

AMEN

The Association of Mechanical Engineers

NEWSLETTER

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A change in tradition greets you in the form of this newsletter. It's our immense pleasure to set forth the practice of presenting to you a monthly newsletter that will keep you abreast with the activities in the department, latest news, research and give you lots of interesting material including a biography and a thought to be pondered upon.

We urge you to constantly encourage us to keep ourselves up to your expectations. Wish you a pleasant reading.

Editors

■ **"If you are not working to stay one step ahead, you are already falling behind"**

■ ***LISTEN...***

'Good morning, IIT Kanpur', boomed the voices of the first-yearites in the auditorium as each one of us yelled at the top of our voices to greet the IITK community and herald a new dawn of optimism and adventure.

My first rendezvous with the department was during the slide show presentation by Prof. K. Muralidhar and Prof. A. Dutta. It was followed by a tour to the mechanical engineering laboratories. I was highly impressed by the strange machines we were shown. But my enthusiasm drained away when I got to know that it would be quite sometime before we would get to lay our hands on those machines. Till then it would be voluminous books and class notes just as before coming to IIT.

A few days later I learned that something called the "Association of Mechanical Engineers" exists. We were told that the AME takes care of our all-round growth. I have no doubt that AME will help us in becoming good engineers by conducting industrial tours and.....but I also expect it to act as a platform for our personality development and allow our creative skills to flourish. After all we do not want to become dumb engineers rooted to machines, do we? I am looking forward to building an everlasting relationship with my department and the AME in particular.

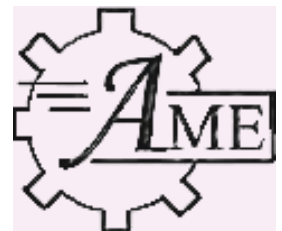
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■ ***RECENT RESEARCH***

A NASA backed US Company is developing aircraft engine noise reduction chevrons that can change their shape in very high temperature exhausts.

Noise reduction chevrons are well established technology to mix the fan flow behind an engine, but they can degrade the thrust performance at cruise attitude. Aerospace companies such as Boeing have developed shape memory alloy chevrons that change their geometry during take off, cruise and landing to optimize noise reduction above airports and retain thrust at higher altitudes. "The research will build on work we have done in the rotorcraft world where we found a way to prestrain the structure so it requires less force to deflect than you would need with brute force" said Dr. Todd Quackenbush, project leader at Continuum Dynamics. A prestrained alloy would need less power to hold it in a particular shape, he said. In principle you could dispense with a great many of the high temperature hydraulic or pneumatic systems in engines and replace them with shape memory actuation.



FROM THE DEPARTMENT

New undergraduate students welcomed into the department in Freshers' Party organized on Thursday, 25th August, 2005. The venue as always was L-7. It was an occasion for the freshers for showcasing their talents and also interacting with their seniors. The cultural programme, prepared by the freshers, under the guidance of the second and third year students, started just before eight. It included a couple of songs, a group dance and a skit of comic genre. All along the forty five minute show the audience had enough entertainment. The handing over ceremony to the new AME council also took place. Harish Awasthi, the outgoing president of AME introduced the audience to the new council. Outgoing council members were felicitated by the Head of Department, Dr. K. Muralidhar. After this the HOD addressed the gathering. He welcomed the freshers and wished them all the best. He expressed concern at the poor attendance of both the students and the faculty at the function. This was followed by the address of Dr. P. Venkitanarayanan, the new AME faculty advisor. He wished the freshers an intellectually invigorating stay at IITK. He also promised all possible help for the AME activities. Both the HOD and the faculty advisor spoke of the need for a monthly AME newsletter. The programme at L-7 was followed by a sumptuous dinner at the LHC foyer. Dr. P. Venkitanarayanan expressed satisfaction over the arrangements and hoped that the AME would remain visible throughout the year.

New appointments in the AME

Prof. (Dr.) P. Venkitanarayanan is the new Faculty Advisor for the AME. The new AME Executive Council has been appointed. The members of the council are Mr. Puneet Agarwal, President, Mr. Vivek Gaur Vats, Gen. Secy., Mr. Ram Krishna Trivedi, Accounts Secy., Mr. Jitendra Tayal, P.R. and Alumni Secy., Mr. Vaibhav Kalway, Event Mgmt. Secy., Mr. Abhishek Poddar, Web Secy. And Mr. Amber Maheshwari, Editor, AMEN.

THE PERSON

He was fascinated with the smell and sound of motors and begged his grand father to take him to the rice polishing mill in the remote Japanese village where he lived. It was 1913, and the mill was one of the only motor driven machines of the day. A few years later, when an old American car went rumbling through the same small town, he ran into the street and sniffed the splattered oil it left behind. To anyone else, it would have been an event hardly worth remembering. But to **Soichiro Honda**, it marked an auspicious occasion. It was at that moment that he decided he was going to build cars. He was eight years old.

The son of a blacksmith, Soichiro left school at 15 to work as a mechanic. After strapping a small generator onto a bicycle, he went on to found the Honda Technical Research Institute (renamed the Honda Motor Company) and built his first dream motorcycle in 1949. Within 10 years, Honda would sell a million motorcycles a year. However Soichiro's first love was still cars. He would never abandon the quest for the perfect engine that was highly efficient. In 1963, using that equation, Soichiro built his first car. It was both a monument to his love of driving and a glimpse of his vision of the future. A vision that would relentlessly drive him and everyone else at the Honda Motor Company. For the man who some might have thought had oil running through his veins instead of blood, it was a labor of love. In 1991, the engine that had driven Soichiro Honda for 84 years suddenly shut down. But the one he had jump-started at the Honda Motor Company, some 43 years earlier revved on smoothly, reverently, never skipping a beat.

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School and Beyond

As I stand today at life's threshold,
Broke, shattered, and no hand to hold,
As thoughts creep up and bring on tears,
Entering a new world brings on fears.

How can I leave this secure hand?
Without it, my life would be bland,
No more spice and no more fun.
No more discipline under the sun.

The hand that led me to my goal,
Helped me enrich and strengthen my soul;
Helped me through life's twists and turns,
Made me competent and helped me learn.

It made me realize all my dreams
And taught me
Life was not full of creams,
Made me as I am today
Now I stand alone in this wide world
Weary, confused, my vision blurred
But the hand that has led me all along
Has made me equipped to survive long

Believe, I trust that eternal hand,
It has always been my magic wand,
How can I repay, I do not know;
But through my deeds,
I shall help it glow.

Sumeet Kale

DREAMZ UNLIMITED

I wear my dreams like a pair of matching shoes with the dress. They seem to vary according to the situation I am in. As a child, bullied by my elder sister, I dreamt of turning into a fairy and giving her a hard time; at the brink of standard 12th, I dreamt of IIT; after coming here, each time during end sem I cursed myself for dooming myself and dreamt of marrying a millionaire Frenchman. Now, as a research student I dream of coming up with something good and pioneering. But in the heart of my heart, the sole aim of my life is to keep my parents happy, do my teachers proud and above all be a good human being.

Jyoti Mishra

This newsletter gives you the opportunity and space to express yourself. Contributions are invited from all UG and PG students. Please send your write-ups to amber@iitk.ac.in. We hope to receive a good response to better showcase our creative side.