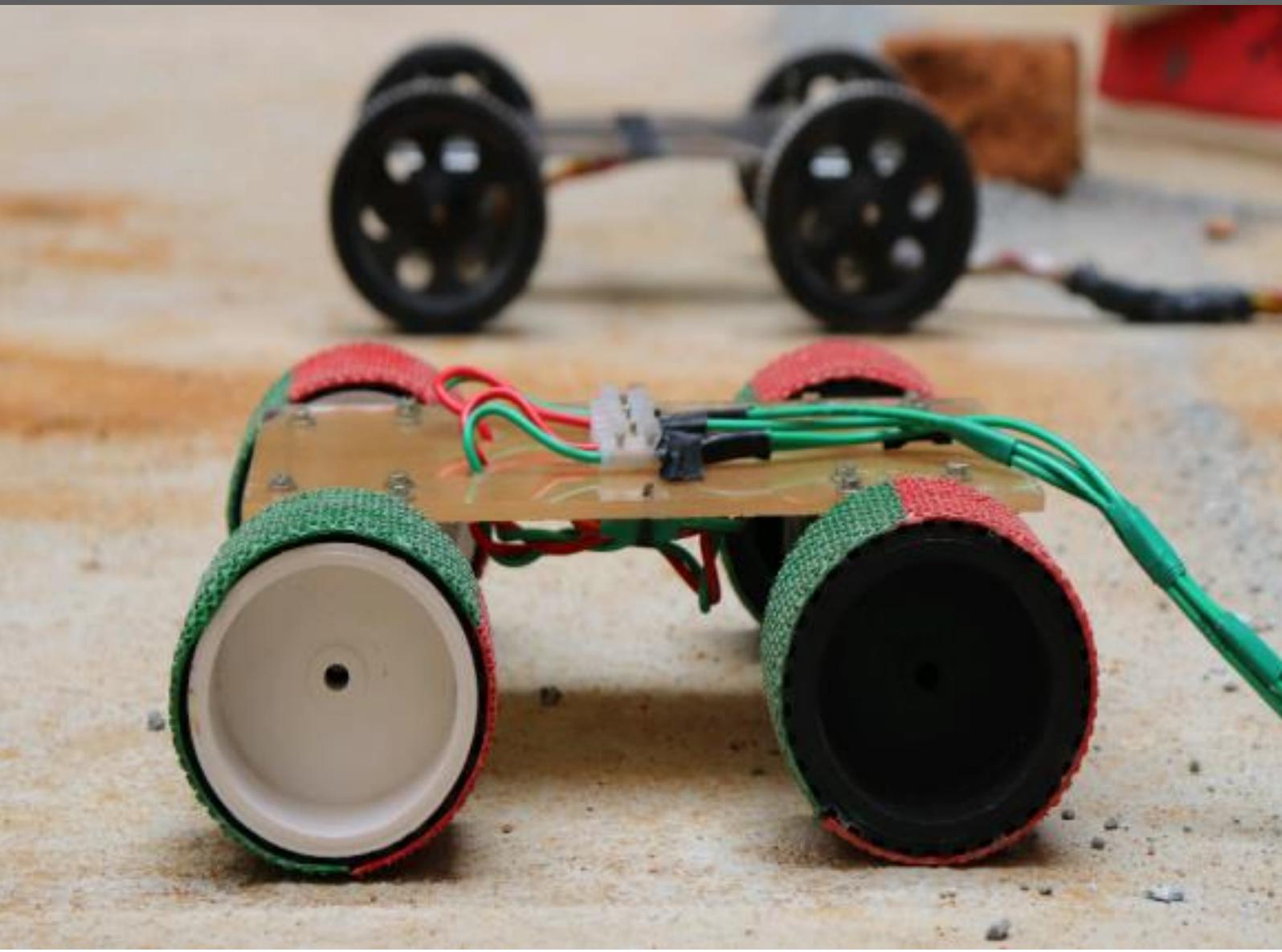
“We created the world’s most advanced shopping technology so you never have to wait in line,” reads the webpage devoted to the 167-square-metre store, which is currently housed inside Amazon’s Seattle campus. All you need to do is to download the Amazon Go app while entering the shop and the bill is automatically charged to your Amazon account. Amazon calls **“Just walkout technology”** will automatically detect the products you take using computer vision, Artificial Intelligence, and Sensors. Even it is able to detect the products that is put back into the shelves. Technology is so advanced that there will soon be unmanned shops all over the world. What do you think - Is AI going to replace Humans in the near future?

Amazon GO - An Automated SuperMarket



SSE IET chapter conducted the fun filled Tech Fest “Le-Incasso” for the sixth consecutive year. It has been an enthralling 3 days of fun and technical funda. Participants were thrilled to display their talents in various technical (Circuit Debugging, Robo-Race, Techie Mania etc) & Non-technical events (Express to impress, Turn coat, Shipwreck etc). Mr. Vishnu L. Bhaskaran, Assistant Director of Director Shankar was a participant was overjoyed to be the judge for the short Video session. Le-Incasso has also offered workshops on trending technologies like IoT, Big Data and Hadoop.

LE - INCASSO



Meditation

Now a days education only means preparing oneself for a job, and people want to do something which will give them the maximum money for comfort, for good standard of living. But education really means to draw out of you your best in terms of your potentials, best in the physical way, i.e., to prepare you to be fit citizens who can serve society, serve your brothers and sisters, to draw out of you your mental and intellectual potential, not to cram facts into your heads. That is the unfortunate consequence of the material civilisation to which we have succumbed.

Really speaking, according to the Vedas, all knowledge is already in us. The only thing, it is covered by what they call ignorance, and they use the famous example of a mirror which is overlaid with dust. You clean away the dust and everything is clear. So, education is really the process of removing the ignorance that is covering our inner knowledge, which is absolute, which is perfect, which is eternal, which is supreme. We don't really have to learn anything. Revelation of this inner knowledge is brought out by the practice of Meditation.

Very often people ask, "How is it that saints and the great Masters of this world appear to know everything? You ask them any question, they have the answer."

Now, this ability is created by meditation, because by meditation we learn to put our mind on one object. Meditation really means to think constantly, continuously of one subject. It has no other meaning. And whatever you think of, that is the object of your meditation, and all the ancient systems, modern systems of spirituality, of occultism all over the world, they say the same thing. You will become that upon which you meditate. This is an old law: as you meditate, so you become. That upon which you meditate, that you become. Now when we learn how to meditate properly by putting our mind on one object continuously, we become capable of concentration. So concentration is a result of meditation.

If you are able to spare, say, half an hour in the morning, half an hour in the evening for the practice, for the system of meditation, you are really training your mind to be able to meditate, then subsequently to concentrate to become a capable instrument for revelation.

Can you realize the enormity of the benefit that you will get, when your mind is so trained, that instantly you apply it?

Meditation trains us to become the master of our minds. It must obey what I say; not I obey my mind. 'Growing up', as we say, because you have no control over your mind. It is being buffeted about like leaves in the wind. Research reports say that a human being will have on an average 70000 to 80000 thoughts per day. Being a student if we could reduce the thoughts and hold our mind to a single thought through consistent practice of meditation, then we can do wonders and excels in our studies!!

Education must be produced only by application: application of the mind and the mind must be able to concentrate, and that concentration can only be developed by meditation. There is no second way. You have to learn to apply the mind to become educated; you have to learn

to apply education to use education, like the difference between science and technology. Science is pure; technology is application of that science to produce things, to utilize things. So, meditation confers on us a total integrated blessing by making us educated in the true inner sense, educated to values and not to facts, educated to our inner needs, not to apparently social needs, that I must be better than my peers, I must earn more money than my younger brother, not things like that, but to the true values of existence. In this way, meditation is the foundation not merely for education but for our existence.

Why one should meditate?

- Better focus on goal
- Reduced stress
- Reduced fear
- Reduced Anxiety
- Increased self confidence
- Better self-esteem, optimism
- Balance emotions.
- Helps to make wise decisions.
- Expands Consciousness
- Makes better relationships with colleagues & team work.
- Prepares the mind to accept and work with change.

(Courtesy: SRCM Literatures, HFN magazines)

Take up one idea. Make that one idea your
life - **Think** of it,
Dream of it,
Live on that idea.

Let the brain, muscles, nerves, every part of
your body, be full of that idea, and just leave
every other idea alone. This is the way to
success.

- Swami Vivekananda

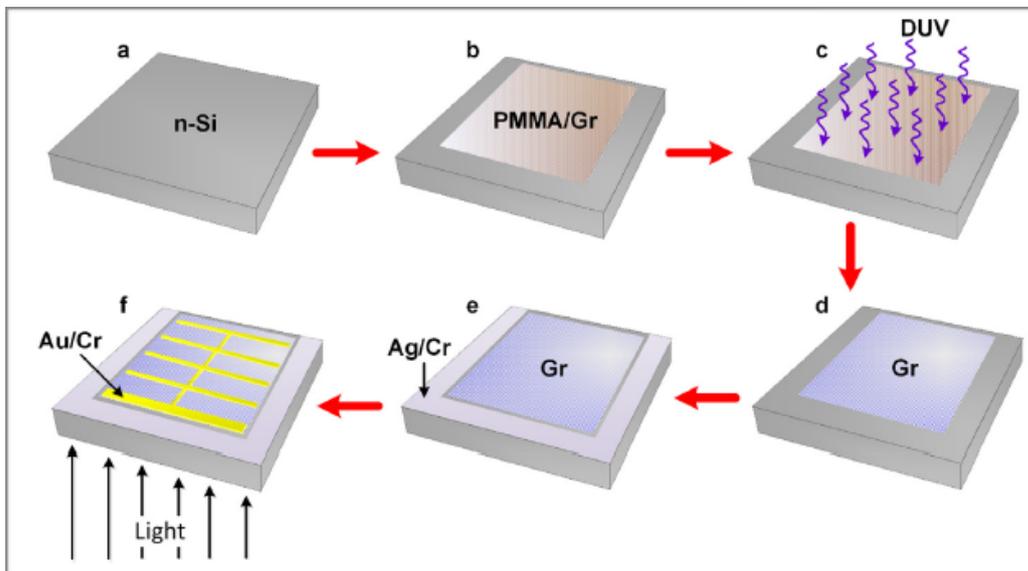


Graphene Based High Efficiency Solar Cells

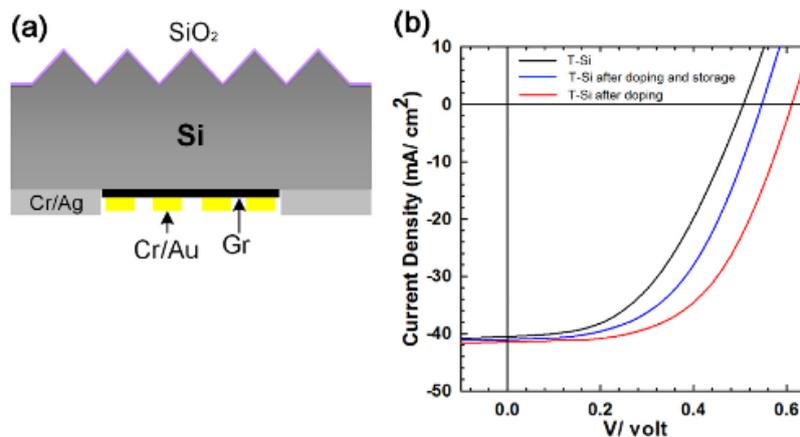
Typical silicon panels used in PV application have many limitations. One limitation is the amount of light reflected (lost) from the panel because of the large mismatch of refractive indices ($n_{air} = 1$ and $n_{Si} = 4$), this phenomenon is known as Fresnel reflection. A second limitation is attributed to shade loss caused by the screen printed top electrodes.

We are currently developing new process technology for the next generation solar cells. Encompassing graphene monolayers into such devices required the development of fabrication routes which enable transferred graphene monolayers to maintain their 'pristine' graphene properties. Texturing and anti-reflective coatings can significantly reduce Fresnel reflections. The front window is optimised by using a back-contact configuration.

A graphene/Si Schottky junction solar cell is commonly fabricated by using the top-window structure. However, reported devices have many drawbacks such as a small active area of 0.11 cm^2 , s-shape in the JV curves, recombination process of charge carriers at the graphene/textured Si interface, high cost and a complex fabrication process. A novel graphene/Si Schottky junction solar cell with a back contact-structure, which has benefits of a simpler fabrication process, lower fabrication cost, and larger active area. Using deep UV treatment within the wet transfer effectively removes the PMMA residue and suppresses the behaviour of the s-shaped kink in J-V curves. With this process technology the recorded power conversion efficiency of 10% is achieved for graphene/textured Si devices without chemical doping and anti-reflection coating. This increased to 14.1% after chemical doping. Doped devices also show great stability and retain 84% of the efficiency after 9 days storage in air.



Fabrication process of graphene/Si Schottky junction solar cells involves: (a) Si substrate after cleaning process and leaving in air for passivation process for 2h. (b) Transferring PMMA/graphene (Gr) onto the centre of Si substrate. (c) Exposing PMMA/Gr to the DUV of 254 nm at $180 \text{ }^\circ\text{C}$. (d) Removing PMMA layer by acetone treatment. (e) Creating Ag/Cr cathode. (f) Forming Au/Cr grid.



(a) Schematic of graphene/textured Si Schottky junction solar cell, indicating SiO₂ as the passivation layer. (b) J-V characteristics for graphene/textured Si devices before and after doping process.

The outcomes of this research are impressive and shows excellent promise for next generation PV systems. However, graphene is an expensive choice for renewable energy, especially in developing countries. Currently in the UK, a typical domestic solar installation cost around £6,000. To circumvent this, research in Plymouth is focussed in exploring the growth of monolayer reduced graphene oxide (rGO) as a low-cost alternative in many sensor applications. With many different systems being developed commercially, such as inkjet printable perovskite based flexible and rigid panels, the removal of carbon-based energy provision will end soon.

References:

1. A Suhail, G Pan, D Jenkins, K Islam. Improved efficiency of graphene/Si Schottky junction solar cell based on back contact structure and DUV treatment. Carbon 129 (2018) pp520-526
2. A Suhail, G Pan, K Islam, D Jenkins and A Milne. Effective chemical treatment for high efficiency graphene/Si Schottky junction solar cells with a graphene back-contact structure. Advanced Materials Letters 8(10):977 April 2017
3. A Suhail, K Islam, B Li, D Jenkins, P Davey and G Pan. Reduction of polymer residue from wet-transferred CVD graphene surface and devices by two novel techniques. Applied Physics Letters 110:183103, May 2017

Professor Dr. David Jenkins,
School of Computing, Electronics and Mathematics
(Faculty of Science & Engineering)
Plymouth University, UK



Creative Corner

கணினி - கவனி

தகவல் புரட்சியின் காரணி
கணினி
அகவல் திரட்சியின் புது
அச்சாணி கணினி
சிந்தனை அறிவின் சிகரம்
கணினி
வந்தனை செய்து வரவேற்போம்
கணினி
இக்கணம் முதலாய் இதைக்
கொஞ்சம் கவனி

ஜனனம் முதலாய் மரணம்
வரைக்கும்
கணிதம் முதலாய் மனிதம்
வரைக்கும்
இயந்திரம் முதலாய் இணையம்
வரைக்கும்
எங்கும் கணினி எதிலும்
கணினி
இக்கணம் முதலாய் இதைக்
கொஞ்சம் கவனி

நவீன உலகின் நாயகன் கணினி
சிந்தனை அறிவின் சிநேகிதன்
கணினி
மந்திரன் போல் பல பல
விந்தைகள் புரியும் நவீன
எந்திரன் கணினி
இக்கணம் முதலாய் இதைக்
கொஞ்சம் கவனி

Dr. S.ஜெயப்பிரகாஷ்
Yoga Trainer

A LIFETIME GUARANTEE

Will you take me back, dear God?
I've been gone away from you so
long;
I have lost track of all my sins,
And I've spent years in doing wrong.

I did so many prideful things,
And shamelessly did boast;
I broke so many loving hearts
And hurt the people I loved most.

I've heard about atonement,
I've been warned of Judgement Day;
And even though I listened,
I still strayed far away.

Will you welcome me again, dear
God,
And forgive me one more time?
Will you share Your love with me
If I truly give you mine?

I'm so sorry that I left You, God,
I'm saddened now and low;
God smiled, "You didn't leave
me, child,
I never let you go!".

"I promised you Redemption,
My Word cannot be undone;
You got a Lifetime Guarantee,
When I am there for you till eternity".

Dr. G. Charlyn Pushpa Latha
Assistant Professor
Department of Computer Science Engg



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Nano Particles

It's a small, small, small, small, small world. That's how small nanoparticles are. Nano science is applied almost everywhere, in physics, chemistry, biology, medicine, space research and what not. There are a pool of application fields of nanoparticles. From this pool, a drop comprises the multi-doping phenomenon. And this is what the article is all about.

Particles or materials when reduced to nano scale show different properties compared to what they exhibit on a macro-scale or normal basis, thus making them useful for unique applications. For instance, opaque substances become transparent (copper); stable materials turn combustible (aluminium); solids turn into liquids at room temperature (gold); insulators become conductors (silicon). A material such as gold, which is chemically inert at normal scales, can serve as a potent chemical catalyst at nano scales. Much of the fascination with nanotechnology stems from these quantum and surface phenomena that matter exhibits at the nano scale.

Generally, Doping is defined as the addition of impurities to a pure material. In this field of nano science, these impurities can do wonders. Addition of impurities enhances the properties of nano particles. In this way, the same material can be used for various applications.

Let us consider an example of platinum and cobalt. Platinum, the precious metal is applicable in many fields. Platinum is precious not only by properties but also by cost. To bring about the economic feasibility, researchers proposed a new catalytic material based on the element cobalt as an alternative to platinum. Cobalt is considered to be the first catalyst made from non-precious metal with properties closely matching with those of platinum. But let's raise a few questions. Is cobalt a perfect substitute for platinum? Does cobalt have the same properties as platinum? Does cobalt give the same results as platinum? The answer to all these questions is a big 'NO'. Though, Cobalt may be similar to Platinum, it will not yield the same results as Platinum. This is when we bring in the phenomenon of Doping. We dope cobalt and platinum in order to attain the combined advantages of both the materials. You may think about the economic feasibility. This is the highlight of doping. During doping, platinum is used in fewer quantities with cobalt, thus attaining the properties of both materials and at the same time maintaining economic feasibility. Another highlight being the variation of properties by varying the doping ratio (amount of dopant). This will open the same material to a pool of applications.

This was just an example for better understanding. Just Imagine how many combinations could be formed with all available materials. And it is not necessary that we dope only two materials. We can dope multiple materials together. Now if we imagine the number of possible combinations and applications, it would be humongous number.

Think Big ! Do Big ! Actually, it would be better if I say Think 'NANO' ! Do 'NANO' !

Manisha Julius Ganesh

IV Year, ECE Dept

Guest Lectures / Seminars / Expert Talks / Workshops

Listening to Experts / Eminent person and engaging in an enthralling discussions can be an everlasting part of your college life. Experts from Industries, Entrepreneurs, Alumni, Research centres, Visiting Professors from UK, and Representative from US consulate have been to our campus and put together 18 such events have happened this month. We strive to bring in eminent people from different walks of life to help our students expand their intellectual horizon.



Events List

Department of Computer Science Engineering

Date	Program	Resource Person	Topic
18/01/18	Guest Lecture	Mr. G. Santosh Kumar, Ideal Academy, Chennai Mr. Abdul Rashath, Just Dial Pvt. Ltd.	Internet Programming
20/01/18	Guest Lecture	Mr. Dharaneetharan, G.D, Director, Social Eagle	How to become a successful entrepreneur
20/01/18	workshop	Dr. T. Ruso, Computer Science Engg, SSE	Exploring python programming
20/01/18	Guest Lecture	Mr. Koushik, IT Analyst, Tata Consultancy Service	Awareness towards emerging trends in IT Industry
22/01/18	One day workshop	Mr. Balaji Suresh, Application Developer and Project Head, Tekplay Systems Ltd., Chennai	Native Application Development
22/01/18	Seminar	Mr. G. Saravanan, Regional Head, ICTACT	Cloud Computing
01/02/18	Guest Lecture	Dr. P . Mirunalani, Assoc. Prof., SSN College of Engg.	Python Programming
02/02/18 & 03/02/18	Learnathon	Mr. Hari Narayanan, Regional Head, ICTACT	"Trailhead Student Championship 2018" - 24 hour learning challenge
03/02/18	One day National Workshop	Mr. S. Sasi, Training Engineer, SMARTANT Technologies, Chennai	Selenium Automated testing
03/02/18	Programming Contest	Python Faculty Members	Python
05/02/18	Guest Lecture	Dr. R. Prasanna Kumar, Professor, Dept. of CSE, S.A. Engineering college	Enhancing Cloud Operations Using Big Data Analytics
09/02/18	Guest Lecture	Mrs. Renuka Devi, Sairam Engineering College, Chennai	Travelling Salesperson Problem
13/02/18	Guest Lecture	Mr. T. Ponmanimaran, Senior System Analyst, Ramco IT Systems, Chennai	Enhancing Integration equations on Middleware Technologies
15/02/18	Guest Lecture	Dr. A. Sasi kumar, professor, Vels University	Mobile computing and its application
15/02/18	Workshop	Mr. Yogesh Nagarajan, Senior Software Tester, Inlogic technologies, Chennai	Agile methodology on software development

Date	Program	Resource Person	Topic
20/02/18	Workshop	Mr. S. Vadivelu, One Yes Technologies, Chennai	Website Design and Development
22/02/18	IET Workshop	Mr.R.Balaji, Project Manager, Infoziant Systems Pvt.Ltd, Chennai	IOT
22/02/18	IET Workshop	Dr.J.Suresh , Associate Prof , SSN College of Engineering	Bigdata and Hadoop
23/02/18	Guest Lecture	Mr. Vinod Senthil, Founder, Infysec	Ethical Hacking - A boon to computer field
23/02/18&24/02/18	Symposium	Mr. T. Vinod Senthil, Chief Technology Officer, DoWebScan	SAMVID 2K18
24/02/18	Guest Lecture	Mr. Surprise Sakthi, Chief, Surprise Ninja	Building Entrepreneurial skills
26/02/18	Workshop	Mr. Rahul Yennu, Senior Embedded Engineer, Pantech Pro Ed Pvt. Ltd, Chennai	IOT using Raspberry Pi and Python

Department of Electronics and Communication Engineering

Date	Program	Resource Person	Topic
29/01/18 & 30/01/18	IET Workshop	Mr.Ramnath, Senior Engineer, Robovar city , Sky-Fi Lab, Bangalore	Robotic training and competition
03/02/2018	Guest Lecture	R. Tamilselvan, Director, Vidhara Securecom Pvt. Ltd.	Recent trends in Electronics Industry
11/11/17	workshop	Mr. Sivakumaran, Photon Technologies, Chennai	Real Time project design using Arudino
08/02/18 & 09/02/18	Workshop	Mr. G. Kannan, Director, Exhibit Electronix, Chennai	PCB design using orcad
15/02/18	Seminar	Dr. Venkatesh Mahadevan, Deputy Dean, Asia Pacific International college, Australia	Professional development and coorporate social responsibility for young Engineers
15/02/18	FDP	Dr. Venkatesh Mahadevan, Deputy Dean, Asia Pacific International college, Sudney	Research Methodolgies in Various Aspects
23/02/18	Guest Lecture	Mr. Venkata Samy, Application Developer, DXC Technology	CAMPUS TO CORPORATE-Emerging Technologies in IT Industries
23/02/18	Guest Lecture	Mr. Sai Pritham, Bangalore	Design for testability of VLSI Chips

Date	Program	Resource Person	Topic
23/02/18	Guest Lecture	Mr. Poojith, Bangalore	IoT based application development
28/02/18	Workshop	Mr. Sanjay Siddha Pradeep Kumar, Lead Software engineer, HCL , Chennai	Python Family-Trending Libraries

Department of Mechanical Engineering

Date	Program	Resource Person	Topic
09/01/18	Guest Lecture	Mr. Vipin V S, CareerLauncher , Chennai	Higher Education Awareness for 2nd Year Students by Mechanical Engg.
24/01/18	Seminar	Mr. C. Jijo Jacob, Business Development Manager, Institute of Industrial Design , Chennai	Computer Aided Design Process for 2nd and 3rd Year Students by Mechanical Engg.
01/02/18	One day National Level Hands-On workshop	Mr. Thileepan Stalin, Society of Automation and mechatronics Engineers	Industrial Automation and Mechatronics for Beginners
09/02/18 & 10/02/18	Two Days International Workshop	Dr. Mohammed Thariq Bin Haji hameed Sultan, University Putra, Malaysia Dr. Geetha Manivasagam, Director (CBCMT), VIT Vellore	Composite Materials
09/02/18	Seminar	Dr. K. Balasubramanian, Professor & Head, Dept. of Mech. Engg., Bharath Institute of higher Education & Research	International Internship Opportunity at Malaysia
10/02/18 & 11/02/18	Special Training Camp	Mr. C.V. Govindan, CORPS Cammander, SJAB, ICF CORPS	Special Training Camp for Officers and NCO's by SJAB/ICF Corps
12/02/18 & 13/02/18	Guest Lecture	Mr. J. Ramesh, Chief Engineer, ONGC (Retd)	Heating Ventilation and Air-Conditioning Systems
21/02/18	Hands-on-Workshop	Mr. P. Vivekandan, Senior Inspection Engineer, TWG Group	NDT methods and Techniques
21/02/18	Guest Lecture	Mr. S. Rajarasalnath, Plant Director, NBSL Elevated Components India Pvt Ltd	Lean Manufacturing
27/02/18 & 28/02/18	Workshop	Dr. P. Kanagavel, Add Director, NIWE Prof. Ajit Kumar Kolar, IIT Madras Dr. Ruben Sudhakar, NIT Karnataka Prof. Dr. V Rajini, SSN Engg College Mr. K. Boopathi, Addl Director, NIWE Prof. Dr.K.Srinivas Reddy, IIT Madras.	The 21st Century Challenges and Opportunities in Development of Sustainable Energy Systems

Department of Civil Engineering

Date	Program	Resource Person	Topic
28/02/18	Guest Lecture	Er. Karthik, Director, Terzaghi Institute, Chennai	Carrer Development
22/02/18	Guest Lecture	Prof. Neil Hewitt, Research Director, Ulster University, UK	Demand Side Response and Renewable Energy

Department of Automobile Engineering

Date	Program	Resource Person	Topic
01/02/18, 02/02/18 & 03/02/18	Workshop	Mr. Govardhana Giri, M/s Atlon Instruments Pvt., Ltd.	NVH in Automobiles
09/02/18 & 10/02/18	Two Days International Workshop	Mohammed Thariq Bin Haji hameed Sultan, Universiti Putra, Malaysia Dr. Geetha Manivasagam, Director (CBCMT), VIT Vellore	Composite Materials
27/02/18 & 28/02/18	Workshop	Dr. P. Kanagavel, Add Director, NIWE Prof. Ajit Kumar Kolar, IIT Madras Dr. Ruben Sudhakar, NIT Karnataka Prof. Dr. V Rajini, SSN Engg College Mr. K. Boopathi, Addl Director, NIWE Prof. Dr.K.Srinivas Reddy, IIT Madras.	The 21st Century Challenges and Opportunities in Development of Sustainable Energy Systems

Department of Electrical & Electronics Engineering & Energy and Environmental Engineering

Date	Program	Resource Person	Topic
28/02/18	Guest Lecture	Er. Karthik, Director, Terzaghi Institute, Chennai	Carrer Development
22/02/18	Seminar	Mr.R.Ganapathy, Application Engineer, ERP labs Chennai.	Product Development using Controller
27/02/18 & 28/02/18	Workshop	Dr. P. Kanagavel, Add Director, NIWE Prof. Ajit Kumar Kolar, IIT Madras Dr. Ruben Sudhakar, NIT Karnataka Prof. Dr. V Rajini, SSN Engg College Mr. K. Boopathi, Addl Director, NIWE Prof. Dr.K.Srinivas Reddy, IIT Madras.	The 21st Century Challenges and Opportunities in Development of Sustainable Energy Systems

Department of Science & Humanities

Date	Program	Resource Person	Topic
27/02/18	Seminar	Dr. S. Gokulraj,C, Kandaswami Naidu College, Dr. R. Siddeswaran, Pachayappas College of Arts & Science, Dr. S. Decashankar, L.N Govt. College, Ponneri	Functional materials and applicational aspects
27/02/18	Guest Lecture	Dr. K. Kanmani Raja, Govt., Arts college, Chennai	Corrossion-the million dollar thief
05/03/18	Guest Lecture	Ms. Ezhilarasi, Chemist & National Rifle shooting Champion	Goals and how to achieve them
14/02/18	Workshop	Dr. Parthiban Natarajan, VIT, Bhopal	Network visualization and Analysis
09/02/18	Guest Lecture	Dr. Aparna Chandrasekaran, USIEF, American Consulate	Keynote
16/02/18	Guest Lecture	Prof. Alan Chambers, Southampton University, UK	Keynote
17/02/18	FDP	British Consulate	BEC Examination

Expert Talks

Date	Resource Person	Topic
4/11/2017	Mr. K. Balasubramanian, Founder Chairman, Precision Equipments	Making of an entrepreneur
11/11/2017	Mr. Chandra Sekharan Pradeep Deputy General Manager, Mahindra & Mahindra	Electric Vehicles
11/11/2017	Mr. Mughilan Thiru Ramasamy, SkyLark Drones	Futuristic Drones
25/11/2017	Mr. G. Balaji, Director, Suba Solutions Pvt.Ltd	Career guidance
25/11/2017	Mr. Senthil Nayagam, Director, FN Entertainment	Entrepreneurship in the Internet Industry
2/12/2017	Mr. S. Siva Samy, UltraCement	Secret of Success
2/12/2017	Mr. Anantha Ram, Multi brand Car service	Motivation In Business
9/12/2017	Mr. Sriram Santhanam, Metal Scope Pvt.Ltd	Entrepreneurship at a very young age

Date	Resource Person	Topic
9/12/2017	Ms. Sharadha GopalaKrishnan, Smiley Media	Challenges faced by Women Entrepreneurs
20/01/18	Mr. G. D. Dharaneetharan, Director, Social Eagle	Entrepreneurship in Computer Science
03/02/18	Dr. Preethi Raj, Founder and Chief Nutritionist, Wootu Nutrition.	Nutrition and Diet
03/02/18	Ms. Priyanka Acharya, Blogger	Family Relationship
03/02/18	Mr. ShyamSundar, Founder and Business Head, Epix Entertainment	Smart Investments
24/02/18	Mr. Karthikeyan, Founder, Chennai Expo Prints Pvt Ltd	The story of my Journey
24/02/18	Mr. Kamalakannan Aiyaswamy, Senior Manger, F.L.Smith Pvt. Ltd.	An Engineering student as an Entrepreneur
24/02/18	Mr. Sakthi, Founder, Surprise Planning Company	An Encounter with Suprises