

Mechanical **Aspire**

Achievements in Sports, Projects, Industry, Research and Education

All About Nobel Prize- Part 35

The Breakthrough Prize

Inspired by Nobel Prize, there have been many other prizes similar to that, both in amount and in purpose. One such prize is the Breakthrough Prize.

The Breakthrough Prize is backed by Facebook chief executive Mark Zuckerberg and Google co-founder Sergey Brin, among others. The Breakthrough Prize was founded by Brin and Anne Wojcicki, who runs genetic testing firm 23andMe, Chinese businessman Jack Ma, and Russian entrepreneur Yuri Milner and his wife Julia.



The Breakthrough Prizes honor important, primarily recent, achievements in the categories of

Fundamental Physics,
Life Sciences and
Mathematics

The prizes were founded in 2012 by Sergey Brin and Anne Wojcicki, Mark Zuckerberg and Priscilla Chan, Yuri and Julia Milner, and Jack Ma and Cathy Zhang.

Committees of previous laureates choose the winners from candidates nominated in a process that's online and open to the public.

Laureates receive \$3 million each in prize money. They attend a televised award ceremony designed to celebrate their achievements and inspire the next generation of scientists.

As part of the ceremony schedule, they also engage in a program of lectures and discussions. Those that go on to make fresh discoveries remain eligible for future Breakthrough Prizes.

The Trophy

The Breakthrough Prize trophy was created by Olafur Eliasson. "The whole idea for me started out with, 'Where do these great ideas come from? What type of intuition started the trajectory that eventually becomes what we celebrate today?'" Like much of Eliasson's work, the sculpture explores the common ground between art and science. It is molded into the shape of a toroid, recalling natural forms found from black holes and galaxies to seashells and coils of DNA.

Events

The significance of scientific advances resonates in both the present and the future. They are among the highest achievements of human culture and the foundation on which new knowledge will be built. The Breakthrough Prize aims to celebrate the best scientific work and inspire the next generation of scientists. Breakthrough Prize laureates are honored at an annual awards ceremony televised globally. In addition, the ceremony is followed by a daylong symposium featuring lectures and discussions with Breakthrough Prize laureates and leading scientists from across the world.

Fundamental Physics

The Breakthrough Prize in Fundamental Physics was founded in 2012 by Yuri Milner to recognize those individuals who have made profound contributions to human knowledge. It is open to all physicists — theoretical, mathematical, experimental — working on the deepest mysteries of the Universe.

Life Sciences

The Breakthrough Prize in Life Sciences honors transformative advances toward understanding living systems and extending human life. The prize was founded in 2013 by Sergey Brin and Anne Wojcicki, Mark Zuckerberg and Priscilla Chan, Yuri and Julia Milner, and Jack Ma and Cathy Zhang.

Mathematics

The Breakthrough Prize in Mathematics rewards significant discoveries across the many branches of the subject. The prize was founded by Mark Zuckerberg and Yuri Milner and announced at the 2014 Breakthrough Prize ceremony.

2016 Awards

"By challenging conventional thinking and expanding our knowledge over the long term, scientists can solve the biggest problems of our time," said Mr Zuckerberg.

In the life sciences, prizes - worth \$3m each - were awarded to five individual researchers:

- **Karl Deisseroth** and **Edward Boyden**, who are pioneers in the field of optogenetics, which uses light to control living cells - particularly those in the brain;
- **John Hardy**, who studies the genetics of Alzheimer's disease at University College London;
- **Helen Hobbs**, who works on the applications of genetics in medicine
- **Svante Pääbo**, a pioneer in the field of ancient DNA, who led the sequencing of the Neanderthal genome

A single award for fundamental physics was shared by five pioneering **neutrino particle experiments** - whose teams together number more than 1,300 researchers. This is the same research field honoured by this year's [physics Nobel](#).

The five experiments were the Sudbury Neutrino Observatory in Canada, the Daya Bay facility in China, along with KamLand, K2K/T2K and Super-Kamiokande, which are all located in Japan.

The mathematics prize went to **Ian Agol**, who studies phenomena known as three-dimensional manifolds.

Nominations for 2017 are closed and announcements expected soon...

Info to Alumni- Campus Update

SSN re-certified for ISO9001:2015 version

During October 25th and 26th, we had the ISO Re-certification Audit. ISO has issued a 2015 version, including Risk mitigation as an important Clause. SSN has successfully met the criteria.

Dr.Srinivas Gumparthi writes..

At the first outset I want to thank all the stakeholders of SSN family for extending excellent support to ISO Cell for successful completion of ISO 9001:2015 (New version) re-certification audit by TUVNORD. I am happy to share that TUVNORD auditors have recommended SSNCE for Quality Standard Certificate for next three years starting from December 2016 to December 2019.

On behalf of all us I would like to convey my thanks to The President, Top Management, The Principal, and The Director for their support in building quality systems in SSN.

Management Representative - ISO



Info to Alumni- Department Update



Flautist Visveshwar performing at the Lawyerpet Sai Baba temple in Ongole on the occasion of Dasara

External Recognition

Flautist Master Visveshwar from Chennai was on a high when flute maestro N. Ramani showered praise on the child prodigy by comparing him with his guru T.R. Mahalingam, affectionately called Mali.

“I cherish most the eminent flautist Ramani’s remark at the Madras Music Academy during the Spirit of Youth festival in 2010 while presenting the best instrumentalist award,” says the 20-year-old flautist going down the memory lane.

“I have not seen my guru Mali playing in his childhood. I think flautist Mali would have played like Visveshwar in his childhood,” flute Ramani, who has introduced long flute into Carnatic music, had said, the young flautist recalled in a conversation with The Hindu here.

Enchanting recital

All India Radio-accredited B-high grade artist floored laymen as well as connoisseurs of art at the music festival organised on the occasion of Dasara by Sri Gayatri Adyatimika Samskritika Mandali.

“Mali, who had revolutionised the style of flute-playing in Carnatic music, is my source of inspiration,” he says. The 20-year-old youth, who has admiration for flautist Shashank, says he wants to carve a niche for himself by developing a style of his own.

Visveshwar, who has given over 600 performances, values the confidence reposed in him by AIR senior staff artistes P. Nageswara Rao and N.S.Kalyanram who played violin and mrudangam with him respectively. The Hindu (Dated 7.10.16) about my flute performance at Ongole, Andhra Pradesh on 6th October.

<http://www.thehindu.com/news/national/andhra-pradesh/its-an-honour-to-be-compared-with-flute-maestro-mali/article9194916.ece>

External recognition

Dr. B. Anand Ronald, delivered an **invited Lecture** on "Grindability of Metal Matrix Composites" in the DST - SERB sponsored One Day National Seminar on "Machinability Behaviour of Aluminium Matrix Composites - MBAMC 2016" at Sri Venkateswara College of Engineering and Technology (Autonomous). Around 68 participants attended the workshop. [15-10-2016]



Dr. Prakash, delivered a **keynote address and invited talk** in a SERB sponsored National work shop at MSAJ College of Engineering, Chennai. [30-9-2016]

Dr. S. Vijayan and Dr. S. R. Koteswara Rao have been appointed as **members of the Syllabus Sub Committee** for framing the Curriculum and Syllabi for B.E Mechanical Engineering UG programmes under R-2017.



Dr. K. Babu, was **invited to review** a technical paper titled "An Experimental Analysis of Quenching of Continuously heated vertical rod with aqueous Al₂O₃ nanofluid" for Journal: Resource-Efficient Technologies, An elsevier publication.

Dr. R. Damodaram was **invited to review** a paper titled "Taguchi-Grey Multi Response Optimization on Structural Parameters of Honeycomb Core Sandwich Structure for Low Velocity Impact Test" for the international journal "Silicon".



Dr. V. E. Annamalai was invited to review a chapter on "QPLAN—A Tool for Enhancing Software Development Project Performance with Customer Involvement." for the book "Strategic Alliance and Value Co-Creation in the Service Industry." , being published by IGI Global.

Publications



Dr. K. Rajkumar, Asso. prof, has published a paper titled "ELECTROLYTIC CONCENTRATION EFFECT ON THE ABRASIVE ASSISTED-ELECTROCHEMICAL MACHINING OF ALUMINIUM-BORON CARBIDE COMPOSITE" in International journal of Materials & Manufacturing Processes, Taylor&Francis Publisher (Impact Factor 1.419)

Dr. K. Jayakumar, Associate Professor has published a technical paper titled "Investigation of Mechanical and Tribological Properties of A356 alloy Al₂O₃-SiCp Hybrid Composites through Stir and Squeeze casting", Vol. 03, 2016, 89-92 in Journal of Advanced Engineering Research (ISSN: 2393-8447).



Dr.L.Poovazhagan, Asso. Prof./Mech, has published a paper titled "Ultrasonication assisted casting of bulk aluminum metal nanocomposites", in the international journal of Applied Mechanics and Materials, co-authored by passed out batch U.G students

A manuscript authored by Dr.G. Selvakumar (Associate Prof. / SSN), K.G. Thirupathi Kuttalingam, (PhD Scholar), Dr.M.Selvaraj (Associate Prof. / SSN) and J. Manohar, titled 'Enhancing Die Corner Accuracy Using Path Modification Strategy in WEDM of MONEL 400' has been accepted for publication in 'The Journal of Mechanical Engineering Science' (**Thomson Reuters Impact factor: 0.73**). Publisher: Sage.



Mr. C. Arun Prakash, Assistant Prof/Mech, has presented a paper titled "Effect of Magnetic Flux Variation on the hardness of the magnetic molded Al/SiCp" at the National Symposium for Mechanical Engineering Research Scholars held at NIT Warrangal [7-10-2016]

Dr. K. Babu, Associate Professor has presented his technical paper titled "Quenching Performance of AISI 1010 Steel in CNT nanofluids" in an International Conference on Advanced Materials, Manufacturing, Management and Thermal Sciences organized by SIT, Tumkur on 24-09-2016.



B Jain A R Tony (Full time PhD scholar/Mech.), Presented paper titled Dynamic Characteristics of Dental Impant, in International Conference on Condition Monitoring (ICCM-2016) conducted by Condition Monitoring Society of India held at GITAM Univ Vishakapatnam, 26-27 October 2016. Co-Authors: Alphin M S, Velmurugan D.

Research news

The Synopsis DC meeting of Mr. M. Gajendiran (Part-time research scholar of Prof.N.Nallusamy) was held on 21-10-2016 at 02.00 pm in SSN CE.



Dr M S Alphin, Associate professor, invited as external DC member for PhD Scholar Mr John Joshua at Karunya University, Coimbatore [8-10-2016]

Dr.A.S.Ramana, Asso. Prof./Mech invited as external DC Member for PhD Scholar at Sri Sai Ram Engineering College, Chennai [28-9-2016]



Programs Attended

Dr. G. Satheesh Kumar attended the workshop on "Internet of Things (IoT)", organized by the Department of Instrumentation Engineering, MIT, Anna University [21 & 22-10-2016]



Dr.G.Satheeshkumar



Dr.N.Nallusamy



Dr.K.Subbaiah



Dr.K.L.Harikrishna

Dr. N. Nallusamy, Professor, attended "NAAC awareness seminar on quality system in higher education" organized by Anna University, Chennai [29 & 30-10-2016]

Dr.K.Subbaiah and Dr.K.L. Harikrishna attended "Two day national workshop on Manufacturing of Advanced Materials" Sponsored by TEQIP - II at J N T University, Kakinada, Andhra Pradesh [29 & 30 -10-2016]

Placement for passed out students

Dr.N.Lakshmi Narasimhan arranged an interview for Dinesh (2016 Passed out student) with Ecologikol Advisors India Pvt Ltd.[28-9-2016]

Ayudha Pooja was celebrated on 7th October, 2016.



Student activities

Manickavel M, II Year, reviewed a book named "Arivial pudhayal" by Dr.Kumar Ganesan during the Tamil Saaral Mandram event [28-9-2016]

Manickavel M, II Year, made an event of game of words in the NSS day celebration- co-ordinator for the NSS day program [5-10-2016]

Visveshwar N, IV Year,

Played Flute concert at Maangadu Kamaskhi Amman Temple [2-10-2016]

Played Flute concert at Ongole Sai Baba Temple [5-10-2016]

Played Flute concert at Shankara Matam, West Mambalam [9-10-2016]

Played Flute concert at Kolar dasara festival [11-10-2016]

Members of the Society of Automotive Engineers Club (SAE) SSN CE conducted Tier - 1 events and sent the result to SAE Southern Section Office [30-9-2016]

Project News



Dr.R.Prakash (PI) and Jayakishan B (Co-PI) sent a proposal to SERB under special call in the area: Combustion on 15.10.16.

Scheme: Extra Mural Research Funding (Individual Centric)

Title:Combustion studies for synthetic polymer fuels on controlled auto-ignition conditions at different injection timings using an open ECU in a VCR direct injection gasoline engine

Duration: 24 Months

Total Cost (in Rs.) : 23,00,000.00 (Twenty Three Lakhs Only)



Industry Interaction

MoU Signed

Dr. N. Lakshmi Narasimhan, facilitated the signing of an MOU [Memorandum Of Understanding] between NDT International and SSN. (28-9-2016)



Invited Talk at Confederation of Indian Industry Gathering



Dr.V.E.Annamalai was invited to make a presentation on “TRIZ-Innovative problem Solving” at a gathering of members of the CII, On Oct 21, 2016, at Hotel Crown Plaza, Adyar, Chennai.

Best Practices Sharing



Dr.V.E.Annamalai was invited to judge and evaluate the work done by various New Product Development Teams of Murugappa group, as part of their Annual Best Practices Sharing Session, held on 14-10-2016 at Institute Industry Interaction Centre [IIC], Tube investments of India, Avadi.

He had the opportunity to evaluate and listen to the Product development work done by twenty teams from various R&D units of Murugappa Group.



FDP on Cognizant Expectations and Future of IT Industry
Oct 22, 2016 @ CTS Office, MEPZ, Chennai.

A Brief Report on the Programme
-Dr. N. Lakshmi Narasimhan

CTS organized on Oct 22, 2016 an FDP on *Expectations and Future of IT Industry* at their campus at MEPZ, Tambaram, Chennai. Faculty members and placement officers from premier institutes and private Universities of the state were the invitees.

From SSN, the programme was attended by a team of faculty members across different departments along with self.

The nominations for participation were officially made from the respective departments through our placement office.

A Sparkling Opening Talk....Mr. Ramkumar Ramamurthy of CTS

Digital Era

The programme had a scintillating beginning with a talk by Mr. Ramkumar Ramamurthy, Sr. Vice President (Corp. Comm.) for close to about 2 hrs, on several areas relevant to the topic of the workshop. He gave a 360° perspective on the **Digital Era** that *we are all in* and its implication on our industrial - academic scenario.



It was well construed from his talk that the *Digital Era* needs a great deal of *Reformation in our Engineering Education* - which the majority of the Indian population is opting for as of now. He had struck an alarm to all the Institutes to bring in *Adaptive Changes* to their Syllabus and Curriculum enabling students understand and respond to the current mammoth changes in Core and IT/IT enabled service industries.

With the emergence of *Digital Era* from the *Internet Era*, he had pointed out that the future would be dictated by areas such as *AI, Cloud Computing, Data Analytics, Robotics, Automation, 3D Printing, IT based Smart Services, Smart Cities, IoT and so on*. The emphasis was on enriching the student's skills & talents aligned with the above said areas well in advance of their final semester.

It was awesome to hear from him that, a majority of the future job opportunities would be based on *Skills* rather than just the *Degrees alone*. The significance of acquiring nano-degrees from online portals/universities are going to be vital. Quite frequent revival of our teaching methods, mode of assessments, skill-mapping were all identified as *key attributes* for effective future placements. Imminent migration of IT related job opportunities to Automation before 2021 was placed as a caution before the audience to plan in advance.

Implications of Digital Era

The following are the implications for academia due to "Digital Revolution" as per the speaker:

- **There is going to be a *teacher on demand for every student in the near future***
- ***Online Video Courses***
- ***Adaptation to MOOCS based learning***
- ***Degree Vs Skills***

Need of the Hour: Skills 2020 - Expectations from the budding Engineers

- **Migration from problem solving skills to Complex problem solving skills**
- **Critical Thinking**
- **Creativity (Most Important)**
- **People Management**
- **Coordinating with others for a healthy business rapport**
- **Emotional Intelligence**
- **Judgment & Decision Making**
- **Service Orientation**

Expectations of CTS

What CTS Expects from the students aspiring for placement wit them:

- **Numerical**
- **logical**
- **Problem solving**
- **Attitude (Important)**
- **Learning ability**
- **Unlearning ability**
- **A basic knowledge in their Core Disciplines**
- **A very basic programming in C or any language from the non-IT branches**

Conclusion by the speaker

The talk was concluded with a gentle request on Institutes/Professors and Heads concerned to encourage students carry out interdisciplinary projects involving IT and accept submission of the same as academic project thesis. The talk concluded with a thunderous applause from the audience for the wonderful insight given by *Ramkumar Ramamurthy* on the future turns that the academic institutions should take to live up to the expectations of the *Fast Changing Industries* thanks to Digitization. Overall that was a perfect birds eye view on Engineering Education of the future!!

Technical Panel Discussion on Placement Performance

Followed was the Technical Panel discussion by CTS HR Team responsible for talent acquisition through campus placements. Frequent "silly errors" that many students do during the campus interview were placed before the academic fraternity just to avoid the recurrence with the future students.

CTS CIO - Challenge

The HR team highlighted about the CTS CIO- Challenge and how it helps students to be a part of CTS during their final or pre-final years. It was found that the participation in CIO Challenge had a big advantage for those placed in CTS on their performance right from the day-1 of their induction. A request was posed to all the faculty members to encourage more participation of their students in CIO-Challenge and CCSP (Cognizant Certified Student Programme) test conducted by CTS every year for placements.

Sayonara

The day ended with a nice lunch served to all the participants. I thank the CTS Team for the excellent hospitality and for the sharing of their experiences, expectations and knowledge. My thanks are reserved *as special* to my Department, SSN Placement Office and the Institution for giving me this wonderful opportunity. Though, I couldn't cover the entire spectrum of wisdom shared by the CTS, hope many of the important messages have been conveyed through this article. Due apologies for the messages left uncovered.

Experiments in Teaching

Audio Files



Dr.N.Lakshmi Narasimhan has done a small experiment: In problem based subjects, when students try to read / understand the problems in the book, they find it difficult. When all these are explained in class by the faculty, student either does not attend or is preoccupied with some other work. Attempting to study alone is a difficulty.

How nice it would be if the faculty's guidance is available as recorded voice like "turn to page 401, the first problem is ..." NLN has wonderfully done this – he has created voice recordings explaining the problems in Fluid mechanics. These voice files are distributed by group mail. No wonder students enjoy this unexpected support from their faculty.



Feedback from a student, Vasupradha-

Sir, I have gone thru all the audio clips for turbulent flow. It was very helpful. I was wondering when the ball bearings audio will be sent. Are there any other extra topics to be read sir? Thanks again for the audio clips.

Manufacturing of Advanced Materials.

Dr. K. Subbaiah and Dr. K. L. Hari Krishna attended a Two day national workshop on "**Manufacturing of Advanced Materials**" at J N T University, Kakinada, Andhra Pradesh.

Dr. G. Narayanan (Keynote Lecture), Scientist "G" from ISRO Trivandrum delivered his lecture on Materials and manufacturing with focus on aerospace liquid propulsion elements. **Experts** from **IIST**, Trivandrum, **NIT** Trichy, **NIT** Nagpur and **IIIT** Nuzvid delivered their lectures on advanced materials.



Dr.K.Subbaiah and Dr.KL. Harikrishna with Mr.V.Jayaprasad (Coordinator)(Left) and Dr. B.Ratnasunil (Dean, IIIT, Nuzvid) (Right)

Dr. V.Muthupandi (NIT T) discussed the Review of "Activated TIG welding".

Dr. P. Chakravarthi (IIST, Trivandrum) handled a session on "Fabrication processes for aerospace applications".

Dr. B. Ratna Sunil (IIIT Nuzvid) shared his experience about surface engineering by friction stir processing.

Sri. A. Viswanath (Sr. Scientist, JNARDDC Nagpur) handled a session on "Numerical simulation on aluminium alloys processing.

Dr. D. Ravikumar (NIT Nagpur) delivered his lecture on " Coatings for the machining of advanced materials"

Program Name : DST - SERB sponsored One Day National Seminar on "Machinability Behaviour of Aluminium Matrix Composites - MBAMC 2016"

Program Date: 15 October 2016

Venue: Sri Venkateswara College of Engineering and Technology, Chittoor, A.P

Dr. A. Mahamani, Professor, SVCET, Chittoor invited me for a talk on "Grindability of Metal Matrix Composites". Around 68 participants from various colleges had attended the workshop



- › **Walk Car** also known as pocket size transporter will soon be in the market. This new technology would be a great leap to the future. Just imagine how cool it is to carry a transporter in a bag pack.

This new gadget has been developed by a Japanese Engineer Kuniako Satio of 26. What this new gadget looks like. It resembles a lot with a skateboard size of a laptop. Moreover, the fuel is a lithium battery.



Walk Car: A pocket size transport : Features

- 1) **Light Weight** : – The walk car comes in two different variations, one for the indoor and the other for outdoor. This device is made from aluminum which ensures the light weight which weighs between 2 to 3kg (4.4 to 6.6 pounds).
- 2) **Durability** : – The device can take load up to 120 KG. The interesting point is that you can carry it in a bag with you. The light weight aluminum board is stronger than it looks.
- 3) **Speed** : – It can reach up to 10 KM per hour which is better than a walking speed and 12 KM per hour after the charging of 3 hours.
- 4) **No parking Space** :- Well if it can fit in your back pack why need space to park it. Even the weight and the dimensions of the device is similar to a laptop which is an advantage in this gadget.

Satio said ; “Maybe I just see it that way, but it seems to me that the U.S. is always the one which invents new products and Japan is the one which takes those products and improves on them to make a better version of it. But here in this case, the WalkCar is a totally new product I have started from scratch. So I also I want to show the world that Japan can also be innovative”

article reproduced from <http://foxinsane.com/walk-car-a-pocket-size-transport/>

Watch it in action at <https://youtu.be/6WR5JfsjOsU>

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CONSULTANCY SERVICES



NDT International Pvt Ltd was established in the year 2011 with a clear mission to 'become world leader in Non destructive training and consultancy services'. NDT International is **approved by British Institute of Nondestructive Testing (BINDT)** as Accredited Training Organization (ATO) and Authorised Qualifying Body for conventional NDT and advanced NDT in Singapore/India.

NDT International is authorized to impart training & certify NDT Personnel to BINDT PCN Scheme which complies with EN-473 & ISO 9712 requirements.

The Training institute is custom built with state-of-the-art technology providing ambient space, well equipped lecture halls, separate practical training rooms with necessary Equipments, accessories, flawed samples for testing.

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World class staff deliver unrivalled quality of training and assessment leading to internationally recognised qualifications in demand by industry worldwide.

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NDT International Pvt Ltd is accredited by BINDT for conducting Level 2 /3 courses in the the following methods

- Ultrasonic testing (category 3.1, 3.2, 3.8,3.9 category welds) Radiography Testing of Welds
- Magnetic Particle Testing
- Liquid Penetrant Testing
- Phased Array Ultrasonic Testing of welds
- Time of Flight Diffraction ultrasonic testing
- Basic Radiation Safety (BRS) Level 1

NON DESTRUCTIVE EXAMINATION (NDE)

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NDT Certified training is offered in

- Magnetic particle testing
- Ultrasonic testing
- Phased array ultrasonic testing of welds
- Penetrant testing
- Time of flight diffraction ultrasonic testing
- Basic Radiation Safety
- Radiographic film interpretation of welds

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NDT Level III Consulting Services

1. Selection of right nondestructive testing method/s and techniques suitable for the application
2. Selection of suitable equipment for specific purpose
3. Preparation of NDT inspection procedures for various inspection methods, clients and jobs
4. Preparation of procedures based on International, National or in-house Codes, Standards and specifications to meet customer requirements
5. Preparation of Test report formats and NDE technique sheets
6. Preparation of advanced NDT procedures such as Ultrasonic testing of TKY joints, Immersion Ultrasonic testing procedure and Aerospace NDT procedures, Phased Array Ultrasonic Testing, Time of Light Diffraction UT, Long range UT, Magnetic flux leakage etc,
7. Procedures for Advanced NDT methods such as Magnetic Particle Testing (MPT), Ultrasonic testing (UT), Liquid Penetrant Testing(PT), Radiographic Testing, Positive Material Identification (PMI) and Hardness Testing.
8. Preparation of written practices as per ASNT recommended practice SNT-TC-1A
9. Review of all inspection procedures
10. Review of procedures based on International, National or in-house Standards & Specifications.
11. Validation of Procedures
12. ASME code stamp certification consulting services

For details, pl visit <http://www.ndtinternational.org/index.html>



Through the efforts of Dr.N.Lakshmi Narasimhan , NDT International has signed an MoU with SSNCE.

NDT International and its association will help us in making our PG students-particularly M.E. Manufacturing Students- industry ready.

Discussion is on for conducting British certified, internationally recognised NDT courses for our M.E.Mfg students.

Amazing Innovation- 1

The smart cradle



The Snoo baby bed calms fussing babies by rocking them

While babies are great in most ways, they're not exactly conducive to getting a full night's sleep. Realizing this, pediatrician Dr. Harvey Karp joined forces with Swiss designer Yves Béhar (of the Fuseproject firm) and a team at MIT's Media Lab to create a solution. Five years later, the automated Snoo baby bed is the result. Throughout the night, Snoo rocks the baby and plays back soothing in-the-womb-like white noise.

When the integrated microphones detect that the baby is crying, the bed starts jiggling the infant and increases the white noise – it keeps this up until the crying stops, at which point it resumes the gentler rocking. Parents wishing to monitor or manually control the bed can do so via an app on their smartphone, using a Wi-Fi connection.

An optional organic cotton swaddle can be quickly wrapped around the baby and attached to the bed using built-in clips, to keep them safely lying on their back. There's also an LED night light, the intensity of which is dictated by an ambient light sensor.

It can be seen in baby-jiggling action, in the video below.

Watch this in action at https://youtu.be/Y5xLH5Qn_U

Amazing Innovation- 2

Efficient Wheel Chair



The Rowwheels REV-LX wheelset is a new Wheel Chair that lets users move their chairs forward by *pulling back* on the handrims - ordinarily, of course, they would push forward on the rims.

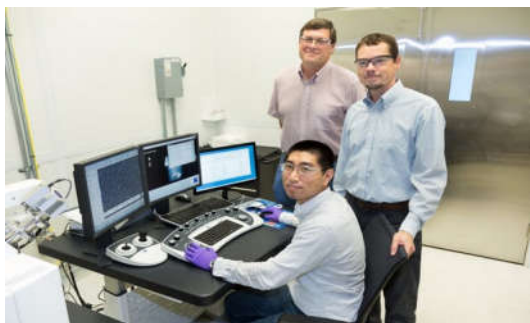
First of all, you may ask, what's the point? Well, switching to the rowing motion reportedly recruits larger, more capable muscles in the user's upper back and shoulders. This reduces the risk of shoulder injury, and also offers a mechanical advantage – according to the Rowwheels company, approximately 25 percent less force is required to propel the chair.

The wheels are available in a variety of sizes, and are installed on existing third-party chairs. Their unique propulsion system is made possible via a planetary gear system at the center of each wheel, which reverses the pulling motion of the user into forward motion of the wheelchair. Braking is accomplished simply by pressing in on the handrims. Watch it in action at <https://youtu.be/xkGoiFTQUjQ>

Amazing Innovation- 3

Converting Carbon Dioxide to Ethanol

The danger of the ever-increasing levels of carbon dioxide (CO₂) in Earth's atmosphere has become one of the most pressing issues of our age. As such, much research has been conducted to find ways not only to reduce it, but also in ways to remove it. This has led to many schemes that simply sequester CO₂ underground, or [store it in volcanic rocks](#). More ambitious schemes even aim to not only remove this gas, but to usefully employ it to create usable products, [such as plastics and foam](#), or even to [produce hydrocarbon fuels](#). Now scientists from the Oak Ridge National Laboratory (ORNL) claim to have produced one of the most usable of all chemicals – ethanol – in a process that is not only cheap, efficient, and scalable, but also conducted at room temperature.



Employing a catalyst made of copper nanoparticles embedded in spikes of carbon, the team found that electricity applied at just 1.2 volts was sufficient to convert CO₂ suspended in water into ethanol. In effect, the team were able to produce a complicated chemical reaction, essentially reversing the combustion process, with relative ease and an initial conversion rate of some 63 percent. This was a surprise to the researchers, as this type of electrochemical reaction often produces many different chemicals, including methane, ethylene, and carbon monoxide.

"We're taking carbon dioxide, a waste product of combustion, and we're pushing that combustion reaction backwards with very high selectivity to a useful fuel," says Dr Adam Rondinone, of ORNL. "Ethanol was a surprise – it's extremely difficult to go straight from carbon dioxide to ethanol with a single catalyst. We discovered somewhat by accident that this material worked, we were trying to study the first step of a proposed reaction when we realized that the catalyst was doing the entire reaction on its own."

<https://youtu.be/t7EYQLOlwDM>

Amazing Innovation- 4

The Lock that releases gas when tampered with



If you look at the bike lock in the above photo, you'll see that it's black with white stripes. It's no coincidence that that's the same coloration as a skunk. And, just like a skunk, the Skunklock will make a big stink if anyone messes with it. Although it looks and (mostly) works just like a regular U-lock, the Skunklock has an interior chamber that runs throughout the length of its hardened medium-carbon steel shackle. Sealed within that chamber is a pressurized legal-but-noxious "unique chemical deterrent."

Under regular use, that chemical stays inside the lock. If the shackle is cut into and the chamber is breached, however, the deterrent gets out. It then creates a cloud of very unpleasant-smelling gas which will irritate the thief's eyes, cause them to have difficulty breathing, and may even make them vomit. Additionally, it's claimed that the chemical will permanently permeate their clothing, ruining it.

Alumni Info

Vishal writes....on his Venture

Dear Sir,



How have you been? I hope all is fine with you and the department. I am writing to you at an interesting time. We at Warhorse are doing quite well and our courses have been met with an overwhelming response. We have also started training college students and have two batches filled in our office itself.

On another note, the Chairman of Harita Techserv(Srilalitha Gopal) has gotten acquainted with us and really wanted us to train various people in the TVS group. We would be commencing training for TVS Electronics sometime soon.

I remember you stating that you wanted us to train students from our department. If you still think that is feasible, we can work something out.

Also, I wanted to inform you about this startup called Brigge. It is a social networking app which helps builds communities for organisations. I think it could help structure out all the clubs and its activities in the department. I could ask the CEO to send you a mail.

Take care and regards,

Vishal V
CEO & Director-Training
Warhorse



Sanjeev Nivedan Chandramouli
of 2011-15 batch
is currently Graduate Student at
Eindhoven University of Technology,
Netherlands.He is pursuing his
Masters in Automotive Technology



Vaibhav Prakash of 2011-15 batch, is currently doing his
Masters, specializing in Sustainable Processes and
Energy Technology in Delft University of Technology.
Currently, he is an R&D Intern at Tata Steel Europe



Praveen Ramanujam Balakrishnan of 2011-15
batch is currently pursuing Masters in Automotive
Technology at Eindhoven University of
Technology

Forthcoming Events

1

Autoserve 2016, 7th edition of exclusive show on automobile aftermarket, part and accessories, is scheduled at Chennai Trade Centre, Chennai from 18th – 20th November 2016 . This is being organized by CII. It is chaired by Mr R Dinesh, Joint Managing Director, T V Sundaram Iyengar & Sons Ltd.

2

CII Southern Region is organizing the 5th edition of FoodCon 2016 one day Conference on Recent Advances in Food Processing Industries on 2 December 2016 at Hotel Westin, Chennai, INDIA.

The focus will be on fostering new business opportunities and technology platforms for small agro enterprises and enabling them to benefit from the growing market opportunities in the agro food system, domestically and internationally. The conference highlights the expanding role of emerging technologies, global food industry trends and functionality in this domain with emphasis on applications and benefits of emerging technologies, with a market focus. There are topics like Refrigerated storage and Solar Drying for Agricultural applications.

3

MALLA REDDY COLLEGE OF ENGINEERING AND TECHNOLOGY, Maisammaguda, Dhulapally, Secunderabad – 500100, Telangana, organizes an International Conference on Emerging Technologies in Mechanical Sciences (ICEMS– 2016) during December 16-17 . Full paper submission Nov 29, 2016. Details at <http://www.mrcet.ac.in/>

4

Department of Mechanical Engineering, Manav Rachna International University, Faridabad is pleased to announce "**International Conference on Quality, Productivity Reliability, Optimization and Modeling (ICQPROM 2017)**", Technically co-sponsored by Institute of Electrical and Electronics Engineers (IEEE) . The conference is scheduled to be held during **5th to 7th January 2017** at Manav Rachna International University, Faridabad (Delhi-NCR), India.

All registered, accepted & presented papers will be considered for publication in IEEE Xplore

For further details, kindly visit Conference website <http://icqprom2017.org/> and Brochure attached. You can send the full paper on or before **5th November 2016**. For submission of paper, kindly send to: <https://easychair.org/conferences/?conf=icqprom2017>

5

The **Student Outreach Program** (scheduled for **15-16 February**), organized by **Jasubhai Media** alongside **Chemtech World Expo 2017**, is arranging a **Prototype Exhibition**: Students build and exhibit working prototypes of original technologies that solve persistent problems of the day. The best models win cash prizes and opportunities to network with reputed industries to bring their ideas to complete fruition. **Students from Mechanical, Production, Instrumentation branches are also welcome** to be a part of this event provided their prototypes are in any way of aid to the Chemical Industry. Visit the website <http://www.chemtech-online.com/> for more information regarding Student Outreach Program 2017 and Chemtech World Expo 2017.

6

The **Department of Mechanical Engineering of SSNCE** is organizing one day "**National Conference for Mechanical Engineering Research Scholars (MERS-2017)**" on **15th February 2017 (Wednesday)** at SSN College of Engineering, Chennai. For details contact .Prospective research scholars are encouraged to send **full length papers** to this mail id: ssnmers@gmail.com on or before **30th December 2016**.

7

Sankalchand Patel College of Engineering, Visnagar, India under the flagship of Sankalchand Patel University, Visnagar is going to organize **1st International Conference on Technology and Management (ICTM-2017)** during 17- 18 February, 2017. **Full Paper Submission:** 6th January, 2017

Submit your paper <https://easychair.org/conferences/?conf=ictm2017>

For more details about conference, please visit <http://www.ictm2017.spcevng.ac.in/>

8

“International conference on Nano for Energy and Water (NEW)-2017 and Indo-French workshop on water networking” which will take place on **February 22-24** in the University of Petroleum and Energy Studies (UPES)-Dehradun, India.

NEW-2017 is customized for students, educators, researchers, scientists, engineers and industrialists, engaged in a wide range of nanotechnology fields and related applications. NEW-2017 will provide an ideal environment to develop new collaborations and meet experts of thematic areas.

For more details please visit us at <http://www.new2017.org>

9

The Chemical Engineering department of SSNCE is organizing 2nd International Conference on **Recent Advancements in Chemical, Environmental & Energy Engineering (RACEEE-2017)** on 23-24 February, 2017 at Chennai. **All the accepted papers will be published** in reputed Journals.

For more Details about the Conference: <http://www.raceeessn.com>

Submit your paper: [EasyChair](#)

Last date of receipt of abstract : 01 Jan 2017

10

Department of Mechanical Engineering, Zeal College of Engineering and Research, Narhe Pune-041 is organizing India’s First Drag Go Kart Racing 2017. Organization teams are invited to participate in “**Zeal Drag 1.0**” scheduled in **March 2017**.

Rule-book of this event can be downloaded from www.zealdrag.com

Registration Starts: 1st October 2016. (Online registrations only)

Registration Ends: 25th November 2016.

Registration Fees: Phase I (Virtual Round) INR 5,000.00/-

Phase II (Main Event) INR 10,000.00/-

Virtual Round: 14th and 15th January 2017.

Final Event: 3rd, 4th and 5th March 2017.

11

4th Annual International Conference on Materials Science, Metal & Manufacturing M3 2017 is planned during 6th – 7th March 2017, Singapore. Extended Paper Submission Deadline: 25th November 2016. Details at www.m3-conference.org

12

The 5th International Conference on Contemporary Engineering and Technology 2017 (ICCET) will be held in Chennai, India on **24th and 25th March 2017**. The conference seeks submissions from Practicing Engineers and Technologists, Scientists from R & D Institutions, Faculty members of Engineering colleges, Research Scholars and Students presenting novel research on all theoretical and practical aspects of data.

website - www.iccet.in (Venue: Madha Engineering College)

Research News from MSP

1

National Digital Library is an initiative by HRD ministry. It is a huge collection of learning resources from primary to PG level. Students and faculties can use it free of charge.

To register go to

<https://ndl.iitkgp.ac.in/index.php>



Dr.Muthu Senthil Pandian
SSNResearch Centre

- Educational materials are available for users ranging from primary to post-graduate levels
- More than 40 types of learning resources are available
- Items are available in more than 70 languages
- 13,00,000+ Items have been authored by 1 lakh authors

2

Paper writing support

1. Some Grammar Checking websites

[GINGER](#)

[SpellChek24](#)

[GrammerCheck.me](#)

[After the Deadline](#)

[SpellChecker.net](#)

[GrammerCheck](#)

2. Plagiarism Check and reconstruction websites

When you face sentence similarity, it becomes plagiarism. These sites can help you rewrite the sentence without changing the meaning. This reconstruction is called spinning.

[Free-Article-Spinner](#) [Best Free Spinner](#) [Spinbot](#) [Small SEO Tools](#) [Solid SEO Tools](#) [Free Article Spinner Online](#)

[Article Spinner](#) [Spinner Free](#) [Foliovision](#)

3. Selecting the right Journal

Whenever you face a dilemma of which journal to choose for your research paper, you can take the help of these websites: [Elsevier Journal Finder](#) [End Note - Matcher](#) (SignUp is required)

See the video tutorials: [Elsevier Journal Finder](#) and [Manuscript Matcher - End Note](#)

3

Collaborative Research Scheme (CRS)

The Mumbai Centre of UGC-DAE CSR invites proposals from researchers in universities and other academic organizations for Collaborative Research Schemes (CRS) on facilities under NFNBR and Mumbai Centre of UGC-DAE CSR. **The proposal can be submitted any time.** The CRS proposal format is available on the website <http://www.csr.res.in/csr/mumbai/users/userforms.html>. The application form or any other details can also be obtained from: For details visit www.csr.res.in

Inspiring Life Stories

*In the jungle which animal is the biggest elephant?
which animal is the tallest..... ..Giraffe?
which animal is the wisest..... ..Tortoise?
which animal is the fastestCheetahs?*

*Among all these wonderful qualities mentioned..... where is
the Lion in the picture?*

*Yet we say the Lion is the king of the jungle even without any
of these qualities.*

But.....be sure.....

The Lion is Courageous_

The Lion is very bold_

*The Lion is always ready to face any mountain, any challenges, any barrier that crosses his part, no
matter how big they are._*

The Lion walks with confidence._

The Lion dares anything and it's never afraid_

The Lion believes he is unstoppable._

The Lion is a risk taker_

The Lion believes any animal is food for him_

The Lion believes any opportunity is worth giving a try and never allows it to slip from his hands._

The Lion has charisma._

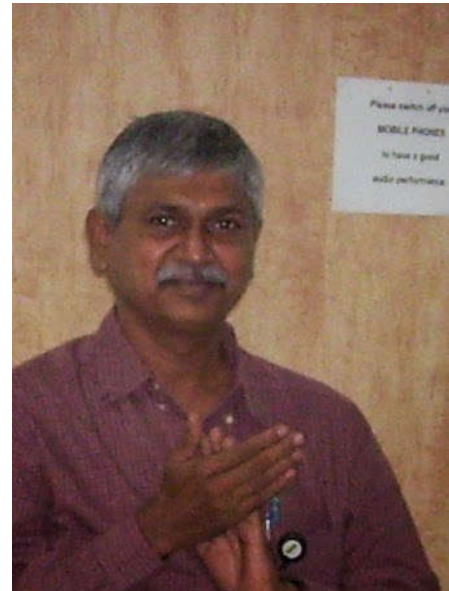
***Moral of the story: You don't need to be the fastest, the wisest, the smartest and the most brilliant! You
don't need to be generally accepted to become your dreams and be great in life! All you need is courage,
will to try, faith to believe it is possible and believe in yourself that you can do it!***

Contribution: Mr. K. C. Alexander, Ex. BPCL, Kochi.

Forwarded by

Kishore Babu

Schwing Stetter



Mr/Kishore Babu
Schwing Stetter

To be a Leader you need have Character. Without the right Character it is impossible to be Leader. Recently in one of the conversations, someone asked me what is the difference between Leadership and Ethical Leadership. It took sometime for me to ponder on this question. Then I replied, "There is nothing like leadership, if there is no Ethics. Ethics is fundamental to Leadership without which there is no Leadership."



A sub-ordinate asked the Leader, "How do I call you?"

The Leader replied,

- "If you call me a Boss, then you become a Sub-ordinate."
- "If you call me a Mentor, then you become a Mentee."
- "If you call me a Teacher, then you become a Student."
- "If you call me a Leader, then you become a Follower & Seeker."
- "If you call me the Beloved, then you become a lover."
- "If you call me by name, then you become a contemporary."

Then the Leader concluded,

"How you call me and how you see me, makes no difference to me, but it makes all the difference to you."

What your Leader means to you makes a little difference to the Leader, but it makes all the difference to you. The heart of a Sub-ordinate towards his or her Leader is much more important than the heart of the Leader towards the Sub-Ordinate.

Every piece of knowledge imparted to you, not only carries the words of the Leader but also the energy of the Leader. A Leader- Sub-ordinate relationship is not mere transference of words but it is also transference of energy. In every word inherited from a Leader, a part of the Leader is present.

So when you love your feeling (of gratitude) to the Leader, you also love the energy of the Leader. You may remember the knowledge, but you will fail to apply it in your life.

The blessings of the Leader is more dependent on how you see your Leader rather than how your Leader sees you. Remain ever grateful to your source of knowledge, for, what you gave your Leaders can be measured but what you inherited from them is immeasurable.

Carry your Leaders in your heart... now, ever and always.

For Leaders- Leadership is not a position, it is a great responsibility

Wishing you most & more

Have a wonderful day & great week

R.Ramakrishnan