



Bapuji Educational Association®  
**BAPUJI INSTITUTE OF ENGINEERING & TECHNOLOGY, DAVANGERE.**

# Mech News

**Semiannual News Letter of Mechanical Engineering Department**

Jan-August 2021

(For private circulation only)

Issue : 01

*All of us do not  
 have an equal  
 talent, yet all of us  
 have equal  
 opportunities to  
 develop our  
 talents -  
 Ratan Tata*

**OUR VISION:** *The department endeavors to be a center of excellence to provide quality education leading the students to become professional mechanical engineers with ethics, contributing to the society through research, innovation, entrepreneurial and leadership qualities.*

## Editorial Board

Chief Editor:

Dr. G. Manavendra  
 Professor & Head  
 Mechanical Engineering  
 Department

Advisors:

Prof. Y. Vrushabhendrappa  
 Director, BIET, Davanagere

Dr. H. B. Aravinda  
 Principal, BIET, Davanagere

Editors:

Dr. Sharan A. S.  
 Associate Professor  
 Mechanical Engineering  
 Department.

Mr. D. E. Umesh.  
 Asst Professor  
 Mechanical Engineering  
 Department.

Mr. Sharan Mudda  
 Asst Professor  
 Mechanical Engineering  
 Department.



## In This Issue....

- + Departmental Activities
- + Faculty Column
- + Students Column
- + Article Column
- + Photo gallery

## DEPARTMENT' MISSION:

- + To impart quality technical education to students through effective teaching learning process leading to development of professional skills and attitude to excel in Mechanical Engineering.
- + To interact with reputed institutions and R & D organizations to enhance academic and research activities.
- + To inculcate creative thinking abilities among students and develop entrepreneurial skills and innovative ideas.
- + To imbibe ethical, environmental and moral values amongst students through broad based education.

## Program Educational Objectives (PEOs) of the Department

1. Enable to understand mechanical engineering systems those are technically viable, economically feasible and socially acceptable to enhance quality of life.
2. Apply modern tools and techniques to solve real problems in mechanical and allied engineering streams.
3. Communicate effectively using innovative tools to demonstrate leadership and entrepreneurial skills.
4. Be a professional having ethical attitude with multidisciplinary approach to achieve self and organizational goals.
5. Utilize the best academic environment to create opportunity to cultivate lifelong learning skills needed to succeed in profession.

## Program Specific Outcomes (PSOs) of the Department

1. PSO1: Apply the acquired knowledge in design, thermal, manufacturing and interdisciplinary areas for solving industry and socially relevant problems.
2. PSO2: To enhance the abilities of students by imparting knowledge in emerging technologies to make them proficient mechanical engineers.



**Dr. G. Manavendra**  
**Professor & Head of Department**

Change is the only constant today, and with it, comes the need for education systems to update and adapt their approach or risk becoming obsolete altogether. Outcome-Based Education (OBE) is a pedagogical model that entails the restructuring of curriculum, pedagogy and assessment practices to reflect the achievement of high-order learning, as opposed to a mere accumulation of course credits. While the traditional education system focuses on what is taught, OBE places emphasis on what is learned, and this distinction is very important. The latter is a student-centric model that incorporates real-world scenarios into the mix. The knowledge, skills and attributes that students take away at the end of a program or course are more valuable than what, or how, something is taught. A traditional education system relies heavily on standardized processes, wherein students assemble under one roof at a particular time to be instructed by a teacher. After the completion of a lecture, learners interact with peers or clear doubts with faculty members. This means, the effectiveness of the education system largely depends upon the efficacy of the teacher and the knowledge base of peers. OBE, on the other hand, is an education system built on specific outcomes. It focuses on the skill sets students to acquire following the completion of their studies. Activities in or outside the classroom are designed in a manner so as to help students achieve these outcomes.

One of the most profound benefits of OBE is the sense of clarity it fosters. Students, along with their parents, can pick an institution, program and course based on clearly spelled out learning objectives. The Course Outcome (CO), Program Outcome (CO), Program Specific Outcome (PSO) and Program Educational Objective (PEO) determine exactly what students are expected to accomplish, post their course or program respectively. This clarity is further reflected in the quality of teaching and delivery, across divisions and departments, where faculty may adjust their focus more appropriately. The next advantage, and perhaps the most obvious one, is flexibility. OBE empowers students to choose what they would like to study and how they would like to study it. Not only does it adapt to a learner's strengths and weaknesses, but it also provides sufficient

time to attain proficiency and fluency in the subject matter. Additionally, the model allows the learner to transfer their credits and switch to another institution that is accredited with the OBE syllabus.



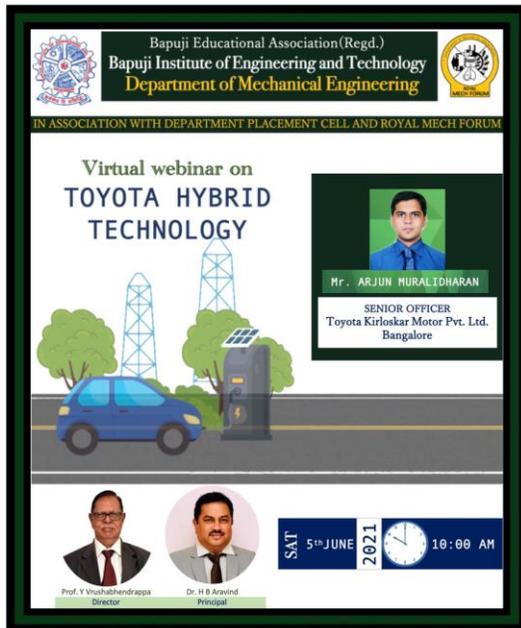
“Change is the end result  
of all true learning.”

— **Leo Buscaglia**



# Departmental Activities

1. Department of Mechanical Engineering in association with ISTE, Conducted an Online Webinar on HYBRID VEHICLES on 5<sup>th</sup> June 2021. Mr. Arjun Muralitharan, Senior Officer, Toyota Kirloskar Pvt. Ltd., was the guest speaker.



2. Department of Mechanical Engineering has organised a Online Quiz on Heat and Mass Transfer on 17<sup>th</sup> July 2021, around 112 students attended workshop .



3. A virtual inter disciplinary project exhibition, NIRMANA 1.0, organized by our Institute (BIET), in which our students participated and exhibited their project, was held on 13<sup>th</sup> August 2021. Our students won the best project



4. Department of Mechanical Engineering organized an online webinar on "Internship to Meet Corporate Expectations" on 18<sup>th</sup> August 2021. Dr. Sekhar S Iyer, Director MBA Program, Vivekananda school of Management Studies, Puttur, Dakshina Karnataka, was the invited speaker.



5. Royal Mech Forum organized an online webinar on Advanced CNC Machines & Additive Manufacturing 3D Printing. Mr. Naveen R Karki, Managing Director, Naveen Engineering Services, was the Guest Speaker.



6. Royal Mech forum organized a Open House Project Exhibition, TECHNOVATION, on 04<sup>th</sup> September 2021. Dr. Bhagyavana S Mudigoudra, E-Governance section & Director, Dept. of Higher Education, Govt. of Karnataka and Dr. Mallikarjuna S Holi, Principal, UBBDT College of Engineering, Davanagere were the invited Chief Guests.



Sl. No.	Name of the Author	Publications
1	<b>Dr.K.Sadashivappa</b>	Study of tool wear characteristics while machining mono and graphite reinforced hybrid zinc Aluminum based MMCs
2	<b>Dr. G. Manavendra</b>	<ol style="list-style-type: none"><li>1. Bio-ethanol additive effect on direct injection diesel engine performance, emission and combustion characteristics an experimental examination</li><li>2. Effect of piston bowl geometry on diesel engine performance operated with dairy scum biodiesel</li><li>3. Experimental investigation on thermal conductivity and thermal degradation of Honge oil methyl ester with B-20 blend</li></ol>
3	<b>Dr.A.G.Shankaramurthy</b>	Design and analysis of hybrid solar cell for e-vehicle charging
4	<b>T N Vijay Kumar</b>	<ol style="list-style-type: none"><li>1. Effect of Flash Filler Material on Tensile Property for Jute/Glass Hybrid Laminate Composites with Dry and Wet Conditions”.</li><li>2. “Experimental Study on Dry and Wet Flexural Behavior of Jf/Gf Laminated Hybrid Composite”</li></ol>

# Students Column

## Student Projects funded by KSCST, Bangalore during 2020-2021

Sl. no	Title of the project
1	Synthesis of Liquid Fertilizer for Agriculture Using Cold Plasma Technology
2	Design and Development of High-Performance Graphene based Super Capacitor and Sensors by Laser Induced Process
3	Nano Coating with Cu-Tio <sub>2</sub> Composite on Mild Steel Substrate by Electroplating Technique for the Improvement of Mechanical Properties.

## Toppers during 2020-21

Sl No	Sem	Name of the Student	USN	SGPA
01	3 <sup>rd</sup> /4 <sup>th</sup>	Bhoomika G S	4BD19ME006	8.08
02	5 <sup>th</sup> / 6 <sup>th</sup>	Chetan Bhat	4BD18ME010	8.30
03	7 <sup>th</sup> / 8 <sup>th</sup>	Pradeep B T	4BD17ME052	9.50

## Placement Details of 2021 Batch

Students of 2018 batch got Placement opportunities in the following companies

Sl No	Company	No
1	Q-Spider	03
2	Usha Armour pvt ltd., Bengaluru	03
3	Infosys, Bengaluru	02
4	TCS, Bengaluru	01
5	Pentagon Space	01
6	Basic First	01
7	Deloitte consulting India pvt ltd.,	01

HOD and Faculty of Mechanical Department congratulate the students who got placement in the above companies.

## Royal Mech Forum Office Bearers

Sl No	Students Name	
1	Dhanush Vaddi	General Secretaries
2	Praveen Kumar H	
3	Manjula S E	Joint Secretary
4	Ashiq Mohammed	Organising Secretaries
5	Ruqaiya Mehwish	
6	Komala S S	Cultural Secretary
7	Manoj Kumar	Sports Secretary



AnveshanA Regional award 20-21



Project got Selected for Top 10 Indian Innovation Express



Our Alumnus, Mr Vageesh V Prasanna, DAQ & EPQ, RBEI Bengaluru, was invited as an Expert member of evaluation committee for evaluating the exhibited Mechanical Engineering projects, for NIRMANA 1.0 and for suggesting improvements in the projects and finally recommending awards for the exhibited projects. He recommended 3 Projects for Best Project of the department also for Institute awards.

Bapuji Educational Association®  
Bapuji Institute of Engineering and Technology, Davangere  
**NIRMANA-1.0**  
*Bringing your ideas and innovations to life!!!*  
Panel of Experts

 Shri. Jagdish B V Superintendent Engineer, RDPR, Davangere.	 Shri. Vageesh V Prasanna DAQ & EPQ RBEI, Bengaluru.	 Dr. Ananthapadmanabha T Former Principal, NIET, Mysore	 Shri. Nagaraj G K Techno Program Manager, Tata Communication Ltd., Bangalore
 Dr. Hemant Pallivela Associate Vice President, AI and ML, eClerx Services Ltd., Mumbai		 Shri. Kshitij Basavaraj Director, Quality Assurance and R&D PSK Pharma Pvt. Ltd., Harihar	 Dr. Harishkumar Postdoctoral Research Fellow, University of British Columbia (UBC), Vancouver, Canada

Event link: [bit.ly/nirmanabiet](https://bit.ly/nirmanabiet) FRI 13<sup>th</sup> AUG 2021 09:00 AM

The following Guests: Jagdish B V, Superintendent Engineer, RPDR Davanagere, Dr. Ananthapadmanabha T, Former Principal, NIET Mysore, Nagaraja G K, Techno Program Manager, Tata Communications Ltd., Bengaluru, Dr. Hemant Pallivela, Associate Vice President, AI and ML, eClerx services Ltd., Mumbai, Dr. Shreedhara K S, Professor, CS & E, UBDTCE, Davanagere, Kshitij Basavaraj, Director, Quality Assurance and R&D, PSK Pharma Pvt Ltd., Harihar, and Dr. Harishkumar, Postdoctoral Research Fellow, University of British Columbia (UBC) Vancouver, Canada, were invited as the Panel of Experts to judge and evaluate the student projects from our department, during NIRMANA 1.0.

1. Project titled “Synthesis of Liquid Fertilizer For Agriculture Using Cold Plasma Technology.” guided by Mr. Anand K J and Dr. Sharan A S, Faculties of Mechanical Engineering Department, has been selected for the KSCST Student Project Program 2020-2021.
2. Project titled “Design and Development of High Performance Graphene based Super Capacitor and Sensors by Laser Induced Process” guided by Dr. Sadhashivappa, Dean Academic, and Dr. SHARAN A S , faculties of Mechanical Engineering department, has been selected for the KSCST Student Project Program 2020-21.
3. Project titled “Nano Coating With Cu-Tio<sub>2</sub> Composite on Mild Steel Substrate by Electroplating Technique for the Improvement of Mechanical Properties.” guided by Dr. Thippeswamy Ekbote and Mrs. Sushma Patil, Assistant professor department of mechanical Engineering, has been selected for the KSCST Student Project Program 2020-21.

## INDIVIDUAL FACULTY

1. Dr. Manavendra G
  - published a paper on “Thermal characterization of dairy washed scum methyl ester and its b-20 blend for combustion applications” in International Journal of Ambient Energy 1-11, 2021
  - published a paper on “Effect of piston bowl geometry on diesel engine performance operated with dairy scum biodiesel” in International Journal of Ambient Energy 1628-1638 41 (14 ) 2021
  - was Appointed as a LIC member of VTU Belagavi for the academic year 2021-22
  - Attended Two days webinar on “Academic and Administrative Audit ”Organized By IQAC, RYMEC, Ballari on 18-08-2021 & 19-08-2021
2. Dr. S Kumarappa
  - Attended webinar on Enriching Engineering Education through experimental, collaborative and social learning on 23rd July 2021, organized by FDC, AICTE, New Delhi.
  - Attended FDP on "Recent Developments in Mechanical Engineering" from 21st to 26th June 2021. Organized by Department of Mechanical Engineering, Coorg Institute of Technology, Ponnampet, Kodagu, karnataka-571216.
  - Attended webinar on Introduction to Cloud Computing and AI on 7 Aug 2021 organized by Cloud X lab.
  - Attended webinar on Data Analysis using Python on 11 Aug 2021 organized by Cloud X lab.
3. Professor Umesh D E
  - Attended a 5 day online FDP on the theme inculcating universal human values in technical education organized by all India council for technical education from 26th July to 30th July 2021.
  - attended a One week FDP on strategies in in modern pedagogy organized by National institute of technology e Sikkim and sponsored by AICTE from 16th February to 20 February 2021
  - Participated in virtual faculty development program on funding agency for supporting it and entrepreneurship organized by Mahendra institute of technology on 5th July 2021
  - participated in National level webinar on advanced resources of biofuel production conducted on 25th June 2021 organized by SJMIT Chitradurga
4. Professor Manjunatha G M Attended AICTE sponsored five days Short term course “Open core smart manufacturing-Building the bridge between Automation and Information Technology” Organized by department of mechanical engineering, Indian Institute of Technology, Madras.
5. Professor Manjunatha G M Attended One Week National Level Online Faculty Development Program on “Advances in Materials & Manufacturing” organized by Department of Mechanical Engineering from 12-07-2021 to 16-07-2021 S J M institute of technology Chitradurga.
6. Professor A B Vinayak Patil Attended one day online webinar on “Microfluidics and Nanotechnology for Lab on Chip and Personalized Diagnostics” organized by Department of Mechanical Engineering, Ramaiah Institute of Technology, Bangalore held on 05th August 2021.
7. Professor A B Vinayak Patil Attended one day online webinar on “Productionizing Autonomous Driving: A Holistic View” organized by Department of Mechanical Engineering, Ramaiah Institute of Technology, Bangalore held on 23rd July 2021.

**Online Alumni meet, for 2012-2016 batch Alumni's held on 24<sup>th</sup> July 2021**





**BAPUJI EDUCATIONAL ASSOCIATION ®**  
**BAPUJI INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
**DAVANGERE - 577 004**  
**DEPARTMENT OF MECHANICAL ENGINEERING**



---

---

## INVITATION

---

---

**Dear Alumnus,**

**Warm Greetings from Department of Mechanical Engineering, BIET, Davangere.**

We are glad to inform you that, Department of Mechanical Engineering is organizing Virtual Alumni Meet of 2016 output batch students on 24<sup>th</sup> July 2021 at 10:30 AM.

### Objectives

- To bring together all the old students and the faculty of Department to share their experiences with each other.
- To utilize the rich experiences of old students of the Department for the benefit and progress of the present students.
- To provide guidance to the present students in their endeavor for better employment and higher studies.

### “Mech MEET”

#### VIRTUAL MEET OF 2016 BATCH STUDNETS

We are hereby sending this Invitation along with Programme Schedule.

**Link for joining the Virtual Meet through Google Meet is:**

<https://meet.google.com/eqx-qypz-dac>

Looking forward for your fruitful active participation in the Online Alumni Meet.

Please feel free to contact the faculty members given below for any clarifications.

Dr. G Manavendra	9964030806	Dr. K Sadashivappa	9241425736
Dr. K.C Devendrappa	9844616304	Dr. Sharan A.S	9164490699

**\*\*Kindly spare a few minutes to fill the Alumni feedback form using the below link:**

<https://forms.gle/UCa7DkNieqBkwVFN9>

With Best Regards,

**Program Coordinator (HOD) and Organizing Committee Members**  
**Department of Mechanical Engineering**

---

---

**BIET, Davangere-577004**



For this online program the invitation was given to alumni through personal email, WhatsApp and also by personal messages and phone calls. A WhatsApp group was also run by the alumina association from so many days. The program was spread through the electronic media.

The meeting was hosted by **Dr. Sharan A.S**, Associate Professor, Alumni Co-coordinator welcomed all the participants to the online meet.

**Dr. G Manavendra**, HOD, delivered the welcome address to all our faculty members and alumni students of 2016 batch and presented department progress and facilities developed for the students over the years. Students felt very happy about the developmental activities carried out over the years

**Prof. Y Vrushebhendrapa**, Director, addressed the meet and explained the importance of the Alumini interaction with the institute and the department. He also the process of NBA and the role of Alumni association in building a profound education background for future India.

**Dr. K. Sadashivappa**, Principal addressed the meet and shared his experience of ICT tools that aid in teaching and learning process. He invited the students to visit back to the departments and share their valuable inputs for the further development of the career.

**Dr. K.C Devendrappa**, Professor, Alumini Co-ordinator of the Institute addressed the students and highlighted the importance of this meet. Further he invited students for their strong support to build this Alumni Association. He requested the students to share their outside world experience with our students. He also invited the Alumina to conduct workshop seminars.

From the Alumna

**Prashath** Presently working as senior manager shared his experience about the quality education that he received from this Institute, and how that helped him to build his career.

**Akansh** explained the importance of the project that he conducted at the Institute level and how that supported for his identity in the abroad while doing his MS Program in Germany.

**Manjunath** thanked all the teachers for their kind support in making their academic career



## Green Campus of BIET



Department of Mechanical Engineering, Barju Institute of Engineering & Technology,  
Post Box No 325, Davanagere -577004  
Karnataka, India.

Email: [drskumarappa@gmail.com](mailto:drskumarappa@gmail.com), Mob: 931000364