

AMEN

*The Association of Mechanical Engineers*

# NEWSLETTER

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**"Be the change that you want to see in the world"**

**- Mahatma Gandhi**

**AME congratulates Arvind Kothari and Sumeet Kale to be elected as our new Gymkhana President and General Secretary (Cultural) respectively.**

## From The Department

### Distinguished Alumnus Award 2007

Dr. Rajiv Desai (BT/ME/82) has been conferred with the Distinguished Alumnus Award of the Indian Institute of Technology Kanpur for his outstanding contribution to Research and Development this year.

Dr. Rajiv Desai is the founder and CEO of 3Di - a software services company with operations in US, Japan and India. He also founded and serves as CTO of Embedio, a leader in the development of next generation embedded operating system and technologies for converged media devices. He has over 13 years of experience in developing business and joint ventures in Japan and India. Dr. Desai has also managed R&D projects, product development contracts, software services contracts and developed licensing contracts and strategic business partnerships with some of the world's leading technology companies.

Prior to becoming a full time entrepreneur, Dr Desai managed a group of scientists and engineers at NASA's Jet Propulsion Laboratory, where his team pioneered the concept of micro robots for planetary exploration that led to successful landing of Mars Pathfinder Rover on Mars in 1997. For his contributions to the space programme, Dr. Desai has received several awards including the NASA's Exceptional Achievement Medal for leadership in developing new space mission for NASA and JPL's Lew Allen Award for excellence in research. He has also served in academic positions at educational and research institutions in US, Japan and Europe and has over 30 technical publications and patents.

Dr. Desai holds a Bachelors of Technology in Mechanical Engineering from the Indian Institute of Technology Kanpur, Master's in Mechanical Engineering, Master's in Computer Engineering and Ph.D. in Mechanical Engineering from University of Michigan in Ann Arbor. He also holds a MBA from Massachusetts Institute of Technology, Sloan School of Management.

### National Conference of Research Scholars in Mechanical Engineering

to be held at Outreach Centre (New Alumni Building) during 23<sup>rd</sup>-24<sup>th</sup> March 2007

PhD. Students of Department of Mechanical Engineering together with AME are organizing a National Conference to explore various vistas of mechanical engineering. This conference will have the participation of mechanical engineering research scholars from all over the country along with industry leaders like GE India, MSC Softwares, Geometric Softwares, Online Solutions etc.

The highlights of conference include:

1. Above 35 technical presentations by research scholars from around the country.
2. Keynotes Addresses including keynotes by Mr. Manu Parpia (Founder & Vice Chairman) from Geometric Softwares Solutions Co. Ltd., Mr. Gerard Rego (VP & GM India Product Development) from MSC Software India Pvt., Dr. Balu Sharma from GE India.
3. Booths for various companies during the conference for detailed interactions with students.

All students are invited to participate in the conference by attending various talks, Keynotes and by visiting various company booths to take the full benefit of this event.

For conference details please visit: [www.iitk.ac.in/mech/ncrsme07/](http://www.iitk.ac.in/mech/ncrsme07/) and feel free to drop your query at [ncrsme07@iitk.ac.in](mailto:ncrsme07@iitk.ac.in)

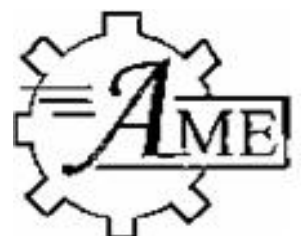
NCRSME'07 TEAM

### Did you know?

Traffic jams of New York, San Francisco and Paris are well known - beaten only by those in Seattle where a driver annually spends 59 hours stuck in traffic.

Traffic lights were used before the advent of the motorcar.

Traffic jams are nothing new. In 45 BC, Rome banned all vehicles from within the city - and in other cities vehicles, including horses, were allowed only at night... because of traffic jams.



## Poster Presentation 07

The annual **Poster Presentation** event was organized on the 17<sup>th</sup> of February by the AME PG Council to showcase the research work of the second year M.Tech. and Ph.D. students of the Mechanical Engineering Department. The event went on for three hours and was attended by faculty Members of the Mechanical Engineering Department as well as the first year M.Tech. and B.Tech. Students. Even people who were not from the department attended the event. A total of **86** posters were presented covering various research areas in the fields of Fluid, Thermal, Manufacturing Sciences and Engineering Design. The participants had been asked to present their work in 12 A4 size sheets or a poster of equivalent size and they managed to do so quite well. The purpose of this event was to give the young researchers a chance to show their work before completing their thesis thereby giving them an idea of the quality of their work as well as introducing the first year M.Tech. Students to the concept called 'research'. The purpose seemed to be fulfilled to quite an extent since apart from being attended by a large no of students it also excited a considerable no.



### Winds in the Will

Ever had a power cut at home? Sure you've had. With India suffering from a deficit of thousands of Megawatts, it's impossible to escape the effects of this problem, even if you are residing at one of the most posh areas of the country's capital. And forget about homes, the heavy industries are the worst sufferers. But not Tulsi Tanti's textile mills. At least, not when they did exist. And why do they not exist? Because it took an enterprising brain like that of Tanti to discover the potential of wind power in a country where every year thousands of homes are blown away by terrible gales while Govt. agencies and ministries spend crores to figure out the solution to the power problem. So Tanti gave up his textile business and started making power out of wind. This is in brief the near-magical story of the rise of Tulsi Tanti, India's wind man.

Tulsi Tanti's textile business was in ruins. Textile mills require huge amount of electric power and not much of it was forthcoming for Tanti, with industries cropping like mushrooms in the early 90's and no infrastructure in place to take care of the burgeoning demand. That's when Tanti invested in a plan which was to put him in the list of 10 richest people in India. He bought two wind turbines (modern name for good old windmills) to power his mill. By 1994, he realized the potential of wind power in India and switched over from textiles to power generation. But it was definitely not as rosy as the picture looks now. In 1994, people in India didn't believe wind power could be cost effective or even efficient. The experiment with solar power had largely failed and people expected nothing extraordinary with wind. Tanti somehow convinced IPCL, his one time supplier in textile business, to buy a wind farm which Tanti's company built in three months. The farm still works at 97% efficiency even after 10 years.

The foremost problem for him was the technology. Hardly any kind of sophisticated technology relating to wind turbines was available in India at that time. So Tanti's company bought the wind turbines from a loss making German company Sudwind because none of the well-known companies were interested in supplying technology without a share in profits. In 1997, Sudwind went bankrupt. Tanti's company Suzlon bought the company and finally began making their own wind mills. By 1999, Suzlon had established itself in the market and have started making its own component parts as well. But the big break came in 2004, when Suzlon went public in the Bombay Stock Exchange. That's what made Suzlon into the \$6 billion company that it is now and made Tanti, who along with his brothers, has a 70% share of the company one of the 10 richest men in India. What made Suzlon click was Tanti's idea to provide end-to-end solutions (sophisticated name for providing after sales service and sometimes operating the plant themselves). Also Suzlon manufactures all the parts of the wind turbines themselves, thus avoiding compromises in delivery time and quality. What ultimately paid off was Tanti's daredevil attempt to take a risk in a field untested in India.

In 2006, Suzlon bought Hansen Transmissions, a Belgian firm manufacturing wind turbine gearboxes. Today, Suzlon is the 5th largest wind power company in the world and the largest in India and Asia. It supplies wind turbines to Australia, China, New Zealand, South Korea, and even the U.S.

Abhimanyu Ghosh  
Y6011

We are finally out with the much awaited AME T-shirt. The design of the T-shirt is uploaded on the AME website. [www.iitk.ac.in/ame](http://www.iitk.ac.in/ame). T-shirts are made available in white/blue/black colours and round neck as well as in collared in all sizes. Cost of the round neck t-shirt is Rs.150 and the collared T-shirt is Rs.160. Please note that t-shirts will be made entirely by the pre-order and won't be available later, so place in your orders now.

*Contributions are invited from all UG and PG students. Send in your entries to [shubham@iitk.ac.in](mailto:shubham@iitk.ac.in)*