

Jan' 20 – Jun' 20



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Jan' 20 – Jun' 20

**Chief Editor:** Dr. C. Krishnaraj      **Editor:** Mr. V. V. Arun Sankar      **Co – Editor:** Mr. R. Krishnan

**Student Editorial Board:** N. Dhineshkumar (17M110), A. Venkatarajulu (17M248), K. Vineeth (17M351)

#### **DEPARTMENT ACTIVITIES**

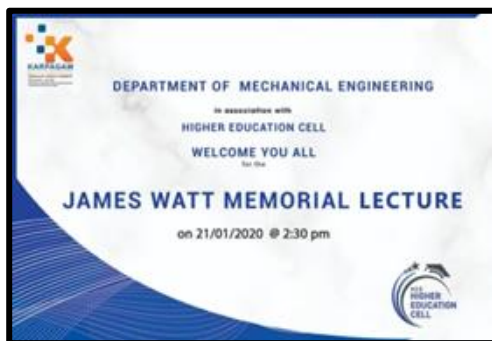
##### **Guest Lectures**

- Mr. Paleti Rana Pratap, Associate simulation Engineer from Robert Bosch, Coimbatore delivered a guest lecture related to Entrepreneurship Development, Soft skills for a total of 85 student participants on 24th January 2020.
- Mr. V.P.Ponnusamy, General Manager, Human Resources from Renault Nissan Automotive India Pvt LTD, Chennai delivered a guest lecture for a total of 85 student participants on 25th January 2020.
- Mr.G.Prasath, Senior Engineer from Aquasub Engineering delivered a guest lecture related to Metrology and Measurements for a total of 120 student participants on 24th April 2020.
- Mr.V.Ezhilan, System Engineer from Infosys delivered a guest lecture related to Artificial Intelligence and Machine Learning for a total of 120 student participants on 28th April 2020.
- Mr.Akarsh Sivaprasad, Industrial Design Engineer from 3D Systems Corporation, USA delivered a guest lecture related to Additive Manufacturing for a total of 120 student participants on 2nd May 2020.
- Mr.Soundara Pandian, Deputy Manager, Automation from Janatics India Pvt Ltd delivered a guest lecture related to Automation for a total of 120 student participants on 4th May 2020.
- Mr.C.S.Suthan, Manager-Supply Chain Planning from Lufthansa Group, Europe delivered a guest lecture related to Supply chain Management for a total of 96 student participants on 7th May 2020.
- Mr.V.Aswinraj, Deputy Manager-Engine R&D from Ashok Leyland Technical center, Chennai delivered a guest lecture related to Thermal Engineering for a total of 69 student participants on 11th May 2020.
- Mr.D.Vinesh, Senior Manager-Product Line from Tata Motors Limited, Pune delivered a guest lecture related to Automobile Technology for a total of 68 student participants on 17th May 2020.
- Mr.K.Sivakumar, Senior FEA Analyst from Ford Global Technology and Business Center delivered a guest lecture related to CAE for a total of 70 student participants on 31st May 2020.
- Mr.S.Babu, Lead Engineer from Quest Global delivered a guest lecture related to Total Quality Management for a total of 37 student participants on 06th June 2020.
- Mr.Abdul Hameed, Technology Analyst from Infosys delivered a guest lecture related to Programming languages for a total of 37 student participants on 06th June 2020.
- Mr.C.Seenivasan, Senior Engineer from TWAD delivered a guest lecture related to Hydraulics and pipe design for a total of 37 student participants on 06th June 2020.
- Mr.S. Sharuhasan, CAD Engineer from HCL delivered a guest lecture related to Basics of Mechanical Engineering and Emerging trends in Industries for a total of 37 student participants on 06th June 2020.
- Mr.Omer Mohammed, Senior P&ID Engineer from Siemens delivered a guest lecture related to Business Analytics for a total of 37 student participants on 06th June 2020.
- Mr.P.Pradeep Raja, Test Engineer from Bridgestone EMIA, Italy delivered a guest lecture for a total of 69 student participants on 15th June 2020.
- Mr.Harish Krishnamoorthy, Performance Engineer from United States Patent and Trademark Office, USA delivered a guest lecture for a total of 69 student participants on 15th June 2020.
- Mr.Gautham Manoharan, Industrial Engineer from Metso, Australia delivered a guest lecture for a total of 69 student participants on 15th June 2020.

##### **Professional Societies / Chapter Events**

- Organized a Guest Lecture as a part of Indian Society of Technical Education (ISTE) Chapter Event on “Industrial Automation” on 10th January 2020.
- Organized a Skill Development Fabrication Workshop as a part of Society of Automotive Engineers (SAE) Chapter Event on “Automobile Electrical Wiring - KTM & TVS” from 23rd January to 25th January 2020.
- Organized a Guest Lecture as a part of Indian Society of Technical Education (ISTE) Chapter Event on “Computer Aided Design (CAD)” on 16th February 2020.
- Organized an Online Lecture Meet as a part of Society of Automotive Engineers (SAE) Chapter Event on “Impact of BS - VI in Engine Design” on 25th April 2020.
- Organized a Webinar as a part of Indian Society of Technical Education (ISTE) Chapter Event on “Supply Chain and its Challenges in Airline Industry” on 07th May 2020.
- Organized a Webinar as a part of Indian Society of Technical Education (ISTE) Chapter Event on “New Product Development in Automotive Industry” on 17th May 2020.

- Organized a Webinar as a part of Indian Society of Technical Education (ISTE) Chapter Event on "Role of Pneumatics and Hydraulics in Automation" on 25th May 2020.
- Organized a Webinar as a part of Indian Society of Technical Education (ISTE) Chapter Event on "Introduction to CAE" on 31st May 2020.
- Organized a Webinar as a part of Indian Society of Technical Education (ISTE) Chapter Event on "Role of Pneumatics and Hydraulics in Automation" on 25th May 2020.
- Organized a Webinar as a part of Indian Society of Technical Education (ISTE) Chapter Event on "KCE Alumni Summit" from 06th June to 07th June 2020.
- Organized a Webinar as a part of Indian Society of Technical Education (ISTE) Chapter Event on "Money out of Waste" on 12th June 2020.
- Organized a Webinar as a part of Indian Society of Technical Education (ISTE) Chapter Event on "Global Career Opportunities" from 15th June to 17th June 2020.
- Organized a Webinar as a part of Indian Society of Technical Education (ISTE) Chapter Event on "An Insight into career opportunities in Mechanical Engineering" from 15th June to 19th June 2020.



#### Miscellaneous Events

- Organized a Guest Lecture on "James Watt - Memorial Lecture Series", in association with Higher Education Cell on 21st January 2020.
- Organized a Hands on Training Program on "Recent Trends on Pump Design and Valve Manufacturing" as a part of KCE Dhruva 2020 on 29th February 2020.
- Organized an Online Course on "Data Visualization" in association with DSAC on 20th April 2020.
- Organized an Online Webinar Series titled, "KCE Mech Webinar Series" on 23rd April, 24th April, 28th April, 29th April, 02nd May, 04th May, 25th May and 31st May 2020.



#### NATIONAL / INTERNATIONAL LEVEL PROGRAMMES (Conducted)

- Organized a National Level "Project Expo and Paper Presentation Event" on 14th March 2020.
- Organized an Online Faculty Development Program on "Novel Materials and its Industrial Application" from 13th to 18th May 2020.
- Organized a Seven Days - Online Faculty Development Program on "Advanced Manufacturing Technology" from 28th June to 04th July 2020.



## **FACULTY ACHIEVEMENTS**

### **Journal Publications**

#### **Dr. C. Krishnaraj, Professor and Head**

- Published a paper titled "The Effect of Varying Infill Densities on Tribological Properties of 3D Printed and Annealed CF-PETG Composites", *Turkish Journal of Physiotherapy and Rehabilitation*, Vol.32, No. 3, pp. 6792-6798, 2020, International (WoS).

#### **Dr. N.V. Dhandapani, Professor**

- Published a paper titled "Transient thermal finite element simulation of moving gas tungsten arc welding on AISI 4340 aeronautical steel", *AIP Conference Proceedings*, Vol.2283, No. 1, pp. 020108, 2020, International (Scopus).

#### **Dr. R. Manimaran, Professor**

- Published a paper titled "Influence of Nano Additives on Performance and Emission Features of D.I Engine Worked Using Blended Pyrolysis Oil Methyl Ester", *Turkish Journal of Physiotherapy and Rehabilitation*, Vol.32, No. 3, pp. 2440-2452, 2020, International (WoS).

#### **Dr. S. Vimal Anand, Associate Professor**

- Published a paper titled "Studies on Shear Strength of CNT/Coir Fibre/Fly Ash Reinforced Epoxy Polymer Composites", *Emerging Materials Research*, Vol.9, No. 1, pp. 01-14, 2020, International (WoS).

#### **Dr. K. Ananthakumar, Associate Professor**

- Published a paper titled "Prediction and Analysis of MultiResponse Characteristics on Plasma Arc Cutting of Monel 400 Alloy Using Mamdani-Fuzzy Logic System and Sensitivity Analysis", *Materials*, Vol.13, No. 16, pp. 3558, 2020, International (WoS).
- Published a paper titled "Spark plasma assisted diffusion bonding of titanium and stainless steel: Role of pulse current in diffusion kinetics and microstructural evolution", *Vacuum*, Vol.177, pp. 109394, 2020, International (WoS).
- Published a paper titled "Experimental investigations on high precision abrasive waterjet cutting of natural fibre reinforced nano clay filled green composites", *Journal of Industrial Textiles*, 2020, International (WoS).

#### **Dr. Titus Thankachan, Associate Professor**

- Published a paper titled "Characterization of ZrC reinforced AA6061 alloy composites produced using stir casting process", *Journal of Mechanical Science and Technology*, Vol.34, No. 1, pp. 143-147, 2020, International (WoS).
- Published a paper titled "Effect of temperature on nano metal oxide coating in boring hardened steel", *AIP Conference Proceedings*, Vol.2270, No. 1, pp. 030003, 2020, International (Scopus).

#### **Mr. V. V. Arun Sankar, Assistant Professor**

- Published a paper titled "Experimental research into the mechanical behaviour of banana fibre reinforced PP composite material", *Materials Today: Proceedings*, Vol.33, No. 7, pp. 3097-3101, 2020, International (Scopus).

#### **Mr. N. Subramani, Assistant Professor**

- Published a paper titled "Fabrication of A6061 PRMMC by using GTAW process and evaluating the material behaviour", *Materials Today: Proceedings*, Vol.33, No. 7, pp. 3169-3173, 2020, International (Scopus).

#### **Mr. R. Masilamani, Assistant Professor**

- Published a paper titled "PIC microcontroller based development of air quality improvement system for automobiles", *Materials Today: Proceedings*, Vol.9, pp. 541, 2020, International (Scopus).

#### **Mr. R. Krishnan, Assistant Professor**

- Published a paper titled "Design and analysis of QUAD bike frame", *Materials Today: Proceedings*, Vol.11, pp. 297, 2020, International (Scopus).

#### **Mr. M. Rajesh, Assistant Professor**

- Published a paper titled "Performance Characteristic Analysis of Vehicle Sub-frame Structure and validation through FEM Approach", *International Journal of Innovative Research in Science, Engineering and Technology*, Vol.9, No. 12, pp. 11145 - 11154, 2020, International (Referred).

#### **Mr. J. Mohanraj, Assistant Professor**

- Published a paper titled "Numerical investigation and designing of a molten salt to air heat exchanger by varying internal and external parameters", *International Research Journal of Engineering and Technology*, Vol.7, No. 7, pp. 4365-4371, 2020, International (Scopus).

#### **Mr. R. Periyasamy, Assistant Professor**

- Published a paper titled "Design Fabrication and Experimental Analysis of Novel 360 Degree Rotating Wheelchair", *Test Engineering and Management*, Vol.83, pp. 14652-14656, 2020, International (Scopus).

#### **Mr. S. Chitharthan, Assistant Professor**

- Published a paper titled "TIG and A-TIG welding for Inconel 718 super alloy - A review", *International Journal of Advanced Science and Technology*, Vol.29, No. 7, pp. 2631-2638, 2020, International (Scopus).

#### **Mr. P. Muraleedharan, Assistant Professor**

- Published a paper titled "Augmentation of service quality and Customer Satisfaction in earth digger service center by using DMAIC integrated Triz methodology", *Test Engineering and Management*, Vol.82, pp. 6266 - 6275, 2020, International (Scopus).

#### **Mr. R. Sathish, Assistant Professor**

- Published a paper titled "Design and Fabrication of Pipe Bending Machine Using Hydraulic System", *International Journal of Mechanical and Production Engineering*, Vol.10, No. 3, pp. 3845- 3848, 2020, International (Scopus).



## **Book Publications**

### **Dr. C. Krishnaraj, Professor and Head**

- Published a book titled "Modelling, Simulation and Control", ISBN: 978-81-933187-0-6.

## **Paper Presentation - National / International Conferences**

### **Dr. C. B. Srinivasan, Professor**

- Presented a paper titled "Development and comparison of Tensile strength, surface micro hardness and microstructure of AA6061/ZrB<sub>2</sub> and A6061/ZrB<sub>2</sub>/SiC Aluminum metal matrix composite", International Conference on Intelligent System and Control(ISCO) at Karpagam College of Engineering from 9<sup>th</sup> to 10<sup>th</sup> January 2020.

### **Dr. J. Devaraj, Professor**

- Presented a paper titled "Impact of Nanofluids on the Execution of Passive Double Slope Solar Still – A Relative Review", International Conference on Intelligent System and Control(ISCO) at Karpagam College of Engineering from 9<sup>th</sup> to 10<sup>th</sup> January 2020.

### **Dr. E. Baburaj, Professor**

- Presented a paper titled "Optimizing characteristics of oil extraction from Hevea Brasiliensis seed", International Conference on Intelligent System and Control(ISCO) at Karpagam College of Engineering from 9<sup>th</sup> to 10<sup>th</sup> January 2020.

### **Mr. E. Vignesh, Assistant Professor**

- Presented a paper titled "Optimizing characteristics of oil extraction from Hevea Brasiliensis seed", International Conference on Intelligent System and Control(ISCO) at Karpagam College of Engineering from 9<sup>th</sup> to 10<sup>th</sup> January 2020.

### **Mr. V. Aravinthasamy, Assistant Professor**

- Presented a paper titled "Performance analysis of gas turbine compartment ventilation system", International Conference on Intelligent System and Control(ISCO) at Karpagam College of Engineering from 9<sup>th</sup> to 10<sup>th</sup> January 2020.

### **Mr. D. Manikandan, Assistant Professor**

- Presented a paper titled "Experimental Investigation of Thermal Behavior on Ni-Zr Coated Piston Head", International Conference on Intelligent System and Control(ISCO) at Karpagam College of Engineering from 9<sup>th</sup> to 10<sup>th</sup> January 2020.

### **Mr. S. Sathish Kumar, Assistant Professor**

- Presented a paper titled "Performance analysis of gas turbine compartment ventilation system", International Conference on Intelligent System and Control(ISCO) at Karpagam College of Engineering from 9<sup>th</sup> to 10<sup>th</sup> January 2020.

### **Mr. P. Karthikeyan, Assistant Professor**

- Presented a paper titled "Development and comparison of Tensile strength, surface micro hardness and microstructure of AA6061/ZrB<sub>2</sub> and A6061/ZrB<sub>2</sub>/SiC Aluminum metal matrix composite", International Conference on Intelligent System and Control(ISCO) at Karpagam College of Engineering from 9<sup>th</sup> to 10<sup>th</sup> January 2020.

### **Mr. M. Murugesan, Assistant Professor**

- Presented a paper titled "Impact of Nanofluids on the Execution of Passive Double Slope Solar Still – A Relative Review", International Conference on Intelligent System and Control(ISCO) at Karpagam College of Engineering from 9<sup>th</sup> to 10<sup>th</sup> January 2020.

### **Mr. V. Balamurali, Assistant Professor**

- Presented a paper titled "Experimental Investigation of Thermal Behavior on Ni-Zr Coated Piston Head", International Conference on Intelligent System and Control(ISCO) at Karpagam College of Engineering from 9<sup>th</sup> to 10<sup>th</sup> January 2020.

### **Dr. G. Padmanabhan, Professor**

- Presented a paper titled "Study on material selection for material handling Equipment through application software", International Conference on Electrical, Electronics, Instrumentation and computer communication-E2IC2 at Karpagam College of Engineering from 25<sup>th</sup> to 26<sup>th</sup> January 2020.

### **Mr. P. Sundaram, Associate Professor**

- Presented a paper titled "Enhancement of Hydro Power Generation with Pumped Storage Plants in Tamil Nadu", International Conference on Electrical, Electronics, Instrumentation and computer communication-E2IC2 at Karpagam College of Engineering from 25<sup>th</sup> to 26<sup>th</sup> January 2020.

### **Mr. T. Akilan, Assistant Professor**

- Presented a paper titled "Enhancement of Hydro Power Generation with Pumped Storage Plants in Tamil Nadu", International Conference on Electrical, Electronics, Instrumentation and computer communication-E2IC2 at Karpagam College of Engineering from 25<sup>th</sup> to 26<sup>th</sup> January 2020.

### **Mr. M. Pandi Elavarasan, Assistant Professor**

- Presented a paper titled "Cronbach Alpha Validation and Correlation Analysis of Work Practices Mediation Model", International Conference on Electrical, Electronics, Instrumentation and computer communication-E2IC2 at Karpagam College of Engineering from 25<sup>th</sup> to 26<sup>th</sup> January 2020.

#### **Mr. Ilyas Hussain, Assistant Professor**

- Presented a paper titled "Cronbach Alpha Validation and Correlation Analysis of Work Practices Mediation Model", International Conference on Electrical, Electronics, Instrumentation and computer communication-E2IC2 at Karpagam College of Engineering from 25th to 26th January 2020.

#### **Mr. A. U. Mohamed Anwar, Assistant Professor**

- Presented a paper titled "Study on material selection for material handling Equipment through application software", International Conference on Electrical, Electronics, Instrumentation and computer communication-E2IC2 at Karpagam College of Engineering from 25th to 26th January 2020.

#### **Mr. L. N. Prabhakaran, Assistant Professor**

- Presented a paper titled "An Enhanced K-Means MSOINN Based Clustering Over Neo4j With An Application To Weather Analysis", International Conference on Electrical, Electronics, Instrumentation and computer communication-E2IC2 at Karpagam College of Engineering from 25th to 26th January 2020.

#### **Seminars / Workshops / FDPs / STTPs - Presented / Attended**

- Mr.Rajesh M, Assistant Professor attended an Online AICTE Recognized FDP on Teaching and learning for accreditation in Technical Education organized by NITTTR Chandigarh from 27th April to 01st May 2020.
- Mr.Mohanraj J, Assistant Professor attended an Online AICTE Recognized FDP on Computer Aided Design and Manufacturing (CAD/CAM) organized by NITTTR Chandigarh from 27th April to 01st May 2020.
- Mr.Subramani N, Assistant Professor attended an Online AICTE Recognized FDP on Computer Aided Design and Manufacturing (CAD/CAM) organized by NITTTR Chandigarh from 27th April to 01st May 2020.
- Mr.Rajesh M, Assistant Professor attended an Online FDP on Academic leadership enhancement in technical Institution organized by NITTTR Chandigarh from 04th May to 08th May 2020.
- Dr.Titus Thankachan, Associate Professor attended an AICTE Training and Learning (ATAL) Academy Online FDP on Data Sciences organized by Punjab Engineering College from 04th May to 08th May 2020.
- Mr.Rajesh M, Assistant Professor attended an Online AICTE Recognized FDP on Waste Management organized by NITTTR Chandigarh from 11th May to 15th May 2020.
- Mr.Mohanraj J, Assistant Professor attended an Online AICTE Recognized FDP on Waste Management organized by NITTTR Chandigarh from 11th May to 15th May 2020.
- Mr.Rajesh M, Assistant Professor attended Online FDP on Leadership and Teamwork for performance Excellence organized by NITTTR Chandigarh from 18th May to 22nd May 2020.
- Mr. Arun Sankar V.V, Assistant Professor attended Online AICTE Recognized FDP on Computer Integrated Manufacturing & CNC (CIM/CNC) organized by NITTTR Chandigarh from 25th May to 29th May 2020.
- Mr.Rajesh M, Assistant Professor attended Online AICTE Recognized FDP on Outcome Based Curriculum organized by NITTTR Chandigarh from 25th May to 29th May 2020.
- Mr.Arulmurugan R, Assistant Professor attended Seven Days Faculty Development Programme on Ethical Practices in Engineering organized by Sri Sairam Engineering College, Chennai from 28th May to 03rd June 2020.
- Mr.Chitharthan S, Assistant Professor attended Five Days online Faculty Development Programme on Biofuels and its applications of IC engines organized by MEA Engineering College, Perinthalmanna, Kerala from 01st June to 05th June 2020.
- Mr.Arulmurugan R, Assistant Professor attended Five Days online Faculty Development Programme on Biofuels and its applications of IC engines organized by MEA Engineering College, Perinthalmanna, Kerala from 01st June to 05th June 2020.
- Dr.Titus Thankachan, Associate Professor attended an Five days Faculty Development Program on Online FDP on Refrigerants Progression - Environmental Concerns organized by QIS College of Engineering and Technology, Ongole, Andhra Pradesh from 01st June to 05th June 2020.
- Mr.Muraleedharan P, Assistant Professor attended One week Faculty Development Program on Python organized by Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule Department of Computer Engineering from 01st June to 07th June 2020.
- Mr.Arulmurugan R, Assistant Professor attended One week Faculty Development Program on OpenFOAM organized by Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule from 01st June to 07th June 2020.
- Mr.Chitharthan S, Assistant Professor attended Five Day online FDP on Emerging Trends in Mechanical Engineering organized by St. Peter's Engineering College, Hyderabad from 02nd June to 06th June 2020.
- Mr. Muraleedharan P, Assistant Professor attended Five Day online FDP on Emerging Trends in Mechanical Engineering organized by St. Peter's Engineering College, Hyderabad from 02nd June to 06th June 2020.
- Mr. Mohanraj J, Assistant Professor attended Five Day online FDP on Emerging Trends in Mechanical Engineering organized by St. Peter's Engineering College, Hyderabad from 02nd June to 06th June 2020.
- Mr.Arulmurugan R, Assistant Professor attended Five Days IGEN PIT Faculty Development Program on Renewable Energy Systems organized by Panimalar Institute of Technology, Department of Electrical and Electronics Engineering, from 08th June to 12th June 2020.
- Mr.Chitharthan S, Assistant Professor attended Five Days online Faculty Development Programme on Introduction to Soft Computing organized by Rajalakshmi Engineering College, Chennai from 08th June to 12th June 2020.
- Mr.Mahesh R, Assistant Professor attended One week Faculty Development Programme on Frontiers in mechanical Engineering organized by KKR and KSR Institute of Technology and Sciences, Guntur from 08th June to 12th June 2020.
- Dr. Ananthakumar K, Associate Professor attended One week Faculty Development Programme on Frontiers in mechanical Engineering organized by KKR and KSR Institute of Technology and Sciences, Guntur from 08th June to 12th June 2020.
- Mr.Mahesh R, Assistant Professor attended Six Days Online Faculty Development Programme (FDP) on Mechatronics Engineering for Industry 4.0 Era organized by KSR College of Technology, Chennai from 08th June to 13th June 2020.
- Mr.Chitharthan S, Assistant Professor attended Seven Days Faculty Development Programme on Institutional Benchmarking of Best Practices organized by Dnyan Prabodhini Mandal's Shree Mallikarjun & Shri Chetan Manju Desai College, Canacona from 08th June to 14th June 2020.

- Mr.Muraleedharan P, Assistant Professor attended Seven Days Faculty Development Programme on Institutional Benchmarking of Best Practices organized by Dnyan Prabodhini Mandal'sShree Mallikarjun & Shri Chetan Manju Desai College, Canacona from 08th June to 14th June 2020.
- Mr.Periyasamy R, Assistant Professor attended Seven Days Faculty Development Programme on Institutional Benchmarking of Best Practices organized by Dnyan Prabodhini Mandal'sShree Mallikarjun & Shri Chetan Manju Desai College, Canacona from 08th June to 14th June 2020.
- Mr.Sathish R, Assistant Professor attended Seven Days Faculty Development Programme on Institutional Benchmarking of Best Practices from organized by Dnyan Prabodhini Mandal'sShree Mallikarjun & Shri Chetan Manju Desai College, Canacona 08th June to 14th June 2020.
- Mr.Subramani N, Assistant Professor attended Seven Days Faculty Development Programme on Institutional Benchmarking of Best Practices organized by Dnyan Prabodhini Mandal'sShree Mallikarjun & Shri Chetan Manju Desai College, Canacona from 08th June to 14th June 2020.
- Mr.Mohanraj J, Assistant Professor attended Seven Days Faculty Development Programme on Institutional Benchmarking of Best Practices from organized by Dnyan Prabodhini Mandal'sShree Mallikarjun & Shri Chetan Manju Desai College, Canacona 08th June to 14th June 2020.
- Mr.Chitharthan S, Assistant Professor attended Five Days Online Faculty Development Programme on Contemporary Developments in Manufacturing Processes, Sustainable Manufacturing and Industrial Technologies organized by Pragati Engineering College, Department of Mechanical Engineering, from 09th June to 13th June 2020.
- Mr.Muraleedharan P, Assistant Professor attended Five Days Online Faculty Development Programme on Contemporary Developments in Manufacturing Processes, Sustainable Manufacturing and Industrial Technologies organized by Pragati Engineering College, Department of Mechanical Engineering, from 09th June to 13th June 2020.
- Mr.Periyasamy R, Assistant Professor attended Five Days Online Faculty Development Programme on Contemporary Developments in Manufacturing Processes, Sustainable Manufacturing and Industrial Technologies organized by Pragati Engineering College, Department of Mechanical Engineering, from 09th June to 13th June 2020.
- Dr.Manimaran R, Associate Professor attended Five Days Online Faculty Development Programme on Contemporary Developments in Manufacturing Processes, Sustainable Manufacturing and Industrial Technologies organized by Pragati Engineering College, Department of Mechanical Engineering, from 09th June to 13th June 2020.
- Mr.Arulmurugan R, Assistant Professor attended Five Days Online Faculty Development Program on Mechanical Behaviour of Advanced Materials and Its Scope for Engineering Applications organized by Sri Venkateshwara College of Engineering, Sriperumbudur, from 10th June to 14th June 2020.
- Dr.Titus Thankachan, Associate Professor attended Five Days Online Faculty Development Program on Mechanical Behaviour of Advanced Materials and Its Scope for Engineering Applications organized by Sri Venkateshwara College of Engineering, Sriperumbudur, from 10th June to 14th June 2020.
- Mr.Muraleedharan P, Assistant Professor attended Five Days Online Faculty Development Program on Mechanical Behaviour of Advanced Materials and Its Scope for Engineering Applications organized by Sri Venkateshwara College of Engineering, Sriperumbudur, from 10th June to 14th June 2020.
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- Mr.Sathish R, Assistant Professor attended Five Days Online Faculty Development Program on Mechanical Behaviour of Advanced Materials and Its Scope for Engineering Applications organized by Sri Venkateshwara College of Engineering, Sriperumbudur, from 10th June to 14th June 2020.
- Mr.Subramani N, Assistant Professor attended Five Days Online Faculty Development Program on Mechanical Behaviour of Advanced Materials and Its Scope for Engineering Applications organized by Sri Venkateshwara College of Engineering, Sriperumbudur, from 10th June to 14th June 2020.
- Mr.Arulmurugan R, Assistant Professor attended Six Days Online Faculty Development Programme on Welding for Additive Manufacturing organized by Coimbatore Institute of Engineering and Technology, Coimbatore from 10th June to 15th June 2020.
- Mr.Chitharthan S, Assistant Professor attended Six Days Online Faculty Development Programme on Welding for Additive Manufacturing organized by Coimbatore Institute of Engineering and Technology, Coimbatore from 10th June to 15th June 2020.
- Dr.Titus Thankachan, Associate Professor attended Six Days Online Faculty Development Programme on Welding for Additive Manufacturing organized by Coimbatore Institute of Engineering and Technology, Coimbatore from 10th June to 15th June 2020.
- Mr.Periyasamy R, Assistant Professor attended Six Days online Faculty Development Programme on Welding for Additive Manufacturing organized by Coimbatore Institute of Engineering and Technology, Coimbatore from 10th June to 15th June 2020.
- Dr.Manimaran R, Associate Professor attended Six Days online Faculty Development Programme on Welding for Additive Manufacturing organized by Coimbatore Institute of Engineering and Technology, Coimbatore from 10th June to 15th June 2020.
- Mr.Arulmurugan R, Assistant Professor attended One Week Online Faculty Development Program (FDP) on Advanced Materials Research organized by Bharat Institute of Engineering and Technology from 15th June to 19th June 2020.
- Dr.Vimal Anand S, Associate Professor attended One Week Online Faculty Development Program (FDP) on Advanced Materials Research organized by Bharat Institute of Engineering and Technology from 15th June to 19th June 2020.
- Mr.Chitharthan S, Assistant Professor attended One Week Online Faculty Development Program (FDP) on Advanced Materials Research organized by Bharat Institute of Engineering and Technology from 15th June to 19th June 2020.
- Dr.Ananthakumar K, Associate Professor attended One Week Online Faculty Development Program (FDP) on Advanced Materials Research organized by Bharat Institute of Engineering and Technology from 15th June to 19th June 2020.
- Mr.Periyasamy R, Assistant Professor attended One Week Online Faculty Development Program (FDP) on Advanced Materials Research organized by Bharat Institute of Engineering and Technology from 15th June to 19th June 2020.
- Mr.Sathish R, Assistant Professor attended One Week Online Faculty Development Program (FDP) on Advanced Materials Research organized by Bharat Institute of Engineering and Technology from 15th June to 19th June 2020.
- Dr.Ananthakumar K, Associate Professor attended One Week Online Faculty Development Program (FDP) on Recent Trends in Mechanical Engineering organized by EGS Pillay Engineering College, Nagapattinam, from 15th June to 20th June 2020.
- Mr.Rajesh M, Assistant Professor attended National Level One Week Online Faculty Development Programme (FDP) on Advancements in Manufacturing and optimization Techniques organized by Jayamukhi Institute of Technological Sciences, Hyderabad, from 22nd June to 26th June 2020.

- Dr.Ananthakumar K, Associate Professor attended Six Days Faculty Development Program on Advanced Machining Techniques organized by Sathyabama Institute of Science and Technology, Chennai, from 22rd June to 27th June 2020.
- Mr.Chitharthan S, Assistant Professor attended Five Days Online Faculty Development Program on Advancement in the field of Mechanical Engineering organized by Navodaya Institute of Technology, Raichur, Karnataka, from 23rd June to 27th June 2020.
- Mr.Muraleedharan P, Assistant Professor attended Five Days Online Faculty Development Program on Advancement in the field of Mechanical Engineering organized by Navodaya Institute of Technology, Raichur, Karnataka, from 23rd June to 27th June 2020.
- Mr.Periyasamy R, Assistant Professor attended Five Days Online Faculty Development Program on Advancement in the field of Mechanical Engineering organized by Navodaya Institute of Technology, Raichur, Karnataka, from 23rd June to 27th June 2020.
- Mr.Mohanraj J, Assistant Professor attended Five Days Online Faculty Development Program on Advancement in the field of Mechanical Engineering organized by Navodaya Institute of Technology, Raichur, Karnataka, from 23rd June to 27th June 2020.
- Dr.Ananthakumar K, Associate Professor attended Five Days Online Faculty Development Program on Advancement in the field of Mechanical Engineering organized by Navodaya Institute of Technology, Raichur, Karnataka, from 23rd June to 27th June 2020.
- Dr.Manimaran R, Associate Professor attended Five Days Online Faculty Development Program on Advancement in the field of Mechanical Engineering organized by Navodaya Institute of Technology, Raichur, Karnataka, from 23rd June to 27th June 2020.
- Mr.Arulmurugan R, Assistant Professor attended Six Days FDP on Emerging Automotive Technologies organized by Kalasalingam Academy of Research and Education, Virudhunagar, from 25th June to 30th June 2020.
- Dr.Vimal Anand S, Associate Professor attended Six Days FDP on Emerging Automotive Technologies organized by Kalasalingam Academy of Research and Education, Virudhunagar, from 25th June to 30th June 2020.
- Dr.Ananthakumar K, Associate Professor attended One Week Online Faculty Development Program on Emerging Research areas in Mechanical Engineering organized by CMR Technical Campus, Hyderabad, from 29th June to 03rd July 2020.
- Mr.Arulmurugan R, Assistant Professor attended One Week Online Faculty Development Program on Technological Advancements in Mechanical Engineering, TAME-2020 organized by Balaji Institute of Technology & Science, Warangal, from 29th June to 03rd July 2020.
- Dr.Ananthakumar K, Associate Professor attended One Week Online Faculty Development Program on Technological Advancements in Mechanical Engineering, TAME-2020 organized by Balaji Institute of Technology & Science, Warangal, from 29th June to 03rd July 2020.

#### **Government Projects / Patents Granted**

- Dr. R. Manimaran published a patent titled "Resistive Spot welding Using E-waste", File No.: 201941052756 on 09th January 2020.
- Mr. N. Subramani published a patent titled "EDP-Machine Learning: Enterprise Internet-OfThings (IOT) Application Development Platform Using Machine Learning", File No.: 202041012276 on 08th May 2020.
- Mr. M. Rajesh published a patent titled "CMWP- Machine Learning: Control the Manufacturing and Welding Processes Using Machine Learning", File No.: 202041012284 on 15th May 2020.
- Mr. V. V. Arun Sankar published a patent titled "CMWP- Machine Learning: Control the Manufacturing and Welding Processes Using Machine Learning", File No.: 202041012284 on 15th May 2020.

#### **NPTEL Certifications**

Se. No.	Course Name	Roll Number	Name
1	Fundamental of Welding Science and Technology	NPTEL 20ME23S1336063	C.Krishnaraj
2	IC Engines and Gas Turbines	NPTEL 20ME42S1131940	E.Baburaj
3	Fundamental of Welding Science and Technology	NPTEL 20ME23S1821064	S.Vimalanand
4	Roadmap for Patent Creation	NPTEL 20GE07S1189400	Titus Thankachan
5	Materials Science and Engineering	NPTEL 20MM09S1629417	Titus Thankachan
6	Fundamental of Welding Science and Technology	NPTEL 20ME23S1449554	M.Rajesh
7	Nature and Properties of Materials	NPTEL 20ME13S1309830	R.Arul Murugan
8	Computer Integrated Manufacturing	NPTEL 20ME44S21340982	V.V.Arun Sankar
9	Fundamentals of Automotive Systems	NPTEL20DE06S1590377	R.Periyasamy

#### **Coursera Certifications**

Se. No.	Name of the Faculty	Name of the Course	Course Offered By
1	Dr.C.Krishnaraj	Collaborative Robot Safety: Design & Deployment	University at Buffalo
2	Dr.C.Krishnaraj	Digital Manufacturing & Design	University at Buffalo
3	Dr.C.Krishnaraj	Advanced Manufacturing Process Analysis	University at Buffalo
4	Dr.C.Krishnaraj	Design Thinking for Innovation	University of Virginia



5	Dr.C.Krishnaraj	Materials Science: 10 Things Every Engineer Should Know	University of California, Davis
6	Dr.C.Krishnaraj	Modeling and Design for Mechanical Engineers with Autodesk Fusion 360	Autodesk
7	Dr. K. Ananthakumar	Advanced Manufacturing Enterprise	University at Buffalo
8	Dr. K. Ananthakumar	Material behavior	Georgia Institute of Technology
9	Dr. K. Ananthakumar	Material Processing	Georgia Institute of Technology
10	Dr. S. Vimal Anand	Material behavior	Georgia Institute of Technology
11	Dr.Titus Thankachan	Digital Manufacturing & Design	University at Buffalo
12	Dr.Titus Thankachan	Energy: The Enterprise	University at Buffalo
13	Dr.Titus Thankachan	Design Thinking for Innovation	University of Virginia
14	Mr.V.V.Arun Sankar	Digital Manufacturing & Design	University at Buffalo
15	Mr.V.V.Arun Sankar	Digital Thread : Implementation	University at Buffalo
16	Mr.V.V.Arun Sankar	Advanced Manufacturing Process Analysis	University at Buffalo
17	Mr.S.Sathishkumar	Digital Manufacturing & Design	University at Buffalo
18	Mr.S.Sathishkumar	Introduction to Thermodynamics transferring energy from here to there	University of Michigan
19	Mr.R.Haridass	Digital Manufacturing & Design	University at Buffalo
20	Mr.R.Haridass	Energy: The Enterprise	University at Buffalo
21	Mr.M.Rajesh	Digital Manufacturing & Design	University at Buffalo
22	Mr.M.Rajesh	Advanced Manufacturing Enterprise	University at Buffalo
23	Mr.J.Mohanraj	Digital Manufacturing & Design	University at Buffalo
24	Mr.J.Mohanraj	Materials Science: 10 things every engineers should know	University of California, Davis
25	Mr.P.Muraleedharan	Digital Manufacturing & Design	University at Buffalo
26	Mr.P.Muraleedharan	Energy: The Enterprise	University at Buffalo
27	Mr.R.Periyasamy	Digital Manufacturing & Design	University at Buffalo
28	Mr.R.Periyasamy	Excel Skills for Business: Essentials	Macquarie University
29	Mr.R.Sathish	Digital Manufacturing & Design	University at Buffalo
30	Mr.S.Chitharthan	Digital Manufacturing & Design	University at Buffalo

**Innovations by the Faculty in Teaching and Learning**

Se.No.	Course Name	Mode
1	Heat and Mass Transfer	ICT + Smart Class
2	Manufacturing Technology	ICT + Smart Class
3	Dynamics of Machinery	ICT + Smart Class
4	Automotive Sensors	ICT

5	Gas Dynamics and Jet Propulsion	ICT
6	Design of Transmission Systems	ICT
7	Flexible Manufacturing Systems	ICT
8	Product Life Cycle Management	ICT
9	Renewable Source of Energy	ICT
10	Principles of Management and Engineering Ethics	ICT
11	Industrial Robotics	ICT
12	Aircraft Systems	ICT
13	Composite Materials	ICT

#### Value Added Courses

Se.No.	Course Name	No. of times offered during the same year	Duration of the Course	Number of Students Enrolled
1	CNC Programming	1	45 Hrs	25
2	Introduction to Arduino MicroController and its Applications	1	30 Hrs	24
3	Training on Certified SolidWorks Associate Programme	1	45 Hrs	20

#### Initiatives Related to Industry Interaction

- SANTEC collaborated with the Department of Mechanical Engineering and supported our Manufacturing Technology (MT) Laboratory; Cylinder Re-boring Machine and Valve Grinding Machine were installed with the support of SANTEC on 24th January 2020.
- Siva Industries collaborated with the Department of Mechanical Engineering and supported our Engineering Metallurgy (EM) Laboratory; Grease Penetration Tester was installed with the support of Siva Industries on 17th February 2020.

#### Industry Offered Courses

- Hirectec India Pvt Ltd offers partial delivery of lectures as a part of the course, "Jigs, Fixtures and Tools in Body in White"
- "Soft Skills" is being offered by Infosys Limited as a part of Industry offered course.

#### Visiting Faculty

Se.No.	Name of the Visiting or Adjunct Faculty	Designation of the Faculty	Course Handled	Duration (Hours/Semester)
1	N.Sukumar	Managing Director, Tech Flow Engineers, Coimbatore - 21	Principles of Management	16
2	G. Prasath	Senior Engineer Design and Development, Aquasub Engineering	Strength of Materials	16

#### STUDENT ACHIEVEMENTS

##### Student Paper Publications

##### Irshadh KM, Sandeepkumar S, Chandru C, Lokesh R

- Published a paper titled, "Fabrication and Characterization of Hybrid Aluminium Metal Matrix Composite by Traditional Stir Casting Process", Turkish Journal of Physiotherapy and Rehabilitation, Vol.32, No. 3, pp. 3882 - 3887, 2020, International (WoS).

##### Prithuvi Rajan S, Rahulson M, Sathish T, Srireguram

- Published a paper titled, "Performance Characteristic Analysis of Vehicle Sub-frame Structure and validation through FEM Approach", International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET), Vol. 9, No.12, pp. 1145 - 11154, 2020, Referred.

### Elancheran S, Rajesh A, Kalidas M

- Published a paper titled "Augmentation of service quality and Customer Satisfaction in earth digger service center by using DMAIC integrated Triz methodology", Test Engineering and Management, Vol.82, pp. 6266 - 6275, 2020, International (Scopus).

### Online Certifications

- In the academic year 2019 - 2020,
  - Total number of NPTEL Certifications from Students: 105
    - Elite + Gold: 3
      - Vineeth K from the Department of Mechanical Engineering has been certified "Elite + Gold" by NPTEL, IIT Kharagpur on the course, "Programming in Java - Online"
      - Dhineshkumar N from the Department of Mechanical Engineering has been certified "Elite + Gold" by NPTEL, IIT Kanpur on the course, "Introduction to R Software - Online"
      - Vineeth K from the Department of Mechanical Engineering has been certified "Elite + Gold" by NPTEL, IIT Kanpur on the course, "Introduction to R Software - Online"
    - Elite + Silver: 27
    - Elite: 34
    - Successful Completion: 41
  - Total number of Coursera Certifications from Students: 14
  - Total number of Design Certifications from Students: 18
  - Total number of IT Certifications from Students: 7

### Placement, Higher Studies and Entrepreneurship

- In the academic year 2019 - 2020,
  - Out of the 209 final year students, 168 students are placed in companies inclusive of Government Jobs.
  - A total of 12 students from the Department of Mechanical Engineering, have been admitted to higher studies with valid qualifying scores.
  - Two of our students have turned into Entrepreneurs in the field of Engineering/ Technology.

### On Job Training

Se.No.	Company Name	Date	Number of Students
1	CADD CENTRE, Coimbatore	16.01.2020	50
2	Coimbatore Cad Solutions Pvt.Ltd	01.02.2020	12
3	MSME – TDC – Lean Six Sigma Green Belt	10.02.2020 to 13.02.2020	12
4	CADD Technologies, Coimbatore	25.02.2020 to 28.02.2020	50

### Industrial Visit

Se.No.	Company Name	Date From	Number of Students
1	Tamilnadu Agricultural University	04.03.2020	140
2	Best Heat Treatment	06.03.2020	64
3	Best Heat Treatment	06.03.2020	63

### Honors and Awards - Student Participation

- S. Mohamed Riyas khan from the Department of Mechanical Engineering participated and won First Place in Gyan Mitra '20 at Mepco Schlenk Engineering College held between 24.01.2020 to 25.01.2020
- Ragul Gandhi M from the Department of Mechanical Engineering participated and won Second Place in Kurukshetra 2020 at College of Engineering Guindy, Anna University held between 12.02.2020 to 16.02.2020
- Praveen Kumar N from the Department of Mechanical Engineering participated and won Second Place in Kurukshetra 2020 at College of Engineering Guindy, Anna University held between 12.02.2020 to 16.02.2020
- Ragul Gandhi M from the Department of Mechanical Engineering participated and won First Place in SHOCKAER ONZ 2020 at Hindusthan College of Engineering and Technology held on 28.02.2020
- Ragul Gandhi M from the Department of Mechanical Engineering participated and won First Place in Yaantrika 2020 at Hindusthan College of Engineering and Technology held on 28.02.2020
- Leo J from the Department of Mechanical Engineering participated and won Second Place in Mechsmith 2020 at KS Rangasamy College of Technology, Tiruchengode, Tamil Nadu held on 05.03.2020
- Amutharajan R from the Department of Mechanical Engineering participated and won Third Place in Mechsmith 2020 at KS Rangasamy College of Technology, Tiruchengode, Tamil Nadu held on 05.03.2020
- Monolisan P from the Department of Mechanical Engineering participated and won Third Place in Swastika 20 at Mar Baselios Christian College of Engineering and Technology, Kuttikanam, Kerala held between 06.03.2020 to 07.03.2020

- Balanchandar.M from the Department of Mechanical Engineering participated and won Third Place in Sciensea 2k20 at Kongu Engineering College, Erode held on 10.03.2020
- Shanmuga Bharathi P from the Department of Mechanical Engineering participated and won Second Place in Sciensea 2k20 at Kongu Engineering College, Erode held on 10.03.2020
- Sreerag P M from the Department of Mechanical Engineering participated and won Second Place in SKARA 2020 at VSB Engineering College, Karur, Tamil Nadu held on 11.03.2020
- Sathish S from the Department of Mechanical Engineering participated and won Second Place in SKARA 2020 at VSB Engineering College, Karur, Tamil Nadu held on 11.03.2020
- Naveen K from the Department of Mechanical Engineering participated and won Second Place in IGNIS 2k20 at Coimbatore Institute of Engineering and Technology, Coimbatore, Tamil Nadu held on 12.03.2020
- Balamurugan M from the Department of Mechanical Engineering participated and won Second Place in IGNIS 2k20 at Coimbatore Institute of Engineering and Technology, Coimbatore, Tamil Nadu held on 12.03.2020
- Vimal M from the Department of Mechanical Engineering participated and won Second Place in IGNIS 2k20 at Coimbatore Institute of Engineering and Technology, Coimbatore, Tamil Nadu held on 12.03.2020
- Santhosh A from the Department of Mechanical Engineering participated and won Second Place in IGNIS 2k20 at Coimbatore Institute of Engineering and Technology, Coimbatore, Tamil Nadu held on 12.03.2020
- Deepak R from the Department of Mechanical Engineering participated and won First Place in Threads T20 at Sona College of Technology, Salem, Tamil Nadu held between 13.03.2020 to 14.03.2020
- Sathiya S from the Department of Mechanical Engineering participated and won Second Place in Threads T20 At Sona College of Technology, Salem, Tamil Nadu held between 13.03.2020 to 14.03.2020

### **Co-Curricular Activities**

- Student Participation in inter-institute events for the academic year 2019-2020
  - Within the state
    - A total of 70 students Participated in Symposium
    - A total of 164 students Participated in Workshop
    - A total of 18 students Participated in Design Contest
    - A total of 34 students Participated in Conferences
  - Outside the state
    - A total of 43 students Participated in Events outside the State.
- Students from KCE, Department of Mechanical Engineering won “Best Design Evaluation and Cost Estimation” as a part of KCT’s, YUGAM – MINI DIRT Challenge held between 2nd March to 4th March 2020.

