Optimism is the light of God. It is a form of grace which allows you to be much more perceptive and to look at life with greater clarity.

- Amma

Spiritual Life

AMRITA School of Engineering
Bengaluru
Amrita School of Engineering, Bengaluru organized its first State Level Robotics Competition – “RASE 2011” on 29th & 30th October, 2011. The event was organized by ‘ACROM’, Robotics and Mechatronics Club of Amrita Bengaluru, under the guidance of the Fest Director, Dr. Sudarshan T.S.B. and the Fest Convener, Mr. A. A. Nippun Kumaar.

24 teams registered for three different events, each of which tested the designing skills and logical abilities of the participants.

The first event, LiFo (Line Follower) expected the participants to design an autonomous line following robot. Although the initial rounds presented no challenge, the later rounds got tougher as participants had to ensure their logic’s integrity in the face of ramps and circular navigation.

‘3->2->1’, the Robotics Race, had participants manoeuvring their wire-controlled robots across an obstacle course modelled upon the college campus. The obstacle course flummoxed even the cleverest of designs with strategically placed sand banks, gravel, ramps and water puddles.

‘Hit’emUp’, the Robo Wars, was the most furious of the lot. The first round was comparatively gentle as the participants attempted to push each others’ wired robots out of the arena. However, the subsequent rounds saw increasing carnage as the arena became less forgiving, incorporating pit traps, grease, sand and finally, barbed wires, all of which tested the endurance of both the robots and their controllers.
Science Olympiad

Aavishkara, the Science and Humanities forum, organized a Science Olympiad for the first year students on 11th October, 2011. 51 students participated in the event. The winners were awarded gift coupons worth Rs.1000/-, Rs.750/- and Rs.500/-, each for the first, second and third places respectively.

The Prize Winners were as follows:

**First Place**
E. Bhavana, ‘C’ section

**Second Place**
S. Manikanta Reddy, ‘G’ section

**Third Place**
T. Sai Santhosh, ‘G’ section

Address by Brahmachari Manoj

Brahmachari Manoj was in Amrita Bengaluru campus from 10th to 13th October, 2011 to address the first year students. Sharing his wisdom with the students, he spoke about the importance of basic human values. He cited examples from Puranas and related them to real life situations. Students were reoriented to some of the finest values of life by him in a very effective manner, leaving a valuable impression on their formative years.
Yakshagana by SPICMACAY

Amrita School of Engineering, Bengaluru, hosted a “Yakshagana” performance by SPICMACAY, Bengaluru Chapter, on 12th October, 2011. It was one of the series of performances staged by the group as a part of Virasat’11.

The “Yakshagana” troupe, led by Shri. Keremane Shivananda Hegde, combined dance and drama to narrate the story of ‘Valimoksha’, a chapter in Ramayana dealing with the slaying of Vali. A combination of witty dialogues and an energetic performance ensured that the audience remained glued to their seats for the entire event.

After the performance, the artistes were honoured by Dr. Nagaraj B.N., Dean Academics, and were presented with mementos as a token of appreciation. The performance was choreographed and directed by Shri. Keremane Shivananda Hegde. The troupe consisted of 17 artistes. The event concluded with a Vote of Thanks delivered by Mr. Varun Rahul, the Co-Secretary of the Amrita Bengaluru Chapter of SPICMACAY.

At the end of the day, the event instilled in every audience a sense of respect and awe for traditional arts.
Department of CSE

Workshops / Seminars / Conferences Organized

Mr. A. A. Nippun Kumaar organized a workshop under ‘ACROM’, the Robotics Club, in association with Robosapeins India on 1st & 2nd October, 2011. Over 82 teams from ASE, Bengaluru and various institutions of Bengaluru actively participated in the workshop. It was a hands-on-session in which students were taught the basics of Robotics and how to build a Line Follower robot on ATmeya 8 platform.

Other News

- Mr. Rajesh M. and Mr. Radhakrishnan G. have registered for Ph.D. programme in Amrita Vishwa Vidyapeetham, under the guidance of Dr. T.S.B. Sudarshan. Their areas of research are ‘Mobile Adhoc Networks’ and ‘Data Mining’ respectively.

- ‘FACE’, the CSE Forum, published the 5th issue of its newsletter BROADCAST. It is displayed on the forum’s notice board.

- ‘FACE’ coordinated the ICPC prelims held on 22nd October, 2011. 4 teams (each comprising of 3 students) from 5th and 7th semesters of CSE and IT participated in the contest. Two teams, team ‘TAMALS’ and team ‘SYNTAX TERROR-2’ have been selected for the finals to be held in December 2011 at Amritapuri Campus.
## Papers Published

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Published by IEEE.

## ECI Forum News

Mr. Viswajith S.V. delivered a seminar on ‘What after Engineering?’ on 26th October, 2011 in the E-Learning hall. The seminar was about the various competitive exams (GRE, CAT & GATE) and how to get into core companies. The seminar was arranged by ECI Forum. It was attended by over 100 students from several departments.
Faculty Achievements / Participation / Recognition

- Dr. Rashmi M.R., Associate Professor in the Department, has been appointed as a ‘Reviewer’ for the National Journal - “Indian Journal of Science and Technology”.

Students’ Achievements

- Two teams from Amrita Bengaluru, won “Bright Idea Award” and cash prize of Rs.3000/- each at Amrita TBI-TIDE Innovation Contest, 2011. The team represented by Mr. Garje Somesh Rajesh, Mr. Gautam Nair and Mr. Akshay Anand, students of the III semester, won the award for their idea of illuminating a room using fibre optic cables, and Mr. Himanshu Sharma and Ms. Shreya Parmar of IV semester and Mr. Vinay Mohan of III semester together won the award for their innovative idea of temperature-controlled fan.
Department of ME

Papers Published

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<tbody>
<tr>
<td>Veeresh Kumar G.B.</td>
<td>“Mechanical and Dry Sliding Wear Behaviour of Al7075 Alloy-Reinforced with SiC Particles”</td>
<td>September 2011 Issue</td>
<td>Journal of Composite Materials of SAGE Publications</td>
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Workshops / Seminars / Conferences attended

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<tr>
<td>Mr. Pramod R., Mr. Mohan Kumar S., Mr. Dileep B. P.</td>
<td>ANSYS India Users Conference-2011</td>
<td>Ansys India</td>
<td>13th October, 2011</td>
<td>Hotel Sheraton, Bengaluru</td>
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Faculty Achievements / Participation / Recognition

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<tr>
<td>Dr. Kumaraswamy G.N., Mr. Praveen D.</td>
<td>Workshop on “Low Energy Ion Beam Facility”</td>
<td>Inter University Accelerator Center (IUAC), New Delhi</td>
<td>21\textsuperscript{st} - 22\textsuperscript{nd} October , 2011</td>
<td>IUAC, New Delhi</td>
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### Other News

- Dr. Kumaraswamy G.N. and Mr. Praveen D. presented a proposal titled “Effect of Low Energy Ion Beam on the Transport Property of Mixed Carrier Polymer Electrolytes” at the workshop conducted by IUAC in New Delhi. If accepted the research will be funded by Inter University Accelerator Centre (IUAC), an Autonomous Centre of University Grants Commission under Ministry of HRD; Government of India, an institution which plays an active and dynamic role as Coordinator-cum-Facilitator in accelerator based research in Indian Universities.
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Abstracts of International Journal Papers Published

Department of Electronics & Communication Engineering

“Understanding the Neural Mechanism of Sleep using Wavelets and Multifractal Techniques”
— Sunitha R. (Assistant Professor); Proceedings of International Conference on Signal Processing, Communication, Computing and Networking Technologies (ICSCCN), 2011

Dynamical properties of large ensembles of neurons in the brain during sleep are found to be highly complex; therefore, nonlinear methods have found application in the analysis of random looking EEG signals. Here we have addressed the issue of the transition process from Non-REM to REM and vice versa using wavelet based multifractal formalism in healthy humans. We have used the technique based on wavelet transform modulus maxima (WTMM) to detect the irregularity in the structural pattern of sleep. The filtered sleep EEG data has been subjected to WTMM, the Singularity spectrum and the Hurst exponent has been computed using the Wavelab 8.5 toolbox. The results show graphically increasing bifurcations during the Non-REM to REM transitions. The narrow width of the multifractal spectrum indicate the REM state which further indicate the presence of many autonomous zones in the REM process. In Non-REM there are fewer bifurcations and the bandwidth of the multifractal spectrum is broad indicating the presence of a single large source contributing to the Non-REM process. The Hurst exponent for the REM sleep is found to be lower than the Hurst exponent for the Non-REM sleep, which can be used as an indicator of the transitions. Our findings show that the sleep transitions may be attributed to an increasing level of bifurcations and collapses that happen with an intermittent drive or force from the pontine and the brain stem structures.
Abstracts of International Journal Papers Published

Department of Mechanical Engineering

“Mechanical and Dry Sliding Wear Behaviour of Al7075 Alloy-Reinforced with SiC Particles” – Veeresh Kumar G.B. (Assistant Professor); Journal of Composite Materials of SAGE Publications

In this article, the experimental results of the mechanical and tribological properties of Al7075–SiC composites are presented. The composites of Al7075 containing 2–6 wt% SiC were fabricated by liquid metallurgy route. The experimental results showed that the density of the composites increase with increased SiC contents and are in line with the values obtained by the rule of mixtures. The hardness and tensile strength of the Al7075–SiC composites are found to be increased by increased volume percentage of ceramic phase at the cost of reduced ductility. The wear properties of the composites containing SiC exhibited the superior wear-resistance properties.

Department of Chemistry


A new facile and sensitive spectrophotometric determination of Pindolol (PDL), a beta blocker drug has been developed and validated. The method was based on the reaction between pindolol and K$_3$[Fe(CN)$_6$] in presence of FeCl$_3$ to form Prussian blue. The absorbance values were recorded at 700 nm and a calibrated graph was constructed. A dynamic Beer’s law range was observed in the range 0.125–2.5 μg mL$^{-1}$ with a detection limit of 0.03 μg mL$^{-1}$ and a quantitation limit of 0.08 μg mL$^{-1}$. Various experimental parameters such as effect of solvents, stability, interference effects due to excipients etc were studied. The reproducibility of this methods were checked by six replicate determinations at 1.0 μg mL$^{-1}$ PDL and the standard deviation was found to be between 0.20 and 0.42%. The results were statistically compared with those of the reference/literature method by applying Student’s t-test and F-test. The sensitivity, simplicity, temperature independence and stability of the colored product are the advantages of the proposed method and it is also free from extraction steps and use of carcinogenic solvents. ©2011 American Institute of Physics
There are some random quotes of Amma on sadhana, spiritual practice, and qualities we need as human beings especially for spiritual aspirants.

We can become divine or demonic. Cultivate the virtuous qualities within for the benefit of yourself and the world around.