Newsletter

Volume 8, Issue 4, April 2018

SSN Mechanical

Aspire

SSNCE has been conferred Autonomous status By MHRD

Achievements in Sports, Projects, Industry, Research and Education

All About Nobel Prize- Part 52

Women Who Changed the World

"We have to show them what women can do in science!" Here Françoise Barré-Sinoussi describes her drive to overcome sexism. In 2008, she received the Nobel Prize in Physiology or Medicine for her role in the discovery of human immunodeficiency (AIDS) virus

https://youtu.be/t4LphtDKgIY

"Perhaps the earliest memories I have are of being a stubborn, determined child"
Rosalyn Yalow was the daughter of immigrants without high school education.

At a time when women were given little access to scientific studies, she made up her mind to pursue a career in physics, and in 1977 she was awarded the Medicine Prize for developing a methodology for the determination of protein hormones in the blood.

https://www.nobelprize.org/nobel_prizes/medicine/laureates/1977/yalow-bio.html?utm_content=yalow_text

She brought crystallography into a new age
Dorothy Crowfoot Hodgkin was arguably the most outstanding X-ray crystallographer of her time. She succeeded in determining the structure of penicillin and later determined the structure of vitamin B12. She is one of only four women awarded the Nobel Prize in Chemistry.

"There are voices around me, hundreds of voices"
Svetlana Alexievich depicts life during and after the Soviet Union through the experience of individuals. In her books she uses interviews to create a collage of a wide range of voices. With her "documentary novels", Svetlana Alexievich, who is a journalist, moves in the boundary between reporting and fiction.

"One of the eternal truths is that happiness is created and developed in peace"
Baroness Bertha von Suttner was the first woman to be awarded the Nobel Peace Prize. She wrote one of the nineteenth century's most influential books, the anti-war novel Lay Down Your Arms (1889).

Reproduced from Nobelprize.org

Info to Alumni- Campus Update

Instincts was graced by Dr.Kamal Hassan

CORPORATE LESSONS LEARNT FROM Dr. KAMALHASSAN'S SPEECH IN INSTINCTS 2018-

reflections by Dr.D.Ananthapadmanaban

As an admirer of Dr.Kamal Hassan for his perfection in work, I was eager to listen to what he was going to speak at INSTINCTS 2018.I was not disappointed in this expectation.

The key takeaways of his speech were-

Always be vigilant-This ,in fact, applies to all of us. Though Dr.Kamal Hassan meant being politically vigilant, one can extend this to real life and Corporate life. Be vigilant to the opportunities knocking at your doors. Keep your eyes and ears open all the time and make use of the opportunities which present themselves to you. An alert human being is an asset wherever he goes.

Meaning of the Tamil word-Meiyyam- It means Centre. Politically, it may mean, being neither rightist nor leftist, but in real life, my interpretation is- look towards all sides and be impartial to all. This is possible only if we analyse all aspects of a problem, which is again possible only if you are neutral (look from the centre).This is an important lesson in Management.

Freedom vs Responsibility-This is a very important point applicable to all of us. You are given freedom only if you are willing to take up responsibilities. Given a responsibility, you have lot of freedom to implement it in various ways. Of course, nobody has absolute freedom to do as he/she wishes. Within the framework of the rules of an organization/Institution, we have the freedom to act .Freedom does not mean shirking away from responsibility. This message was emphasized by Dr.Hassan, while he was addressing the students and I felt that this was a very important point that he was making, apt to the situation.

Our beloved Principal Dr.S.Salivahanan receives ISTE Lifetime Achievement Award

Photo Courtesy -Dr.Sethuraman

Photo Courtesy -Dr.Sachin

For inspiring teaching and mentoring of numerous students,
For individual and collaborative research contributions,
For outstanding administrative accomplishments,
for significant contribution to the
growth of technical education
and service to the Society

Message on the plaque

Prof Kamaraj,
ISTE- SSN Chapter,
in charge writes..

It gives me great pleasure to inform you that Our Principal, Dr. S.Salivahanan, has been awarded with the "ISTE Tamilnadu & Pondicherry State Life Time Achievement Award" by Indian Society of Technical Education (ISTE), Taminadu & Pondicherry state section which is associated with Ministry of Human Resources and Development, Government of India.

The Life Time Achievement Award is conferred to honor eminent professors by ISTE TN & P State Section every year. The award was presented during the inaugural function of the 20th Annual Convention of ISTE, held at Mahendra College of Engineering, Salem on 26.03.2018 .On behalf of SSN-ISTE Chapter we wish him all the best.

The Department of Chemistry, SSNCE, conducted "Two days workshop on chromatographic techniques and patent rights" on 15th and 16th of March 2018 . There were expert lectures on Chromatographic techniques (GC-MS and LC-MS) and on patent filing , followed by an industrial visit to have an insight about chromatographic techniques on the second two.


Dr.Davis Presley

The program was organised by Dr.M.Mahalakshmi and Dr.S.I.Davis Presley under the leadership of Dr.V.S.Gayathri.


Dr.Mahalakshmi


Dr.Gayathri

Amit Tyagi writes..

We are delighted to inform you that EDC cell of SSN organised SYCon 2018, the SSN Youth Conference. The event took place on the 14th of March, 9am to 3:30pm.

SYCon, SSN Youth Conference invites renowned people from different fields of expertise to talk on topics like entrepreneurship, leadership, sports, and arts and share with the youth their life-changing stories. Spread over 7 hours, this conference inspires individuals with a myriad of interests and skills and exposes you to a plethora of new ideas and opportunities. (A detailed report follows in Faculty write up section)

Prof.Chandy conducted the **Third Patent Committee meeting** on 20th March. Patent Committee has laid down policies for patenting. Any facuty wishing to patent his/her idea has to submit the proposal to the Patent Committee. The patent committee, comprising of suitable members for review, will screen the ideas and guide on patenting or otherwise.Approved ideas are supported by an external agency Cintelligence (run by our Alumnus), for further action of drafting and filing.

Other Activities in Brief....

On March 3, 2018, the NSS Unit of SSN, in tie-up with Yuva Shakthi, organised an **Inter-Collegiate NSS Conclave** titled **Conserving Environment - Role of NSS Students** to discuss on the needs of Environmental Conservation and its current trends.(details in faculty write up Section)

Blood Donation Camp was organized by NSS and YRC units of SSN CE on 16 March 2018.

President met students of mech engg on 20-3-2018, to discuss ways for improvement in supporting students.

Research Day was celebrated on26th March 2018. Several categories of awards were distributed to faculty and students. On the basis of overall performance, ECE dept emerged as The Best Research Dept.

The 19th Annual Sports day of our college was conducted on 29th March, 2018 at our college Football stadium. Shri. RAMAN VIJAYAN, Former Indian Footballer graced the occasion.

Info to Alumni- Department Update

Sathyajhith S S of I yr Mech B, participated in the 6th south India level Yogasana competition organised by Global Yoga Federation (Regd.) on 18th February at Jawaharlal Nehru Indoor Stadium.

He got 1st place in that competition representing Annaraj sir's team..

M. Praveen of Final year Mech B has won the Hovercraft competition in PRAGYAN 2018, NIT Trichy, which is an initiative under the Make in India scheme, Ministry of Electronics and IT, Govt. of India.

Dr.K.Rajkumar received a certificate of recognition from Elsevier Journals for the reviews he has done for the Journal.

External Recognition

Invited Reviews

Dr. N. Nallusamy, Professor, reviewed the following technical papers:
(i) "Experimental mitigation of NOx emission in exhaust gases of CI engine fuelled with MECSO blend" for International Journal of Ambient Energy (Taylor & Francis) and
(ii) "Utilization of ambient air velocity to cool off-grid pole mounted flat solar photo-voltaic panels to enhance its electrical power output" for Environmental Progress and Sustainable Energy (John Wiley & Sons)

Dr. K. Jayakumar, Associate Professor, Reviewed a manuscript Titled "Traditional approach and new tools for metric buttress thread planetary milling and subsequent turning on the CNC machine" for International Journal of Automotive and Mechanical Engineering, Universiti Malaysia Pahang Publisher. [30/3]

Dr.K.S. Vijay Sekar, Asso.Prof, reviewed a research paper titled "Optimization Of Machining Ti6Al4V For Biomedical Applications: Numerical Simulation And Experimental Verification" submitted to the International Journal of Machining and Machinability of Materials (IJMMM), Inderscience publishers.

Invited Lectures

Dr. Satheesh Kumar Gopal delivered an invited lecture on “Robotics for future and Society” at the one day workshop on "Recent trends in Robotics and Automation" organized by Mechanical Engineering Department, Jeppiaar SRR Engineering College, Chennai in collaboration with Institute of Engineers (India). [14/3]

Dr. K. Rajkumar, was Key note speaker for an International Conference on Innovation in Engineering and science which was conducted by Jeppiaar SRR Engineering College, Chennai [23/3]

Dr.K.S.Vijay Sekar, Asso .Prof, delivered a Guest Lecture on " Advanced trends in Finite element analysis" at DMI College of Engineering, Chennai. [17/3]

Dr.S.Rajkumar

Dr. S. Rajkumar, Associate Professor, delivered a guest lecture on "Solar Energy - Opportunities and Challenges" in one day national workshop conducted by Jeppiar SRR Engineering college. [27/3]

Dr. S Soma Sundaram, Associate Professor, delivered an invited lecture on Flow analysis using CFD, in the National Conference on "Innovations in Chemical Engineering for Sustainable Development (ICES2018)" [28/3]

Dr.S.Somasundaram

Research Publications

Dr. N. Nallusamy, Professor, presented a technical paper titled "Experimental investigation of effect of EGR on performance, combustion and emission characteristics of RCCI Engine" in Nat. conference on "Emerging Research and Advances in Mechanical Sciences" held on 14th March 218 at Velammal Engineering College, Chennai [14/3]

Arthur Jebastian (Part Time Ph.D Scholar), D.Ananthapadmanaban, Arun Vasantha Geethan presented a paper titled Preparation, Hardness studies and Characterization of 88 Sn-7.5Zn-2.5Al-2In and 88 Sn-7.5 Zn-2Al-2.5 In Lead free soldering alloys at the International Conference conducted at SRM University [22/3]

Research Activity

Dr M S Alphin served as a external Comprehensive examiner/ Doctoral Committee member for Mr. L YUVARAJ, Full Time Research Scholar of VIT Chennai. [8/3]

Dr K.S. Vijay Sekar, Associate Professor, evaluated a PhD Thesis of a Research scholar of the Aeronautical Engineering Department, Hindustan University, Padur as the Indian Examiner.[12/3]

Dr M S Alphin, Associate Professor , Convened DC Meeting and Seminar for the PhD Scholar Mr. Jain A R Tony B. He has submitted his synopsis in Anna University for his research work.[16/3] Dr. K. Rajkumar, attended this DC Meeting .

Events Attended

Dr. B. Anand Ronald, Assoc. Prof., participated in the AICTE sponsored Short Term Course "Ultra High Precision Machine Tools - Design and Characterization", organized by Department of Mechanical Engineering [5/3 to 10/3]

Dr M S Alphin, Associate Professor, serves as Viva-Voce External Examiner for B.E / M.E final year students at Sathyabama Institute of Science and Technology, Chennai [13/3]

Dr.D.Ananthapadmanaban,Associate Professor attended 3 day International short course on Biomechanics at SSN College, Biomedical Department and won the First prize (out of 10 teams) in The Research Proposal Contest leading a team of 7 contestants . Mr. C. Arun Prakash, Assistant Professor, also attended this Short Course . [19/3 to 21/3]

Mr. Jayakishan. B, Assistant Professor, Participated as Faculty Advisor for All-Terrain Vehicle (ATV) Student Grand Prix and Design Competition along with 20 students held at NBKR Institute of Science and Technology, Nellore organized by Seven Motors Pvt. Ltd. [22/3 to 24/3].

Dr.D.Ananthapadmanaban attended a 1 day workshop on Welding Codes and Standards,Dept of Mechanical Engg,SSNCE [24/3]

Mr.B.Jayakishan

Events conducted

Dr M S Alphin, Associate Professor, served as one of the Course Coordinators for the 3 days International Short Course on Bio-Mechanics held in our campus in collaboration with Mechanical Engineering and Biomedical Engineering Department. [19/3 to 21/3].

Dr. N. Lakshmi Narasimhan, Assoc. Prof/Mech gave a talk on GATE and PSU opportunities to all the II and III Year students of Mech on 23.03.2018. Experts from Dynamic Institute were invited to share details regarding GATE-2018 [23/3]

Dr. K.L. Harikrishna, Associate Professor, Dr. S. Vijayan, Associate Professor, Dr. S R Koteswara Rao, Professor organised Workshop on “Welding Codes and Standards” [24/3]

Industry Interaction

Dr. N. Lakshmi Narasimhan, Assoc. Prof/Mech arranged summer in-plant training at Ford India (Chennai) for two students Debal and Ankit, both in their III year Mech. [16/3]

Dr. N. Lakshmi Narasimhan, Assoc. Prof/Mech arranged an interview on Mar 20, 2018 for 6 months internship for the First Year PG (Manf) students at Preethi Kitchen Appliances (Philips India Ltd.), Chennai.[20/3].

Dr. N. Lakshmi Narasimhan, Assoc. Prof/Mech, had a discussion with Preethi Kitchen Appliances (Philips India Ltd.), Chennai , regarding considering SSN for Campus placements. Preethi kItchen Appliances has agreed to come for a campus interview for both Mech and EEE final year students. The placement interview is expected to happen during first week of April, 2018, for the position of GET.[23/3]

Dr. N. Lakshmi Narasimhan, Associate Prof/Mech and Dr. A.K. Lakshmi Narayanan, Associate Prof/Mech, were invited for a technical discussion by Preethi Kitchen Appliances (Philips India) Pvt. Ltd., Ponmar, Chennai for an industrial problem solving discussion. [29/3]. (details in faculty write up section)

Student activity

Navneeth Venkatesan, of second year mech, won the best delegate award in the Trilateral Commission at VITCMUN 2018 [16/3 to 18/3]

Vinaya Krishna, of second year mech , won the special mention award in the UNHRC at VITCMUN 2018 [16/3 to 18/3]

Harish V, of Third year mech, served as the secretary for Instincts 2k18 {8/3 to 10/3]

Vimaleshwar Babureddy, of Third year mech

(1)Attended 2nd International Conference on Advances in Mechanical Engineering (ICAME-2018) held at SRM Kattangalathur. Presented a paper titled "Artificial Intelligence based defect classification for weld joints" . The paper is to be published in Scopus Indexed proceeding- IOP conference series: Material science and Engineering (ISSN: 1757- 899X). The authors of the paper were Mr R Vimal Samsingh, Dr. S. Esther Florence and Vimaleswar Babureddy.

(2) Attended the ATV competition conducted by Seven Motors LTD as part of Team Precisio held at NBKR institute of science and technology, Nellore and constructed an ATV and was placed top 5 in the zone. [22/3 to 24/3]

Akshay Aravindan, of final year mech,served as the chairperson of the UNHRC at VITCMUN 2018 [16/3 to 18/3]

This issue has two annexures.
Anx 1 – Report on National Conference
Anx 2 – e-book on “Maximizing student potential”

The purpose of an annexure
is to enable forwarding to others
without having to send the entire Aspire

Faculty Write up

Dr.B.Anand Ronald writes on

Short Term Training Program on

"**Ultra High Precision Machine Tools"**,

organised by IIT Madras, Chennai. Date: 5 – 10 March 2018

The One week Short Term Training program on "**Ultra High Precision Machine Tools"**,, was organised by Department of Mechanical Engineering, IIT Madras, Chennai from 5- 10 March 2018. The inaugural session was followed by a talk on Vision, Mission, and Strategy of Indian Government for Machine Tool sector, by Prof. N. Ramesh Babu. The next half an hour was spent on Overview of the course. The afternoon session was by Prof. Sathiyan Subbaiah and Prof. G. L. Samuel on State of the art on Ultra High Precision machining and Characterization of machine tools.

The second day started with visit to the labs (Micromachining, KERN machining Centre & Next Generation Grinding Machine) in the morning session and the afternoon session was on Industry Perspective given by Mr. N. Dhand, Chairman & MD, Micromatic Grinding. It was followed by a talk by Prof. Nilesh. J. Vasa on Laser Texturing. The third day began with a talk by Dr. Somasekar Hiremath on Design and Development of Machine tool for Unconventional Machining. The next was on Development and Performance Evaluation of Miniature Machine Tools by Prof. M.S. Shunmugam. Afternoon session was engaged with a visit to MTAB industries, Kakkalur, Tiruvallur District. The participants were showed the various stages of CNC Machine building.

A completely built CNC Machining Center ready for Testing @ MTAB

The fourth day started with a talk by Prof. Amitava Gosh, on Influence on Machining Process on Machine tool design and performance, followed by a talk on Control System Design for machine tools by Prof. P.V. Manivannan. Afternoon session was engaged with a visit to Precision Lab. Fridays session started with Static and Dynamic analysis of machine tool design, by Dr. Mohit Law from IIT Kanpur. The next session was handled by Prof. V. Radhakrishnan, one of the senior retired Professor of IIT Madras.

Afternoon session started with a talk on Sub- Structuring by Dr. Mohit Lan, IIT Kanpur, followed by Manufacturing requirements for bio-medical applications by Dr. Ashish Kumar Sen. Saturday began with a emotionally passionate talk by Dr. T.G.K. Murthy, Retired Outstanding scientist, ISRO Bangalore on Role on Precision machines in Optics for Space Imaging. He dwelt on how he overcame certain technological challenges when India could not get Ion Beam Polishing for Glass precision machining, due to sanctions imposed by foreign countries and how in collaboration with Avasarala Technologies, Bangalore they were able to build it disingenuously. The training program ended with a Valedictory function.

Faculty Write up

Dr.M.S.Alphin writes..

3 Day International Short Course on Biomechanics sponsored by DRDO was organized by Department of Biomedical and Mechanical Engineering, 19 - 21 March 2018. There were 83 Participants enrolled for the program. Some of the experts present in the course are

Dr. Sriram Balasubramanian, Drexel University, USA

Dr. Teo Ee Chon, Associate Professor, School of Mechanical & Aerospace Engineering,

Nanyang Technological University (NIE/NTU), Singapore

Dr.G.Sudhir, Spine Surgeon, SRMC

Dr Paul Brandt-Rauf, Dean, Drexel University, USA

Dr. Dinesh Bhatia, Associate Professor and Head/ BME, North Eastern Hill University (NEHU), Shillong

During a break, Dr Teo Ee Chon, NTU, Singapore visited CAD lab and demonstrated Spine Modeling and Analysis for mech engg students.

Co-ordinators

Dr.A.Kavitha

Dr.M.S.Alphin

Dr.S.Bagyaraj

Dr.D.AnanthaPadmanaban who attended this program writes..

The main feature of the workshop was-Right during the first session of the workshop, we were all informed that on the 3rd day, each of the teams have to give a Research proposal in the form of a ppt for exactly 5 minutes. So, all of us were most attentive to find out the Research gap during the presentations.The Research Proposals were evaluated by a team from Drexel University, including the Dean and a Scientist from DRDO.

The First prize was bagged by the team led by me. The Topic of our team presentation was-Life prediction of spine using 3D Printing and FEM Modelling. All the presentations were put up on a google link for future reference.

After the workshop, I being the team leader, got the mail ids of all my team members and have mailed them saying that we as a team should carry forward our idea as a final year project and possibly as a project for external funding. I have also mailed Dr.Sriram requesting him to be our team mentor and guide us for possible research interactions even in the future

Faculty Write up

LEARNINGS FROM SYCON 2018-Dr.D.Ananthapadmanaban

Sycon 2018 was conducted on March 14th,2018 by the Entrepreneurship wing of SSN College of Engineering, Lakshya.

The first speaker was Mr Ranganathan, Founder of Kavin Care. He talked about how he was very weak in English and Maths, right from schooldays and his interest in Tamil. But , when he wanted to follow his passion for doing business at the Global level, he completely left reading Tamil Magazines and started reading newspapers and Business World. He also talked about leaving one's comfort zone, when it came to pursuing his passion. Mr.Ranganathan wanted to start his own business ,leaving the family business, so he had to forgo the car given by his brothers and start cycling again, even after getting used to going by car. Mr.Ranganathan called it-swallowing your ego.

Mr.Ranganathan touched upon how he improved his basic maths, going down to once again memorizing thoroughly 16 tables and also doing a lot of mental calculations for chemical formulations. He also stressed on importance of good ,regular habits .He says he always makes sure that his weight is 73.5kgs+ 500 gms and he monitors his weight every day.

The second speaker was Mr.Kumar Vembu, one of the co-founders of Zoho and a graduate of Madurai Kamaraj University. He had many things in common with what Mr.Ranganathan said and also many things different. He talked in detail about the SSB (Staff selection Board)Interview that he attended during his college days and how the lessons learnt in the interview are still used by him. He mentioned in particular, the SSB method of forming teams with one short guy, one tall guy, one very healthy guy and one totally out of shape guy to assess how they all combine as a team to help each other out and complete tasks. He also mentioned the final interview when almost all candidates were interviewed for about 2 minutes, but only he was interviewed for close to 30 minutes. This was due to the fact that he had not agreed with the interview committee's viewpoint about the selection of the Indian cricket team to tour New Zealand(way back in 1989).It seems Mr.Vembu stuck to his guns about his views. On coming out of the interview and explaining his stance to the other candidates, he came to know that in the Air Force, you never argue with your superiors(this fact was known to many of the candidates since they were children of Service Officers).In spite of this, Mr.Vembu says that he was selected for the Air Force. This taught him an important lesson –Stick to your guns, if you feel you are right.

During the medical test for SSB, Mr.Vembu observed directly that many of the Air force officers' jobs were over in 4 hours(8.00 A.M to 12.00 A.M) .Mr.Vembu felt that he neede a more challenging job and hence did not take up the Air Force job.

The 3rd speaker was Mrs Aparna Ganesh, a woman entrepreuner. She talked about her traditional upbringing in a TamBrahm family in Mylapore and how she took up dance as a profession for 12 years. Once she realized that this job was boring her, she just left it to go to New York to pursue a course in Western Dance and culture. She then came back to India and with the help of her friends, somehow managed to start an all women dance school, which is now making profits. She also talked about how it felt being the only woman owner of a company in her whole office block and how to manage anger, when sometimes things are so male centric.

Mrs Janaki Lenin talked about her journey from a film maker to a writer. She founded Draco films along with Romulus Whitaker and has produced more than a dozen films for National Geographic. The panel discussion focused on how she overcame her fear of reptiles.

Mr Jayam Narayanan related regular happenings in his life in e very humorous way. This had something to with his not knowing English properly. His Journey on how he trained with his friends in a TASMAC Shop so that people would mistake them to be drunk(the actual purpose was to improve his English).He joined a club called TOASTMASTERS in order to get out of his shell. Now, he has his own start up called Toss the coin which is a marketing agency involved in corporate marketing and communication .

Mr.Pradeep Ramesh was a free style footballer who wanted to take free style football seriously. He was the only U 18 player in the Chennaiyin FC .He faced pressure from his family when he decided to take free style football as his profession. The 3 steps for success which he recommended were to-Dream, Try and Become.

There was a Q & A session for all the speakers and our students came up with really challenging questions-Like how do you manage failure and what do you do when you are completely out of motivation. The Questions were well handled by the speakers.

The afternoon session starred 2 speakers-namely Soda, aka Sudarshan .a stand up comedian and Dr.Kannan Girish, Founder Live Life Foundation.

Soda regaled all of us with the various twists and turns of life. Every failure in his life was converted into a humorous incident. This was appreciated by everyone.

Dr.Kannan Girish, who is a recipient of e medal from Ex-President Pranab Mukerjee is a psychiatrist with a difference. He did not talk about drugs used in psychiatry, but talked about a lot of moral issues in a very touching manner.He literally made everyone dance to his tunes. He gave a lot of case studies ,some of them being-A man who lost almost half his body, now being a CEO of a supermarket chain in China, many acid burn victims, who have let go of their past and become HR Managers in reputed companies. He himself met with an almost fatal accident and was saved from the jaws of death by the love and affection given by his parents. Most importantly ,he stressed the importance of not blaming anybody for the situation that you are in and taking full responsibility for your actions

The Event was compered by Vassante Kumar and Deepak Ram of Final Mech and it was really energizing to see Vishwanath Jeyaraman, Dhruv Parthasarathy, Arun.V.S, Nitin Joy, Syleshkumar , Salavadeshwar, DevaPrashanth and Subramanian doing a lot of volunteering. I am sure that being part of the organizing team for SYCON 2018 will help students gain practical insights into Management and will be useful for them later on in life when they have to work in teams and Manage people with diverse backgrounds.

We were told by the organizers that this was the first time that Staff were invited to SYCON. Other than around 70 student participants from the Department of Mechanical Engineering, the programme was attended by Dr.K.S.Vijayasekar and Dr.D.Ananthapadmanaban, Faculty of Mechanical Engineering. We hope to attend SYCON every year and enrich our knowledge and life skills.

Faculty Write up

One day Workshop on "Welding codes & Standards"

24th March, 2018

Dr. KL. Harikrishna, Associate Professor, Dr. S. Vijayan, Associate Professor & Dr. S.R.Koteswara Rao, Professor, organized "One day workshop on "Welding codes & Standards" on 24th March 2018. Mr. S A Vanchinath, Consultant, delivered his lecture on Necessity of codes & Standards, Various codes related to welding, Welding qualification as per ASME Section IX, in that workshop. Faculties and students from different Engineering colleges in Tamilnadu and Andhra Pradesh participated in the workshop. Total forty four participants attended the workshop.

Feedback from one of the participants:

Sir,

The 1 day workshop on Welding Codes and Standards was handled very well by Mr.Vanchinathan. It was really inspiring to see a 75 year old young man talking for almost 4 1/2 hours. Mr Vanchinathan paced his lecture very well with a very simple power point presentation. A print out of his ppt was handed over to all participants before his lectures started. So,it was very easy for the participants to note down what was not in the ppts, in the notepad given to us. It is doubtful whether younger people can handle 1 full day workshop single handedly. Normally, I have seen at least 2 people handling a 1 day workshop. This shows the sound knowledge, confidence and stamina of the Resource Person.

Hats off to him.

Many practical examples from Industry were illustrated. For Example-While welding in shipbuilding, one has to weld suing a ceramic backing plate since these large welds cannot be reversed after welding one side., They can be welded only on one side. The Resource person could have given 1 or 2 videos in between to break the monotony.

Dr.K.L.Harikrishna

Dr.S.Vijayan

Dr.S.R.Koteswara Rao

Co-Ordinators

Meeting on March 29, 2018 , with Preethi Kitchen Appliances Pvt. Ltd., Ponmar, Chennai

Members Present

From SSN College of Engineering (SSNCE), Kalavakkam-603110.

1. Dr. N. Lakshmi Narasimhan, Associate Prof/Mech (NLN)
2. Dr. A. K. Lakshminarayanan, Associate Prof/Mech (AKL)

From Preethi Kitchen Appliances Pvt. Ltd. (PKA), Ponmar, Chennai

1. Mr. S.R. Suresh, DGM (Engg. & Maintenance)


Dr.NLN


Dr.AKL

Introduction

The meeting began with a welcome note and a short brief about the company by Mr. Suresh. Followed was the purpose of the meeting and agenda. Dr. AKL and Dr. NLN made a brief on their research areas to Mr. Suresh during the introductory note.

Discussion on the Proposed Project

Mr. Suresh brought forward the technical issues pertinent to their products and highlighted the need for addressing the problem giving a top priority. The kind of support expected from the two faculty members (Dr. AKL and Dr. NLN) was put forward by Mr. Suresh during the discussion. Followed was an invite by Mr. Suresh to visit the factory shop floor for a better understanding of the processes involved.

Shop Floor Visit

The entire process of commutator winding, its assembly with the armature, spot welding process of the commutator copper bars, stator winding, stator-rotor assembly and final finishing process were thoroughly explained by Mr. Suresh and few other shop floor Engineers. Ample time was spent near the welding and resistance measuring equipments discussing in detail based on "*on the spot*" observations by both NLN and AKL. Following the shop floor briefing of the processes as regards the motor division, the members came back to the discussion room for a *brainstorm* on the failures reported during the quality check of their products.

Agreed for a Joint Project

Mr. Suresh had agreed for a joint project with Dr. AKL and Dr. NLN with due technical support extended by the company with the sole objective of eliminating the failures observed with some of their flagship products. At this point, Mr. Suresh conveyed with due acknowledgments the support and encouragement of Mr. S. Narayana Murthy, AGM (HR) for the joint project to be undertaken.

Tech Talk Proposal by the AGM (HR)

Near to the end of the long brainstorm session, Mr. Suresh conveyed the exciting idea of Mr. S. Narayana Murthy, AGM (HR) for hosting a **Tech Talk** inviting faculty members from SSNCE for sharing their wisdom on current technical topics and topics of relevance to their Engineers on a continual basis. The event is envisaged as an opportunity for cross learning and interaction with academia. Dr. AKL and Dr. NLN welcomed the idea as a wonderful opportunity that could be mutually beneficial to academic and industries if taken on a long term basis.

Action Plans

Dr. NLN and Dr. AKL have both agreed to propose a concise action plan on the proposed project dealing with the Failure Analysis of their Motor Commutator in a few days time.

Sign Off

The members signed off after a great lunch offered by PKA.

Acknowledgment

On behalf of SSNCE as well the Dept. of Mech. Engg, both Dr. NLN and Dr. AKL would like to thank with due regards Mr. Narayana Murthy, Mr. Suresh and M/s PKA for all the support, encouragement and opportunity given for technical interaction, extending across faculty members to students of our dept. A special thanks are due from our side for the hospitality extended to us during and after the meeting as well. Our sincere thanks to the department of Mech, beloved Principal and SSNCE for encouraging our industrial endeavours.

-The minutes have been compiled by Dr. NLN with due consultations with the members.

Faculty Write up	Industry Interaction - 2	Titan , Hosur

On 17th March, 2018, TITAN COMPANY LTD, Hosur organized a Technology Tune-In (TTI) forum for the academic institutions to showcase their Projects/Recent Technologies/ Innovative solutions/Ideas. TTI forum mainly supported various institutions to showcase their best technology innovations and projects to TITAN executives and Management.

Four research projects were registered to the TTI forum through online and among them one project titled “Attempting Magnesium alloy (AZ31B) for amour materials” was shortlisted for the presentation.

Dr.S.Suresh Kumar and R.Suraj of third year Mechanical Engg, presented their work along with the poster and ballistic tested samples.

Around 36 teams from various parts of our country , presented their research ideas to the visitors of Titan team. The exhibition started with an industry visit of their watch section. It was noted that, electric discharge machine and wire cutting machine are being used to fabricate the intricate parts of the watch.

The following projects were identified from the requirement of the company

1. The jewelry division of the company is interested in making light weight gold chains using gold foams
2. The watch division is interested in developing light weight watch casing using magnesium foams

Presently the company is in the process of shortlisting the exhibited ideas based on their requirement and implementation and we are expecting a positive response for collaborative work.

Faculty Write up

Inter-Collegiate NSS Conclave

Ms.P.Kaythry,
Asst Prof, ECE &
NSS in charge

On March 3, 2018, the NSS Unit of SSN, in tie-up with Yuva Shakthi, organised an '**Inter-Collegiate NSS Conclave'** titled "**Conserving Environment – Role of NSS Students"** to discuss on the needs of Environmental Conservation and its current trends.

The event was graced by the Chief Guest **Mr. Indra Kumar**, an Eco warrior who has turned his home into a self sustainable zero waste producing home, who shared his experiences, inputs and ideas on the topic "Self sustainability begins at home".

(To know more about the Guest - http://talkingtrashchennai.tumblr.com/post/55966553658/dont-transfer-the-waste-transform-the-waste & http://www.thehindu.com/news/cities/chennai/for-indra-kumar-the-ecowarrior-waste-management-begins-at-home/article4993056.ece)

Student write up

The Hover Team's Journey....

Praveen M, Final Year Mechanical B section share his experiences of working with the Hovercraft team and how he tackled the prestigious event at NIT Trichy this year

SSN AERO CLUB has teams working on Gliders, Quadcopters, RC planes and Hovercraft. The teams have been participating in many events conducted by reputed colleges and other organisations and won several awards. The hovercraft team is very active in past three years. Designing a Hovercraft is something which comes from detailed research and immense experience. Designs that are available on the interned are futile for the challenges in the tracks that are being used to race Hovercrafts nowadays.

In 2016 they participated in the National level technical symposium "PRAGYAN" conducted by NIT, Trichy. The team did the best they could and got 7th position among the 43 teams participated. The next year the team lost a chance of getting into the winner's list by an unfortunate event and ended up 4th in the competition. The team worked on the design more carefully and competed the Hovercraft event in the "PRAGYAN 2018 "and have beaten all the teams participated by a huge margin. With the experience from the losses, the team worked hard to correct their errors. After repeated design improvements the team managed to pull out a massive win in the month of Feb 2018.

The team feels there is still some improvement to be done and they are working to beat their previous best in upcoming events. The team is guided by the final year students and Dr K S Vijay Sekar of Mechanical Dept. The team looks promising for the upcoming years and are expected to shine in more events that are yet to come.

Mech Marvel - 40

LSEV is touted as being "the first mass-producible 3D-printed electric car in the world." Expected to enter production in the second quarter of 2019, the vehicle was recently unveiled at a press conference held at the China 3D-Printing Cultural Museum in Shanghai.

The LSEV is the result of a partnership between Chinese 3D printing company Polymaker and Italian electric car manufacturer XEV.

According to Polymaker, all visible parts of the car except the chassis, seats and glass are 3D-printed. Taking this approach reportedly allowed the total number of separate parts to be reduced from a typical 2,000 to only 57 – that presumably doesn't include things like the drivetrain. It also made possible a claimed complete vehicle weight of just 450 kg (992 lb).

Another advantage of 3D printing is that it drastically accelerated the research and development process, allowing XEV to complete new designs in just three to 12 months – Polymaker states that the R&D process for a similar *conventionally*-manufactured car takes more like three to five years.

Even though production has yet to begin, XEV is said to have already received 7,000 European orders for the LSEV – 5,000 from Italian postal services provider Poste Italiane, and 2,000 from vehicle leasing company ARVAL.

"XEV is the first real mass production project using 3D printing," says Polymaker CEO Dr. Luo Xiaofan. "By saying real, I mean there are also lots of other companies using 3D printing for production. But nothing can really compare with XEV in terms of the size, the scale, and the intensity."

We've reached out to Polymaker for more details on the vehicle, and are still waiting to hear back. In a recent report from CNBC, however, it was stated that the car will be priced at approximately US$7,500, have a top speed of about 43 mph (69 km/h), and a battery range of 93 miles (150 km) per charge.

Source: Polymaker via Inhabitat

(reproduced from Gizmag)

Corporate Story 40

SAC ENGINE COMPONENTS PVT. LTD.
(Formerly Southern Auto Castings Pvt. Ltd.)

MSME Focus

SAC supplies camshafts and accessories to almost all auto and two wheeler manufacturers.

SAC Engine Components Private Limited formerly known as Southern Auto Castings Pvt. Ltd., was started in the year 1986 to manufacture Diesel & Gasoline Engine Components such as **Camshafts, Balancer Shafts, Valve Tappets and Rocker Levers** from Chilled Grey Cast Iron, Chilled Ductile Iron, Ductile Iron and Hardenable Iron and Steel Bar / Forgings.

SAC started its manufacturing activities with the Foundry and later on added machine features to supply Semi & Fully Machined Components of Camshafts & Tappets as required by the Customers.

In the last two & half decades, SAC has grown into leaps and bounds and has attained the inevitable name in the Power Train Components Industry with SAC as its brand image making its presence all over the world.

Mission : Be the Tier1 / Tier2 Supplier to OEM globally

Vision : To be the Globally preferred and most trusted source for Engine Components that enhances the Customer Value

Strengths

- Shortest Lead Time for New Product Development
- Continuous Technology Up-gradation
- Ability to supply Camshafts & Tappet in As-cast, Semi and Fully Machined Condition
- Tier-1 Supplier to Major OEM's
- Skilled and Committed Work Force
- Unit located close to Chennai Seaport & International Airport

SAC Manufactures Camshafts in chilled Grey iron, Chilled Ductile iron, Ductile iron, Hardenable grey Iron and Steel (Bar & Forging) with state-of-the-art Technology.

SAC manufactures wide range of Camshafts from Single Cylinder to Six Cylinder up to the length of 1.2 Meters and supply to customer in “As Cast, Semi Finished and Fully Finished condition as per the need of the customers.

It has four divisions, Foundry, Camshaft Machining, Tappet Machining and R&D wing (laboratory)

The foundry is specialized in manufacturing casting of camshafts, Valve Tappets, Balancer Shaft and Rocker arms from chilled Grey iron, Chilled Ductile iron, Ductile Iron and Hardenable Iron. The material configurations are generally as per customer requirement.

The foundry is spread over five acres of land with covered area of 20,000 Sq.Mts and it is **ISO/TS 16969 & ISO 14001** Certified for its Quality and Environmental Management System.

Since from its inception, the foundry has been vital to SAC's self sufficiency and growth .

The Camshafts Machining Division having covered area of 15,000 Sq.Mts , is equipped with the state of the art technology with world class high productivity CNC CBN Cam Lobe and Journal Grinders over and above the mass production conventional machine tools. Most of the lines have Single Piece Flow with stage inspection equipments to ensure the lowest PPM level.

All the operations are carried out In-House including Induction Hardening for Steel Camshafts to ensure high quality standards and speedy delivery to the customers.
With the addition of more CNC machines with latest technology for manufacturing of fully machined Valve Tappets (Cam Followers / Lifters), the Tappets (CAM follower) Machining Divisions Covers an area of 1870 Sq.Mts

The Lab has several facilities .

- Optical Emission Spectrometer – 15 Elements (ARL) for chemical analysis
- Sand Control Laboratory for all types of testing on sand
- Ezcam Cam Profile tester ,Adcole Cam profile tester and Co-ordinate measuring machine
- Full fledged Metrology lab, common for both Camshaft & Valve Tappet Machining Division .

SAC Engine Components Pvt. Ltd has a separate R&D Team, that perform R&D operation to enhance manufacturing techniques and support to customer components design.

- Alternative Material (Chilled grey Iron / Chilled Ductile Iron) Development instead of Steel.
- Weight reduction of Camshaft by creating as cast hollow & dimensional optimization
- Quality improvement through Design of Experiments (DOE)
- Tappet development in cluster Mold.
- Automatic Fettling for camshaft through Robotic Technology
- Automatic counting for Tappets / Rocker Arms
- Tappets mold development in cold box core shoot
- Cast chills development
- Chills placement by Robot (Pick and Place)

For available careers , visit http://www.sacec.in/careers.html

If you are interested in working with SAC, please email your resume to jobs@sacec.in

Amazing Innovation- 61

Hybrid Solar Cell

A team of Chinese engineers has developed a hybrid solar cell that can produce electricity come rain or shine, using the triboelectric effect to harvest energy from the movement of raindrops on its surface.

Triboelectric nanogenerators (TENGs) create a charge from the friction of two materials rubbing together, which you may recognize as static electricity. It could find eventual practical uses in harvesting energy from movement or vibrations through clothing, car wheels, floors, or touchscreens.

In this case, the researchers tapped into the motion of raindrops rolling off the surface of a solar cell. To do so, they added two polymer layers to form a TENG on top of a photovoltaic cell. The top layer consists of a polymer called polydimethylsiloxane (PDMS), while the lower layer is made of poly (3,4-ethylenedioxythiophene): poly(styrenesulfonate) (PEDOT:PSS). To improve the performance of both layers, the polymers are first textured with grooves by imprinting them with the pattern from the data side of DVDs.

The top layer is activated when drops of water land on it and roll off, bringing the polymer into contact with the lower layer. The PEDOT:PSS film acts as a mutual electrode between the TENG and the solar cell, conducting energy from the former to the latter. To make sure the photovoltaic cell still functions when it's sunny, both polymer layers are transparent.

According to the team, the device had a peak short-circuit current of about 33 nA, and a peak open-circuit voltage of around 2.14 V. That's not particularly high, but it is enough to demonstrate that the concept works, and might be scalable.

Amazing Innovation- 62

Tyres that can harvest energy

The newly announced Oxygene by the company GoodYear, will harvest energy through photosynthesis. It inhales C02 from the air and moisture from the road, feeding a living moss in its sidewall and releasing oxygen into the air. The way Goodyear sees it, in a city the size of Paris with 2.5 million vehicles on the road, a society-wide adoption of the Oxygene tire would create 3,000 tons of oxygen and soak up more than 4,000 tons of C02 a year. What's more, the tire would also capture energy generated during photosynthesis and use it to power electronics inside it, such as onboard sensors, a customizable safety light, and an artificial intelligence processing unit. It would also use Li-Fi to hook up with the Internet of Things and talk to other cars and road infrastructure. The tread would be 3D-printed using rubber powder from recycled tires.

https://youtu.be/Ba-hRW6SP4o

Amazing Innovation- 63

Wave powered autonomous boat

Autonot is a new 5 meter (16.4 ft) sensor-packed unmanned surface vehicle . The vessel can be launched and recovered directly from a shipway and moves forward using wave foil technology, comprising keel-mounted articulated and sprung foils to the front and back, that harvest energy from the rise and fall of waves and silently convert it directly into propulsive thrust. The craft has been designed in such a way that it's able to move forward no matter the direction of the waves hitting it and can get up to 5 knots.

Photovoltaic panels to the top run client-specified sensors – current deployments include a mast-mounted weather station, a Doppler current profiler, multi-beam echo sounders and sonars and ocean acidification sensors. Measurements are collected and data processed onboard, with the information then transmitted to home base via satellite.

Watch it in action at https://youtu.be/LUWP97MWoI4

Amazing Innovation- 64

Water and wind turbine

The Waterlily is designed to be more portable, weighing 800 g (1.8 lb) and measuring 180 mm (7 in) across and 75 mm (3 in) thick, and the little turbine can be placed into a river or a windy place to spin up some power for any device that charges via USB. Submerged, Seaformatics says the Waterlily can operate in water flowing at speeds between 1 km/h and 11 km/h (0.6 mph and 6.8 mph), but the peak output of 25 watts is achieved at 7.2 km/h (4.5 mph). Out in the air, it needs a minimum wind speed of 10.8 km/h (6.7 mph) to get going, but apparently finds its stride around the 72 km/h (45 mph) mark.

Watch it in action at https://youtu.be/J_AZWLiks50

Alumni Info

Suggestions from Alumnus

From a mail to VeA

This is Tarun Subramanian, from the BE Mechanical Engineering batch 2013-2017. I am currently pursuing my Master's in Mechanical Engineering with a specialisation in Robotics (Northwestern University). I have been regularly following aspire and I am glad it has kept me up-to-date on the various activities in the department.

A quick update on my work :

- Currently, I am researching in the field of Surface Haptics under Professor Ed.Colgate.
- Haptics is defined as the sense of touch and the primary goal of this lab is to emulate real texture (such as wood, steel, rubber etc) on virtual surfaces (like a phone screen, laptop screen etc).
- They have already developed a friction modulation device called the Tpad (Tactile Pattern Display) in which the glass vibrates and thus varies the coefficient of friction on the surface (More info on the technology can be found here: http://tpadtablet.org/home/).
- My work is focused on a better technology where we use a 3M touchscreen and the friction varies as a function of the voltage applied to the screen. I am trying to map certain characteristics (impulse response) of a material onto the virtual surface and see how closely it relates to the real texture.
- This is the device that our lab released for CES (https://www.youtube.com/watch?v=LrbJWiAc6JI)

The main reason I wanted to write this email was to tell you the mistakes I have done in my undergrad and steps students currently doing their undergraduate can take to not fall in the same trap as I did.

Mistake 1:

Not Reading papers

I feel like all students who are going to pursue their masters or even a job must learn the art of reading papers. When I first joined the lab, although I understood 80-90% of the technology and; the science behind it, the papers I read made no sense to me. This is not because I was incapable of understanding it, it is just that every author has a style of writing a paper and we must adapt ourselves to his/her writing style and make sense of it. Another thing I realised is that although I might have understood 90% of the paper, it eventually comes down to that 10% of the paper that would really help me progress with my research. Also, there is no such thing as **I have read the paper once.** In order to truly understand a paper, it must be read a minimum of 5-6 times if not more and then discussed with classmates. Discussion sessions only determine if we have really understood the paper or not and also helps to brainstorm ideas for our research.

Sir, I realised that all these mentioned above can be easily rectified if I had read my papers and attended your **paper reading classes** regularly and took it seriously. I would advise all students pursuing their masters to please attend this class and make the most out of it. Regardless of whether the students are planning to do a thesis or non-thesis, they must learn it.

Mistake 2:

Not creating a LinkedIn Profile early

- I never realised the importance of a LinkedIn profile until I came here to the USA.
- This was the only reason I was able to land an internship (Roboworld) and had I started my profile in my undergraduate, I would not have spent and wasted my time building my profile and connections after coming here.
- Although I know students think that they can build our profile in a matter of few days, **it doesn't end there**.
- What I want them to understand is your LinkedIn profile is ready only when you start building your connections and growing your network.
- Once your network is quite big (say 150-200 connections) the next step to take is to reach out to these connections. It is very frustrating since most of them do not reply to the messages, some of them reply after 1 month and a few of them reply in a weeks time.

A quick stat to bolster my above statement :

1) I connected with 300+ people (out of the 500 people I sent a request to)
2) I messaged around 300 people
3) 10 people replied after a month
4) 5 people replied in a weeks time
5) 1 person offered me an internship

This was 4-5 months of work and I spent the first 2 months building my connections. Had I built my profile at SSN, I would have been in a much more comfortable position. Sir, I had a suggestion.

Since you ask us to open a LinkedIn profile at the end of the year, why don't you ask them to do that at the beginning of the final year?

That way they would have a year's time to build their profile. I will be more than happy to create a powerpoint or some reading material on 'How to create your LinkedIn profile'. Do let me know if you want me to do it.

Good suggestion. We will do it for next batch, as soon as they enter final year.

You may send the write up on how to create the profile; for inclusion in next issue--VeA

I thank you for taking the time to read my email. I will keep you posted on my research work and progress. I also would be happy to any questions student have on pursuing their masters in USA, whether to take thesis or non-thesis option, field of specilisation.

Those who want to contact, may do so thru the following mail id ------ VeA

tarun13103@mech.ssn.edu.in

Extremely happy to Note that he still uses SSN mail id-that helps us identify the batch.

Forthcoming events

Workshops / Faculty Development programs

April 2018

The Department of Mechanical Engineering of SSNCE, is planning to organize Two Days Workshop *on FEA Simulation of Composite Structures-Impact and Vibration Analysis (ABAQUS & ANSYS)* at our college premises between 12-13 April 2018.
Website: https://sites.google.com/view/fea-impact-vibration-workshop
Registration: https://goo.gl/forms/zC7c2NcO75LEFqeV2
https://drive.google.com/file/d/0B7aUKCWY8sPCSkFtRDJ6MXVFSlBraHpjMVNYMkZQeTNrWUg0/view

Department of Mechanical Engineering, BS Abdur Rahman Crescent Institute of Science & Technology is organizing a one day workshop on "FRICTION MATERIAL CONCEPTS – FORMULATION, TESTING & ENVIRONMENTAL ISSUES"
Almost all the speakers are from the friction material Industries only.
At the end of the workshop, all the interested delegates will be taken to the company M/s. Pyramid Precision Engineering Ltd., Chennai to get experience on testing of brake pads/linings as per Original Equipment Manufacturer standards.Register by April 2. Fee Rs.500.

May 2018

The Department of Mechanical Engineering, MNIT Jaipur is organizing an International Two Weeks International Programme on "Advanced Course on Sustainability in Materials & Design" under the aegis of Global Initiative of Academic Networks (GIAN) Programme of the Govt. of India during May 21st - June 1st, 2018. The foreign expert for this Course is Prof. P.N. Rao from University of Northeren Iowa, USA. Register by April 21. Fee Rs,5,000 for faculty and RS.2,000 for students.Create login and password at http://www.gian.iitkgp.ac.in/GREGN/index.

Conferences

April 2018

DST-SERB and BRNS Sponsored "National Symposium on Sustainable Energy Conversion & Storage Materials (NSSECSM - 2018) is organized by Centre of Excellence for Energy Research, Centre for Nanoscience and Nanotechnology, **Sathyabama Institute of Science and Technology**, Chennai during April 26-27, 2018. Register by April 10.

May 2018

International Conference on Progress in Automotive Technologies (ICPAT 2018) will be conducted during MAY 10-12, 2018, at Elite World Prestige Hotel located in the center of Taksim in Istanbul.
CONFERENCE LINK: http://www.icpat2018conference.com/
Selected manuscripts will be considered for publication in Journal of Thermal Engineering and International Journal of Advances on Automotive and Technology.
Deadline for Abstract Submission: April 02, 2018

June 2018

Dr B R Ambedkar National Institute of Technology, Jalandhar in academic collaboration with Global Institute Of Flexible Systems Management (GIFT), New Delhi is going to organize 5th International Conference on Production and Industrial Engineering (CPIE 2018) scheduled to be held on June 26-29, 2018 at Bangkok (Thailand). Full Paper Submission: April 10, 2018

August 2018

Department of Physics, Periyar University, Salem, is organizing the 2nd International Conference on Recent Trends in Applied Science and Technology (ICRTAST-2018), during 23-25 August 2018. Abstracts by **21.06.2018**

September 2018

The 4th International Conference on BioTribology (ICoBT 2018) will be held in Montreal, Canada, on 26-29 September 2018. Submit abstracts by 20 April, 2018. https://www.elsevier.com/events/conferences/international-conference-on-biotribology

National Conference on Materials & Technologies for Energy Conversion and Storage (M-TECS- 2018), 26-29 September 2018, Technical Physics Division (TPD), Bhabha Atomic Research Centre (BARC), Mumbai-400085, Maharastra

Delhi State Centre of The Institution of Engineers (India) is organising 34th National Convention of Mechanical Engineers on theme: "*Mechanical Engineering and Emerging Challenges for Manufacturing'* under the aegis of Mechanical Engineering Division– IEI during September 7-8, 2018 at New Delhi. Abtsract submission by April 30.

April 2019

The 22nd International Conference on Wear of Materials will take place in Miami, USA from the 14-18 April 2019. Abstract submission by May 31st.

- Division of Mechanical engg of SA Enginering College, Chennai, is conducting a "National Conference on Design Analysis and Manufacturing systems (NCDAMS-2018") on 27th April 2018. Last date for paper submission April 2.

Challenge from NIOT

ESSO-National Institute of Technology (NIOT) , under the Ministry of Earth Sciences, is organizing a competition for students pursuing engineering degree to visualize and design an autonomous underwater vehicle. The conceptual basis for Student Autonomous underwater Vehicle (SAVe), is a highly mobile Autonomous Underwater Vehicle (AUV) to be built based on engineering principles. The main focus of this competition is to involve students on the new frontier areas of ocean technology and kindle their innovative thinking in this unexplored area of ocean environment and observation. NIOT will support the winning team with their technical expertise and also sponsor for the International competition being held annually in AUVSI foundation San Diego, USA.The competition is open to Indian national students only.

- To provide opportunities for students to experience the underwater technologies of system engineering.
- To develop skills in AUV engineering technologies
- To provide a learning basement for students with an interest in international AUV competitions.

More details at https://www.niot.res.in/SAVe/

Submission of Preliminary Design Report (PDR) April 19.

Those interested can contact Dr.Sakthivel Murugan, Assoc Prof, ECE, who works on under water technologies.

Research News from MSP

Dr.Muthu Senthil Pandian
SSNResearch Centre

1.Fulbright-Kalam Climate Fellowships are offered for:

Doctoral Research: These fellowships are designed for Indian scholars who are registered for a Ph.D. at an Indian institution. These fellowships are for six to nine months.

Postdoctoral Research: These fellowships are designed for Indian faculty and researchers who are in the early stages of their research careers in India. Fulbright-Kalam Climate Fellowships will provide opportunities to talented faculty and researchers to strengthen their research capacities. Postdoctoral fellows will have access to some of the finest resources in their areas of interest and will help build long-term collaborative relationships with U.S. faculty and institutions. These fellowships are for eight to 12 months.

Affiliation
The selected candidate will have affiliation with one U.S. host institution during the grant. USIEF strongly recommends all applicants to identify institutions for affiliation and correspond in advance with potential host institutions. If you have a letter of invitation from a U.S. institution, please include it as a part of your online application. The letter of invitation should indicate the duration of your visit, preferably with dates.

Website: http://www.usief.org.in/Fulbright-Kalam-Climate-Fellowship.aspx
Last date to apply July 16.

2.Summer Fellowship for SC/ST students

Eligibility

SC/ST students studying 1st year M.Sc in science disciplines (Biological, Physical, Chemical and Mathematical Sciences) or 3rd year B.E./B.Tech or equivalent degree in all discipline during the academic year 201 7-18. Students during 2nd Year MSc, 4th Year Engineering, M Tech students and students already applied in past are not eligible for this program.

Duration of the Programme One month (June/July)

Financial Support IISc. will provide:
- Travelling allowance equivalent to 2nd Class sleeper train fare from nearest station of college/residence to IISc. and back.
- Free boarding and lodging (on sharing basis) at IISc.
- Fellowship of Rs.5,000/- and a book grant of Rs.1,500/-

Features of the Programme

Selected candidates will work with one of the faculty members of IISc., and learn various techniques used in research.
Last date for submission of filled in application form is **25th April 2018.**

Website: http://www.iisc.ac.in/

3.DST is seeking to support novel energy storage research proposals addressing one or more of the following challenges:

• Materials and materials design

➢ Projects should seek to improve the lifetime and performance of energy storage devices through improved materials design and development.

➢ Projects should seek to achieve performance advances in terms of energy and power density, together or separately, as they are important for future energy storage devices.

• Diagnostics

➢ Projects should seek to improve the tools and methodologies needed to understand and predict the characteristics and performance of energy storage materials, components, devices and systems, under different conditions and at different length and time scales.

➢ Development of methodologies to diagnose energy storage systems under prevailing conditions with sufficient speed and accuracy to enable the efficient and safe operation of the system.

The proposers are encouraged to consider following aspects in their proposals where appropriate:

• Modelling as a tool to facilitate development of computational materials with next-generation computing, artificial intelligence (machine learning), and robotics tools, with the aim of creating a more fully integrated approach.

• The manufacturability of new materials and devices including scale-up and Cost.

• End of life aspects should be considered from an early stage to ensure new devices stand the best chance of minimising environmental impact down the line.

• Application and integration of materials into device.

Funding Available:

Research Stream (Stream A) : 1 Crore maximum

Technology Stream (Stream B): 3 Crore maximum

Project Duration : 3 years maximum

Soft copy of Project Proposal is to be e-mailed (Subject Captioned: Call for Research & Technology Proposals on "*Materials for Energy Storage*" *(MES)* - 2017 / Stream Name / PI Name) to ranjith.krishnapai@gov.in by 31st May 2018.

Website: http://www.dst.gov.in/callforproposals/call-oriented-researchtechnology-development-proposals-materials-energy-storage-mes

Inspiring Life Stories

Mr. Kishore Babu
Schwing Stetter

The story is told of a woman who bought a parrot to keep her company, but she returned it the next day.

***"This bird doesn't talk,"* she told the owner.**

"Does he have a mirror in his cage?"* he asked. *"Parrots love mirrors. They see their reflection and start a conversation."

The woman bought a mirror and left. The next day she returned; the bird still wasn't talking.

"How about a ladder? Parrots love ladders. The happy parrot is a talkative parrot."

The woman bought a ladder and left. But the next day, she was back.

"Does your parrot have a swing? No? Well, that's the problem. Once he starts swinging, he'll talk up a storm."

The woman reluctantly bought a swing and left. When she walked into the store the next day, her countenance had changed.

***"The parrot died,"* she said.**

The pet store owner was shocked.

***"I'm so sorry. Tell me, did he ever say anything?"* he asked.**

***"Yes, right before it died,"* the woman replied.**

"In a weak voice, it asked me, 'Don't they sell any food at that pet store?'"

Moral of the story: Sometimes we forget what's really important in life. We get so caught up in things that are good while neglecting the things that are truly necessary. Take a moment to do a *"priority check", and strive for what is most* important today. *Don't wait for the parrot to die...!!*

Contribution: Ms. B. Niranjana, Sr. Associate, Visteon Automotive India Pvt. Ltd.

Corporate Wisdom 52

Remembering the past

Facebook's headquarters in Palo Alto earlier belonged to Sun Microsystems. Sun was one of the early giants of Silicon Valley – but died a silent death in 2009. When Facebook moved in to the premises, they refurbished the entire place. But they didn't get rid of the Sun Microsystems signboard outside the office. They just flipped it, and put Facebook's sign in the front. Why did they do that?

Mark Zuckerberg explains that he wanted the old sign to remind Facebook employees of what can happen if you take your eye of the ball. He wanted them to remember never to take their success – or even their existence – for granted. Interesting thought, isn't it?

Most leaders tend to look at past successes to inspire and motivate their teams. We showcase trophies won, and re-tell tales of triumph to remind ourselves of what we need to do to win. We don't usually look at mistakes made - or failures - to remind ourselves of what we should not do. Maybe every organization should ask itself the question: What's our equivalent of the Facebook/Sun signboard?

Few months back I read an article by one of the Leaders. This goes like this.

Extract of the article

At the start of my career, I remember walking into the cabin of a shampoo brand manager. On the shelf in his room were samples of blockbuster products, great packaging, ad club awards and innovative point-of-sale material. No surprises there.

But what caught my eye was a leaky pack of anti-dandruff shampoo in a tall refill pouch. The blue shampoo had clearly leaked a long time ago, and smudged the outer pack. It wasn't one of those tiny sachets (that came much later) – but a large pouch – almost like a bottle. What was this messy pack of half-leaked shampoo doing on the shelf, I remember thinking? And the Brand Manager went on to tell me the story. He explained how the refill pack was one of the biggest launches he was associated with. The innovative pouch was expected to dramatically lower packaging costs – which in turn would allow the company to sell shampoo at significantly lower prices. The project was fast-tracked to get the product in the market soonest possible.

It was a mega-launch. Sales teams and retailers were all impressed by the innovative packaging and sales in the first three months were well above target. And then, disaster struck. The pouch began to leak. Complaints began to flow in. Turned out that over time, the shampoo was corroding the lining of the pouch, resulting in the leak. Shops across the store were turning blue as the shampoo leaked and messed up the entire shelf. Shopkeepers were furious, as other expensive cosmetics were getting damaged too. The product had to be recalled, trade had to be compensated – and the marketing team had egg (and shampoo) on their faces. That pack there, said the brand manager, is to remind me and my team that while we need to constantly innovate, we also need to be careful to test every element and not look for short-cuts in the quest for speed. Needless to say, he went on to have a hugely successful career in the years ahead.

So time to think

- So what's your leaking-shampoo story?
- What's behind your company's signboard? Maybe you should let your team know.
- Lest they forget. Remember the words of George Santayana: Those who cannot remember the past are condemned to repeat it.