

# Association for Machines and Mechanisms News Bulletin

Volume 1, No. 2

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## Message from the Corresponding Editor



### Our Objectives and Activities

The main objective of AMM is to contribute to mechanical design at all levels starting from academic research to industrial initiatives, thereby enhancing the quality and reliability of indigenous machines. With this in view, AMM organises the National Conference on Machines and Mechanisms, NaCoMM, and the workshops on Industrial Problems on Machines and Mechanisms, IPRoMM.

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### DESIGN EDUCATION

*Need to combine OLD experience, new tools, and practical orientation for the changing needs*

I was of the impression that the manual efforts required for churning butter is not worth its taste. That was only until a couple of years ago when I visited the *Sterling Resorts* in Mahabalipuram incidentally with Prof. Kurt Luck, a mechanisms expert associated with the founding days of IFToMM. Not that the hotel served me yummy butter, but a wooden churner was on display among the several artifacts there. The hand-movable slider effortlessly rotated the wooden screw rod resulting in the churning action. I would suggest the more inclined to do a web-search for *churning butter* to find that this artifact is just one of several mechanisms that have perhaps contributed to the evolution of so many food delicacies.

Often I recollect the Deepavali eve of my childhood days. I remember them more, not for the few crackers that I had burst, but for the long evenings I sat in my tailor's shop waiting for him to complete the new shirt for me to wear in the morning of the festival day. Once, I remember, I asked the tailor whether the cloth feeds automatically below the stitching needle. The tailor said that was indeed the case. I refused to believe despite his repeated demonstrations. During my visits for hair-cut those years, my father would insist that I went through the hair-trimming machine. I never liked the result but the experience, I must confess, was soothing and seductive. Years later, on vacation from college, I would wake up late to the rhythmic shuttling noise of the handlooms from the households across the street.

The rhythmic noise and the soothing hair-cut did not encourage me to appreciate the technology and innovation behind these ubiquitous technological marvels. Perhaps, as they say, familiarity breeds contempt. It took me years to realise that, not just the sewing machine and the loom, but there is a gamut of textile machinery that work marvelously well thanks to a large number of kinematic mechanisms that have been perfected over the years due to innovation, experience, and engineering acumen and research.

Barring the advancement in computers and electronics, have we, the contemporary researchers and designers, together contributed anything to match the accomplishments of the past few centuries? Why has the wide availability of books, literature, and software failed to evince innovative mindset and products? Are engineering education and innovation becoming mutually exclusive? Will it be feasible to make undergraduate design education more practically- and innovation-oriented?

The attempts by educational kits such as LEGO<sup>®</sup>, Robix<sup>®</sup>, and, from the Indian side, MAKIT<sup>®</sup>, are significant steps forward for nurturing the future innovations, even if they might not entirely hold the key.

P. Vivekananda Shanmuganathan

Corresponding Editor

## HIGHLIGHTS OF GENERAL BODY MEETING OF AMM

General Body Meeting of AMM was held on March 20, 2009 at IIT Madras. President of AMM, Prof. C. Amarnath, chaired the meeting attended by several other present and past officer bearers and members. Secretary announced the joining of a large number of new student members and life members. In order to better manage the membership database, a new format for membership number was proposed and adopted. The newly joined members would receive their membership certificates soon.

The GBM approved the publication of the News Bulletin. Advertisement tariff for News Bulletin are decided as follows: Rs 5,000/- for full-page; Rs 3,000/- for half-page; and Rs 2,000/- for quarter page. Editorial board gratefully acknowledges the advertisers in the current and future issues.

Revision of membership fees has been recommended as follows: Life Membership for new individual members will be Rs 1575/- (including the admission fee of Rs 75/-). Full time students may become student members by paying only Rs 150/- as the processing fee.

## NATIONAL SEMINAR ON MODERN MECHANISMS AND ROBOTICS AT HALDIA INSTITUTE OF TECHNOLOGY ON MARCH 19, 2009



While common man and even engineering students in their early years are seldom conscious of the inevitable link between machine science and robotics, robotics research has for many years received the due attention from the Association of Machines and Mechanisms (AMM) and the parent body IFToMM, which have historically contributed to the study of mechanisms and mechanical systems design.

In this light, it is notable that Haldia Institute of Technology (HIT), Haldia, with funding from Technical Education Quality Improvement Programme (TEQIP) and in technical collaboration with AMM and Bengal Engineering and Science University (BESU) organised on March 19, 2009 a National Seminar on Modern Mechanisms and Robotics.

Live television brings warfare to the drawing rooms today. In a country that has faced many an invasion and seen several wars in the past decades as well as the increasing incidence of terror strikes, it is but natural for one to envisage applications for robots with focus on offensive and defensive military use. The national seminar held in Haldia gave a different perspective, reminding one of the adages: 'Technology is meant for the welfare of mankind.'

Vice President of AMM, Prof. Subir K. Saha from IIT Delhi, and Zonal Vice-President (East) of AMM, Prof. S. Bhaumik of BESU participated in the widely attended seminar. Prof Bhaumik discussed a few indigenously developed Mechatronics systems related to robotics. Dr. Bikash Bepari, Head of the Department of Production Engineering, HIT, exhibited a dexterous robot hand, that he has developed as part of his Ph. D. work. Prof. Saha, who is applying his expertise in robotics and multibody systems to rural applications, meticulously explained the fundamental principles of a variety of mechanisms and highlighted their use in machinery and robots suitable for specific applications.

## FORTHCOMING EVENTS: 2009

While the late part of the year 2008 witnessed a well-attended workshop on Design of Mechanisms for Industrial Problems, this year is perhaps going to be much more eventful.

The southern region is due to witness several conferences scheduled for the second half of 2009. Obviously, the most known among them all is *NaCoMM 2009* (Dec 2009). *IPRoMM* is another conference held in June 2009.

IIT Madras is organizing *International Conference on New Product Development* in December 17-19, 2009, which is preceded by the *International Conference on Advances in Mechanical & Building Sciences*, organized by during December 14-16, 2009 at Vellore to mark the Silver Jubilee celebrations of VIT University.

Details of all these conferences may be found in the following websites:

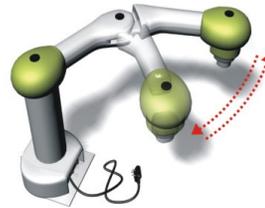
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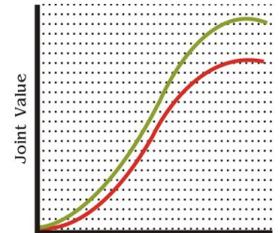
# IIT Delhi

Launches

## RoboAnalyzer BETA



Kinematic and dynamic analysis



Plotting of result data

[www.rob analyzer.com](http://www.rob analyzer.com)

Venue: ME Seminar Room (II-422), IIT Delhi

Date: 18<sup>th</sup> April, 2009 | Time: 3:00 p.m.



### International Conference on **ADVANCES IN MECHANICAL AND BUILDING SCIENCES IN THE 3<sup>rd</sup> MILLENNIUM** **ICAMB - 2009**

(as part of *Silver Jubilee Celebrations of VIT University*)

**December 14 – 16, 2009**

*in association with*

STATE UNIVERSITY OF NEW YORK, FARMINGDALE, USA

[www.vit.ac.in/icamb2009](http://www.vit.ac.in/icamb2009)

#### Important Dates:

Extended abstract submission commences	February 19, 2009
Deadline for submission of extended abstracts	June 01, 2009
Notification of acceptance of extended abstracts	June 14, 2009
Submission of full length papers commences	June 15, 2009
Registration commences	July 15, 2009
Early bird registration ends	September 30, 2009
Deadline for submission of full length papers	October 31, 2009
Registration closes	November 30, 2009
<b>Conference Dates</b>	<b>December 14-16, 2009</b>

#### CONFERENCE THEMES

Heat Transfer & Fluid Flow  
Mechatronics & Automation  
Automotive Engg. & Alternative Fuels  
Nano Materials & Nano Composites  
Computer Aided Design & Manufacturing  
Energy & Environmental Engg.  
Transportation & Structural Engg.  
Water Resources & Fluid Mechanics  
Geotechnical Engg., Disaster Mitigation & Management

#### Contact:

##### Organizing Secretary **ICAMB 2009**

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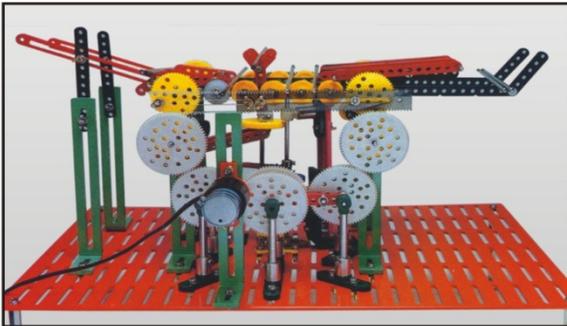
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