

Mechanical Aspire

Achievements in Sports, Projects, Industry, Research and Education

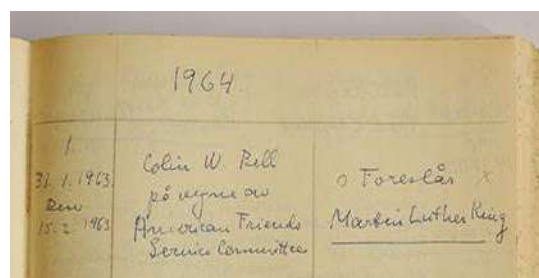
All about Nobel Prize- Part 26

Data on Martin Luther King's nomination revealed

Alfred Nobel had a clause in his will that said that all nominations can be disclosed only after 50 years. This means, we cannot know *who all were nominated, who nominated whom etc for fifty years*. These details are disclosed only after 50 years of the award. In that respect, this year, details about Martin Luther King's Nobel Peace prize have been disclosed. Have a look at those details.

The first nomination for Martin Luther King Jr. arrived to the Norwegian Nobel Committee in 1963. The Norwegian Nobel Committee, awarder of the Nobel Peace Prize since 1901, received this nomination from an earlier Nobel Peace Prize Laureate, American Friends Service Committee, (The Quakers) in Philadelphia, USA, awarded the Nobel Peace Prize in 1947. The nomination was dated 31 January 1963. Read the nomination letter at http://www.nobelprize.org/nobel_prizes/peace/laureates/1964/first-nomination-american-friends.jpg

The Log book entry of nomination



Martin Luther King Jr.

Born: 15 January 1929, Atlanta,

Died: 4 April 1968, Memphis,

Residence at the time of the award:
USA

Role: Leader of "Southern Christian Leadership Conference"

Field: human rights

Prize share: 1/1

- Martin Luther King Jr. was awarded the 1964 Nobel Peace Prize for his nonviolent campaign against racism. **Aged 35, he was then the youngest Nobel Peace Prize Laureate ever.**
- **Dr. Martin Luther King, Jr.**, (January 15, 1929-April 4, 1968) was born Michael Luther King, Jr., but later had his name changed to Martin. His grandfather began the family's long tenure as pastors of the Ebenezer Baptist Church in Atlanta, serving from 1914 to 1931; his father has served from then until the present, and from 1960 until his death Martin Luther acted as co-pastor.
- He enrolled in graduate studies at Boston University, completing his residence for the **doctorate** in 1953 and receiving the degree in 1955.
- In Boston he met and married Coretta Scott, a young woman of uncommon intellectual and artistic attainments. Two sons and two daughters were born into the family.
- In 1954, he became a member of the executive committee of the **National Association for the Advancement of Colored People**, the leading organization of its kind in the nation.
- In December, 1955, the **first great Negro nonviolent demonstration**, the **bus boycott** happened under his leadership. The boycott lasted 382 days. As a result of this, on December 21, 1956, the Supreme Court of the United States had declared unconstitutional the laws requiring segregation on buses.

- Then, Negroes and whites rode the buses as equals. During these days of boycott, King was arrested, his home was bombed, he was subjected to personal abuse, but at the same time he emerged as a Negro leader of the first rank.
- In 1957 he was *elected president of the Southern Christian Leadership Conference*, an organization formed to provide new leadership for the now burgeoning civil rights movement. **The ideals for this organization he took from Christianity; its operational techniques from Gandhi.**
- In the eleven-year period between 1957 and 1968, King traveled over six million miles and spoke over twenty-five hundred times, appearing wherever there was injustice, protest, and action; and meanwhile **he wrote five books** as well as numerous articles.
- In these years, he led a massive protest in Birmingham, Alabama, that caught the attention of the entire world, providing what he called a coalition of conscience. and inspiring his "Letter from a Birmingham Jail", a manifesto of the Negro revolution;
- He planned the drives in Alabama for the registration of Negroes as voters;
- He directed the peaceful march on Washington, D.C., of 250,000 people to whom he delivered his address, "I Have a Dream",
- He conferred with President John F. Kennedy and campaigned for President Lyndon B. Johnson;
- He was arrested upwards of twenty times and assaulted at least four times;
- He was awarded five honorary degrees;
- He was named Man of the Year by *Time* magazine in 1963; and became not only the symbolic leader of American blacks but also a world figure.
- **He announced that he would turn over the Nobel prize money of \$54,123 to the furtherance of the civil rights movement.**
- On the evening of April 4, 1968, while standing on the balcony of his motel room in Memphis, Tennessee, where he was to lead a protest march in sympathy with striking garbage workers of that city, he was assassinated.
- His famous speech on "I have a dream" inspired many in those days.

Excerpts from his speech "I have a dream"

- I have a dream that one day this nation will rise up and live out the true meaning of its creed: "We hold these truths to be self evident, that all men are created equal."
- I have a dream that one day on the red hills of Georgia, the sons of former slaves and the sons of former slave owners will be able to sit down together at the table of brotherhood.
- I have a dream that one day even the state of Mississippi, a state sweltering with the heat of injustice, sweltering with the heat of oppression, will be transformed into an oasis of freedom and justice.
- I have a dream that my four little children will one day live in a nation where they will not be judged by the color of their skin but by the content of their character.
- Read his powerful speech at the link

<http://www.med.umich.edu/diversity/pdf/files/1%20January/January%20I%20have%20a%20dream.pdf>



A Section of Alumni who turned up on Alumni meet Tribute
On Jan 2nd,2016

SNU News

Amit Tyagi writes....



Hon'ble President of India, Shri Pranab Mukherjee formally inaugurated Shiv Nadar University and dedicated it to the Nation on January 18, 2016. With this event Shiv Nadar University reaffirms its commitment to be a University that will make India illuminate the world with the light of knowledge. The President also laid the foundation stone for the faculty residential complex and felicitated the winner of the inaugural HCL Grant.

Marking the occasion, Hon'ble President planted a Kadam tree. A forest of Kadam is said to symbolize the universe. This tree shall inspire us to be an institution that encompasses all facets of education. Read more at

<http://www.shivnadarfoundation.org/president-of-india-shri-pranab-mukherjee-inaugurates-the-shiv-nadar-university-and-dedicates-it-to-our-nation>

Info to Alumni- Department Update

External recognition

Dr.M.S.Alphin was Invited as Inaugural Chief Guest and to deliver a technical lecture (external resource person) for the Faculty Development Training Program on Finite Element Analysis, Anna University Sponsored Program held at St Josephs Institute of Technnology, OMR, Chennai, Topic: Finite Element Formulation (Weighted Residual and Ritz Method).



Dr.S.Suresh Kumar was invited to deliver a lecture titled "2D scalar field problems" on FDP program Conducted by St.Joseph Institute of Technology, Chennai. The title of the FDP is "ME 6603 - Finite Element Analysis" sponsored by Anna university, Chennai. (6 Jan 2016)

Dr.A.S Ramana was invited to deliver a lecture on "Psychrometrics" in FDP on Thermal Engineering organized by Panimalar Institute of Technology, Chennai (11 Jan 2016)



Dr.K.Babu



Dr.S.Sureshkumar



Dr.M.Suresh



Dr.A.S.Ramana

Dr. K. Babu, Dr. M. Suresh and Dr. S. Suresh Kumar participated in **IMTEX FORMING 2016, South-East Asia's top most annual exhibition for metal forming machine tools**. This exhibition was conducted at Bangalore from January 21 to January 26, 2016 by IMTMA, Indian Machine Tool Manufacturers' Association. All three faculty members displayed their respective project posters in the academic pavilion and **SSNCE stall bagged the first consolation prize**.



N.Visveshwar of Third year was invited to render a flute recital for half an hour in Raj TV on republic Day between 5.30 am and 6 a.m. Starting with "Alai payuthey Kanna", he moved on to "Auvome Pallu Paduvome", "Parathpara Parameshwara", "Nakumo" and closed the recital with "Oli Padaitha Kanninai Vaa Vaa vaa". The program was captioned as "Inba Sagasam".

Student Project info

Intelligent Library Assistant Bot (i - lab) : A project proposal submitted by Deepak Vishal, Final Year Mechanical and Nandhini, Final Year CSE under the guidance of Mr. C. Arun Prakash has been shortlisted for the final round of Skify Labs "My Project Best Competition". It has been selected in the top 10 among various projects from all over the country

The project submitted by Balaji and his team has been selected for the Final Round of Sparkle 2016. The Final Event will take place on 30th January, 2016 in Pune.

Research activity

Dr. KL. Hari Krishna presented the research work titled "Processing of high performance Polyeter eter ketone (PEEK) – Synthetic diamond polymer composite") presented at National Conference on Advances in Materials Processing and Charcterization(NCAMPC - 2016) at National Institute of Technology, Warangal held between 04.01.2016 - 06.01.2016. Co-Authors Dr.K. Rajkumar and Mr. K A Varun



Dr. N. Nallusamy, Professor, published a technical paper titled "Effect of various nanofluids on performance of Latent Heat Solar Thermal Energy Storage system" in the International Journal of Applied Engineering Research, 2015, Vol. 10(39), pp. 29573-29576. Co-author: Mr. M. Gajendiran, SVCE.

A paper titled" Finite Element Analysis of Drilling of Ti-6Al-4V Titanium Alloy" was presented by Sushinder K, Shivaram PR,Nivedh Kannaa SB,Nisarg Gupta and Vijay Sekar KS in the First International Conference on —Productivity, Efficiency and Competitiveness in Design and Manufacturing, 7 – 9 January 2016, Department of Mechanical Engineering, PSG College of Technology – Coimbatore, Tamilnadu, India.



The First Ph.D. completed from Mech Res Centre

Mr Srinivasa Rao T , research Scholar of Dr.S.R.Koteswara Rao, had his **Oral examination (Viva)** on **7-01-2016** . **Professor Amithava De, Of IIT Mumbai** came in as the examiner along with **Prof.Vela Murali from Anna University**.



Dr.SRK Rao

STUDENT ACTIVITIES:

Arun K V J – IV year

- a) participated in PARKOUR Workshop held at British Council, Chennai on 07-01-2016 conducted by THE URBAN PARKOUR (UK)team in association with Chennai Parkour Circle
- b) Volunteered for Student Sea Turtle Conservation Network (SSTCN) for Turtle Walk at Marina Stretch and Nelankarai to Besant Nagar Stretch respectively [15-01-2016 and 21-01-2016]
- c) Volunteered for the Beach Clean Up at Besant Nagar organised by Chennai Trekking Club(CTC) on 02-01-2016

Arun K V J, Raghul B, Parthiban A, Vivek M – IV yr Volunteered for POLIO VACCINATION Campaign in Thirupporur Divison Primary Health Care Centre [17-1-2016]

Prasanna M, Jamal Mohmed , Raghul B, Parthiban A, Ramesh K, Arun K V J, - IV year participated in IIT, Madras – Saarang Cultural fest 2016 Street Play competition on behalf of SAARAL Tamil Mandram [10-1-2016]

Aravind B – III year underwent In-Plant Training at Turbo Energy Private Limited which produces turbo chargers for vehicles. [20 to 25-1-2016]

Ram Sharma – III yr Volunteered for POLIO VACCINATION Campaign in Thirupporur Divison Primary Health Care Centre [17-1-2016]

G.Sailalitha – II year Won honorary mention in IIT,Madras - MUN 2016 and building a QUADCOPTER with **Nishant P shah – II year** [17-1-2016]

Vishnu Shankar, PrathapSeelan, Vishnu Priya and Ahmed – II year Qualified and Participated in Hybrid Vehicle Challenge, India held at Bhopal Race track and keeping 12th position among 80 teams in and around India [26-1-2016]

Internship Info



I am Arjun Anil Kumar from Mech-'A',third year and am happy to inform you that I am pursuing an internship cum project in the research and analysis of the auto and auto ancillary industry at Crisil Limited, A Standard & Poor's company where I am being mentored by the Head of Ratings.

I am working on the comparison cost effectiveness and competitiveness of the Indian auto ancillary industry to the global one. I have been analysing data from auto-hotspots like Germany,North America(Michigan in Particular),India,Japan and South America(Mainly Brazil and Argentina).

In this internship,I have had access to the minute details of the industry which includes import and export,comparison of labour costs,power costs and transportation costs,etc and am using these details to present my final report .This has enabled me to understand how the industry works and who the leaders in the industry are.

Working in an internationally renowned company and India's ratings leader has been a great experience for me where I am surrounded with graduates from top schools like the IITs and IIMs who have been really good mentors and motivators. My working hours are from 9AM- 7/8 PM and it has been a real challenge to sit in an office for a long period. Every time I am stuck with an issue,I have been made to work on it by myself till I find a solution which I feel has made me a tougher person. I shall show you my final report upon completion for your feedback.

Seminar-Opportunities in Business Analytics

N.Visveshwar of Third year writes...

I attended the seminar, “Opportunities in Business analytics” conducted by the SSN School of advanced career education at Radisson Blu Hotel on the 23rd of January 2016. The seminar started with the introduction about the Post graduate certificate program in business analytics by SSN SACE which commences from the 1st of February 2016.

We were then briefed on how IBM uses analytics in situations like Tsunami warning systems, Telecom revolutions, Crew management system, Customer analytics solution and open source disaster management system by Mr. Das Gupta, IBM career education program manager.

The Q&A followed the keynote with Dr. Shashikant Albal, Director SACE and Mr. Das Gupta answering various questions raised on the scope of analytics in various fields like manufacturing, retail, healthcare and IOT.

Also Dr. Albal elucidated on how R programming language and a strong basics of statistics can help a beginner/enthusiast(undergraduate level) in analytics, to climb up the ladder and become a successful Data Scientist.

-----Visveshwar N

Info from Alumni

Mohammed Irfaan writes..

Belated new year wishes to you and your family. Hope you are doing well. I have been offered an Internship from Allianz Germany and I will be starting it this April'16.



Forthcoming Events

Department of Mechanical Engineering, SSN College of Engineering, Chennai, is organizing a workshop on **Machine Vision Techniques and its Application in Mechatronics** on **05th March 2016**. - C.Arun Prakash and G.Sathishkumar are coordinating.

Mepco Schlenk Engineering College, Sivakasi an Autonomous Institution would like to take the opportunity to invite you for two days Workshop on “Current trends in nano technology” to be held on 5th & 6th of February 2016. The objective of the workshop is to introduce the tools, techniques and prospects of current trends in nano materials, characterization and its application. Contact nselva@mepcoeng.ac.in

Karpagam of Engineering are Organizing a 2nd International Conference on ADVANCED ENGINEERING AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT (ICAETSD 2016) on February 19th and 20th 2016.

The **21st International Conference on Wear of Materials** will take place in California, USA from the 26-30 March 2017. The conference will focus on both the fundamental and applied aspects of wear and friction of materials at the macro-, micro-, and nano-scale. It will address the understanding of tribological phenomena; particularly the progression in recent decades.

Abstract submission deadline 27 May 2016

Faculty Write up 1



Dr. A.S. Ramana, delivered an invited lecture on “Psychrometrics” in the Faculty Development Program on Thermal Engineering organized by Panimalar Institute of Technology, Chennai on 11.01.2016.

Psychrometrics is a science that deals with properties of moist air. Lecture covered basics of psychrometry, different processes and estimation of cooling load. Participants were briefed about the psychrometric chart and its applications. Psychrometry is useful in air quality and energy efficiency analysis for different applications such as comfort airconditioning, textile, paper, food processing and agriculture. Psychrometrics also offers scope to do research in upcoming fields such as solar thermal, desalination and energy conservation in thermal systems. The importance of accounting different heat sources in estimation of cooling loads was also stressed.

Faculty Write up 2

National Conference – NIT Warangal 04.01.2016 – 06.01.2016

Three day “National Conference on Advances in Materials Processing and Characterization (**NCAMPC – 2016**)” was held at **NIT Warangal** on 04.01.2016 to 06.01.2016.



Dr.K.L.HariKrishna

Prof. C. Suryanarayana, University of Central Florida, USA delivered the Plenary Lecture on the topic “Fifty years of Metallurgy and Materials”. Field (Material Science) experts Prof. G V S Sastry - IIT (BHU), Dr. Raghvendra Tewari - BARC- Mumbai, Dr. R. Gopalan -ARCI-Chennai, Dr.V.V. Bhanu Prasad - DMRL-Hyderabad, Dr. N. Eswara Prasad -DMSRDE – Kanpur, Prof. Ramana G Reddy - University of Alabama and Dr.C K Mukhopadhyay – IGCAR Kalpakkam delivered the keynote lectures.

Participants from IIT’s, IIIT’s, NIT’s, Central University, Government State University, Defence Labs and other institutions presented their research work. Around 55 oral presentations and 10 Poster presentations were held in this conference. Myself, presented a paper on “Processing of high performance Polyether ether ketone (PEEK) – Synthetic diamond polymer composite”.

Placement News

Glad to inform you that, in the recently held placements with L&T and TVS Sundram Fasteners, 6 UG and 1 PG students have been placed. **Our current placement % is at 80** considering the 119 eligible candidates. Regards,

N. Lakshmi Narasimhan



Summer Fellowship at IITM

IITM Summer Fellowship Programme - 2016

The IITM - Summer Fellowship Programme of two months with stipend is designed to enhance awareness and interest in high quality academic research among young Engineering, Management, Sciences and Humanities students through a goal oriented summer mini-project undertaken at the Indian Institute of Technology Madras.

Eligibility: Candidates pursuing **Third Year of B.E./B.Tech./B.Sc. (Engg)/Integrated M.E./M.Tech. programme, First Year of ME/M.Tech/M.Sc./M.A, MBA** with outstanding academic background in terms of high ranks in university examinations are encouraged to apply, highlighting their academic performance and achievement including papers presented at seminars, projects executed, design contests participated, score/rank in Mathematics Olympiad and any other awards/distinctions obtained. [IIT students are not eligible to apply].

Period of the Project: Duration of the programme may commence from **16th May 2016 to 15th July 2016**. (Schedule may be flexible to suit student’s convenience.)

Stipend: A sum of Rs.5000/- per month will be given as a stipend for a maximum period of 2 months.

Participating Departments::

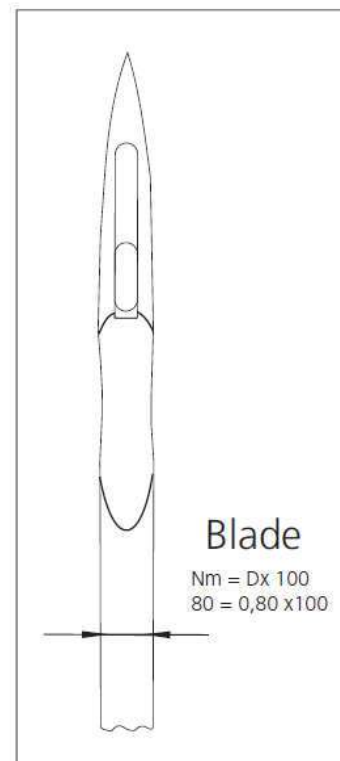
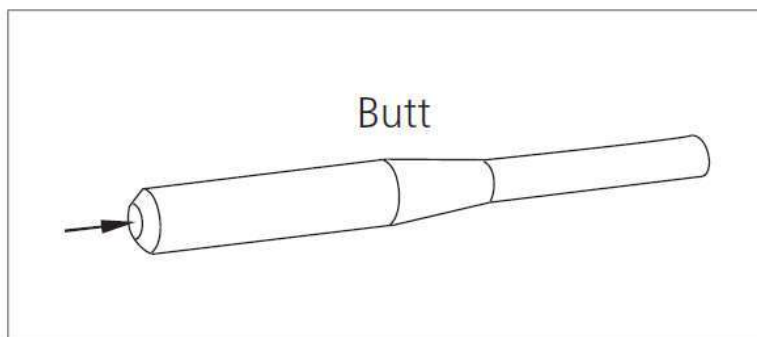
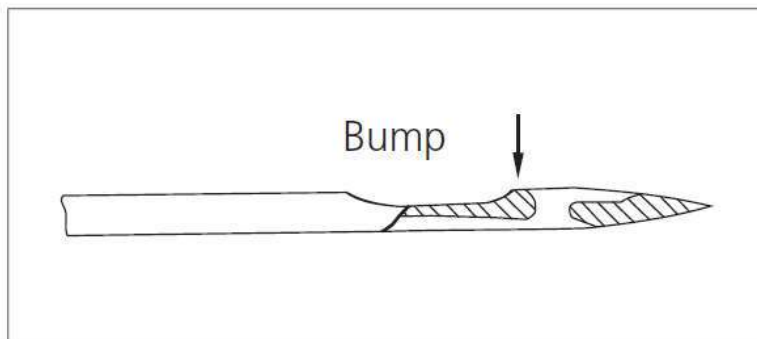
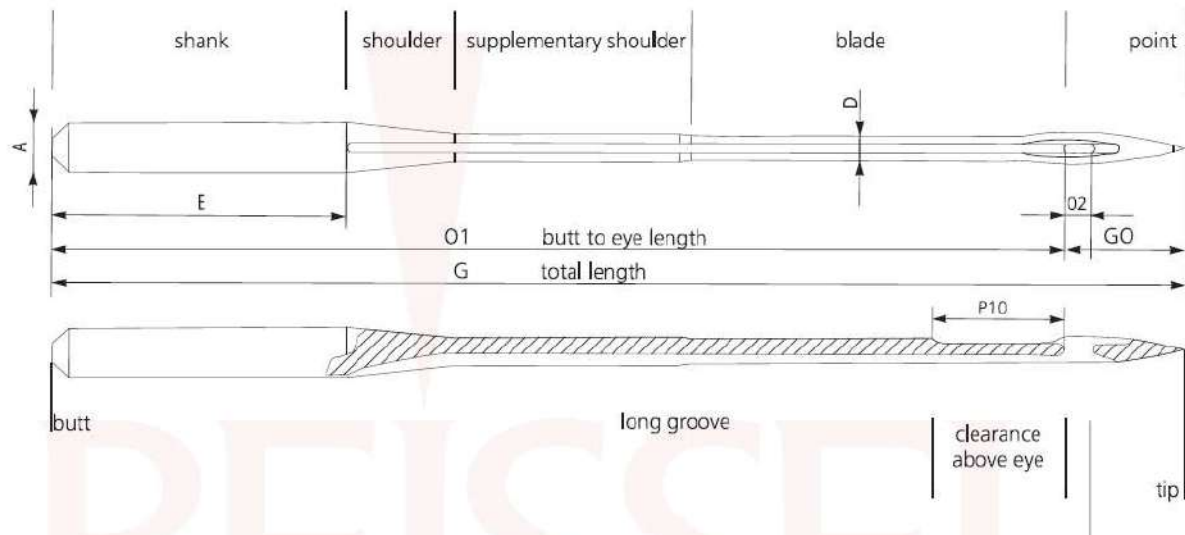
Aerospace Engg, Applied Mechanics, Bio Technology, Chemical Engg, Civil Engg , Computer Science & Engg, Engineering Design, Electrical Engg, Mechanical Engg, Metallurgical & Materials Engg, Ocean Engg., Physics, Chemistry, Mathematics, Humanities & Social Sciences, Management Studies

Last date for submitting application : 29th February 2016 at 5.00pm

<http://sfp.iitm.ac.in/>

To the naked eye, a needle looks like a tiny piece of metal. Take a closer look and you will be amazed at the 20 odd parts that make up this magical fashion tool. Attached are illustrations of the needle with proper labeling to help you study the parts.

PARTS OF A NEEDLE



Have you ever wondered how a needle creates the loops / stitches in a sewing machine?

Learn it at <http://www.beisselneedles.com/html/beissel-needle-resource.htm>

This knowledge page has several other info on the history of development of needles .

What seems small is not really small-it is mechanically big!

Beissel is a global brand of sewing machine needles that aspires to bridge the exacting new-age demands of the fashion industry with old-fashioned precision.

Licensed from BMN Beissel Maschinnadel GmbH, the Beissel trademark is a symbol of class borne by needles made lovingly by over 200 passionate experts in our 80,000 square foot factory, located in Southern India.



For over a decade now, Beissel has been providing nearly 500 readymade stitching solutions to who's who of the fashion industry. An eye for detail, delicious pricing and above all, our fashion conscious approach has made us a hot favourite with haberdashers, designers and apparel makers across the globe.

Beissel is trusted by the biggest and the best
– in India and 44 countries around the world

Significant cost savings	Quality trusted by leading customers	Exported to all continents	155 quality checks on every needle	Conforms to German DIN standards	Training support and customer care	Useful resources available online

- Altek Beissel Needles Limited is one of the first in the world to pass the performance standard laid down for sewing machine needle by SATRA of the UK, and conform to German DIN Standards.
- They use the same technology and processes as the now legendary Lammertz of Germany.
- Every single needle made in their state-of-the-art factory in Chennai, goes through 155 different quality checks.
- They have almost 200 specialists working round-the-clock to ensure that nothing but the best reaches clients.
- Regions served: Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia, Czech Republic, Estonia, Georgia, Kosovo, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Russia, Serbia, Ukraine

The value of the product is directly proportional to the quality of the pack that holds it. Beissel is a stern believer of this saying.

- Beissel needles come in 5, 10, 100, 500 and 1000 needle packages depending on the type of needle.
- Each of these have been thoughtfully designed keeping in mind safety, functionality, aesthetics, and easily-identifiable product information.

Assured Quality

In order to assure quality, Beissel needles are subjected to a variety of tests as below:

1. **Needle Torture Test** Test garments are sewn for 20 minutes on several layers (garment and leather) to inspect whether the needle performs without breakage.
2. **Thread test** Cotton thread (though polyester is a more commonly used thread and breaks less easily) is used and tested rigorously under conditions far more severe than real life conditions. If the cotton thread does not break, the needle passes the quality test.
3. **Needle Gun shot test** This is the ultimate test that determines the strength and tip hardness of the needle. A needle is shot through a steel plate and the tip is checked. The tip must remain sharp and intact.
4. **Needle Elasticity test** A good needle must have elastic property. Additional layers in sewing (e.g. collar attachment) pose sudden resistance which can be met only if the needle is elastic. It is mandatory that the needle returns at once to its straight position. If not, there will be problems of skipped stitching and damage to vital sewing machine parts. This elastic limit is continuously monitored.
5. **Smooth eye and sharp tip test** King Needles from Altek Beissel Needles Limited, is a range of affordable, high-quality sewing machine needles for popular applications such as lock stitch, embroidery and basic home sewing. King Needles have a sharp tip and smooth eye, and are available in DB X1, HA X1, and DB X K5 systems in the popular sizes of 14, 16, and 18.



After all this test, they are so sure about their quality that they include a magnifying glass in each box, inviting the customer to inspect the needle tips.



Innovation in packaging

In the 500 pack, the unique box design transforms the cover into an attractive vertical mini branding unit!

Watch these tests at <http://www.beisselneedles.com/html/beissel-on-youtube.htm>

Care to share

Needle being a specialised product, not many will know about its use and care. So, the company has taken lot of pains in assimilating and compiling data pertaining to the use and care of needles.

Their knowledge centre has rich resources on various aspects of needles like

- history of needles ,
- why needles break ,
- how a sewing machine works,
- tips for maintenance of sewing machines,
- problems faced with needles and how to overcome them etc.

The contents are rich and methodical.

Example – How a stitch is formed

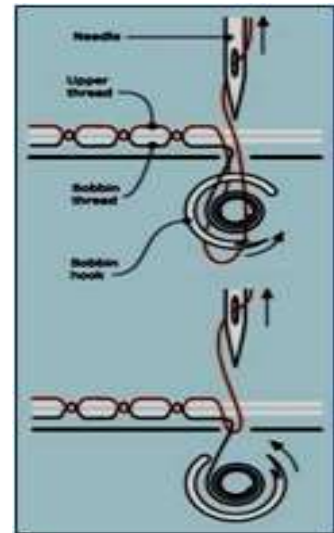
The formation of a stitch begins when the needle penetrates the fabric and descends to its lowest point.

The bobbin hook then slides by the needles scarf, catching the upper thread, and carries it around the bobbin and bobbin thread.

The thread is then pulled up into the fabric and completing the stitch.

Sewing machine manufacturers want their machines to consistently produce a perfect stitch, so the needle's configuration is engineered to manage thread and fabric to reduce skipped stitches.

Each needle type produces a stitch by sewing a uniquely designed groove, scarf, eye and/point to enable the needle and bobbin hook to meet perfectly.



Scientific Complaint Resolution

They care about providing stitching solutions. The site lists a complaint received from a customer, how it was analysed and how it was resolved. http://www.beisselneedles.com/downloads/Beissel_CaseStudy.pdf

Manufacturing process Have a look at how needles are made at <https://youtu.be/wZJPpuL2sqQ>



Career at Beissel

Beissel is looking for talented individuals in various functions - accounts, purchase, engineering, tool & die making, production, quality control, sales, and marketing. If you wish to explore career opportunities at Beissel, please email your resume to info@beisselneedles.com

<http://www.beisselneedles.com/html/beissel-needle-resource.htm>



Student Project Call



Call for Proposals

Research Grant for Innovative Projects on "Water and Sanitation in Urban Context"

About

The Coca-Cola Department of Regional Water Studies, TERI University with the support from USAID is working on the Project '*Strengthening Water and Sanitation in Urban Settings*'. As part of this Project the Department takes pride in inviting applications for merit scholarship from youth across the nation who showcase their ingenuity in the field of managing water and sanitation. The Proposal should entail identification of various Water, Sanitation and Hygiene (WASH) indicators, their inter linkages, scope for scalability, site specific solution/s, and its implication on National Urban Policy. The scholarship amount will be a maximum of Rupees one lakh over a period of two semesters commencing July 2016.

Thematic Areas

- Health and informal settlements nexus
- Low cost water and/or wastewater treatment technologies
- Hard/software interventions for sustainable groundwater management
- Restructuring urban water hydrology towards alternative management of rain water and reduction in water logging
- Development of water borne disease surveillance system
- Water contamination episodes in unplanned urban settlements and existing mitigation measures viability.

Eligibility Criteria

Final year graduates and postgraduates from the following disciplines:

- Engineering/Architecture/Urban Planning
- Physics/Chemistry/ Biochemistry/Biotechnology/Mathematics/Zoology/Botany
- Economics/Anthropology/Geography/Statistics

Important Dates

Opening date of application: **November 1, 2015**

Closing date of application: **March 31, 2016**

How to Apply

The detailed application form along with terms and conditions of the scholarship can be obtained from the TERI University website www.teriuniversity.ac.in

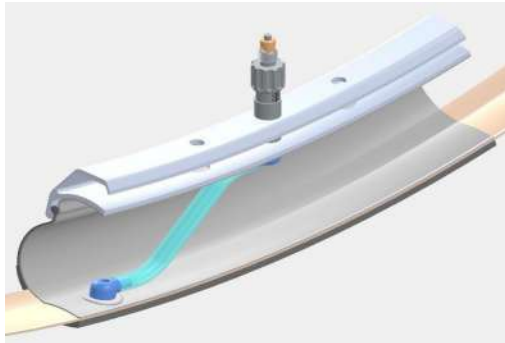


For Further Information:
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Coca-Cola Department of Regional Water Studies, TERI University
E mail: ranjana.chaudhuri@teriuniversity.ac.in, +91 11 71800222



Amazing Innovations 1

Pump tire



The idea behind the technology is that riders will no longer need to pump up their tires in order to compensate for seepage or pinhole leaks. While larger punctures may not have as *much* of an effect as they would otherwise, they'll still ultimately need to be patched. Air is drawn in from the atmosphere through a one-way valve, which sits in the valve stem. Instead of going directly into the inner tube, however, the air goes into one end of the tube-like pumping mechanism, which runs along the outside perimeter of the main inner tube.

As the tire rolls against the ground, the pumping mechanism is compressed, forcing air into the inner tube. The resulting absence of air in the pumping mechanism creates a vacuum effect, drawing more air in through the valve. That said, if the inner tube is already at its desired pressure (which can be set on a dial on the valve stem), no additional air is pulled in. Plans call for the first PumpTubes to be compatible with third-party 700c and 26-inch tires, and to retail for US\$30 to \$55 per unit.

Source: [PumpTire](#)

Amazing Innovations 2

Flexible solar panel



The HeLi-on is designed with polymer solar cells printed directly on a plastic foil. The carbon-based material is renewable, non-toxic, and, quite importantly, thin enough to be rolled for convenient storage. Even with the cells protected by foil on either side, the flexible panel is less than one millimeter thick, which allows it to be rolled up into a candy bar-like case measuring 4.4 x 1.4 x 1.1 in (11.3 x 3.6 x 2.8 cm) and weighing 3.7 oz (105 g).

The case includes an inbuilt rechargeable 2,600 mAh battery that stores the electricity generated by the flexible solar paneling when pulled out of the case. The solar cells are designed to generate up to 3 W of power under standard conditions, with electricity stored on the battery outputted to devices through a USB port. When done, the entire length of paneling rolls back inside by continually twisting one end. If there is no sun, the HeLi-on's battery can be charged via any USB wall adapter like a typical power bank.

The HeLi-on solar charger is currently funding on [Kickstarter](#), having raised 186 percent of its KR\$500,000 (approx. US\$72,650) goal in 39 days, with another 21 days left to go. A pledge of KR\$685 (US\$100), which includes international shipping, sets you up with one HeLi-on in choice of blue, white, and black colors.

Check out the teaser video below to see how HeLi-on works.

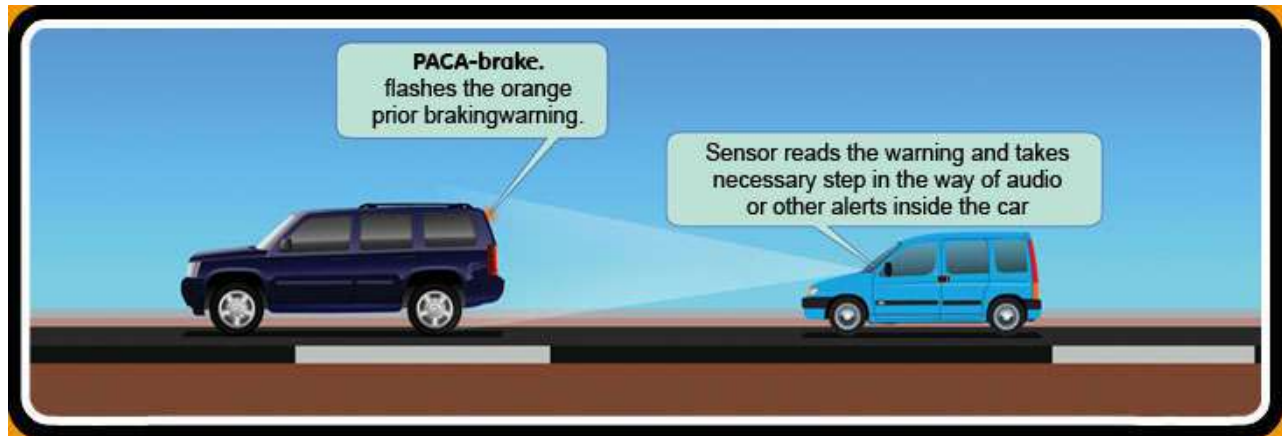
<https://youtu.be/KMxyOk5H3fQ>

Sources: [infinityPV](#)

Amazing Innovations 3

Pre-braking warning system

In a common case scenario, automobiles follow one another at steady speeds on highways and expressways. The vehicle in the lead decelerates or brakes either to slow down or stop. The driver of the second following vehicle sees the stop light coming on in the first vehicle and reacts accordingly. The reaction time is roughly standard. The red stop light comes on in the first vehicle, the driver in the second vehicle sees it and analyses that the vehicle in front has slowed down and in turn decides to apply the brakes. Precious time is lost here.



Driver reaction time can be brought down considerably when a 'prior braking sign' is incorporated. **PACA-brake** accomplishes this by displaying a prior braking warning to vehicles behind when the driver in the lead vehicle even considers slowing down his vehicle and before he actually applies the brakes. This in turn, gives precious time for the driver behind to react and thus prevent a possible collision.

The display of the **PACA-brake** system is integrated into the third brake light, which is a standard fitment in automobiles. **PACA-brake** displays the warning in the way of orange blinking lights when the driver decelerates to a possible braking situation. The blinking is incorporated in the warning so that persons with Colour Vision Deficiency can read the warning.

Watch the animation of how it works at <http://www.muckati.com/paca/details.html>

Amazing Innovations 4

Portable accordion lamp

More details at <http://orilamps.com/orilamps/>

Watch the possibilities of innovative lighting at <https://youtu.be/W5av3HAoTHs>



Instead of opening up like a book, Orilamp unfurls like an accordion. Or a rainbow. Or a hanging lantern, depending on how you choose to position it. Orilamp is designed to automatically turn on/off as soon as it has been opened/closed. Light emitted by the LEDs is equivalent to a 70-W bulb at maximum brightness. And it only takes about 60 minutes to fully-charge the internal battery, which can provide illumination for up to seven hours, depending on the brightness set. The Orilamp app can adjust LED brightness, set light on a timer, or double as a morning alarm to help wake you up more naturally.

Industry Interaction



The Indian Machine Tool Manufacturers' Association (IMTMA) inaugurated IMTEX FORMING 2016 and concurrent Tooltech 2016 at the Bangalore International Exhibition Centre on Jan 21, 2016. IMTEX FORMING 2016 is South-East Asia's topmost annual exhibition to display the latest trends in metal forming machine tools as well as technological refinements from India & other countries. This exhibition was conducted at Bangalore from Jan 21- 26, 2016. Going beyond the regular exhibition show, IMTEX FORMING 2016

also offered a platform to the academia in the form of i2 Pavilion. It is an Industry-Institution Pavilion, a forum for academic and research and development institutions to showcase their activities in the manufacturing and engineering space. About 40 stalls in i2 Pavilion were devoted to institutions including IIT Bombay, IIT Ropar, IIITDM Jabalpur, PSG Tech and many others to showcase their research activities in the form of Posters.

Dr. K. Babu (KB), Dr. M. Suresh (MSU) and Dr. S. Suresh Kumar (SSK) took part in the presentation during and displayed their respective project posters in the i2 academic pavilion. The poster themes were: 1. Rapid quenching using CNT nanofluids 2. A spot cooling tool for machining operations and 3. Numerical generation of forming limit diagram for plates and welded joints. All three themes attracted faculty and students from many educational institutions as well as people from few industries.

As a part of the i2 Academia Pavilion initiative, IMTMA organized "Academia Research Projects' Presentation" to give the industries a glimpse into the R&D capabilities of academic institutions.

Dr. S. Suresh Kumar presented his theme, "Numerical generation of forming limit diagram for plates and welded joints" and was well received by the audiences. Also, Dr. K. Babu explained his theme "Rapid quenching using CNT nanofluids" to jury members who were mainly industrialists during their visit to SSNCE stall to assess the projects. On the final day, awards were distributed to the selected projects. The first prize of Rs. 50,000/- was awarded to IIITDM, Jabalpur, second prize of Rs. 25,000/- was awarded to IIT Bombay and IIT Ropar jointly and the third prize of Rs. 15,000/- was awarded to MIT, Aurangabad. It is proud moment that the project evaluation by Jury members resulted in I Consolation prize, a cash prize of Rs. 5,000/- to SSNCE. This way, SSNCE could also be able to highlight that our projects are also industry relevant and in line with the quality of IITs, IIITDMs, etc.



Dr. KB's presentation to Jury members



Dr. SSK's presentation



Dr. MSU's product demonstration

GLIMPSES @IMTEX FORMING 2016



Challenge

Local Innovation for a Better Environment

In a first-of-a-kind partnership, the University of Chicago and the Delhi government have come together and launched a unique competition: **The Urban Labs Innovation Challenge: Delhi**. This Innovation Challenge is crowdsourcing the best local ideas to improve Delhi's air and water quality, and meet Delhi's future energy needs.. The winners will receive up to Rs. 2 crore to work with the University of Chicago and Delhi Government to pilot and test their idea. If successful, the government could implement the program at a large scale, providing an important model for other cities to follow.

<https://urbanlabs.uchicago.edu/page/urban-labs-innovation-challenge-delhi>

Who Can Apply

Organizations, agencies, groups, students, researchers, and practitioners across India with promising programs or interventions aimed at solving Delhi's urgent energy and environmental problems are encouraged to apply.

Special attention will be given to ideas that:

1. Reduce air pollution;
2. Improve access to clean, reliable, and efficient energy;
3. Facilitate decentralized energy solutions;
4. Encourage water conservation;
5. Provide drinking water and sanitation solutions; and/or
6. Reduce disruptive climate change or help better adaptation to climate change.

How to Apply

Those interested in applying should submit Letters of Interest by **March 1, 2016**.

Collaborative effort for Flood Mitigation

Sankar Raju writes:

The Tamilnadu Science Forum (TNSF), an eminent organisation comprising of technical experts from IGCAR, University of Madras, IMSc, IIT-M, NLC and many more has asked Mr.N.Sankar Raju, TNSF member and a final year Undergraduate Mechanical Engineering student, SSN College of Engineering, to lead and co-ordinate the team of technical experts from various educational institutions and research institutes across the state for a massive technical flood mitigation activities in the Districts of Thiruvallur, Cuddalore and listed areas which have been flooded even after the flood has drained in most parts of these affected districts. The report of the technical investigation will be submitted to the Government of Tamilnadu on behalf of TNSF.



The mitigation core technical team is led by Dr. Srinath Rajagopal, an Environmental Researcher from the Department of Civil Engineering, SSN College of Engineering.

As a part of the mitigation project, Ms.Abinaya V. Ramanan, a final year Chemical Engineering student, SSN College of Engineering has volunteered to perform the tests on the water samples collected from various regions across the flood affected districts. The collaborative efforts of the various departments of SSN is hoped to bring a change in the lives of the suffering people.

Announcement on Technical Business Incubator at SSN

- Ministry of Micro Small & Medium Enterprises (MSME) has selected SSN for setting up a Technical Business Incubator (TBI) Centre.
- SSN Business Incubator will be named as SSN Business and Entrepreneurship in Science & Technology (**SSN BEST**) centre.
- Every Department is expected to identify atleast five projects which can be selected for Incubation by SSN BEST. Projects will have to be accompanied by a Business Plan including financials and the commercialisation plan.
- SSN BEST will be initially set up under the scheme “Support for Entrepreneurial & Management Development through Incubators.

Objectives of SSN BEST

The purpose of SSN BEST is **to support students/ex-students/faculty or entrepreneurs** try out their innovative ideas at the laboratory or workshop stage and beyond to carry forward the idea from its mere conception to ‘know-how ‘ and then to ‘do how’ stage.

The idea is to sustain at some basic or introductory level, the incubation of ideas that would have otherwise been lost for want of support.

Thrust Areas

- Information & Communication Technology (DSP, Electronics, Software Solutions, Computing, VLSI design, Embedded Systems etc.)
 - Renewable Energy & Storage
 - Clean Energy Materials
 - Chemical & Biomedical Sciences
 - Mechanical Engineering(Manufacturing Technology)
 - Civil Engineering (Environment & Sustainability, Building Materials)
- Around 50% are to be in the thrust areas. Exceptional projects in related and other areas will also be considered.

Expectations from SSN BEST

The expectations are that a sizeable percentage of the grantees/incubatees would be graduating to higher levels of operation that would then require other levels of support under other schemes/organisations and from Venture Capital or Angel Funding.

Financial Support from the Scheme

- Funding will be provided to BIs for 10 projects.
 - **Each project will be funded to a tune of Rs. 4.5 lakhs to up to 8 lakhs**
 - Funds will be released 30 % at a time. 15% of the funds has to be brought in by the incubate for micro enterprises and 25% for small enterprises.
- Illustrative expenditure for an Incubatee.

Interested persons can approach HoD mech with their project ideas



R. Ramakrishnan

Dream we must; that all of us know. But all the great dreamers dreamt great dreams, not necessarily during the best of times , but during the toughest of times. Independent of the circumstance, dream they did, and on the sheer strength of their dreams, organizations, nations and humanity stood up.

In 1963, Martin Luther King Jr. delivered the historic speech .” I have a dream that one day this nation will rise up..” Several decades later, America created history by electing their first Afro-American President. What is significant is that this dream was not implanted into the social consciousness during the best of the time, but during the worst of the times , when the blacks didn’t even have their voting rights.

- Let us look at Mahatma Gandhi who dreamt of a free India when the country remained enslaved for over 3 centuries. And today, we are living his dream.
- At a time when India could not build even world-class air carriers, the legendary APJ dreamt; “ In the 3000 year history of India, barring 600 years , the country has been ruled by others. If you need development , the country should witness peace and peace is ensured by strength. Missiles are developed to strengthen the country. Great dreams of great dreamers are always transcended. Today, the “ space”, the “Moon” and “ Mars” belong to India too.

So, dream you must. Dream big you must. Dream and believe that the best period of your life is ahead of you. The future open the doors of humungous possibilities of Holistic abundance for each one you.

Wishing you most and more
Have a wonderful day & great week
[R. Ramakrishnan](#)