



NEWSLETTER

MExpress

Department of Mechanical Engineering, KUMARAGURU COLLEGE OF TECHNOLOGY

Vision: To facilitate mechanical engineering education, research and services that contributes to the advancement of scientific knowledge leading to social development.**Mission:** The Department is committed to provide quality education and training with emphasis on engineering fundamentals and applications to the students to be competent professionals with ethics. The department executes research and provides engineering services for sustainable development of society.

Vol. 01 No. 03

For internal circulation only

01.10.2017 – 31.10.2017

Editor: Dr. V. Muthukumaran**Associate Editors:** Mr. B. N. Sreeharan, Mr. J. K. Mukilan, Mr. Rallish, Mr. K. Arun**Programmes Organized**

Following programmes were organized in the department:

Guest Lecture for final year on “IC Engine Testing and Simulation” was conducted on 09.10.2017. Mr. Grame Harris, Senior Lecturer, Ara Institute, NZ delivered the guest lecture.



Guest Lecture was coordinated by Mr. Manikanda Prasath K., AP/ME and Pradeep P, AP/ME.

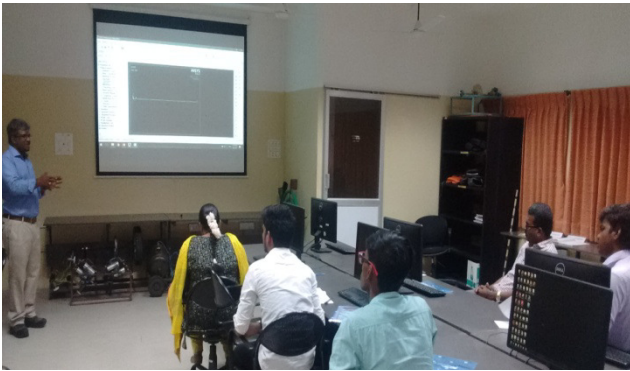
Programme on “Career development programme” during 10.10.2017 and 11.10.2017. Dr. P. K. Giridharan, Prof.& Head (Mech -PG), Department of Mechanical Engineering, Kumaraguru College of Technology, Coimbatore. Mr. M. Kandasami, Managing Director, M/s Ananda Fabricators P. Ltd, Coimbatore, Mr. Bigil Kumar, Project Manager, Pricol Technologies, Pricol Technology Ltd, Coimbatore. Mr. Venkatesh (Entrepreneur) KCT Alumni Coimbatore were the guest speakers.



The programme was coordinated by Mr. ManikandaPrasath K., AP/ME and Dr. Balasubramanian S. ASP/ME.



Summer course on “Advanced Computational Fluid Dynamics using Ansys” was conducted during 03.10.2017 to 09.10.2017. Mr. CharatChander, Technical trainer, MaxCADD6 was the trainer.



Course was coordinated by Dr. P. K. Giridharan, Prof. & Head – PG/ME, Mr. R. S. Mohan Kumar, AP/ME, and Mr. M. Thirumalaimuthukumaran, AP – II /ME.

Guest Lecture on “Sources of finance for industrial start ups” was conducted on 12.10.2017. Mr. Venkatesh (Alumni KCT), MD, Biravi traders. Coimbatore and Mr. Santhana Krishnan, MD, Athammal Spinners, Coimbatore were the guest lecturers.



Dr. M. Balaji, ASP/ME and Mr. K. Manikandaprasath, AP/ME coordinated the event.

International Workshop in “Advancements in Composite Material and its Applications” was conducted between 13.10.2017 and 16.10.2017. Prof. Milky, Czech., Dr. Rajesh Mishra, TUL., Dr. Subramaniam, PSG Tech were the distinguished chief guests among the other guests who delivered the lectures.



Workshop was coordinated by Dr. C. Velmurugan, Prof./ME and Mr. K. ManikandaPrasath, AP/ME.



KCT Space week celebration 2017 was celebrated on 04.10.2017 and 05.10.2017. Shri R Venkatraman, Deputy Director, VALF and Shri. S Ramesh Subramaniam, Scientist/Engineer - SE, MAFS, were the chief guests.



Training programme on “Personality Development” was conducted for final year Mechanical Engineering students on 24.10.2017. Mr. N. Sreenivasan, Aries Training & Consultancy, Hyderabad was the trainer.



Mr. P. Karthi, AP/ME, Mr. P. Pradeep, AP/ME & Mr. S. Prabhu, AP/ME coordinated the event.

Guest Lecture on “Integrated Product Development Strategies” was conducted on 27-10-2017, Dr. N. Ganeshkumar, Assistant professor, Sr. Gr., PSG College of Technology was the guest lecturer.



Mr. M. Thirumalaimuthukumaran, AP-II/ME & Mr. S. Thirumurugaveerakumar, AP-III/ME coordinated the event.

Two day Faculty training program on "Advanced features in Solidworks 2017" was conducted on 30th & 31st Oct 2017.



Mr. KaviPrathap and Mr. Gnanaprakash (Certified Solidworks Professionals from Coimbatore Cad Solutions Pvt Ltd trained our faculty members.



Mr. R. S. Mohan Kumar, AP/ME and Mr. K. Vijayanand, AP/ME coordinated the event.

Conference / Workshop attended

- Following faculty members attended a three days International Workshop on “Advancements in Composite Materials and its Applications” during 13, 14 and 16 October 2017 conducted by the Departments of Textile Technology and Mechanical Engineering of KCT Jointly with Technical University of Liberec, Czech Republic.
 - Dr. S. Balasubramanian, ASP/ME
 - Mr. M. Thirumalaimuthukumaran, AP-II/ME
 - Mr. M. A. Vinayagamoorathi, AP-II/ME
 - Mr. B. N. Sreeharan, AP-II/ME
- Mr. Jeeva, AP/ME participated in the following
 - International Seminar on Advanced Fluid Research and Testing on 05.10.2017
 - Science Academies Lecture workshop during 06.10.2017 and 07.10.2017
 - Three days workshop on “Thermal-Hydraulic Modeling and Simulation of Thermal Power Plants” during 26.10.2017 and 28.10.2017 conducted by Research & Engineering Pvt. Ltd., Bangalore.
- Mr. M. Ramesh Kumar, AP/ME participated in a Faculty Development Programme on “Robotic Process Automation – Ui Path” on 21.10.2017 conducted by Talent Acquisition.

Paper Publications

- Mr. Manikandaprasath K, AP/ME published a paper titled “A Green supply chain agility index for E commerce Business : A Indian perspective using ISM” in the Journal of Advanced Research in Dynamical and Control System, Vol. 9, Issue No. 6, Page Nos. 1913-1925.
- Dr. V. Muthukumaran, HoD/ME published a paper titled “Evaluation of in vitro cholesterol esterase and α -amylase inhibitory activities of purified polyphenols from Nigella sativa seeds.

One Credit Course

- Department offers one credit course on "U15MEI008 - Value Engineering" for the third year students. The course is handled by Mr. YuvarajPalanisamy, Altran Technologies, Coimbatore.

Industrial Visits

- 11 students from III Year B. E. Mechanical Engineering along with Mr. S. Suresh, AP/ME visited the following industries between 03.10.2017 and 10.10.2017. Tata Motors Pvt Ltd, Pune, Mahindra & Mahindra Motors Pvt Ltd, Pune and Automobile Research Association (Arai) Of India Pvt Ltd, Pune.
- 17 students from III Year B. E. Mechanical Engineering along with Mr. T. Karuppusamy, AP-II/ME and Mr. S. Subbiah, AP/ME visited the following industries between 27.10.2017 and 28.10.2017. Ashok Leyland, Bangalore and Hindustan Machine Tools, Bangalore



- M. E. – Industrial Engineering students along with Dr. S. Balasubramanian, ASP/ME visited M/s. Anandha Fabrications (CBE) Pvt. Ltd. On 28.09.2017.



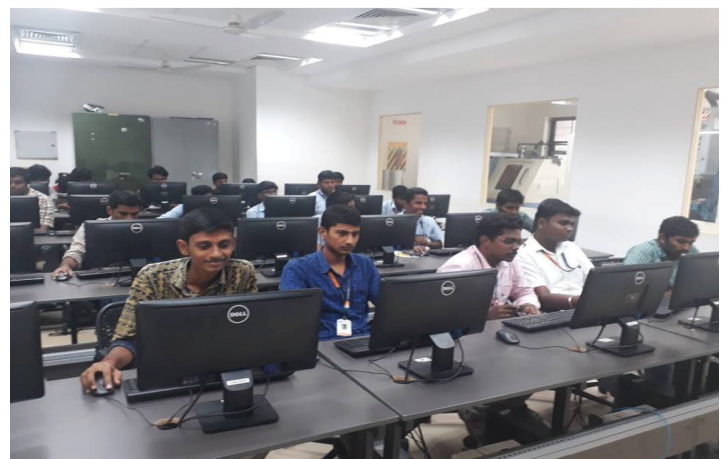
- II year B. E. – Mechanical Engineering 'B' Section students along with Dr. S. Balasubramanian, ASP/ME and Mr. K. Vijayanandh visited M/s. Ammarun Foundries (CBE) Pvt. Ltd, Coimbatore on 28.10.2017



Mechanical Engineering Association

MECH MASTER

Mechanical Engineering Association has organized an event MECH MASTER to test the skills and knowledge of our students in Technical aspects. It was successfully conducted by Mr. Akilan from III Year B. E. Mech and Mr. Arun K from II Year Mech. 'C' section. MECH MASTER TIER 1 was conducted on 13.10.2017 and MECH MASTER TIER 2 was conducted on 26.10.2017.



The WINNERS are: Mr. Naveen – III year and Mr. Venkatesh, II Mech. C

Mr. MECHANIC

Mechanical Engineering Association has organized an event Mr. Mechanic to test the skills and knowledge of our students in Technical aspects.

It was successfully conducted by Mr. Mahendran, III Mech. A. It was conducted on 07.10.2017.



The Winner was Mr. SakthiVeeraswar VM from final year.

Students Achievements

- Ms. P. Archana, II Mech. – A Attended the Wushu National Championship conducted by Assam Rifles and got placed 6th. She also attended the Yoga Nationals in Hosur and got 3rd place and was placed 2nd in the State level.
- Mr. Ramakrishnan. D, II Mech. A Won the Interzonals held in Oct 4-5 in Paavai Engineering College, Namakkal. He also got selected in Anna University Handball team, Went to South Zone Inter University competition held from Oct 21-25 and won the silver medal held at Machilipatinam, Telegana.



- He qualified for All India Interuniversity held from October 1-4 and came in top 8 held at Madhya Pradesh. And also he secured Gold in the Zonal Handball match held in SREC Coimbatore in September.

- Mr. Daraneesh and Mr. Vaishnavan, II Mech. A attended a one day workshop on Hands on Training in Assembling and Disassembling of IC engine held at Ramakrishna College.
- Mr. DuraiRaja. K. B, II Mech. A attended a workshop on Advancements in Composite Materials conducted by KCT.
- Mr. Thazootheen. M, III Mech. A Won National Level Wushu National Championship conducted by Assam Rifles.
- Mr. Ranjith Kumar, PG student Won 2nd position in the Azim Premji University, Social Enterprise 'Idea' Challenge.
- Following are the details of our student participation in Draha Fest conducted by the Drama and Haasya Club of KCT.

Mr. AJAY KRISHNAN K	2nd prize in HAASYA
Mr. VALLIAPPAN R.M	Participation
Mr. NETHAJI SUBASH M	Participation
Mr. NANDHA KUMAR K	Participation
Mr. SUDHARSUN J.N	Participation
Mr. GOWTHAM S	Participation
Mr. KARTHIK RAJA M	2nd prize in HAASYA
Mr. RISHIKESH N	Participation
Mr. SUSANTH B	Participation
Mr. PRABU SANKAR R	Participation
Mr. MANOJ S	Participation
Mr. GERALD JACOB J	Participation
Mr. SATHYA PRAKASH M	Participation
Mr. TAMILSELVAN R	Participation
Mr. HRISHIKESH N.M	Participation
Mr. RAHUL ROSHAN B	Participation
Mr. VENKATESH M	Participation
Mr. BALA KARTHIKEYAN S	Participation
Mr. KAPIL ANAND P	3rd prize in DRAMA
Mr. PATHMA GURU RAJA	3rd prize in DRAMA
Mr. ASWATH D	2nd prize in DRAMA
Mr. AJITH KUMAR S	2nd prize in DRAMA
Mr. DHARUN KUMAR K	2nd prize in DRAMA



- Following students from II Mech. B participated and donated blood in the blood donation camp held at KCT on 24.10.2017. Mr. S. Sungath, Mr. R. Gokulakrishnan, Mr. S. Dharunkumar and Mr. N. Dinesh Kumar
- Mr. N. Dinesh Kumar participated in Lunar Rover Workshop conducted during KCT Space week celebration 2017 on 04.10.2017 and 05.10.2017.



- Mr. Gokulanathan, III Mech. C participated and won laurels in open state dead lifting championship 2017.
- Mr. Prasanna R, II Mech. B participated in Hackathon conducted by Dover in VIT, Vellore.
- Following students from 1st year participated in Climathon
 - Mr. RameshNithin
 - Mr. Logesh
 - Mr. Jakabar
 - Mr. Sethupathi
 - Mr. Manish Kumar

2D & 3D PRINTING

A major technological advance in the field of high-speed beam-scanning devices has increased the speed of 2D and 3D printing by up to 1000 times, according to researchers in Penn State's College of Engineering.

Using a space-charge-controlled KTN beam deflector -- a kind of crystal made of potassium tantalate and potassium niobate -- with a large electro-optic effect, researchers have found that scanning at a much higher speed is possible.

"Basically, when the crystal materials are applied to an electric field, they generate uniform reflecting distributions, that can deflect an incoming light beam," said Shizhuo Yin, professor of electrical engineering in the School of Electrical Engineering and Computer Science. "We conducted a systematic study on indications of speed and found out the phase transition of the electric field is one of the limiting factors."

To overcome this issue, Yin and his team of researchers, Penn State graduate students Wenbin Zhu, Ju-Hung Chao, Chang-Jiang Chen and Robert Hoffman from the Army Research Laboratory in Maryland, eliminated the electric field-induced phase transition in a nanodisordered KTN crystal by making it work at a higher temperature. They not only went beyond the Curie temperature (the temperature in which certain materials lose their magnetic properties, replaced by induced magnetism), they went beyond the critical end point (in which a liquid and its vapor can coexist).

This increased the scanning speed from the microsecond range to the nanosecond regime and improved high-speed imaging, broadband optical communications, and ultrafast laser display and printing. The group's findings were published September in an issue of *Nature's Scientific Reports*.

Yin said technology like this would be especially meaningful in the medical industry -- high-speed imaging would now be in real-time. For example, optometrists who use a non-invasive imaging test that uses light waves to take cross-section pictures of a person's retina, would be able to have the 3D image of their patients' retinas as they are performing the surgery, so they can see what needs to be corrected during the procedure.

Yin added that this research could benefit everyone, in that something being printed in 3D that once took an hour would now take seconds, and 20,000 pages printed in 2D would take one minute.



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