KUMARAGURU
college of technology
character is life

JUNE -SEPTEMBER 2018

NEWS LETTER

Mechatronics Engineering

INSIDE

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- Research - Publication Book chapter, Organized Guest Lecture
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- Placement & Alumni Talk
- PEO, PO, PSOs

MECHATRONICS

Is a branch of engineering that focuses on designing, manufacturing and maintaining products that have both mechanical and electronic components

STAFF ACHIEVEMENT - FUNDED PROJECT

Completed the Management funded project in the title "Automatic double side feeder mechanism for textile loom "for the cost of Rs.2.1 Lakhs

This project was done by Dr.R. Venkatesan HoD/MCE & Dr. Thangamani / Prof. Textile.

In this project is done using rack and pinion mechanism to move the feeder forward and backward on both sides.

THREE AXIS SOLAR TRACKER RESEARCH PROJECT - EZON PROJECT

Dr.A.Vasuki, Dr.K.Akila & Ms.B.Sabitha

Kumaraguru Centre for Industrial Research and Innovation (KC.IRI) is setting up a **KCT-EZON Centre for Research in Renewable Energy** in collaboration with M/s. EZON ENERGY SOLUTIONS (P) Ltd, Coimbatore in KCT for carrying out research activities related to Solar and Wind Energy. KCT is signing a MOU with EZON for setting up the centre.

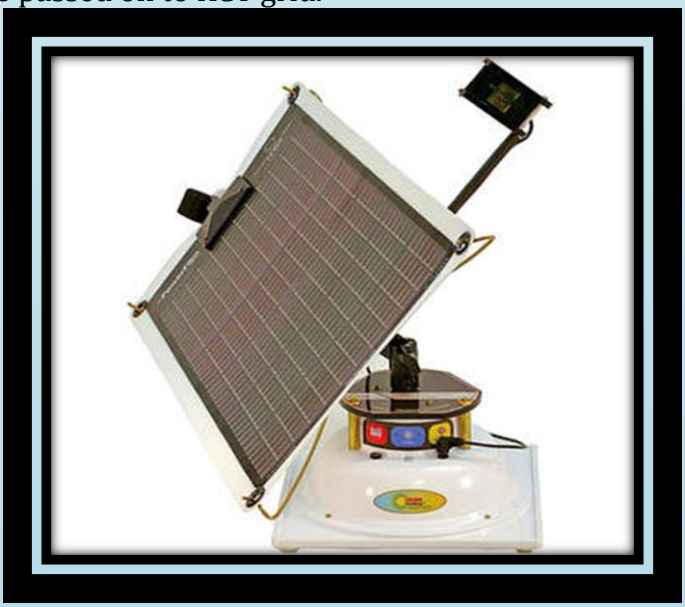
The scope of the Centre and areas of collaboration are.

1. New product - joint development, testing & improvisation
2. Product redesign, cost cutting and technological up gradation
3. Joint knowledge exchange programme in the areas of

a. Skill development & Project guidance to the students - Blending theory and practice
b. Specific research and development activities identified time to time
c. Cross and joint utilization of infrastructure for development

4. Any other related joint projects with or without Govt. funding

Research and Testing of the Three Axis Solar Tracking system - Mechanical design & components are provided by EZON for one row of 10 solar panels with tracker and one more row of 10 solar panels without tracker for comparison of output power improvement. The power output of about 6 KW will be passed on to KCT grid.



STAFF ACTIVITIES – FDP / Workshp ATTENDED

- **Dr.R.Venkatesan/HoD MCE** attended a one day Seminar on " Vibration Testing " at Bangalore on 20.08.2018
- **Dr.A.Vasuki/Prof.** attended Interactive Workshop on "Industry Academia Collaboration" conducted by SERB, FICCI, at Taj Vivanta, Coimbatore, 19th Dec. 2017.
- **Dr.K.Akila / ASP** attended 7 days FDP on "Big Data Analytics" conducted by School of Computing and Robert Bosch from 24.11.2017 to 01.12.2017.
- **Dr.M.Saravana Mohan/ASP** attended a workshop conducted by third eye solutions in association with Shakthi group on Process Improvement is to be held on 17th -18th July 2018 held at KCT with our Leadership and Management teams sharing process improvements as an integral part of our Strategic road map towards Vision 2030
- **Dr.M.Saravana Mohan/ASP** participated in the "Role of intellectuals in nation building" book release function held at Arya Vaidya pharmacy hall , Ramanathapuram on 16.08.2018

- **Dr.M.Saravana Mohan/ASP** participated in Tamil Internet conference organised by INFITT and TNAU Coimbatore in association with KCT.
- **Dr.M.Saravana Mohan/ASP & Mr. J.Sivaguru /AP** were participated ATAL New India Challenge Outreach Event in Coimbatore on 05.05.2018.
- **Mr.T.Suresh/AP-II,** attend the iMENTOR Innovation Mentors organized by Forge Factory, KCT tech Park, Coimbatore from 14th September 2018 to 16th September 2018
- **Mr.P.Anush /AP** attended FDP (7 days) on "Finite Element Analysis at CIT, Coimbatore on 14.05.2018
- **Mr. J.Sivaguru / AP** attended FDP (7 days) on "Finite Element Analysis " at CIT, Coimbatore on 14.05.2018
- **Mr. J.Sivaguru / AP** attend a one day Seminar on " Vibration Testing " at Bangalore on 20.08.2018

DELIVERED GUEST LECTURE

- **Mr.R.Saravanan/ AP & Mr.K.Murugesan/AP** handled the session **"on the Design Tool (CATIA) "**as a part Summer Technical Training Program for III Year ECE students from 02.07.2018 to 10.07.2018.
- **Mr.A.Ramkumar/AP II** delivered a Guest Lecture on **" Design of automation and Robotics system delivered to students of Mechanical and Automation engineering "** at SNS College of Technology, Coimbatore on 07.09.2018
- **Ms.B.Sabitha/AP (SRG)** delivered **a** Guest Lecture on **" BioMEMS for Biomedical Application "** at SNS College of Technology, Coimbatore on 27.08.2018

RESEARCH

PUBLICATIONS

The following paper were published in the International Journal

- **Dr.R.Venkatesan**
  "Experimental Investigations of the Chatter Stability In Boring Operations with Semi-Active Magneto rheological Fluid Damper "J.CSME, Vol.39, 2018
- "Optimization of process parameters of Pulsed Electro Deposition Technique for Nanocrystalline Nickel Coating using Gray Relational Analysis (GRA)', **International Journal of** Nanoscience. Vol. 17, No. 01n02, 1760007 (2018).
- **Dr.A.Vasuki**
  Reduced Order Generalized Integrators Based Collective Control Strategy For Dfig System During Network Unstability", International Journal of Electronics, Electrical and Computational System (IJEECS) Vol.6, Issue 10, October 2017, pp.62– 68.
- R. Rajkumar, A.Vasuki, (2018), "Reversible and Robust Image Watermarking based on Histogram Shifting", Cluster Computing, Springer (online), DOI 10.1007/s10586-017-1614-9.
- A.Vasuki, K.Kavitha, G.Sowndharya, (2018), "Performance Analysis of Turbo Codes Using CRC and FC with OFDM", International Journal of Computer Sciences and Engineering, Vol. 5, No.11, pp. 1–6.
- **Dr.K.Akila**
  Akila, K., Sabitha, B., Ayyarsami, A., Prasath, D. G., & Navaneethan, N. (**2017**). PHARMACEUTICAL INSPECTION USING MACHINE VISION. Journal of Advanced Research in Dynamical and Control Systems. (Special Issue 14).pp.882-892
- **Ms.B.Sabitha**
  Sabitha, B & Akila, K & Magudapathi, P & Saravanan, R & Kumar, S.K.. (2018). Abettor - A personal care robot (k-bot). International Journal of Mechanical Engineering and Technology. Vol.9. 194-201.
- **Mr.A.Ramkumar**
  Ramkumar A, "Control of NAO robot arm using MYO armband", I-STEM first international Conference on Science, Technology, Engineering and Management 2018.
- Ramkumar A, "Autonomous Rover Controlled by NAO", I-STEM first International conference on science, Technology, Engineering, and Management2018.
- **Mr.P.Magudapathi**
  Review on Non Traditional Machining of Metal Matrix Composites International Journal for Research in Applied Science & Engineering Technology (IJRASET) ISSN: 2321-9653; Valume:6 Issue, January 2018
- International Journal of Advanced Research in Management, Architecture Technology and Engineering. (IJARMATE)" Smart Irrigation System". ISSN Online: 2454-9762. Volume 4, Issue VIII, August 2018.

BOOK CHAPTER

- **Dr. Vasuki**
  Mr.Rajkumar R, Dr.A.Vasuki (2018) Histogram Modification and Bi-level Moment Preservation Based Reversible Watermarking. In: Hemanth D., Smys S. (eds) Computational Vision and Bio Inspired Computing. Lecture Notes in Computational Vision and Biomechanics, vol. 28. Springer, Cham.

- **Dr.A.Vasuki**
  A.Vasuki (2017), *Chapter Title :* Certain Applications and Case Studies of Evolutionary Computing Techniques for Image Processing, *Book Title :* Biologically Rationalized Computing Techniques for Image Processing Applications, Lecture Notes in Computational Vision and Biomechanics, Vol. 25, Springer International Publishing, pp. 273 – 296.

- **Dr.M.Saravanamohan**
  Dr.M.Saravanamohan (2018), *Chapter title :* "Kinematic Modeling and simulation of 8 degrees of freedom SCARA Robot", submitted to the book "Green Engineering Techniques for Modern Manufacturing" was published in IGI Global Publications, Hersey ,USA.(2018 -2019)

GUEST LECTURE ORGANIZED

- Guest Lecture on **INDUSTRIAL AUTOMATION AND ROBOTICS by Mr.Premkumar, Axis Global**
- Guest Lecture on **Sound & Vibration Measurement by Mr.R.S.Mahendran, JOSTS Engineering, Co. LTD**
- Guest Lecture on **"CONTROLLERS IN ROBOTS" for II year student (III Sem) MCE students, held on 30.08.2018, by Mr. RAMESHBABU R,** Manager/Training school, FANUC India Pvt. Ltd in Mechatronics Engineering
- Guest Lecture on **"ASSEMBLE AUTOMATION IN VENDING MACHINE" by Mr.KARTHIC SOUNDARARAJAN**, DIRECTOR, SYNETICS AUTOMATION SOLUTIONS Pvt. Ltd., held on 07.09.2018 in Mechatronics Engineering.

ACADEMIC INNOVATION

PROTOSEM

PROTOSEM is a first-of-its-kind program that embeds an innovation centred approach to engineering education right into the internal core of the engineering curriculum - innovation aimed at engineering tech enabled solutions for real-world industrial problems.

FORGE in collaboration with the Kumaraguru College of Technology [KCT] launched PROTOSEM (shorter version for Prototyping Semester), a full-semester curriculum integrated program offered independently by the Incubator. This course is currently completed by 2 of our 3rd year MCE students in the fifth semester.

In the current 7th semester 6 of MCE students are selected to do project work in PROTOSEM.

Students design & fabricate minimum usable commercially viable product with the guidance of industry experts that generate sustainable and profitable revenues.

Outcome of the Program:

It creates a higher level of confidence among the students to pursue innovation and entrepreneurship as their primary career path after graduation.

KALISELVAN T	15BMC001
NITHIN S	15BMC010
MANODHAYAN K	15BMC013
KUNKUMA MITHUN BALAJI V	15BMC026
ARJUNRAJ G A	15BMC036
HAIRSH S	15BMC037
PAVITHRAN C	15BMC053

STUDENTS ACHIEVEMENT

- III Year Student **Kannapan Karthik** Winner in the Anna University Tennis Zonal Tournaments SNS College of Engineering held on 28.08.2018.
- III Year Student **Kannapan Karthik** winner in the KIC'S 18 Kumaraguru Inter College Sports held on 15th to 17th August 2018.
- IV Year Student **Mr. Saravanan** got 1st Place in the 70Kg Category at KIC's 18 Kumaraguru Inter College Sports held on 13th to 14th August 2018

STUDENT ATTENDED

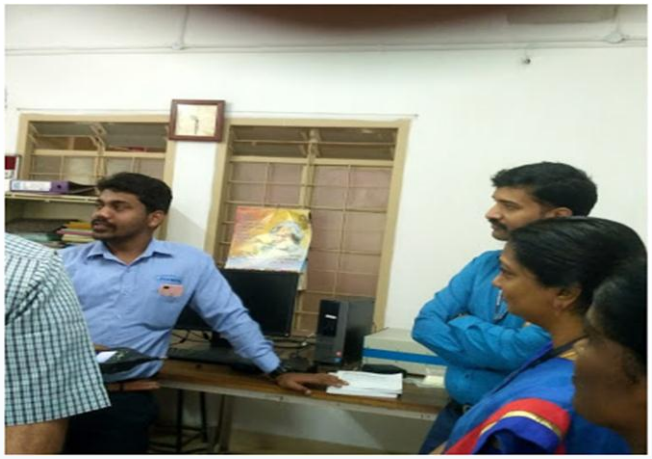
- III year Students Mr. **Sathish kumar S.V. , Mr. Jayachandran** were participated in Rajasthan Young Scientist Space Research Program on 25 to 27 August 2018.
- **Mr. Jayachandran** visited Robert Bosch Coimbatore as a student ambassador and also Submitted "Mobility Hackathon idea" to Govt of India.
- II Year Student Mr. **Padmanaaban AG, Mr. Vishnu Varshan. P, Mr. Sai Prasanth**, have participated in " International Workshop on Arduino in Robotics – IWAR' 18" Organized by Trainotech in association with LANSA informatics Pvt Ltd and Thick India on 31.08.2018 at Coimbatore Institute of Technology

INTERNSHIP DETAILS

INTERNSHIP DETAILS 2016 BATCH EVEN SEMESTER

16BMC002	Mummana Sasi kumar	BHEL, Visakhapatinam , Internship Training
16BMC013	Renuka Devi S	Titan Engineering and Automation Limited, Hosur
16BMC013	Renuka Devi S	India Nippon Electricals Limited, Hosur
16BMC017	Kannappan Karthik	TVS, Bangalore
16BMC024	Soorya prakash S	Tamil Nadu Newsprint & Paper Limited, Karur
16BMC026	Kavin kumar S	
16BMC032	Sathish kumar S.V	Flow Link System Private Limited, Coimbatore
16BMC035	Haribalaji A	12 days Inplant Training ITC Limited
16BMC042	Ashwin B	Tamil Nadu Newsprint & Paper Limited, Karur
16BMC046	Jayachandhran S	TVS Motor Company, Hosur
16BMC046	Jayachandhran S	Hi-Tech Engineering Solutions, Dindugul
16BMC046	Jayachandhran S	Mahendra - Indian Garage , Velachery , Chennai
16BMC051	Rakshith K	Tenneco, Hosur,
16bmc059	Nireshkumar K	A study of Performance monitoring of SME Gear Boxes in Mines-II, Neyveli Lignite Corporation Limited, Navratna Government of India Enterprise, Neyveli 607803
16BMC066	Sabarish	Tenneco Automotive, Hosur, India
16BMC066	Sabarish	TVS Motor Company, Hosur
16BMC207	Lekha Nidhi G.V.	In-Plant Training in the area of Mechanical Maintenance at Salem Steel Plant
17BMC004	Thirunavukk arasu P	Pre-IGC camp at Government College of Engineering, Salem from 22-07-2018 to 31-07-2018
17BMC023	Srithar P	Pre-IGC camp at Government College of Engineering, Salem

EVENTS



This is mainly benefited to the students who come for IV visit to Ooty. By inflicting this Radio Astronomy Center they will get a great motivation and it will be very useful to them.

Students of our third year B.E. Mechatronics visited Radio Astronomy Centre, Ooty on August 31.08.2018. It was a memorable experience for all. The staff present their explained the working of each and every component present in the centre. Students were given briefing on how communication takes place at the Centre.

INDUSTRY VISIT FOR RADIO ASTRONMY CENTRE

Radio Astronomy is located in Muthorai near Ooty. The Radio Astronomy Centre (RAC) is part of the National Centre for Radio Astrophysics (NCRA) of the well-known Tata Institute of Fundamental Research (TIFR) which is funded by the Government of India through the Department of Atomic Energy. The Ooty Radio Astronomy is a 530-metre (1,740 ft) long and 30-metre (98 ft) wide Cylindrical Paraboloid telescope. It operates at a frequency of 326.5 MHz with a maximum bandwidth of 15 MHz at the front-end. The radio telescope in Ooty has benefited them more mainly on the research in the universe.

PLACEMENT

Congratulations!

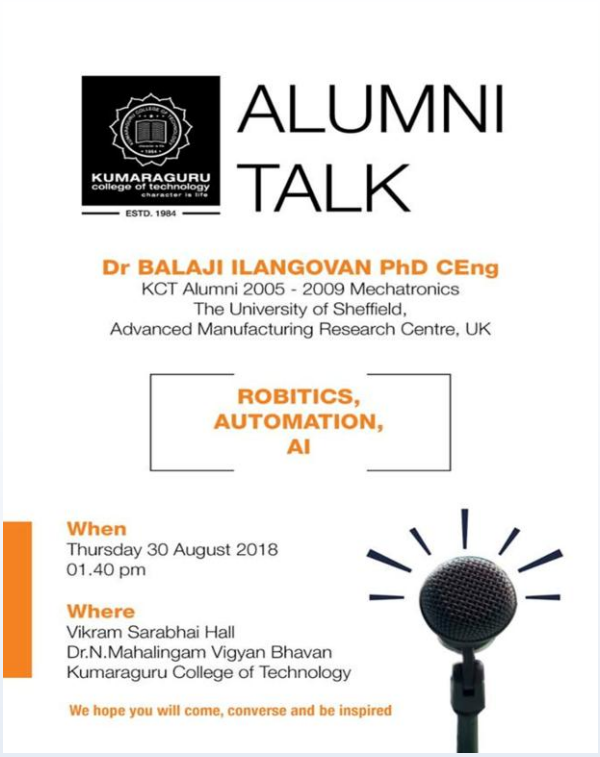
The Management, Principal, HOD, Staff Members, and students of Mechatronics Engineering Department are congratulating the following final year students who have been placed in Soliton, Robert Bosch and Mobiveil.

Balamurugan (Soliton)

Indrajith (Robert Bosch)

Manodhayan (Mobiveil)

ALUMNI TALK



Dr.Balaji Ilangovan PhD, CEng, the University of Shelffield, Advanced Manufacturing Research Centre 2005-2009 Batch Mechatronics Department Student Interaction with all department

INSITUTION

VISION

The vision of the college is to become a technical University of International Standards through continuous improvement.

MISSION

Kumaraguru College of Technology is committed to providing Quality Education and Training in Engineering and Technology to prepare students for life and work equipping them to contribute to the technological, economic and social development of India. The College pursues excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set the students on the path to leadership.

DEPARTMENT

VISION

The vision of the department is to achieve academic and industrial excellence in industrial automation research and innovative product development driven by mechatronics systems.

Mission

- Impart the right blend of knowledge and skills to students and enable them to apply it in real life situations.
- Motivate the students towards interdisciplinary research to cater to the local and global needs.
- Achieve innovation in developing industrial products with social responsibility

PROGRAM OUTCOMES (PO)

1. Develop innovative and sustainable products with multidisciplinary Engineering expertise.
2. Solve complex engineering problems by applying mechanical, electrical and computer knowledge and engage in lifelong learning in their profession.
3. Work or pursue higher education in multicultural, multilingual and multinational environment with competent oral and written communication.
4. Lead and contribute in a team entrusted with professional, social and ethical responsibilities.

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

Engineering Graduates will be able to:

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. .
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

1. Design and develop Mechatronics systems to solve the complex engineering problem by integrating electronics, mechanical and control systems.

2. Apply the engineering knowledge to conduct investigations of complex engineering problem related to instrumentation, control, automation, robotics and provide solutions.

குமரகுரு
தொழில்நுட்பக் கல்லூரி

அய்யா

வணங்குகிறோம் வழிநடப்போம்

உங்கள் வாழ்க்கை - எங்கள் பாதை

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