

mechanical **Aspire**

Achievements in Sports, Projects, Industry, Research and Education

All About Nobel Prize- Part 8 - Can Nobel Prize be sold?



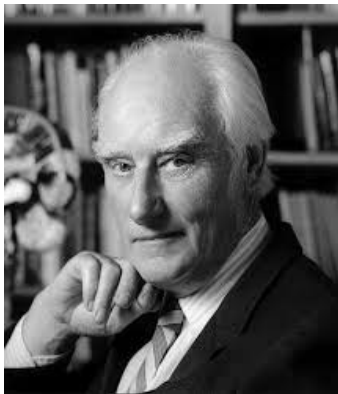
James Chadwick
(1891-1974)

The 1935 Nobel Prize in physics that was awarded to English scientist James Chadwick for his discovery of the neutron was sold at auction for \$329,000.

Sotheby's auction house, which handled the sale on June 3, 2014, in New York, estimated that the [Nobel gold medal](#) and its accompanying diploma would sell for between \$200,000 and \$400,000. Sotheby's did not release any information about the buyer. The seller was a collector of medals and coins, who bought Chadwick's Nobel gold medal and diploma from the famed physicist about 20 years ago.

Chadwick studied under British scientist Ernest Rutherford, who is considered the father of nuclear physics, and whose model of the atom (which was the first to show that much of its charge was concentrated in a nucleus) earned him a Nobel Prize in chemistry in 1908.

Decades later, Chadwick proved the theoretically predicted existence of neutrons — electrically neutral particles in the nucleus of an atom that have slightly more mass than protons. Scientists soon understood that neutrons could be used in nuclear chain reactions to release massive amounts of energy. Chadwick, who was knighted in 1945, was involved in developing the [first atomic bombs](#) during World War II, as head of the British contingent of the Manhattan Project. He even witnessed the Trinity bomb test — the world's first nuclear explosion — on July 16, 1945, at the Alamogordo Air Base in New Mexico.

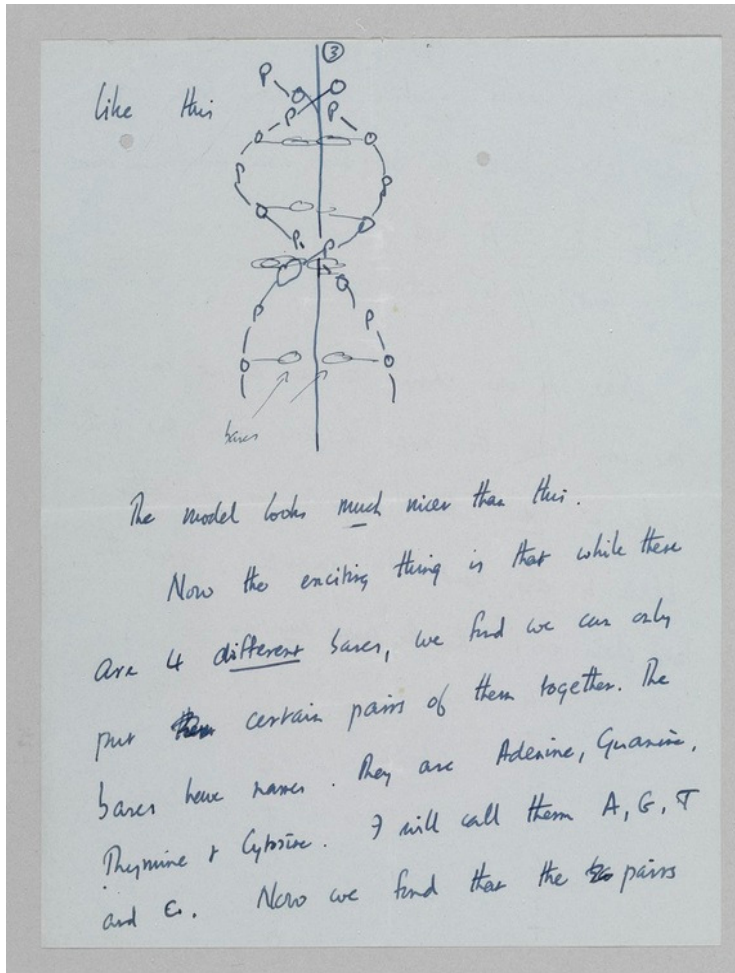


Francis Crick
(1916-2004)

With this week's auction, the seller may have been trying to strike the same fortune as Francis Crick's family.

The [medal awarded to Crick in 1953](#) for the discovery of DNA's twisted ladder shape was offered at auction last year, marking the first public sale of a Nobel Prize. With little precedent for the sale, Heritage Auctions had valued Crick's medal and diploma at \$500,000. It far exceeded expectations, selling for more than \$2 million. A Nobel Prize medal honoring the discovery of DNA's twisted ladder shape was sold at auction on April 11, 2013 in New York for more than \$2 million.

Francis Crick was one of three men awarded the [Nobel Prize in Physiology or Medicine](#) for deciphering the DNA molecule's double-helix structure in 1953. Sixty years after the discovery, the CEO of a Chinese biomedical firm that's working on organ regeneration paid \$2,270,500 for Crick's medal and accompanying diploma at Heritage Auctions.



At a separate sale a day before, a letter penned by Crick set the world record for any letter ever sold at auction.

A bidder paid over \$6 million at an auction on April 10, 2013, for a letter British scientist Francis Crick wrote to his 12-year-old son explaining the double-helix structure of the DNA molecule, which he and James Watson had just discovered.

The winning bid was \$5.3 million, with the final price tag for the "Secret of Life" letter coming in at \$6,059,750, according to Christie's, which handled the sale.

The [seven-page handwritten note](#), dated March 19, 1953, contains diagrams that outline the scientists' model for how "des-oxy-ribose-nucleic-acid (read it carefully)" replicates and encodes instructions for the development and function of living things.

"In other words we think we have found the basic copying mechanism by which life comes from life," Crick wrote to his son, Michael, who was at boarding school at the time, signing off, "lots of love, Daddy." [[See Images of Crick's 'Secret of Life' Letter](#)]

As legend has it, when Watson and Crick made their discovery on Feb. 28, 1953, Crick announced inside a local Cambridge pub called the Eagle, "We have discovered the secret of life." Their findings wouldn't be published in the journal *Nature* until two months later, and the note to Michael is likely one of the first written explanations of the discovery.

"As far as we know this is the first public description of these ideas that have become the keystone of molecular biology and which have spawned a whole new industry and generations of follow on discovery," Michael Crick wrote in Christie's catalogue.

<http://www.livescience.com/46092-nobel-medal-neutron-discovery-sold.html>

Info to Alumni

Campus Update

Freshers of 2015 batch join SSNCE

The Orientation Program for the 2015 batch was inaugurated on 30th July. Principal welcomed the gathering, President addressed the students, Director MBA introduced the faculty and as usual Scholarship holders took us on an emotional ride by sharing their experiences in SSNCE.

Mock Interview by EDC

Dr.K.S.Vijaysekar was one of the Panel members of the Interview Committee along with Mr.Amit Tyagi and HoD English Dr.Thruvenkatasamy for the mock interview session organised for the benefit of third and final year students by EDC team of SSNCE.

Good use for cricket Ground

Tamilnadu Cricket Association first division cricket matches was held in our cricket ground. International players like Badrinath, Piyush Chawla, Venugopal Rao have played in the tournament. Mr.Kasi Viswanathan, TNCA Secretary had visited our ground during the match and he was really impressed with our well maintained ground. He also assured that our ground can be of great use for BCCI and TNCA tournaments and immediately he has allotted the All India Kalpathi Buchi Babu Cricket Tournament from August 15 including for the finals.

External Recognition

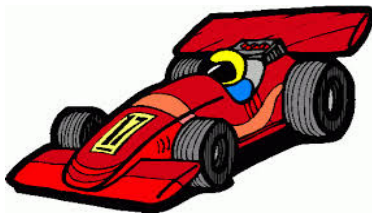
Department Update

Dr.K.Babu reviewed a technical paper titled "Effect of CNT concentration on center cooling rate during quenching in CNT nanofluids" for the International Journal of Heat and Mass Transfer published by Elsevier.



Dr.K.S.Vijay Sekar has been appointed as a Technical committee member by IACSIT, China, to review papers for the "International Conference on Mechanical Manufacturing and Control (ICMMC 2014)" to be held during November 21-23, 2014 in Singapore.

A team of 25 SAEINDIA student members of our department under the leadership of the immediate passed out student Mr. Kalaiselvan J. and M. Ezhilan, A. Mukesh as trained drivers, made a maiden **Real Formula Car** at our campus confirming to the norms and standards set by the SAEINDIA.



The team participated in the *dynamic* round organized by the SAEINDIA (SUPRA wing) at the prestigious Madras Motor Race Track (MMRT) near Sriperumbudur, Chennai during July 18-20, 2014.(more details in Faculty write up section...)

M.Prasanna, R.Pragadish, V.Saravanan, Navin Kumar Krishnan, A.G.Gokul, G.Arind and C.Praveen of Third Year Mech B, Cleared the virtual round of the NATIONAL GO KARTING CHAMPIONSHIP. They will be fabricating a go kart car. Finals is in October 2014.

A Go-kart is a small four wheeled vehicle of any shape and size.



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Research Activity



Dr. M.S. Alphin Conducted Doctoral Committee meeting for the PhD scholar Mr M. Gopal. The invited external experts are Dr Davidson Jebaseelan, VIT University, Chennai and Dr. Edward Kennedy, KCG College of Technology, Chennai. (1-7-14)

Dr. M.S. Alphin Conducted Doctoral Committee meeting for the PhD scholar Mr Rajesh Kumar under Anna University. The invited external experts are Dr. Arunachalam, IIT Madras, Chennai and Dr. Kumarasamy, KCG College of Technology, Chennai. (2-7-14)

Dr. M.S. Alphin Conducted Doctoral Committee meeting for the PhD scholar Mr. Arunkumar under Anna University. The invited experts are Dr. Ramkumar, IIT Madras, Chennai and Dr. S. Vijayan (7-7-14)

Dr. S. Vijayan conducted the Doctoral Committee meeting for his Ph.D. Scholar Mr. S. Prasath on 30-7-2014. The invited external members were Prof. Rajadurai from MIT, Chromepet and Prof. L. Karunakurthy of Anna University.



Dr. B. Anand Ronald, has published a paper titled "Hole Accuracy during Deep Hole Drilling for Hydraulic Cylinder Application", in Advanced Materials Research, Vol. 984-985 (2014), pp. 67-72, co-authored by R. Clifford Benjamin Raj, A. Velayudham and Prasmit Kumar Nayak

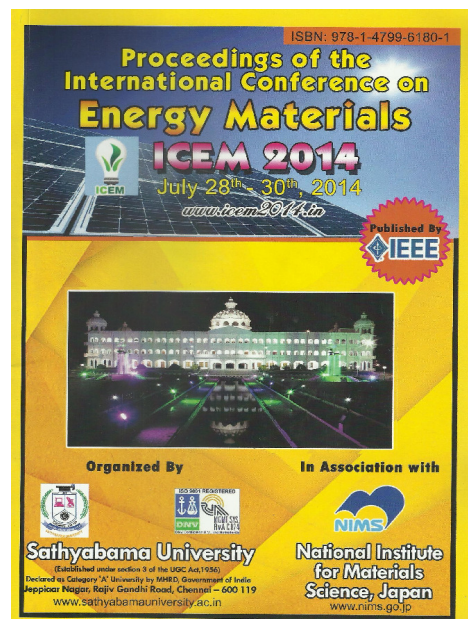
Dr. N. Nallusamy has published the following technical papers: (1) "Experimental study on diesel engine and analyse the spray characteristics of diesel and biodiesel by varying injection pressure", Advanced Materials Research Vols. 984-985 (2014) pp 932-937; doi:10.4028/www.scientific.net/AMR.984-985.932; (2). "Review Study on Spray Cone Angle in Diesel Engine Fuelled with Biodiesel and its Derivatives", Advanced Materials Research Vols. 984-985 (2014), pp 938-942. doi:10.4028/www.scientific.net/AMR.984-985.938



Conference Paper by Mrs. R. Rajeswari and 2014 passed out Mech UG students C. Karthic Raja, Kishore, Kiran and Purushothaman. Title: Optimisation of process parameters during EDM of AISI 304 stainless steel, accepted for presentation in the International Colloquium on Materials, Manufacturing and Metrology, ICMMM2014, to be held during 8-9, Aug 2014 at IIT Madras.



"A review of energy materials used in devices for harnessing non conventional energy Sources"- authored by Akhilnandh Ramesh, Amitesh Jain, A. Kirthivasan and Dr. D. Ananthapadmanaban, presented in the International Conference on Energy Materials and abstract published in Proceedings.





Project Efforts

External Project

Dr. A.S. Ramana, Associate Professor made a presentation on his solar thermal project proposal in Programme advisory meeting on Solar Energy Sciences of Department of Science and Technology (DST), Ministry of Science and Technology, Govt. of India in National Institute of Advanced Science (NIAS), Bangalore on 28.07.2014.

Project Efforts

Internal Project submitted to SSN Trust



Prakash



MD



Satheesh



Damodaram



AKL



DAP



KS

S.No	Title	Investigators	Fund Requested in Rs. Lakhs
1	Evaluation of Alternate fuels for internal combustion engines	Dr.R.Prakash	6.00
2	Investigation of Machinability and functional characteristics of Nickel based alloys under cryogenic cooling	Dr.M.Dhananchezhian	5.00
3	Design, development and implementation of robots for scavenging applications	Dr.G.Satheesh Kumar	2.90
4	Investigations on the stress corrosion cracking studies of friction stir processed Nickel aluminium bronze	Dr.R.Damodaram Dr.A.K.Lakshminarayanan	4.50
5	Assessment of inter-granular corrosion resistance of friction stir and gas tungsten arc welded 316LN Austenitic stainless steel	Dr.D.Ananthapadmanaban Dr.A.K.Lakshminarayanan	2.10
6	Evaluation of Microstructure and mechanical properties of dissimilar friction stir welding on AA5083-H321 and AA6061-T6 alloys	Dr.K.Subbaiah	6.00

Our appreciations to Damodaram, Satheeshkumar and Dhananchezhian Who have submitted proposals within one month of joining SSN.

Our appreciations to Prof.Subbaiah who has submitted proposal within two months of being promoted to Professor Grade.

Faculty news

Mr. C. Arun Prakash joined as Assistant Professor on 23rd June 2014.



Mr. Arun Prakash did his B.E (Mechanical) in SSN College of Engineering and was ranked 8th in the Anna University scoring a CGPA of 9.07 out of 10. He went on to do his masters in MIT, Anna University specializing in Mechatronics. He is the Class topper in his Masters scoring a CGPA of 9.41 out of 10.

Areas of interest includes Robotics, Mechatronics and Maschine Vision.

Apart from the above ranks in the university, he has scored 98 percentile in GATE 2012, won prizes in speech, Poetry and Short story competitions. He was the Co-head of Tamil Mandram in SSN College of Engineering. He was also the Event coordinator for the National Level Symposium conducted by Mechanical department both in SSN CE and MIT, Anna University.



The 51st Convocation of the Indian Institute of Technology was held on Friday, the 18th July, 2014 at 4.00 p.m. at the Students Activity Centre (SAC) of the Institute.

Dr. Devi Prasad Shetty, Chairman, Narayana Hrudayalaya Group of Hospitals, India was the Chief Guest of the Convocation.

R.Damodaram and S.Somasundaram received their degrees.



Workshops attended

Dr. S. Soma Sundaram attended a one day workshop on 'connected thinking in core engineering' organized by National Productivity Council (NPC) held at Centre for excellence for training on energy efficiency, Ambattur, Chennai.(4-7-14)



There was a one day workshop on July 4, 2014, on '*Connected core thinking in core engineering*' conducted by **National Productivity Council (NPC)** at **Centre of Excellence for Training in Energy Efficiency (CETEE)**, Ambattur, Chennai. The major sponsors were American Chamber of Commerce Tamil Nadu chapter and Deloitte, a consulting company.

The **NPC** is a national body formed in 1968, with an objective of promoting productivity culture through consultancy and training. The corporate headquarters is in Delhi, with about 13 regional offices in state capitals. The **CETEE** is a unique hands-on training facility, functioning with an objective to bridge the gap between the academics and industry.

The workshop was started with the presidential address by **Mr. Harbahajan Singh IAS**, Director General of NPC. There were lectures by **Mr. Vivekanand**, **Mr. Rajiv Chawla** and **Mr. Rajan Aiyer**, who represented the industry. There was also a lecture by **Dr. T. Thyagarajan**, from Anna University, representing the academia. Lectures were given by **Dr. P. Dharmalingam** and **Mr. J. Nagesh kumar**, explaining the role of NPC in general and CETEE in particular.

The gap between the industrial practices and the academic knowledge were discussed. While industry required people with *managerial abilities and lateral thinking*, the students coming out of colleges and universities are found to be lacking in these fields. During the in plant training or the industrial visits, students are allowed to view the machines and do not get a hands-on experience.

To overcome this gap, the CETEE is planning to provide a **five day training programme** to students on machineries which they are bound to see in the industry. They require students in the **final and pre-final years** in **Mechanical/ Electrical/ Instrumentation Under graduate programmes**. As each student must have a hands-on experience the batch size is limited to 40. The course fee is **Rs. 10,000** for one student.

A tour around the facilities available on the CETEE campus was given. The instrumentation used by industries in boilers, compressors, pumps, heat exchangers, motors, air conditioners, lighting and energy management were available in the campus. The students would be allowed to vary the load conditions and note the corresponding changes in the output parameters. Real time variation of the load with time also can be monitored using computers as done by the industries. The students can use the theory learned in the college/ university and put it to practical test.

A broad descriptive of the programme was given. A batch of 40 students would be considered and a real life industrial problem, like expansion of a chemical plant, would be provided to them. The students would then be split into groups, and each group will be asked to look at the various outcomes of the problem, like increase in lighting, air conditioning, implementation of additional furnace, additional load on the power supply, etc. The students would then carry out experiments on the respective systems and at the end of five days, they will be asked to submit a report.

The students will also be given a training certificate, which would be considered by industrial bodies attached with the American Chamber of Commerce Tamil Nadu chapter, as an additional qualification.

Workshop Conducted - 1

10 Day Workshop on Automotive Industry Simulation and Training (AISIT) Department of Mechanical Engineering, SSNCE.

The department of Mechanical Engineering organized a 10 Day Workshop on Automotive Industry Simulation and Training (AISIT) during June 18-29, 2014, as part of our SAEINDIA SSNCE collegiate club activity in the recent summer vacation. The event was organized by the SAEINDIA SSNCE club Faculty Advisors Dr. N. Lakshmi Narasimhan and Dr. R. Prakash.

About 250 participants across our country participated in the workshop. The workshop had lecture sessions on Automotive Engineering for four days, hands on session on Engine Dismantling and Assembly for two days, Automotive Simulation using software packages for three days, with a Project presentation on the last day. The participants were divided into 17 groups on the second day and each group was assigned an Industrial - Automotive Project that needed to be completed in eight days time and presented on the final day of the workshop. The participants enjoyed the programme the entire ten days at SSN.

The invited Expert speakers were from ATALON, Ashok Leyland, Defiance Technologies, Nissan-Ashok Leyland, Experts Hub and from our Department. The Faculty advisors thank the Department and the management for the kind support and encouragement. Special thanks to Prof. N. Nallusamy, Dr. S. Rajakumar and Dr. N. Lakshmi Narasimhan for delivering the lectures during the workshop. A warm thanks to the students volunteers Nandakumar, Manikanda Balaji, Rohan Singh, Sanjay, Veeraraghavan, Bhargav, Vaibhav, Ganapathy, Krishnan, Srivatsan, Murugappan, Chandramouli, Praneeth, Rajaraman, Pugazendhi, Akilanandh Ramesh and other SUPRA volunteers for their immense support for the entire ten days.



Glimpses of our 10-Day AISIT Workshop

Workshop Conducted - 2

e-Yantra Robotics Workshop

Department of Mechanical, Electronics & Communication and Electrical Engineering organized a two day Robotics Workshop as part of the e-Yantra project on June 30 and July 1, 2014. **Sixty faculties** from 11 Engineering Colleges and 4 Polytechnic Institutes in Chennai Region participated in the workshop.



Inaugural session
Mrs. Bhuvaneswari Project Manager, eYantra,
IIT Bombay, Mumbai
Dr. R. Jayaparvathy Professor ECE, SSNCE
Dr. K S Jayakumar Asso.Prof, Mech, SSNCE

The main **initiative** of the workshop is to support, in creating infrastructure in various colleges by providing a platform for **training teachers** both in theory and applications of Robotics, in addition to providing **guidance** in setting up a Robotics laboratory in the college.

In the two-day workshop, teams from 15 colleges consisting of four teachers each were trained to program the **Firebird V robot**.

Each team was given a **Robotic kit** that will be used by the teams to participate in the e-Yantra Robotics Teacher Competition (**eYRTC**).

This competition is used to further train the teachers to solve a real world problem using the robot through the Project Based Learning mode, completely on-line..

e-Yantra is a project initiated by **IIT Bombay** to spread education in Embedded systems and Robotics. This project is sponsored by Ministry of Human Resource Development (**MHRD**) through the National Mission on Education through Information and Communication Technology (**NMEICT**).



Dr. Saraswathy, Senior Project Engineer, eYantra IIT Bombay, delivering the lecture on "Introduction to LCD interfacing"



Saurav, Project Engineer, eYantra
Delivering the lecture on Robot
Programming for white line following



Hands on session in progress



The engrossed audience..



Team members of SSNCE receiving the robotic kit
Mr.K.L.Harikrishna, Dr.K.S.Jayakumar,
Dr.M.Balaji (EEE) and Dr.R.Jayaparvathi (ECE)



Support by Prof.V.Kamaraj and Prof.S.Radha



Valedictory session
Dr.Saraswathi Kirthivasan Senior Project Manager, eYantra IIT Bombay.
Dr.C.Chinnaraj TEQIP Co-ordinator, DOTE, Chennai
Dr.D.Mohan, Director CFD, Anna University, Chennai
Dr.S.Salivahanan, Principal SSNCE

The **benefits** envisaged are:

- i) nurturing the technical skills of student as per industry needs and
- ii) providing an opportunity for the students to explore interdisciplinary skills.

With the support of AICTE -Industry Institute Partnership Cell and SSN funding, we now have a Robotics Lab housed in mech block

Mech guys manufacture a Racing Car

**SAEINDIA SSNCE COLLEGIATE CLUB - OUR SUPRA 2014 VENTURE – “MACH RACING TEAM”
A FORMULA-1 CAR MADE AT SSN- IT IS A DREAM COME TRUE – A REPORT**

What is SUPRA all about?

SUPRA SAEINDIA – a student Formula car design is a high profile real time annual live contest organized by the prestigious SAEINDIA (Society of Automotive Engineers India). A large number of premier institutions across the country take part in the making of the Formula Car at their own campus under the guidance of their respective SAEINDIA club Faculty Advisor.

The event is restricted to SAEINDIA student members only. Student members in a group of maximum 25 team up and work for about 6-8 long months to design and build a live Formula -1 Car at their college campus to participate in the SAEINDIA's SUPRA event.



**A snap of our SUPRA Team members with the SUPRA Formula car.
Present with them are our Principal and the two Faculty Advisors.**

SUPRA contest consists of two rounds – the *virtual* and the *dynamic*. In the *virtual* round, the participating teams are required to present their conceptual design of their proposed Formula car with analysis carried out using the licensed softwares such as Solid Works, Altair Hyperworks, Ansys, etc. This is an elimination round to qualify for the dynamic round that happens 7-8 months after the *virtual* round.

Those teams qualified in the *virtual* round are officially permitted to develop their own Formula-1 car at their campus strictly complying to the norms and rules of the SUPRA SAEINDIA contest. The duration given between the *virtual* and *dynamic* rounds is about seven to eight months to enable teams to develop their own Formula car. The finished cars are to be brought to the real Formula car Test Track venue chosen by the SUPRA organizers for Technical Inspection and Endurance Testing during the 3 day *dynamic* round.

At Chennai, the available track for such formula events is the well known Madras Motor Race Track near Sriperumbudur. A technical team of Judges comprising of experts from automotive industries and premier academic institutions constituted by the SUPRA organizers inspects each and every participating car at various stages of inspection during the *dynamic* round.

Complete Scrutiny of all the individual participating SUPRA vehicles is done with safety aspects of both the vehicle as well as the student driver uncompromised. Any violation of the norms, rules and guidelines framed for the SUPRA vehicle would undoubtedly invite disqualification of the team involved. SUPRA organizers make it mandatory that the student drivers are qualified drivers with compulsory participation in their SUPRA student driver's training programme organized prior to the commencement of the *dynamic* event.

All the participating teams should have to pass the Technical Inspection, Brake Test, Noise Test, and Endurance Test on their vehicle within the first two days of the *dynamic* round to qualify for the 3rd day Grand Finale live event. Scores are awarded by the Judges under different categories such as design, safety, aesthetics, novelty, acceleration, noise levels for the participating vehicles. Overall Championship is awarded for the Team securing the maximum scores at the end of the Grand Finale event.

SUPRA VEHICLE at SSN

A team of 25 SAEINDIA student members of our department under the leadership of the immediate passed out student Mr. Kalaiselvan J. and M. Ezhilan, A. Mukesh as trained drivers, geared up for the SUPRA participation last year (2013). Clearing the *virtual SUPRA* event organized by SAEINDIA last year (held at Kalinga Institute of Industrial Technology, Bhubhneshwar, India during, Sep20-21, 2013), securing an All India Rank 26, our SUPRA Team named as **MACH RACING team** have put tireless efforts and made a maiden **Real Formula Car** at our campus confirming to the norms and standards set by the SAEINDIA.

The team participated in the *dynamic* round organized by the SAEINDIA (SUPRA wing) at the prestigious Madras Motor Race Track (MMRT) near Sriperumbudur, Chennai during July 18-20, 2014. Though the team couldn't qualify for the last day - Grand Finale event of the *dynamic* round, they showed their real spirits and technical skills to the experts who inspected our Formula Vehicle during the first two days of the *dynamic* round.

The total budget of the vehicle was close to 6 Lakhs. The Faculty Advisors of our SAEINDIA SSNCE collegiate club, the department and the institution as a whole wish to congratulate the entire SUPRA - MACH RACING team for their great effort. The Formula vehicle developed by our team had many successful trail runs at our campus that spread the message of their hard work and skills honed by the team members during the tireless exercise performed in the last one year.

The MACH Racing team and the Faculty Advisors would like to thank the President (SSN Institutions), the Principal, Head (Construction and Facilities) and our entire department for the kind support and encouragement at various stages during the SUPRA journey.

OUR “MACH RACING” – SUPRA TEAM MEMBERS

1.	J. Kalaiselvan (Team Lead), Passed Batch2014		
2.	M. Ezhilan , Passed Batch - 2014	14.	B.Sanjay Bharadwaj ,Final Year
3.	A. Mukeshh, Passed Batch - 2014	15.	Rohan.H.Singh, Final Year
4.	M. Vinoth, Passed Batch - 2014	16.	M. Thamilmani, Final Year
5.	J. Karthic Raja, Passed Batch - 2014	17.	S. Nandhakumar, Final Year
6.	M. Yashwanth, Passed Batch - 2014	18.	Vaibhav Prakash, Final Year
7.	L. Nandakumar, Passed Batch - 2014	19.	S.Ganapathy, Final Year
8.	Akshay Karthick, Passed Batch - 2014	20.	R.Krishnan, Final Year
9.	A.Siddarth , Passed Batch - 2014	21.	S.Murugappan, Final Year
10.	P. Raghavendra, Passed Batch - 2014	22.	V. Manikanda Balaji, Final Year
11.	D. Radheesh , Passed Batch - 2014	23.	S. Chandramouli, Final Year
12.	A. Praveen Ramanujam, Final Year	24.	Ch. Bhargav, Final Year
13.	V. Veeraraghavan , Final Year	25.	Akhilnandh Ramesh, Third Year



SAEINDIA SSNCE Faculty Advisors:

Dr. N. Lakshmi Narasimhan and Dr. R. Prakash

The MACH Racing team and the Faculty Advisors would like to thank the President (SSN Institutions), the Principal, Head (Construction and Facilities) and our entire department for the kind support and encouragement at various stages during the SUPRA journey.



Also we would like to express our sincere gratitude to M/s Lucas-TVS with a special thanks to the Executive Director, for sponsoring our SUPRA team, a sum of Rs.50,000/-.

Mr. Rohan Singh of Final Year, is appreciated for his initiatives on the sponsorship received.

Student Activity

Mech Research Seminar -MRS/1/2014

Mr.S.Prasath, Ph.D research scholar of Dr.S.Vijayan, delivered a seminar on the topic "Dissimilar Friction Stir welding of Magnesium Alloys" at 10.00 am on 30/07/2014 in the Mechanical Department (M.E Class room).

S.Pon Vignesh Pappu of M.E.Manufacturing, attended a one day workshop on “Recent Trends in Mechatronics for manufacturing automation” at VIT Chennai on 18-7-14.

P.C.Praveen of M.E.Manufacturing, attended a workshop on “Nano Particles and nano materials” at Nitte Meenakshi Institute of Technology, Bangalore ,from June 14 to June 18.

K.R.VIGNESH and R.RAJARAMAN Won 1st prize Saaral Tamil Mandram quiz competition on June 9

Internships started during vacation (completed and Ongoing)

Company / Institute	Student and Class
AIESEC Conference at Pune	S.Vishnu Vardhan of Final Year B Section attended (June 26 to July 2)
AIESEC Bandung, Indonesia	Naveen Raj Anbazhagan of Final Year B Section Completed AIESEC Social Internship (June 7 to July 18)
ASHOK LEYLAND	S.Pradeep of Final Year B Section Pursuing Project since June 15.
ASHOK LEYLAND	Vairavel Premnath of Final Year B Section for 10 days
Caterpillar	M.Athul of Final Year A Section undergoing Internship (June 1 – July 31)
Center for Wind Energy Technology (CWET).	P.Tamilselvan and N.Manigandan of M.E.Energy Engineering
CPCL	G.Srinivasan and PR.Shivram of Third Year B Section (1 week)
Dept of Management Studies, IIT MADRAS	M.Vimalesh of Final Year B Section, “Determination of Maximum number of products from a given set” (June 5 to July 16)
Grundfos	N.Gowdhaman and D.R.Ebin Davis of M.E.Energy Engineering
HINDUJA FOUNDRIES LTD, ENNORE	R.Ramasamy and T.Senthamizhan of Final Year B Section (June 20 to July 10); Ajay Nandan of Third Year A Section (1 week)
HINDUSTAN MOTORS	Abinav Sundar of Third Year A Section (June 12-15)
IGCAR	Balaji of Final Year A Section (1 week)
IISc Bangalore	R.Archish of Final Year A Section undergoing Internship (June 1 – July 31)
IIT Madras	B.Adithya of Final Year A Section (June 15 to July 31) project on Vibrations
Prasteiya Mulya Business School in Jakarta, Indonesia	Vivin Abraham Kurian and N.Priya Ragavi of Final Year B Section Completed Social Internship (June 7 to July 18)
Railway Workshop , Bangalore	Samuel Mechano and B.Raghul of Third Year B Section (1 week)
RANE MADRAS	R.Vishwadeep of Final Year B Section (June 9 to 21); Adithya Jaikumar of Third Year A Section (for 3 days)
ROYAL ENFIELD	M.K.Eswaran and R.Aravindan of Third Year A Section (June 13-20)
SAINT GOBAIN LTD	S.Ganapathy of Final Year A Section (June 5 to July 16)
SESHASAI PAPER BOARD	R.Vignesh and Nivedh Khanna of Third Year B Section (1 week)
SPICEJET	E.Alagunidhu of Final Year A Section (June 7 to July 18)
TS1 Expansion at Neyveli Lignite Corporation	P.Saminath, K.K.Ranjith and C.Pradeep of Final Year B Section (June 13 to 20)

Internship Cum Projects for PG students

Wheels India Ltd has accepted to have Mr.C.Pradeep, ME (III sem Manufacturing student) to take up his project in their company under the guidance of Mrs.R.Rajeswari/AP/Mech for a period of 6 months.



FluidTherm Technology Pvt.Ltd has accepted to have Mr.K.M.Nambiraj, ME (III sem Manufacturing student) to take up his project in their company under the guidance of Mrs.R.Rajeswari/AP/Mech for a period of 3 months.



Murugappa Group has accepted to offer internship and projects for M.E.Manufacturing III sem students 1.S.Selva Arasan, 2.S.Pon Vignesh Pappu and 3.C.Vinoth , under the guidance of Prof.V.E.Annamalai



IGCAR has accepted to offer Internship cum project for Vijay Prakash and Santosh under the guidance of Dr.A.K.Lakshminarayanan and Dr.K.Rajkumar respectively.

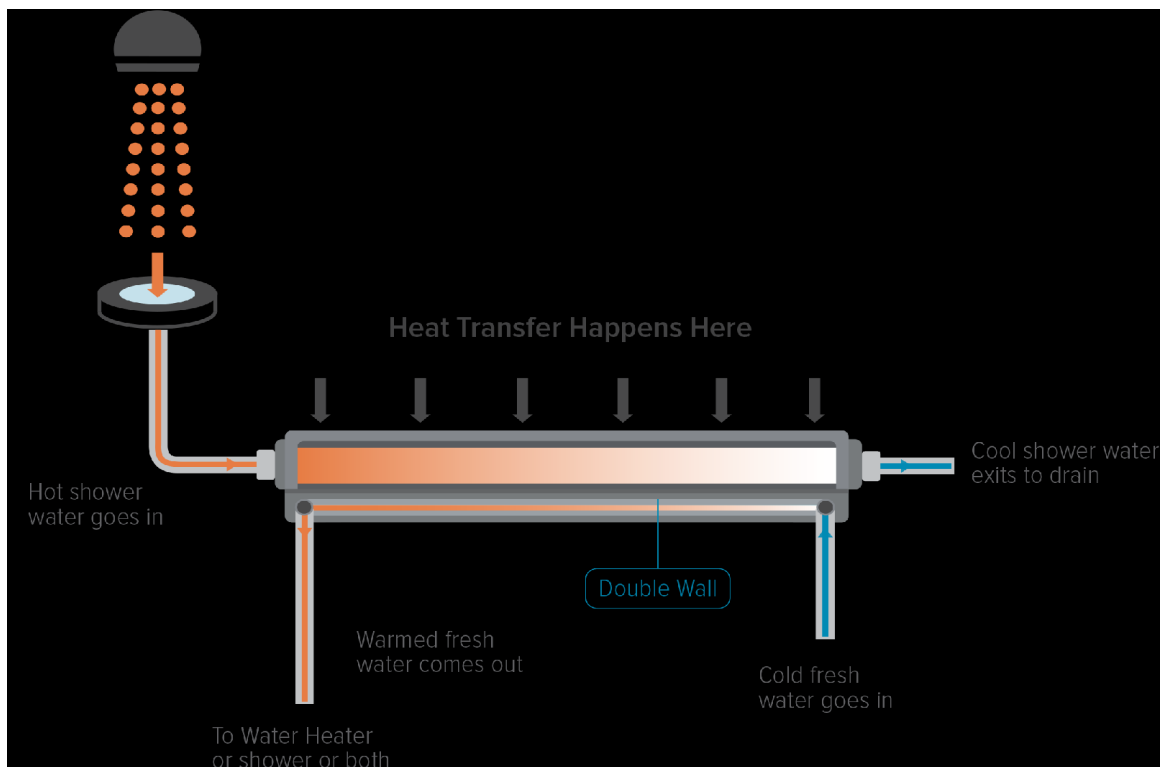


Forbes Marshal has accepted to offer projects and internship for six students of M.E.Energy III Sem -D. CHRISTOPHER, M.JAYAMURUGAN, S.P.R FEBI PONWIN, K.KUMARRATHINAM, L.VENKATRAMANAN and R. MARADONA



Amazing Innovations - 1

Recovering heat from wasted shower water

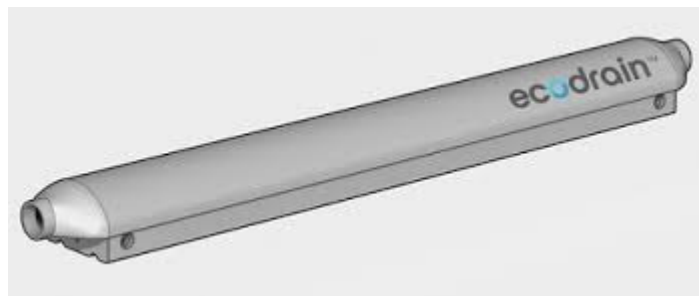
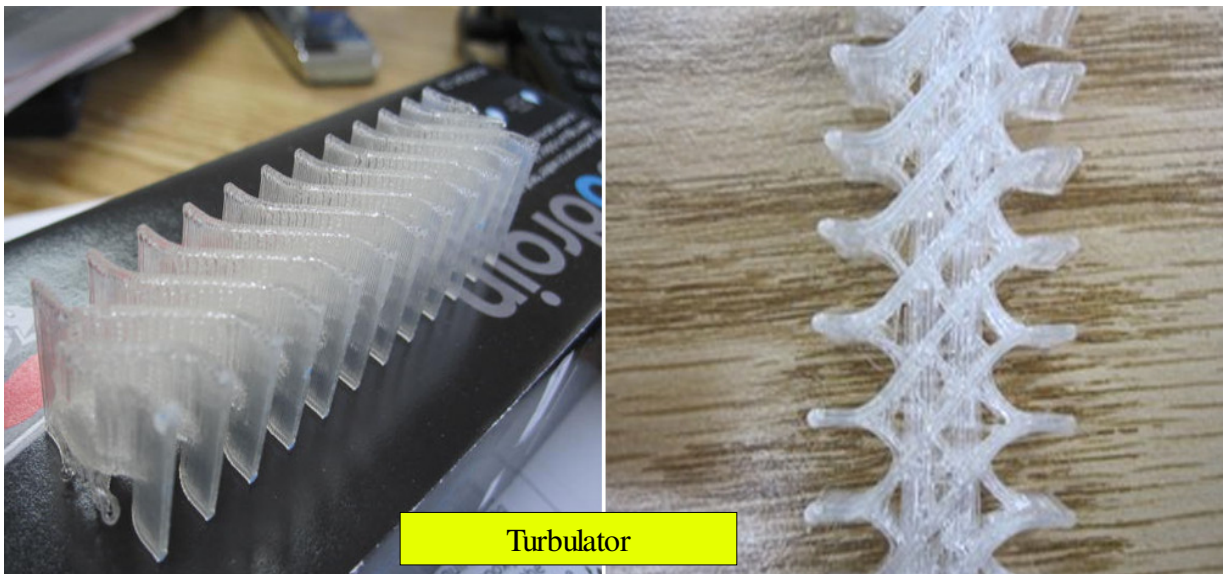


Wasted energy flows down the drain every day because there is no easy way to capture it. The solution is EcoDrain™: an easy-to-install, next-generation heat exchanger that captures the energy from your shower's hot water. Turns out it's one of the simplest, most cost effective home improvements you can make.

What goes on inside EcoDrain™?

A lot, even though there are no moving parts and EcoDrain™ requires no electricity to operate. Inside, a specifically engineered piping configuration transfers heat energy from the hot shower water to the incoming fresh water supply. And, a patent-pending device optimizes turbulence in the fresh water supply for maximum energy recovery.

In testing it was discovered that generating turbulence in the cold water was a key to increasing the heat transfer. So the experiments began with turbulence generating inserts called turbulators that were separate from the outside geometry encasing the cold-water channel.



Read the development at

<https://ecodrain.ca/en/our-story/>

Amazing Innovations - 2

Newspaper with mosquito repellent ink

Sri Lankan newspaper [Mawbina](#) has taken fighting dengue fever to new levels. For national dengue week they ran the usual articles on how to avoid getting bitten by dengue-carrying mosquitoes. However, they went further producing poster ads coated in citronella essence and hanging them in bus stops, allowing people to huddle at the stop under the ads' protective smell.



The highlight of the campaign came on the April 7, World Health Day. As the video below notes, “People read the newspaper in the early morning and evening, the time the mosquito strikes.

The entire newspaper was printed using inks with citronella essence mixed in. As they claim “Every letter of every word stopped mosquitos from biting.”

As a commercial venture the project was a huge success – with the edition selling out by 10am, a sales increase of 30%. Read more at <http://www.iflscience.com/health-and-medicine/sri-lankan-newspaper-repels-mosquitoes#YkC8gUtW0glsThEw.99>

Amazing Innovations - 3

Hand power to assist cycling



Much as cycling is a good source of exercise for the lower body and the core, it admittedly doesn't do much for the upper body. We've seen a number of attempts to address this shortcoming, mostly in the form of bikes that are pedaled with both the legs and the arms.

The FitRider takes a somewhat different approach, looking somewhat like a cross between a regular bicycle and a NordicTrack.

Instead of traditional handlebars, the FitRider has two vertical ski pole-like levers that extend down to the pedals, and which pivot in the middle where they meet the aluminum frame. Each one is connected to its respective pedal via a steel rod, allowing arm power applied to the levers to augment the leg power that's applied to the pedals.

If the rider's arms get tired, they can disconnect those rods and secure them to an anchoring point on the frame, locking the levers in a more traditional non-pivoting configuration. They can still turn from side to side, however, to facilitate steering.

In its current form, the FitRider also features a suspension fork, 700C wheels, and a 14-speed drivetrain.

Its creators, Bill Capek and Abraham Mathew, are now in the process of raising production funds on Kickstarter. A pledge of US\$1,800 will get you one, when and if they're ready to go. The estimated retail price is \$2,199.

You can see the bike in action, in the link below.

<https://www.kickstarter.com/projects/686369974/fitrider-get-it-and-get-fit?ref=discovery>

Source- <http://www.gizmag.com/fitrider-arm-powered-bicycle/33046/>

Alumni Tracking

Sir, (addressed to Dr.NLN)

My name is Prithiv John, I am currently doing my MSc in Thermal Power and Fluid Engineering at the University of Manchester. I was part of the SSN mechanical batch that passed out in 2013.

I am writing to say that I have been offered the Graduate Technical Engineer position at ABB Ltd, Aberdeen, Scotland and to thank you once again for the 4 insightful years of education and support.

Best regards,
Prithiv John



I have joined a company, actually a start-up called Cloudcherry as an analyst and have been working for a month now here at Chennai. They are into customer experience capture, measuring customer delight and helping business and brand owners get closer to their customers by giving them insights on where they are going wrong by using data collected from their customers.
(www.getcloudcherry.com)

I just thought I should inform you of the happenings from my end and also wanted to continue to keep in touch with you and the department. I would love to receive copies of Aspire every month and contribute to it as and when I can. Hoping to hear from you soon!

Regards
Arjhun (2010-14 batch)

I am Rajan.P, of M.E.Manufacturing 2012-2014 batch.
I have joined Agni College of Technology as Assistant Professor.



Deepak Ramu of 2014 batch is now Engineer at Technip



Mubarak Abdul Khader of 2014 batch
Is now Engineer-Engg Finance (MIS),
Larsen & Toubro Ltd.

Arjun Shyam Sundar of 2014
batch is now at Ford Motor Co.



Alumni feedback - 1

Hope everything is fine in the department. Please convey my regards to all the faculties and students of our department.

I have been regularly reading the Aspire, in fact my interest to read this is growing month after month I move away from my college days. So was heavenly our department of Mechanical Engineering. The amount of support and encouragement the department gave us is tremendous in each and every field we wanted to excel.



My life at Ashok Leyland is absolutely great and I have entered a completely non-engineering venture. I am currently working with the marketing team of Light vehicle division of Ashok Leyland. And this was chosen by me. That's the amount of liberty GETs get in choosing their department at Ashok Leyland. They offer a wide range of work profile to choose from.

For the past four years I was in a assumption that I was going to be a good engineer when I graduate. But after coming to Ashok Leyland, I got the opportunity to discover myself and where do I actually belong to. To be frank even now I am not clear, but of course better than before and more importantly I enjoy my work.

But it didn't stop just with the rediscovery. What gave me the real guts to choose a non-core department, competing with lot of MBAs, was the article in Aspire of month "April, 2014" - "Get off the Wrong bus", by Mr. R. Ramakrishnan, President, Mytrah Energy. It was of great help in taking a bold decision. Thanks a lot for including it in the Aspire and bringing it to our notice. Having said this, I urge my juniors to spend some quality time, on what they really can work and formulate a way to attain the best work satisfaction.

I have been posted in Kolkata. This is a very challenging environment for people who doesn't know a word in Hindi, and that too being in Marketing department. Of course a very good place for Food :D. But the joy of learning a new language keeps me motivated. Convey my best wishes to the students in their future endeavour.

A small suggestion to Aspire: It would be great if some major economic or international events can be included. Creating awareness about the macro economic changes happening around the globe could be an eye opener in some way for students growing as professionals. This could also help students to see the opportunities to make business who are aspiring to be an entrepreneur.

Thanking you

Sincerely,
Seshadri R

SSN Mech 09-13

Seshadri and his team received incentive for publication from SSNCE. They were courteous enough to give it back to the next project team to buy material for their project. We appreciate their gesture



Nitin visited us recently
and shared a few points
with juniors in classroom

Few things which I wanted to share.

1) Difference to "Indian university " system of education

Actually the syllabus of our study is really good. But the way the exams are conducted makes the difference in what students actually get from the teachers. With Indian style of university exams , we were able to clear the exams with good CGPA just with four days of full preparation during study holidays and during the exam days.

Sometimes, the questions which are asked in those examination can be answered without even understanding the concept. But in Netherlands, we are allowed to bunk all the classes also. But we cannot even bunk one class because that will even make us to fail the exam.

Some exams are oral exams. In the oral exams , we have to submit a report on a assignment which is given by the teachers. Then we will have one-to-one session with the professor who asks question regarding the report and the subject knowledge. The assignment can be done in a GRP of two(not more than that) or alone.

The oral exam usually lasts for 20 mins. In few subjects, we have written exams and in few exams, presentation+questions after that. After every class , we had to brush through the concepts which are taught in the class with the help of some books or papers in internet.

As we did not study our bachelors the way we should have studied, we had to do lot of homework to match with their level. The 20 mins which they give is strict timing. If we do not up during that 20 mins. Either we had to postpone the exam(if the teacher is available) or we had to fail that exam.

2) Things to be done by Juniors

Six years back, getting an admission in Germany for mechanical engineering students were really easy. But year by year, its getting tougher. Now it has become really tough that 900 applications are coming for automotive technology course in Esslingen university of applied science which has only two seats for Indians.

GRE and IELTS is just a criteria for European university. Some universities in Germany are demanding GATE score also as the competition is increasing. European universities wanted to know how much technical knowledge you have than to check your English knowledge.

So start thinking about your future during your second year itself. Decide whether you wanted to Study in USA or Europe. **The demand for Germany is huge because some universities do not have Tuition fees or it is very less. You can save Rs. 30 lakhs easily if you get admission In Germany. And jobs for mechanical engineers in Germany is huge.**

But to get admission and to get job there, you need to have fluent German. Doing basic courses in German (even B1, B2) is not enough to get an admit nowadays due to intense competition. **You have to write your CV and Letter of Motivation in German to increase your chance.**

And Research in Core mechanical field is decreasing a lot. So you have to be inter-disciplined to have a better future. You should either know bit of electrical/electronics or bit of computer science (school level C is not enough) .

So only if you try to increase these skills from second year, you will have a chance to get an admit in one of the best universities in the world. Start thinking in second year so that you will finally have a decision by the middle of third year.

Consulting an agency for abroad education is waste when you have a bunch of seniors who have huge knowledge about admission procedures, criteria, job aspects, field of research . So use the social medias efficiently to get linked with the SSN seniors. There is a facebook group to help the juniors of our department to get their doubts clear about higher education.

I think most of us will be glad to help our juniors to shape their career.. All the best.

My wishes.

Nitin Krishnan

Forthcoming events

Crank – X September 9th, 2014

International Conference -Jan 8 and 9, 2015

The poster for ISERMAT - 2015 features a green background with a large green leaf on the left. The title 'ISERMAT - 2015' is in green at the top. The SSN logo is in blue at the top right. The main text 'INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY RESOURCES, MATERIALS AND TECHNOLOGIES' is in black. Below it, the dates '8 - 9 JANUARY 2015' are shown. The organizer information 'Organized by DEPARTMENT OF MECHANICAL ENGINEERING SSN COLLEGE OF ENGINEERING, CHENNAI TAMIL NADU, INDIA. Website : www.ssn.edu.in' is at the bottom. The right side of the poster is a collage of images: a dam, a windmill, solar panels, a gear, and a server rack.

ISERMAT - 2015

SSN

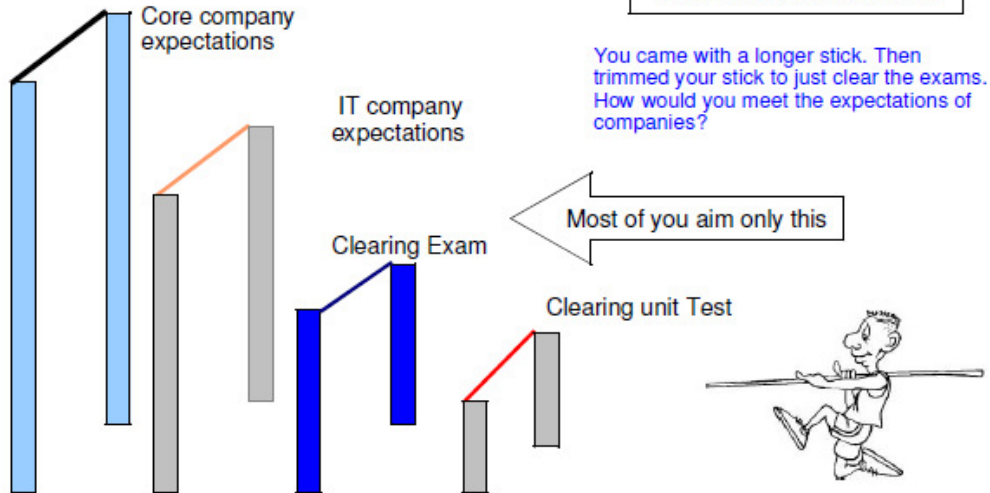
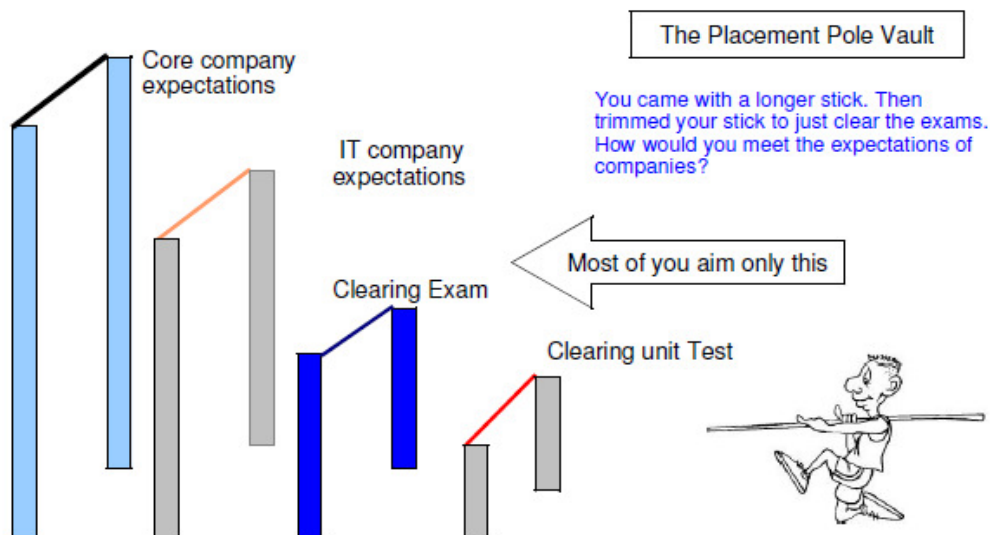
**INTERNATIONAL CONFERENCE ON
SUSTAINABLE ENERGY RESOURCES,
MATERIALS AND TECHNOLOGIES**

8 - 9 JANUARY 2015

**Organized by
DEPARTMENT OF MECHANICAL ENGINEERING
SSN COLLEGE OF ENGINEERING, CHENNAI
TAMIL NADU, INDIA. Website : www.ssn.edu.in**

For more details about the conference, please visit www.isermat2015.com

Some slides from HoD's info sharing to students



Pick a bigger stick- Pay attention to core subjects right now, develop your basics, avoid arrears, attend Placement tests , Attend Placement Training and make yourself eligible for an Engineering Core job.

Breaking the pole



If your pole is broken, attend to it with care, immediately and correct it. Attend to arrears issue quickly-take faculty help and see how to clear. Analyse why you got arrears and initiate steps to avoid further losses.

Others, ensure the pole is not broken during the remaining semester exams.

Once employed, you need to wear id card.
Why not wear right now and practice?

Behavioural Change needed 1-Wearing id card

An id card displays our Association with an Institution.

Supposing I am a member of “**Thieves of Mylapore**”,
I may feel ashamed to display that and then I will hide the id card.

If I am a **member of Google**, I proudly display it.

Logic-

If you like the association-you display your link by Id card.

If you don't like the association, you hide the card.

Now, don't you feel proud of being in SSN?

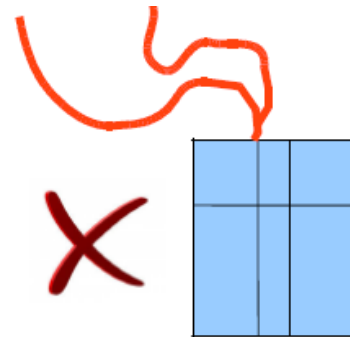
Unless you feel you are unfit to be in a good institution like SSN, there is no reason to hide your link to SSN. So, start wearing your id card.



The purpose is **to display, not to hide.**

So, wearing the id card tag and
**hiding the card inside your pocket is
as bad as NOT wearing it.**

So, wear it boldly and take pride in being an SSNite.



If you are uncomfortable with the rope hanging around your neck, use the card on the pocket with the clip



Not wearing Round neck shirts

Behavioural Change needed 2- Dress Code

Would you come in shorts to class?
A round neck shirt on top is as bad as shorts below.



Understand the strong reaction your dress creates on the system.
Is it worth disturbing the system with your choice of dress?

Behavioural Change needed 3- Self-Discipline

Conform to rules. Fight to Change the rules- but don't break the rules.

Using a faculty to discipline is like using a Rs.1000 note for wiping bird droppings on a car.
If you are Self-disciplined, faculty can do more for your growth. Think..



Learning from worldcup football event

**Mr. A.R. Subramanian, Executive Director-Finance.
SCHWING Stetter India Private Limited**

Japan may have lost their chance at the 2014 FIFA World Cup in the match against Greece last week, but they won hearts all over the world with their incredible gesture after - they stayed back to clean the stadium of all litter as the rest of the crowd filed out.



Wearing raincoats to protect themselves against the drizzle, and armed with garbage bags, the Blue Samurai fans set an example of true sportsmanship and goodwill, despite their loss. Unlike fans in other nations that have been known to resort to vandalism and violence (both in disappointment and exuberance) after a match, the 15,000 Japanese fans present at the Arena Pernambuco, Recife showed off a civic sense embedded deep within their cultural etiquette.

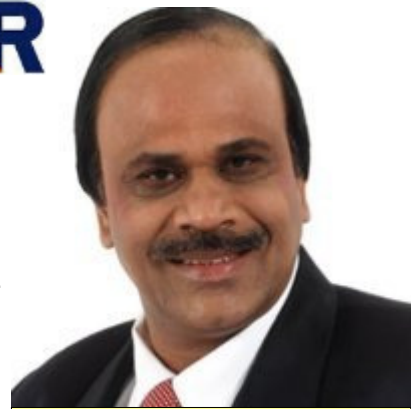
In Japan, it is common practice to clean up after yourself at concerts, sporting events and festivals. At restaurants, diners clean their own tables after a meal. And at public events, people often carry garbage back home to dispose of, instead of littering. A Japanese football fan was quoted telling the NPR, "We try to do little bit of clean-up to show respect to the host country and just, you know, show off how clean things are in Japan. And we like to make it so here, too."



At the end of the match, the defeated Japanese players formed a line and bowed to their fans, in appreciation of their support. The photographs went viral on social media, eliciting responses that hailed Japan as a fascinating example of sportsmanship. The host nation, Brazil, has called this out as a great example for Brazilians.

Anger is one of the most prominent emotions in all human beings. It can be an emotional result of having been offended , emotionally abused , wronged or denied something or when we are exposed to failure.

There are many aspects to anger and this can vary between people. Some difference can include how often we get angry, how severe our anger becomes, how much we suffer from it, and also the triggers which stimulate anger and possible tantrums. There can also be differences regarding other feelings which might be associated with anger when it occurs.



Mr.R.Ramakrishnan
Advisor, GMR Group

Let us understand anger. Anger is not a result of what the world does to you. Anger is the basic expression of your inability to be in control of the situation in any other way. Whenever the current situation is not in your control you let your temper loose.

Suppressing anger is not a solution. In fact, it takes greater amount of energy to hold your emotions than to expose it. Emotions born but not expressed do not get buried dead, but get buried alive. All suppressed emotions keep burning from within. Continuous suppression of anger , or for that matter any emotion, accumulates into emotional baggage and they come out in ugly and unmanageable proportions in the most unexpected circumstances. So, suppressing anger is not a solution but transcending anger is.



In animals kingdom, the only way to keep one self away from being hurt by the rest is exhibiting anger. it is like come no further , this hurts, this is my space ; I do not want to be disturbed. And many more of these expressions can only be communicated to other through anger.

Anger is their defense mechanism. **Anger in human beings is that animal expressing itself. When through human ways we are not able to take control of a situation, we resort to the animal in us.**

So the primary understanding is that anger is not born out of any deficiency with others, but out of your own inadequacy to be in control of a situation. It is not that he is not doing what I want him to do. It is that I am not able to get him to do what I want. So I become angry. Anger is more a message of you than to the world. Anger tells you to look into some inadequacy that is there in you. So , how do I transcend anger ?

Let us look at this small story !

A Hindu saint who was visiting river Ganges to take bath found a group of family members on the banks, shouting in anger at each other. He turned to his disciples smiled and asked.

“ Why do people shout in anger and shout at each other ?”

Disciples thought for a while, one of them said, “ Because we lose our calm, we shout .”

“ But , why should you shout when the other person is next to you ? . You can as well tell him what you have to say in a soft manner.” Asked the saint.

Disciples gave some other answers but none satisfied the other disciples. Finally the saint explained.

· “ When two people are angry at each other, their hearts distance a lot. To cover that distance they must should to be able to hear each other. The angrier they are, the stronger they will have to should to hear each other to cover that great distance.

· What happens when two people fall in love ? They don't shout at each other but talk softly, because their hearts are very close. The distance between them is either nonexistent or very small.

· The Saint continues , “ When they love each other even more, what happens? They do not speak, only whisper and they get even closer to each other in their love. Finally they every need not whisper, they only look at each other and that is all. That is how close two people are when they love each other .”

Then he looked to disciples and said

- So when you argue do not let your hearts get distant .
- Do not say words that distance each other more.
- Or else there will come a day when the distance is so great that you will not find the path of return.

Awareness!

It is through awareness and awareness alone that you can transcend anger. Every time you get angry, become aware of it.

Ask yourself the following questions:

- 1) Whom are you primarily destroying with your anger – isn't it yourself
- 2) What did you get in return – a small job was done and acids got secreted in your body
- 3) Is it worth it ?
- 4) What was your personal inadequacy that led to this anger ?
- 5) Was there another way ?
- 6) A Humane way in which you could have handled the situation?

If need to be maintain a pocket journal with you in which you can record your awareness and realizations during every bout of your anger.

The more and more you find answers to the above question, the lesser will be the intensity of your anger. Over a period of time, you would have not only conquered your anger, but would have also evolved into a much better person, equipped in enough human ways to take control of any situation.

If you ask me whether, with this process, Am I improving –the answer is yes, I am aware of this and learning this. The first step to change is awareness and understand where I am and Where I want to be?

**Have a wonderful day & great weekend !
Ramki**

