

Department of Mechanical Engineering

VELAGAPUDI RAMA KRISHNA

SIDDHARTHA ENGINEERING COLLEGE



Academic Year 2020-21

Issue - I

DEPARTMENT NEWS LETTER
DEPARTMENT NEWS LETTER
DEPARTMENT NEWS LETTER



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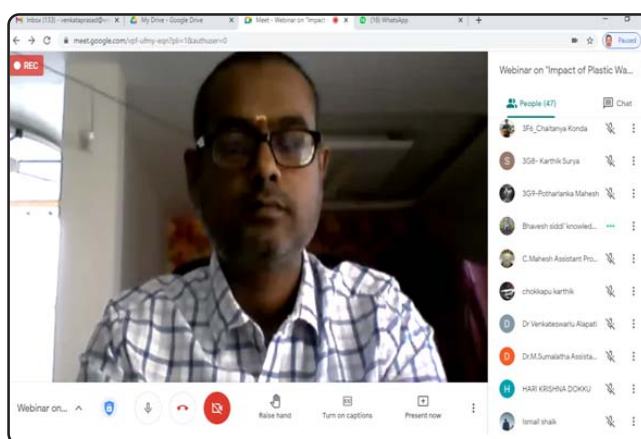
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WORKSHOPS/SEMINARS/FDP/CONFERENCES ORGANISED

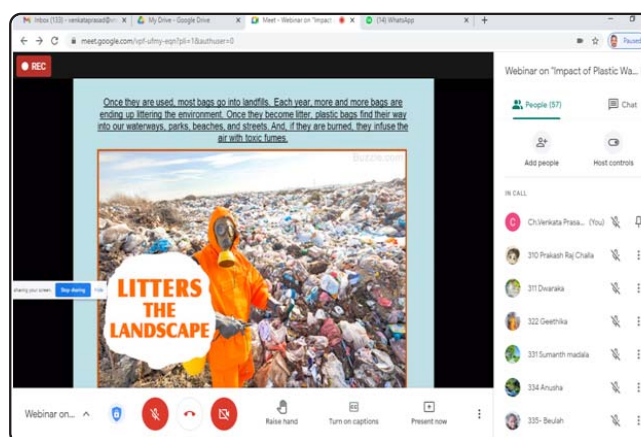
WEBINAR ON “IMPACT OF PLASTIC WASTE ON SOCIETY”

The department of Mechanical Engineering conducted a Webinar on “Impact of Plastic Waste on Society” in association with IQAC on 18/12/2020. Resource Person: Mr. Ramappa siddi, Asst. Environmental Engineer, Telangana State Pollution Control Board Hyderabad. The objective of the program is to create awareness among students and faculty on plastic waste usage and its harmful effects. Students and faculty of the departments participated with a large number.



The major impact of plastic bags on the environment is that it takes many years for them to decompose. In addition, toxic substances are released into the soil when plastic bags perish under sunlight and, if plastic bags are burned, they release a toxic substance into the air causing ambient air pollution.

Program Co-ordinator: Mr. CH. Venkata Prasad - Assistant Professor, Department of Mechanical Engineering, V R SEC Vijayawada.



FACULTY PUBLICATIONS

INTERNATIONAL JOURNALS:

- 1) G.V.N.B. Prabhakar, Lingaraju Dumpala, **N. Ravi Kumar**, “Investigating Mechanical Properties, Corrosion Resistance and Machining Characteristics of Al5083-Graphene Composites Produced by Friction Stir Processing”, The Indian Institute of Metals – IIM 2020 (Springer), 10 October 2020, **Scopus Indexed**.
- 2) **Prakash Babu Kanakavalli**, Vijaya Babu Vommi, “A Metaheuristic Algorithm for Solving Simultaneous Scheduling Problems”, International Journal of Mechanical and Production Engineering Research and Development (IJMPERD), ISSN (P): 2249 – 6890; ISSN (E): 2249-8001, Volume 10, Issue 3, September 2020, 13837 – 13848.
- 3) Bulasara Siva Kumar, **M. Balaji**, “Design and Analysis of Intake Valve of SI Engine”, International Journal of Mechanical and Production Engineering Research and Development (IJMPERD), ISSN (P): 2249 – 6890; ISSN (E): 2249-8001, Volume 10, Issue 3, September 2020, 13629 – 13634.
- 4) D. Brahmeswara Rao, **M. Balaji**, P. B. G. S. N. Murthy, K. Venkata Rao, “An Optimization Strategy to Reduce Surface Roughness, Flank Wear and Tool Vibration in Micro Milling of Ti-6Al-4V Alloy”, Journal of Mechanics Continua and Mathematical Sciences, ISSN (Online) : 2454 – 7190, Volume 15 No.-7, July 2020, pp 529-539.
- 5) V. Uma Sai Vara Prasad, K. Venkata Rao, **Ch. Nagaraju**, M. Venu, M. Venkataiah, “Experimental Surface Quality Estimation in Ultrasonic Vibration Assisted Helical Milling”, Journal of Mechanics Continua and Mathematical Sciences, ISSN (Online) : 2454 – 7190, Volume 15 No.-7, July 2020, pp 472-479.
- 6) Ch Hari Krishna, **Ch Nagaraju**, “Modelling of Cylindrical Upsetting Process for Enhanced Ductile Fracture”, Materials Today Proceedings, ISSN: 2214 – 7853, July 2020, **Scopus Indexed**.
- 7) K. Gopi Krishna, Koteswara Rao Unnam, **Ch Nagaraju**, “Mitigation of Stress Concentration in a Plate Having a Central Hole Subjected to Tensile Load Using Piezoelectric Patches”, International Journal of Mechanical and Production Engineering Research and Development (IJMPERD), ISSN (P): 2249 – 6890; ISSN (E): 2249-8001, Volume 10, Special Issue, August 2020, 414-419, **Scopus Indexed**.
- 8) Vemuri Sravani, **S. Srinivas Prasad**, M. Ravi Teja, **K. Ramanaih**, “Acoustic Analysis of ship propeller using CFD”, International Journal of Ambient Energy, 5th November 2020. **ESCI, SCOPUS**.
- 9) D Rajamani, E Balasubramanian, **G Dilli Babu**, K Ananthakumar, ‘Experimental investigations on high precision abrasive waterjet cutting of natural fibre reinforced nano

clay filled green composites', Journal of Industrial Textiles, ISSN :1528-0837, JULY 2020, 50, pp 1-25. Indexed in **SCIE. Impact factor 2.0**

- 10) **M. Bala Chennaiah, A. Sreenivasulu, K. Ravi Kumar**, "Influence of Tool Profiles on Heat Transfer Analysis in Al-6061 Alloy Using Friction Stir Welding", Trends in Manufacturing and Engineering Management, Lecture Notes in Mechanical Engineering, PP 545-553, August 2020, https://doi.org/10.1007/978-981-15-4745-4_48. **SCOPUS. ISBN 978-981-15-4745**
- 11) **Mallapuram Bala Chennaiah**, Podaralla Nanda Kumar, Karanam Prahlada Rao, "Experimental Investigation of heat treatment processes on Dissimilar IS2602-EN9 MIG welded joint", Trends in Mechanical and Biomedical Design , Lecture notes in Mechanical Engineering, PP 459-465, August 2020. **SCOPUS. ISBN :978-981-15-4488**
- 12) Srihari Prasad, V. Srinivasa Sai , K. Venkata Ramana and **V. Balakrishna Murthy**, "Establishment of "Back-Track" Method: A Simpler Approach to Determine Fiber Elastic Properties", Article in Press, Materials Today Proceedings, November 2020 ISSN : 2214-7853 . **SCOPUS**
- 13) S. Ravi Theja Reddy, A.V. Ratna Prasad, **K. Ramanaiah**, "Tensile and flexural properties of biodegradable jute fiber reinforced poly lactic acid composites" Materials Today: Proceedings. ISSN : 2214-7853 December 2020. <https://doi.org/10.1016/j.matpr.2020.10.806>.
- 14) **G. Jamuna Rani**, G Sai Rani, Anchupogu Praveen, " Nano fluids effect on crossflow heat exchanger characteristics – Review ", Materials Today: Proceedings. ISSN: 2214-7853, December 2020.
- 15) Gudlavalleti Vamsi Babul and **V. Balakrishna Murthy**, "Prediction of thermal ablation in rocket nozzle using CFD and FEA", International Journal of Computational Materials Science and Engineering, Vol 9, No 3, September 2020. PP 2050014(1-12) ISSN : 2047-685X, Indexed in **ESCI, SCOPUS**
- 16) **C. Mahesh**, K. Govindarajulu and **V. Balakrishna Murthy**, "Verification of Numerical Homogenization Approach in Predicting Thermal Conductivities of Fibre Reinforced Composites with Voids and Randomly distributed Fibres", International Journal of Computational Materials Science and Engineering, Vol 9, No 3, September 2020, PP 2050017(1-19),ISSN : 2047-685X, Indexed in **ESCI, SCOPUS**.
- 17) U. Hari Babu, **N. Vijaya Sai**, Ranjeet Kumar Sahu, "Artificial Intelligence system approach for optimization of drilling parameters of glass-carbon fiber/ polymer composites" Silicon

2020, ISSN 1876-9918, August 2020, <https://doi.org/10.1007/s12633-020-00637-5> .
Impact factor 1.246. **ESCI indexed.**

- 18) **K. Siva Prasad**, G. Chaitanya “Optimization of process parameters on surface roughness during drilling of GFRP composite using taguchi technique”. Materials Today Proceedings. ISSN : 2214-7853, July 2020,
- 19) **K. Siva Prasad**, G. Chaitanya “Multi-objective optimization of machining parameters on drilling of GFRP composite using hybrid GRA-PCA Techniques”. International Journal of Mechanical and Production Engineering Research and Development (IJMPERD). Vol. 10, Issue 3 Jun 2020.
- 20) Jyoti Menghani, Akash Vyas, Pringal Patel, Harshad Natu, **Satish More** “Wear, erosion and corrosion behavior of laser clad high entropy alloy coatings – A review”. Materials Today Proceedings. ISSN : 2214-7853, October 2020.
- 21) Rahul Jagtap, Ganesh Kakandikar, Ajit Dhanawade, **Satish More** “Optimization of wall thickness and geometric accuracy in stretch forming combined with incremental sheet forming using grey relation analysis (GRA)”. Materials Today Proceedings, ISSN : 2214-7853, December 2020.

International Conferences:

1. M. Sivanagaraju , **G. Dilli Babu**, **N. Vijaya sai**, ‘Fabrication and Mechanical Behavior of Nano-Based Green Particle Reinforced Composites’, International Multidisciplinary Conference on Current Research Trends-2020 (IMCCRT-2020-1325) Organized by International Institute Of Knowledge and Research, Malaysia on 19th and 20th September, 2020 .
2. **G DilliBabu**, Garikapati Bhava and K. SivajiBabu, ‘Mechanical and Machining Characterization of Agave Americana, Pineapple and its hybrid fiber composites’, 3rd International Conference on Advancements in Materials for Manufacturing (ICAAMM-2020) Organized by MLR Institute of Technology Hyderabad, during 24th – 25th July 2020.
3. Anchupogu Praveen, **G. Jamuna Rani**, B. Balakrishna, “ Effect of MWCNT as nano additives in Calophyllum Inophyllum biodiesel blends on the performance and emission parameters of a diesel engine”, 4th international Conference on Soft Materials (ICSM 2020) organized by Malaviya National Institute of Technology, Jaipur, from 13th to 18th December 2020. PP 116.
4. Ramana K. V., Srihari Prasad A. and **Balakrishna Murthy V.**, “Prediction of elastic properties of Sisal fiber using back-track approach”, International conference on Recent

Developments in Mechanical Engineering ICRDME-2020, being organized by KL University held during 18th -19th December 2020.

5. Vijaya Kanth P., and **Balakrishna Murthy V.**, “A numerical approach to study the effect of load and geometry on thermal ablation”, International conference on Recent Developments in Mechanical Engineering ICRDME-2020, being organized by KL University held during 18th -19th December 2020.
6. Fardeen khan, **Dr. V. Balakrishna Murthy**, M. Saibabu, K. Pujitha, G. Divya and D. Kiranmai, “Prediction of Thermal Ablation of a Re-Entry Missile Nose Cap”, 65th Congress of Indian Society for Theoretical and Applied Mechanics (ISTAM-2020), an International Conference being organized by GITAM University, Hyderabad during 9th to 11th December, 2020.
7. Mukesh CH.S.N.S.B., Venkateswarao A. and **Balakrishna Murthy V.**, “Analysis of Two-Phase Flow Around a Pier through Numerical Simulations”, 65th CONGRESS OF ISTAM, an International Conference being organized by GITAM University, Hyderabad during 9th to 11th December, 2020.
8. Sri Pavan Krishna A, Mohan Sai Raju, Md. Mukheem and **Balakrishna Murthy V.**, “A numerical simulation for reducing the scouring effect using sacrificial piers”, 65th CONGRESS OF ISTAM, an International Conference being organized by GITAM University, Hyderabad during 9th to 11th December, 2020.
9. **M. Sumalatha**, J. N, Malleswara Rao, **B.Supraja Reddy**, “Optimization of Process Parameter in Fused Deposition Modelling (FDM) using Taguchi Method”, International E- conference on Industry 4.0 Technologies in Civil & Mechanical Engineering (IC14TCME – 2020) held at Vasireddy Venkatadri Institute of Technology on 4th to 5th December 2020.
10. D. Prasanna Kumar, **A. N. Phani Deepthi**, “A Review on Performance, Combustion and emission Characteristics of CRDI diesel engine charged with Diethyl Ether”, International conference on Recent Developments in Mechanical Engineering ICRDME-2020, being organized by KL University held during 18th -19th December 2020.

GUEST LECTURES DELIVERED BY FACULTY

1. A Guest Lecture was delivered by **Dr M.Balaji** on topic “Design of Experiments” at Geethanjali Institute of Science & Technology, Nellore on 30th July, 2020
2. A Guest Lecture was delivered by **K.Ramanaiah** on topic “Experimental Study of fire properties of Caryotaurens palm fiber reinforced polyester composites” at Mahatma Gandhi university Kottayam, Kerala on 13th Dec, 2020

3. A Guest Lecture was delivered by **Dr B.Raghava Rao** on topic “Modelling and Analysis of Fluid thermal structural interaction” at VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad on 19th Dec, 2020
4. A Guest Lecture was delivered by **Dr V.Balakrishna Murthy** on topic “Modelling of Interlaminar stresses in FRP composites-Structural” at VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad on 16th Dec, 2020
5. A Guest Lecture was delivered by **Dr V.Balakrishna Murthy** on topic “Modelling of Interlaminar stresses in FRP composites-Thermal” at VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad on 16th Dec, 2020

WORKSHOPS/SEMINARS/FDP ATTENDED BY FACULTY

1. **K. Ramanaiah, G Sridhar Babu** and **K. Siva Prasad** attended the event on “ Futuristic Trends in Research for Mechanical Engineering “ at Shri Vishnu Engineering College for Women, Bhimavaram on 25th June- 4th July,2020
2. **Dr. Satish R More** attended the event on “ Research Techniques and Sustainable Development in Mechanical Engineering “ at St. John College of Engineering and Management, Palghar on 29th June – 03rd July, 2020
3. **G. Sridhar Babu** attended the event on “ Advancements in Mechanical Engineering “ at GATES Institute of Technology, Ananthapuram, A.P on 4th-10th July, 2020
4. **Dr. M. Balaji** attended the event on “ Innovation, creativity and entrepreneurship – ice2020: a cool workshop “ at Satya Institute of Technology and Management, Vizianagaram. on 6-10th July, 2020
5. **V.V. Venu Madhav** attended the event on “ Materials Processing and Optimization “ at NITTTTR, Chandigarh on 6-10th July, 2020
6. **G. Sridhar Babu** attended the event on “ Industrial Robotics & its Applications “ at GMR Institute of Technology, Rajam on 6-11th July, 2020
7. **Dr N. Vijaya Kumar** and **V.V. Venu Madhav** attended the event on “ Shape Memory Alloys: Applications & Research Opportunities “ at Vignan Institute of Technology & Science, Hyderabad on 7th July, 2020
8. **G. Sridhar Babu** attended the event on “ Composites for Beginners “ at Vignan Institute of Technology & Science, Hyderabad on 9th July, 2020
9. **Dr. V. Balakrishna Murthy** attended the event on “Composite materials for Engineering Applications” at Geethanjali College of Engineering & Technology. on 13th July, 2020

10. **K. Ramanaiah** and **Dr. M. Balaji** attended the event on “Research Innovations In Mechanical Engineering – RIME-2K20 “ at SASI institute of Technology & Engineering, Tadepalligudem, West Godavari. on 13th- 17th July, 2020
11. **V.V. Venu Madhav** attended the event on “ Professional Behavior “ at Francis Xavier Engineering College, Tirunelveli (Tamilnadu State) on 14th July, 2020
12. **V.V. Venu Madhav** attended the event on “ Gearing up for Industry 4.0 : A focus on Indian PSUs” at ArulmiguMeenakshi Amman College Of Engineering, TiruvannamalaiDist, Tamil Nadu on 15th July, 2020
13. **Dr. M. Balaji** attended the event on “ How to Read a Research Paper? “ at VISAKHA institute of Engineering & Technology, Visakhapatnam on 18th July, 2020
14. **V.V. Venu Madhav** attended the event on “ Role of Machine Learning in Real-Time Applications “ at Scad college of engineering and technology, Tirunelveli on 18th July, 2020
15. **Dr Ch. Naga Raju** attended the event on “ Failure and Damage Mechanics of High Performance Engineering Materials “ at Anil Neerukonda Institute of Technology & Sciences on 13-18th July, 2020
16. **Dr. M. Balaji** attended the event on “ Role of Materials and Processing in Additive Manufacturing: 3D Printing to Industry-2020 “ at GLA University, Mathura on 19th-24th July, 2020
17. **V.V. Venu Madhav** attended the event on “ Research Scope in Tribology “ at Vignan Institute of Technology & Science (Telangana State) on 21st July, 2020
18. **V.V. Venu Madhav** and **K. Ramanaiah** attended the event on “ Research Methodology: Structure of Original Research Article and Insights “ at Shri Vishnu Engineering College for Women, Bhimavaram on 21st July, 2020
19. **V.V. Venu Madhav** attended the event on “ Enhancing Research effectiveness through best tips “ at Annamacharya Institute of Technology & Sciences, Rajampet (A.P.) on 21st July, 2020
20. **V.V. Venu Madhav** attended the event on “ Mechanical Components Drafting by AutoCAD “ at APSSDC, Vijayawada on 13-25th July, 2020
21. **V.V. Venu Madhav** attended the event on “ Role of Materials and Processing in Additive Manufacturing: 3D Printing to Industry-2020 “ at GLA University, Madhura (U.P.) on 19-24th July, 2020
22. **Dr. B. Raghava Rao** attended the event on “ Empowering the All Electric Society “ at on 22nd July, 2020

23. **K. Ramanaiah, Dr N. Vijaya Kumar, Dr. M. Balaji and V.V. Venu Madhav** attended the event on “Advanced Research Traits in Materials & Design of Mechanical Systems “ at Vignan’s University, Vadlamudi(A.P.) on 22-27th July, 2020
24. **G. Sridhar Babu** attended the event on “ 2nd International (Virtual) Conference on Recent Trends in Technology Engineering and Applied Science (ICRTTEAS) “ at Dr. T Thimmaiah Institute of Technology, K.G.F, Karnataka. on 24th-25th July, 2020
25. **G. Sridhar Babu** attended the event on “ Additive Manufacturing “ at Mandsaur University, M.P on 25th July, 2020
26. **G. Sridhar Babu, Dr. Satish R More, and Dr. V. BalakrishnaMurthy** attended the event on “ Engineering Applications of Defence Stealth Technology’ A Game Changer “ at Tirumala Engineering College, Narasaraopet, Guntur on 25th July, 2020
27. **V.V. Venu Madhav** attended the event on “ The Role of Electronics Engineering Fraternity in Craving a Super Techno Power India “ at The Institute of Electronics and Telecommunication Engineers, Hyderabad on 26th July, 2020
28. **G. Sridhar Babu** attended the event on “ MIM, Quality and Problem solving Tools and Automation “ at SaiVidya Institute of Technology, Rajanukunte, Bengaluru, Karnataka. on 26th July, 2020
29. **Dr N. Vijaya Kumar** attended the event on “ Plastics Challenges: Processing and Recycling “ at Vignan Institute of Technology & Science, Hyderabad on 26th July, 2020
30. **G. Sridhar Babu** attended the event on “ A Practical Approach on Industry 4.0 & its Implementation in Smart Factories “ at Mahatma Gandhi Institute of Technology, Hyderabad on 26th July, 2020
31. **K. Ramanaiah** attended the event on “ Dr. APJ Abdul Kalam Memorial Global Webinar Impact of COVID-19 on Development of Rural Economy-Challenges and Opportunities “ at JNTU Ananthapuram on 27th July, 2020
32. **G. Sridhar Babu** attended the event on “ Recent Trends in Production Technology “ at East West Institute of Technology, Bengaluru on 27th-28th July, 2020
33. **Dr N. Vijaya Kumar** attended the event on “ Nanotechnology and Functional Materials (NTFM) “ at S.V.College of Engineering, Tirupati on 27th July- 1st Aug, 2020
34. **V.V. Venu Madhav** attended the event on “ Recent Trends in Advanced Manufacturing Technology “ at ArulmiguMeenakshi Amman College of Engineering(Tamilnadu State) on 29th July, 2020
35. **V.V. Venu Madhav** attended the event on “ Thrust Areas in Mechanical Engineering “ at Geethanjali Institute of Science & Technology, Nellore on 27-31st July, 2020

36. **V.V. Venu Madhav** attended the event on “ CAD/CAM and Rapid Prototyping Technologies (CAD/CAM & RPT) “ at NITTTR, Chandigarh on 27-31st July, 2020
37. **G. Sridhar Babu** attended the event on “ Optimization Techniques for Mechanical Engineers “ at Vignan Institute of Technology & Science (Telangana State) on 27th July-1st Aug, 2020
38. **G. Sridhar Babu** attended the event on “ Finite Element Analysis with Ansys Mechanical APDL “ at SrinivasaRamanujan Institute of Technology, Ananthapuram. on 28th July- 5th Aug, 2020
39. **V.V. Venu Madhav** attended the event on “ Life after B.Tech “ at Aacharya on 1st Aug, 2020
40. **V.V. Venu Madhav** attended the event on “ Electric Mobility & Its Ecosystem “ at SNS College of Technology, Coimbatore on 1st Aug, 2020
41. **V.V. Venu Madhav** attended the event on “ Annual Pump Performance Test for Fire Pumps “ at Assocham India on 3rd Aug, 2020
42. **V.V. Venu Madhav** attended the event on “ Scope in Automotive Industry “ at VVIT, Nambur(A.P.) on 3rd Aug, 2020
43. **K. Ramanaiah** attended event the on “ Emerging Technologies Industry 4.0 “ at Anurag University on 3rd Aug, 2020
44. **G. Sridhar Babu** attended event the on “ Advanced Nano materials & Their Engineering Applications (AdvNano-2020) “ at GRM Institute of Technology, Rajam, A.P. on 3rd-8th Aug, 2020
45. **Dr N. Vijaya Kumar** attended the event on “ Fundamentals of Refrigeration and Air Conditioning Systems “ at Rajalakshmi Engineering College, Chennai on 6th Aug, 2020
46. **Dr N. Vijaya Kumar** attended the event on “ Advanced Welding Technologies “ at Jain Faculty Engg and Technology, Bengaluru on 4-8th Aug, 2020
47. **V.V. Venu Madhav** and **K. Ramanaiah** attended the event on “ Quality Sustenance and Enhancement Parameters –NAAC and NIRF Ranking Framework “ at MarudharKesari Jain College For Women, Marudhar Nagar, Vaniyambadi (Tamilanadu State) on 6-7th Aug, 2020
48. **V.V. Venu Madhav** attended the event on “ All about GEM Green Building Certification Program “ at Assocham India on 8th Aug, 2020
49. **V.V. Venu Madhav** attended the event on “ Indian Culture beyond boundaries “ at Jain Faculty of Engineering and Technology, Bangalore on 8th Aug, 2020
50. **K. Ramanaiah** attended the event on “ Demystifying the New Education Policy Impact on the Future of Indian Education System “ at Lead India Foundation on 8th Aug, 2020

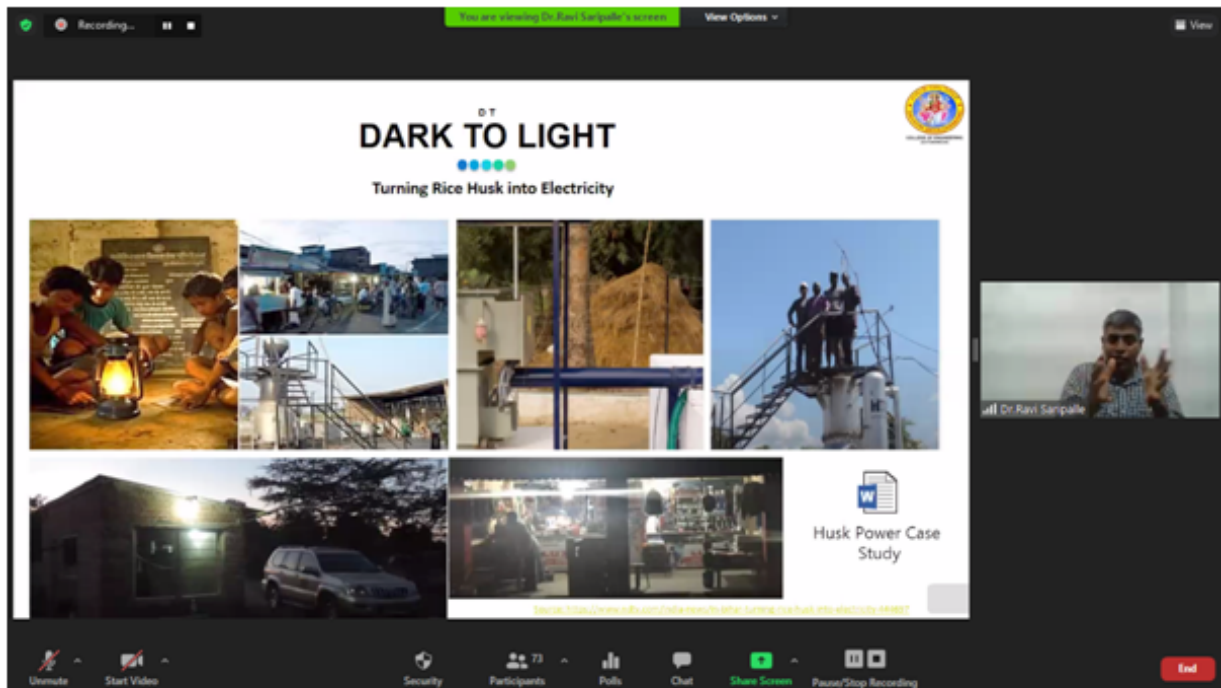
51. **G. Sridhar Babu** attended the event on “ PCM based Thermal Management for solar and Building applications “ at Loyola Institute of Technology and Science, Thoivalai on 8th Aug, 2020
52. **G. Sridhar Babu** attended the event on “ Design Thinking to Digital Thinking “ at CMR Institute of Technology, Hyderabad on 8th Aug, 2020
53. **Dr. V. Balakrishna Murthy, K. Prakash Babu, K. Ramanaiah, Dr. M. Balaji, V.V. Venu Madhav, M. Rajesh, Dr. Satish R More and V. Vasu** attended the event on “ Introduction to Automotive Noise, Vibration and Harshness “ at VRSEC, Vijayawada on 10th Aug, 2020.
54. **G. Sridhar Babu** attended event the on “ Vibration Analysis of Rotating Machinery “ at Mandsaur University, M.P on 10th Aug, 2020
55. **K. Ramanaiah and G. Sridhar Babu** attended the event on “ Recent Developments in Mechanical Engineering “ at PVPSIT, Vijayawada on 10th-14thAug, 2020
56. **G. Sridhar Babu** attended the event on “Innovative Product Design, Precision Engineering and Optimization “ at Vasavi College of Engineering, Hyderabad. on 10th-14th Aug, 2020
57. **Dr. M. Balaji and V. Bapi Raju** attended the event on “ Role of Artificial Intelligence & Machine Learning for Future Manufacturing Systems “ at Usha Rama College of Engg, Telaprolu. on 12th Aug, 2020
58. **V.V. Venu Madhav** attended the event on “ Multiphysics simulations using ANSYS “ at Vignan’s University (Guntur District) on 12th Aug, 2020
59. **G. Sridhar Babu** attended the event on “ Artificial Intelligence in Manufacturing “ at Basaveshwar Engineering College, Bagalkot. on 14th Aug, 2020
60. **V.V. Venu Madhav** attended the event on “ Innovative Applications of 3D Printing “ at Vignan’s University (Guntur District) on 15th Aug, 2020
61. **Dr. K. Srinivas** attended the event on “ LaTeX “ at Central Library & Training & Placement Cell, Degree College Tangmarg on 15th-18th Aug, 2020
62. **V.V. Venu Madhav** attended the event on “ Advanced Applications of 3D Printing Technologies “ at Vignan’s University (Guntur District) on 18th Aug, 2020
63. **V.V. Venu Madhav** attended the event on “ Latest Trends in Engineering, Science and Technology: Nanomaterials “ at Lendi Institute of Engineering and Technology, Vizianagaram on 10-15th Aug, 2020
64. **V.V. Venu Madhav** attended the event on “ Failure and Damage Mechanics of High Performance Engineering Materials-Phase-II “ at Anil Neerukonda Institute of Technology & Sciences, Visakhapatnam on 10-15th Aug, 2020

65. **Dr N. Vijaya Kumar** attended the event on “ Industrial Internet of Things “ at NITTeMeenakshi Institute of Technology, Bangalore on 12-16th Aug, 2020
66. **V.V. Venu Madhav** attended the event on “ OUTCOME BASED EDUCATION - A Continuous Quality Improvement of the Program “ at SRKR Engineering College, Bhimavaram on 17-21st Aug, 2020
67. **V.V. Venu Madhav** attended the event on “ Repair and Maintenance of Machine Tools “ at NITTTTR, Chandigarh on 17-21st Aug, 2020
68. **G. Sridhar Babu** attended the event on “ Impact Behavior of FRPs Composites “ at Dr.Ambedkar Institute of Technology, Bengaluru. on 19th Aug, 2020
69. **V. Vasu** attended the event on “ Fuel Cell Technologies for Hybrid and Electric Vehicles (FCTHEV) “ at MaharajVijayaramGajapathi Raj College of Engineering, Vizianagaram on 17-22 Aug, 2020
70. **Dr. V. Balakrishna Murthy, K. PrakashBabu, Dr. B. RaghavaRao, Dr. K. Srinivas, Dr. M. Balaji, V.V. Venu Madhav, K. Ramanaiah, M. Rajesh and V.Vasu** attended the event on “ Thermal Battery Power Sources and Explosive Heat Actuated Thermal Subsystems in Aerospace Applications “ at VRSEC, Vijayawada on 23rd Aug, 2020 “
71. **Dr. V. Balakrishna Murthy, Dr. K. Srinivas, Dr. M. Balaji and K. PrakashBabu** attended the event on “ Blockchain Technology and its Applications in Mechanical Engineering “ at VRSEC, Vijayawada on 25th Aug, 2020 “
72. **Dr. M. Balaji and G. Sridhar Babu** attended the event on “ Industry 4.0/ Smart Factory Automation with Digital Twin “ at Vignan’s Foundation for Science, Technology & Research. on 25th Aug, 2020 “
73. **V.V. Venu Madhav** attended the event on “ Vibration Based Tool Condition Montoring “ at Vignan’s University (Guntur District) on 26th Aug, 2020
74. **Dr. M. Balaji and V.V. Venu Madhav** attended the event on “ CFD Using Finite Volume Method With Simulation in ANSYS “ at Vignan’s University (Guntur District) on 27th Aug, 2020
75. **V.V. Venu Madhav** attended the event on “ Tribology & Sustainability “ at SRM Institute of Science and Technology (Tamilanadu State) on 24-28th Aug, 2020
76. **G. Sridhar Babu** attended the event on “ Recent Advances in Renewable Energy “ at BVC Engineering College, Odalarevu, A.P on 24-28th Aug, 2020
77. **Dr. M. Balaji and V.V. Venu Madhav** attended the event on “ Measurement of Road Transportation Vibration on Vehicles “ at Vignan’s University (Guntur District) on 29th Aug, 2020

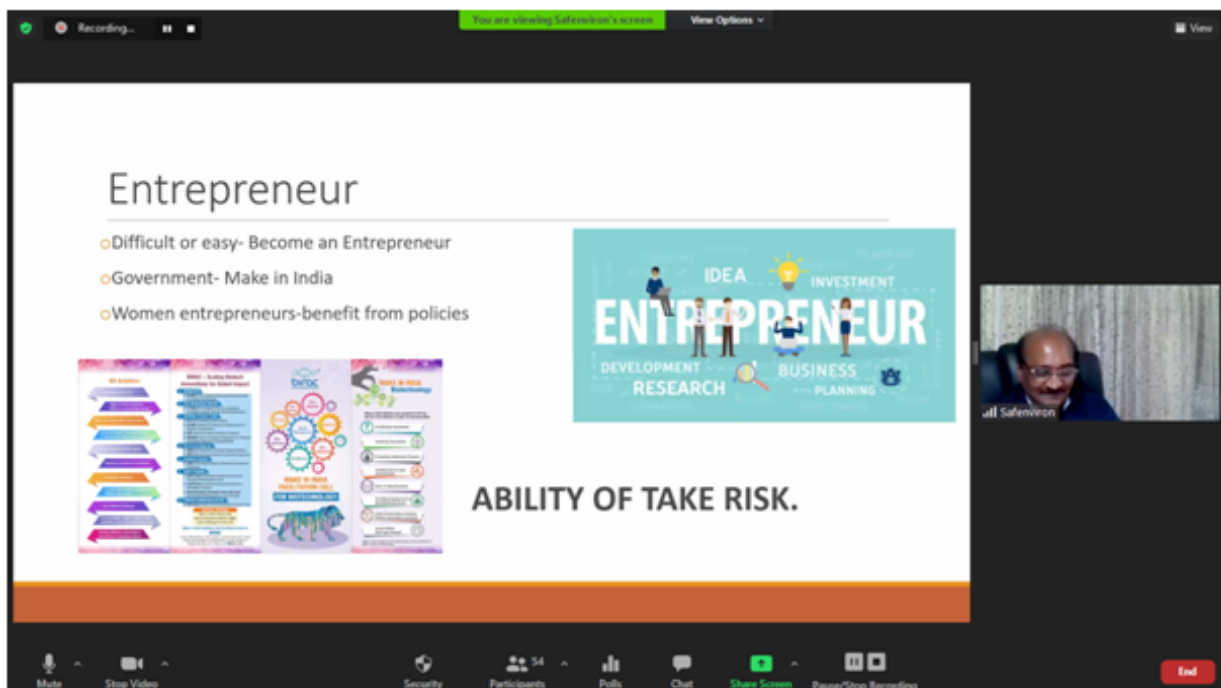
78. **V.V. Venu Madhav** attended the event on “ Fluidization Techniques for Deagglomeration of Nanopowders “ at Vignan’s University (Guntur District) on 31th Aug, 2020
79. **Dr. K. Naga Malleswara Rao** attended the event on “ “PG NBA Process – SAR Preparation” under AICTE Margdarshan “ at VRSEC, Vijayawada. on 31st Aug-1st Sep, 2020
80. **K. Ramanaiah** attended the event on “ Use of LMS, Virtual Teaching and OBE Software for Engineering “ at VMEDULIFE Software Services on 3rd Sep, 2020
81. **V.V. Venu Madhav** attended the event on “ Introduction to Amazon Web Services “ at Jain Faculty of Engineering and Technology, Bangalore on 5th Sep, 2020
82. **Dr. K. Srinivas** attended the event on “ Electric Vehicles: An Opportunity for India “ at R.M.K College of Engineering and Technology, Tamilnadu. on 7th-12th Sep, 2020
83. **Dr. B. Raghava Rao** attended the event on “ Mysteries of Geospace Storms “ at on 9th Sep, 2020
84. **Dr N. Vijaya Kumar, B. Supraja Reddy and K. Prakash Babu** attended the event on “ Condition Based Monitoring CNC Machine Tools “ at Central Manufacturing Technology Institute, Bangalore on 9th Sep, 2020
85. **V.V. Venu Madhav** attended the event on “ First International Virtual Conference On Nanomaterials, FIVCON-2020 “ at Acharya Nagarjuna University, Guntur on 10-12th Sep, 2020
86. **M. Rajesh** attended the event on “ Industry 4.0 Technology Pillars “ at Central Manufacturing Technology Institute, Bengaluru. on 14th Sep, 2020
87. **Dr. V. Balakrishna Murthy and Dr. B. Raghava Rao** attended the event on “ Multi-Scale Computational Fluid Dynamics: Fundamentals and Applications “ at Dr. B R Ambadkar National Institute of Technology, Jalandhar, Punjab. on 21st-25th Sep, 2020
88. **G. Jamuna Rani** attended the event on “ Advances in Engine Combustion and Emission Diagnostics “ at NIT A.P on 5th-9th Oct, 2020
89. **Dr. V. BalaKrishna Murthy** attended the event on “ ISRO FEAST “ at FEAST Under Licence From ISRO on 5th-10th Oct, 2020
90. **Dr. M. Sumalatha and B. Supraja Reddy** attended the event on “ Finite Element Method for Engineering Applications “ at Sai Ram Engineering College, Chennai. on 5th-10th Oct, 2020
91. **V.Vasu** attended the event on “ Accelerating Hydrogen and Fuel Cell Technology “ at CFCT-ARCI, Chennai on 8th Oct, 2020
92. **Dr. K. Srinivas** attended the event on “ Professional Morals, Work Ethics & Accountability for Teachers in Technical Education “ at VRSEC, Vijayawada. on 19th-31st Oct, 2020

93. **Dr Ch. Naga Raju** attended the event on “ Additive Manufacturing for Medical and Aerospace Applications “at Shri Vishnu Engineering College for Women, Bhimavaram on 26-31st Oct, 2020
94. **Dr M.Jogendra Prasad, K. Prakash Babu, B. Supraja Reddy, Dr. M. Sumalatha, Dr. K. Naga Malleswara Rao and A.N. PhaniDeepthi** attended the event on “ AtmaNirbhar Bharat: The Role of Collaborations “ at SRM University, A.P. on 7th Nov, 2020 “
95. **Dr. M.Sumalatha and B. Supraja Reddy** attended the event on “ Additive Manufacturing for Medical and Aerospace Applications “ at Shri Vishnu Engineering College for Women, Bhimavaram, A. P. on 16th – 21st Nov, 2020
96. **B. Supraja Reddy** attended the event on “ Saga of Science from 13th to 21st Century “ at SRM University, A. P. on 21st Nov, 2020
97. **Dr. M. Sumalatha** attended the event on “ Optimization of Process Parameters in Fused Deposition Modelling (FDM) Using Taguchi Method “ at Two Day International E-Conference on Industry 4.0 Technologies in Civil & Mechanical Engineering (IC14TCME - 2020), VVIT, Guntur, A. P. on 4th& 5th Dec, 2020
98. **Dr. M. Sumalatha** attended the event on “ Pursuit of Excellence: Institution Building “ at SRM University, A. P. on 12th Dec, 2020
99. **K. Ramanaiah and V. Bapi Raju** attended the event on “ Process of Innovation Development (Inspire to Innovate) “ at VRSEC, Vijayawada on 17th Dec, 2020
100. **Dr. M. Sumalatha** attended the event on “ Impact of Plastic Waste on Society “ at V. R. S. E. C, Vijayawada on 18th Dec, 2020
101. **Dr. N. Vijaya Kumar** attended the event on “ Nurturing Morals, Work Ethics & Accountability for Technical Teachers “ at VRSEC, Vijayawada on 7th-19th Dec, 2020
102. **K. Srinivasa Rao, Dr M.Jogendra Prasad, P. Gopinadh Choudary and G. Srivalli.** attended the event on “Universal Human Values in Technical Education “ at AICTE, New Delhi on 14-18th Dec, 2020
103. **K. Siva Prasad** attended the event on “ Additive Manufacturing for Medical and Aerospace Applications(Phase-3) “ at Shri Vishnu Engineering College for Women, Bhimavaram on 14-19th Dec, 2020
104. **K. Siva Prasad** attended the event on “ Smart Manufacturing Technologies “ at NIT, Bhopal on 23-27th Dec, 2020
105. **Dr M.Jogendra Prasad** attended the event on “ Resilience-DNA of Success “ at VRSEC, Vijayawada on 28th Dec, 2020

GUEST LECTURES ORGANISED



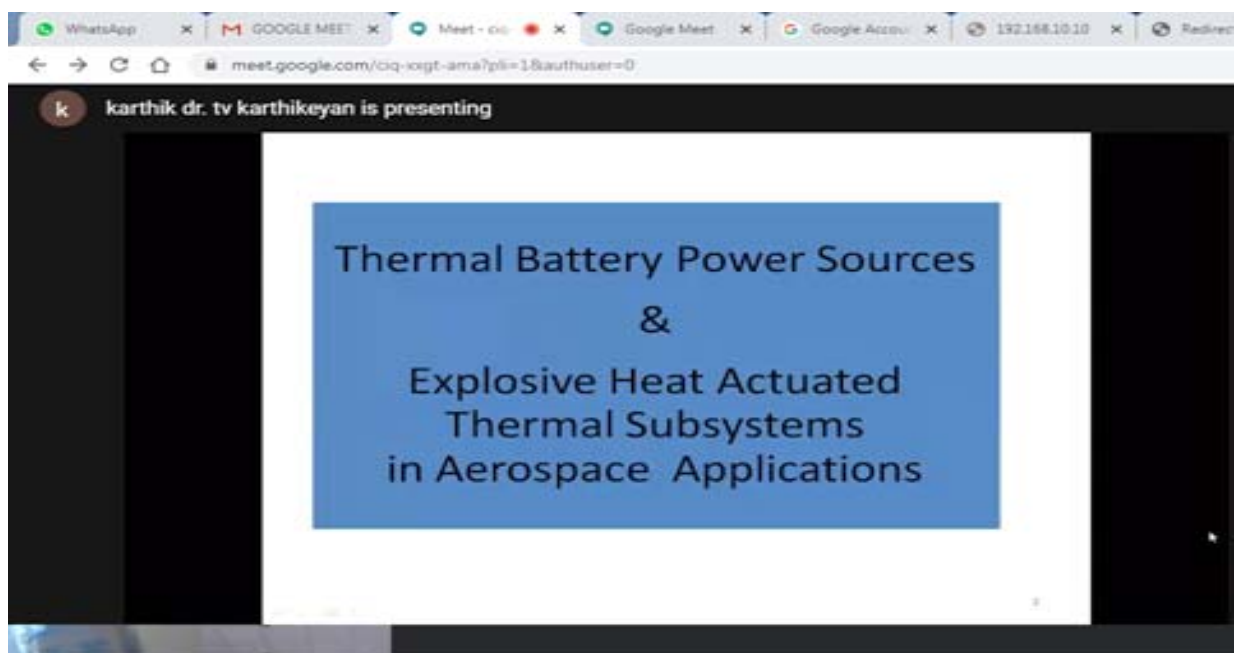
- Webinar on “Process of innovation Development (Inspire to Innovate)” organized by VR Siddhartha Engineering College, Mechanical Department in association with institution innovation council on 17/12/2020, Speaker: Dr. Ravi Saripalle, Director, Center for Innovation and Incubation, GVP College of Engineering.



- Webinar on “ Resilience – DNA of Success” by VR Siddhartha Engineering College, Mechanical Department in association with institution innovation council on 28/12/2020, Speaker: Mr. V. Venkateswara Rao, Founder of SAFENVIRON, A Bio-Medical Waste Treatment facility, Guntur.

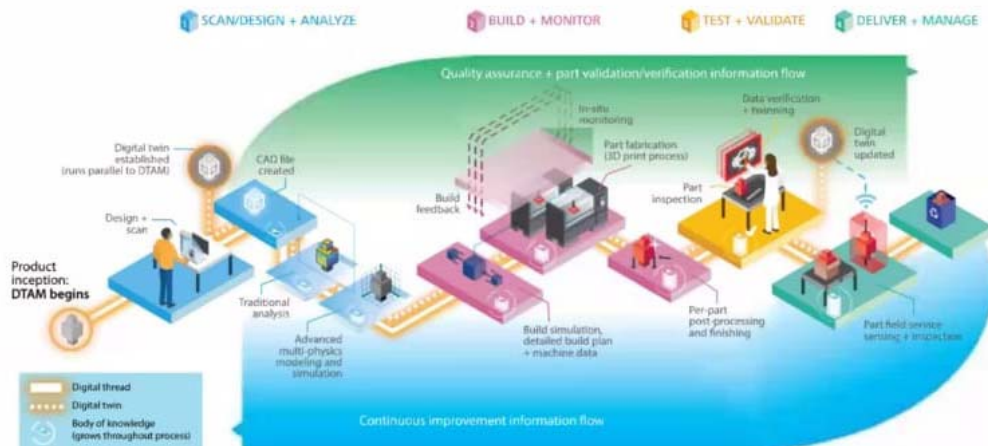


- Guest lecture on “Developing Introduction to Automotive Noise, Vibration and Harshness” organized by the institution of Engineers India student’s chapter, and conducted in VR Siddhartha Engineering College, Mechanical Department on 10/08/2020, Speaker: Dr. M. Jaganmohan Rao , Divisional Manager , NVH Group , R& D Division , Ashok Leyland, Chennai. (Webinar).



- Guest lecture on “Thermal Battery Power Sources and Explosive Heat Actuated Thermal Subsystems in Aerospace Applications” organized by The ASME and conducted in VR Siddhartha Engineering College, Mechanical Department on 23/08/20, Chief Guest & Speaker: Dr. T. V. Karthikeyan, senior Scientist, Advanced system Laboratory, Defence Research Development organization,, Kanchanbagh, Hyderabad. (Webinar).

Blockchain in Mechanical industry (Digital Thread Additive Manufacturing)



- Guest lecture on “Blockchain Technology and its Applications in Mechanical Engineering” organized by the SAEINDIA and conducted in VR Siddhartha Engineering College, Mechanical Department on 25/08/2020, Speaker: Mr. Arjun Dev, Manager – Tech Evangelist, EMURGO, Bangalore.

DOCTORAL DEGREES AWARDED

- * **Dr. M. Sumalatha**, Working as Assistant Professor in the department of mechanical engineering was awarded Ph.D. degree specialization in Corrosion resistance of plasma welding from A U Vizag in the month of August 2020
- * **Dr. K. Prakash Babu**, Working as Assistant Professor in the department of mechanical engineering was awarded Ph.D. degree specialization in Simultaneous Scheduling in FMS from A U Vizag in the month of November 2020

Ph.D THESIS SUBMITTED

| Sl.No | Name | Designation | University | Month & Year | Specialization |
|-------|-------------------|---------------------|-------------------|---------------|----------------|
| 1 | V. Bapi Raju | Assistant Professor | A U Vizag | October 2020 | Welding |
| 2 | V. Venu Madhav | Assistant Professor | J N T U Hyderabad | November 2020 | Composites |
| 3 | G. Jamuna Rani | Assistant Professor | J N T U Kakinada | December 2020 | IC Engines |
| 4 | Ch. Sri Chaitanya | Assistant Professor | N I T Warangal | November 2020 | Casting |

GUIDING Ph.D

| Sl.No | Faculty Name | Designation | Name of the scholar | University & Year of Registration |
|-------|----------------------------|-----------------------|------------------------|---------------------------------------|
| 1. | Dr. A.V. Ratna Prasad, | Professor & Principal | K.Ramanaiah | J N T UA, 2009 |
| | | | G. Vijay Prakash | ANU Guntur 2011 |
| | | | P.SrinivaasRao | KLEF, 2013 |
| | | | G.Pavan Kumar | Annamalai 2018 |
| 2. | Dr. N. VijayaSai | Professor & H.O.D. | A.Satyanarayana | J N T UH2009 |
| | | | U. HariBabu | AN U, 2011 |
| | | | P.Nanda Kishore | J N T U K, 2010 |
| 3. | Dr. V. Bala Krishna Murthy | Professor | N. Vijeta | J N T U K, 2010 |
| | | | S. Rambabu | J N T UA, 2011 |
| | | | Y. SaiBbu | J N T U A, 2012 |
| | | | V. Mohan ManojGupta | J N T U K, 2016 |
| 4. | Dr. N. Ravi Kumar | Professor | Ch. RangaRao | J N T U K, 2014 |
| | | | G.V.N.B. Prabhakar | J N T U K, 2015 |
| 5. | Dr. Ch. Naga Raju | Professor | K.Ravi Kumar | J N T U K, 2013 |
| | | | V. Sudheer Kumar | A N U, 2011 |
| | | | P.SateeshKumarReddy | A N U, 2011 |
| | | | A.Syam Prasad | J N T U K 2016 |
| | | | U.KoteswaraRao | N I T Warangal , 2010 |
| | | | Ch. Rama Krishna | J N T U K, 2016 |
| 6. | Dr. S.S. Prasad | Professor | Smt. A.N. PhaniDeepthi | Annamalai University, 2019 |
| 7. | Dr. G. DilliBabu | Associate Professor | ObulesuTaperla | J N T U K, 2016 |
| | | | M. SarathBabu | Tibrewala University Rajasthan , 2015 |
| | | | B. YedukondalaRao | Annamalai University, 2019 |
| 8. | Dr. K.N.M. Rao | Associate Professor | M.Peraiah | J N T U K, 2016 |
| 9. | Dr. V.L.Krishnan | Associate Professor | K.RajaSatyanarayana | K L E F, 2014 |
| | | | NileshKolhalkar | K L E F, 2016 |

ON GOING RESEARCH (DOING Ph.D)

| Sl.No | Name | Designation | University | Month & Year of Registration | Specialization |
|-------|-----------------------|------------------------|----------------------|------------------------------|--------------------------|
| 1 | P.Sateesh Kumar Reddy | Sr.Assistant Professor | A N U Guntur | July 2011 | Fabrication of weldments |
| 2 | V. Sudheer Kumar | Assistant Professor | A N U Guntur | July 2011 | Design of robots |
| 3 | K.Ramanaiah | Sr.Assistant Professor | J N T U Anantapur | September 2009 | Composites |
| 4 | K.Ravi Kumar | Assistant Professor | J N T U Kakinada | August 2013 | Heat Transfer |
| 5 | B. SrinivasaRao | Assistant Professor | J N T U Hyderabad | June 2012 | F E M |
| 6 | K.Sivaprasad | Assistant Professor | A N U Guntur | March 2014 | Production |
| 7 | B. Supraja Reddy | Assistant Professor | A N U Guntur | March 2014 | Welding |
| 8 | B. L.V.S. Gupta | Assistant Professor | J N T U Kakinada | October 2011 | Radiators |
| 9 | V.Sridhar | Assistant Professor | A U Vizag | April 2014 | Finite Element Methods |
| 10 | M.AshokChakravarthy | Assistant Professor | J N T U Kakinada | November 2011 | C F D |
| 11 | Ch. Venkata Prasad | Assistant Professor | J N T U Kakinada | September 2012 | Mechanisms |
| 12 | V. Vasu | Assistant Professor | N I T Warangal | December 2018 | I.C. Engines |
| 13 | G. Srivalli | Assistant Professor | A N U Guntur | July 2016 | Radiator Fins |
| 14 | A.N.PhaniDeepthi | Assistant Professor | Annamalai University | October 2019 | Combustion technology |
| 15 | G.S.Pavan Kumar | Assistant Professor | Annamalai University | December 2018 | Composites |
| 16 | P.Gopinath | Assistant Professor | N I T Warangal | July 2019 | Vibrations |
| 17 | G.SreedharaBabu | Assistant Professor | A U Vizag | April 2018 | Solar Robot |
| 18 | M.Rajesh | Assistant Professor | K L E F Vaddeswaram | January 2017 | Alternate Fuels |

RESEARCH AND DEVELOPMENT PROJECTS APPLIED

| S. No | Name(s) of the coordinators | Title of the project and duration | Sponsoring agency | Amount of the grant (Rs.) | Date of Application |
|-------|--|--|-------------------|---------------------------|----------------------------|
| 1 | Dr. M B Chennaiah, Smt. G Srivalli | Biodegradable polymer filter made from fiber composite & 3 Years | DST | 40 Lakhs | 22 th Dec' 2020 |
| 2 | Dr K Nagamalleswara Rao (ME), Dr K Hanuma (CE), Dr N. Vijaya Sai (ME), Dr K Prakash Babu (ME). | Mechanical Evaluation of Bottom Ash from Municipal Solid Waste Incineration for Application in Construction Industry – A Life Cycle Assessment Approach, 3 Years | DST-WMT | 635.89 Lakhs | 30 th Nov' 2020 |

CONSULTANCY DETAILS

| S. No | Nature of the work | Agency to which consultancy is offered | Date | Revenue earned (Rs.) |
|-------|---|---|------------|----------------------|
| 1 | Flexural test | P V P Siddhartha Institute of Technology, Vijayawada | 28-12-2020 | 2,065 |
| 2 | Micro Structure | A. Surya Kiran JNTUK, Kakinada | 22-10-2020 | 4,130 |
| 3 | Flexural & Impact Testing of composites | A.Venkata Jayasri, P V P Siddhartha Institute of Technology, Vijayawada | 14-12-2020 | 1,652 |
| 4 | Surface Roughness | N.Vital Kumar Vishnu Dental College, Bhimavaram | 02-09-2020 | 4,720 |
| Total | | | | 12,567 |

STUDENT CO-CURRICULAR EXTRACURRICULAR ACTIVITIES

| S.No | Date | Name of the student | Name of the event | Organizer details | Prize won |
|------|--------------------------|------------------------|---|--|--------------|
| 1 | 06-09-2020 | A Davakar sai Bahaskar | Quiz on concept of Mechanical Engineering | GIET, Rajamoundry | Participated |
| 2 | 08-09-2020 to 18-09-2020 | A Davakar sai Bahaskar | Training programme on Basic to advance virtual training problem | EXCELR Solutions, Madison, Wisconsin, USA | Participated |
| 3 | 03-07-2020 | G Durga Prasad | Plastic day Quiz | JNTUK (NSS) | Participated |
| 4 | 14-09-2020 to 18-09-2020 | B Sandeep | Workshop on film making is a tool for science communication | Science media centre, Indian Institute of science education and research, Pune | Participated |

STUDENTS PUBLICATION

International Journals

1. Bulasara Siva Kumar, **M. Balaji**, "Design and Analysis of Intake Valve of SI Engine", International Journal of Mechanical and Production Engineering Research and Development (IJMPERD), ISSN (P): 2249 – 6890; ISSN (E): 2249-8001, Volume 10, Issue 3, September 2020, 13629 – 13634.
2. Vemuri Sravani, **S. Srinivas Prasad**, M. Ravi Teja, **K. Ramanaiah**, "Acoustic Analysis of ship propeller using CFD", International Journal of Ambient Energy, 5th November 2020. **ESCI, SCOPUS.**
3. S. Ravi Theja Reddy, **A.V. Ratna Prasad**, **K. Ramanaiah**, "Tensile and flexural properties of biodegradable jute fiber reinforced poly lactic acid composites" Materials Today: Proceedings. ISSN: 2214-7853 December 2020. <https://doi.org/10.1016/j.matpr.2020.10.806>.
4. **G. Jamuna Rani**, G Sai Rani, Anchupogu Praveen, " Nano fluids effect on crossflow heat exchanger characteristics – Review ", Materials Today: Proceedings. ISSN: 2214-7853, December 2020.
5. Gudlavalleti Vamsi Babul and **V. Balakrishna Murthy**, "Prediction of thermal ablation in rocket nozzle using CFD and FEA", International Journal of Computational Materials Science

and Engineering, Vol 9, No 3, September 2020. PP 2050014(1-12) ISSN : 2047-685X,
Indexed in **ESCI, SCOPUS**

International Conference

1. Fardeen khan, **Dr. V. Balakrishna Murthy**, M. Saibabu, K. Pujitha, G. Divya and D. Kiranmai, "Prediction of Thermal Ablation of a Re-Entry Missile Nose Cap", 65th Congress of Indian Society for Theoretical and Applied Mechanics (ISTAM-2020), an International Conference being organized by GITAM University, Hyderabad during 9th to 11th December, 2020.
2. Mukesh CH.S.N.S.B., Venkateswarao A. and **Balakrishna Murthy V.**, "Analysis of Two-Phase Flow Around a Pier through Numerical Simulations", 65th CONGRESS OF ISTAM, an International Conference being organized by GITAM University, Hyderabad during 9th to 11th December, 2020.
3. Sri Pavan Krishna A, Mohan Sai Raju, Md. Mukheem and **Balakrishna Murthy V.**, "A numerical simulation for reducing the scouring effect using sacrificial piers", 65th CONGRESS OF ISTAM, an International Conference being organized by GITAM University, Hyderabad during 9th to 11th December, 2020.
4. D. Prasanna Kumar, **A. N. Phani Deepthi**, "A Review on Performance, Combustion and emission Characteristics of CRDI diesel engine charged with Diethyl Ether", International conference on Recent Developments in Mechanical Engineering ICRDME-2020, being organized by KL University held during 18th -19th December 2020.

Design and Fabrication of Multipurpose Farming Machine

VR Siddhartha Engineering College sponsored the project with Rs. 20,000

The reduction of the manual labour and improving the efficiency of the farming leads to makes farming profitable and lucrative. Mechanization of agriculture is one way to improve the efficiency of agriculture.



A small machine that can take up multiple tasks in farming is the idea for this project. The Multipurpose farming machine was designed and fabricated by the final year students of Mechanical Engineering Department with a support of Rs. 20,000 from the College. The machine can be used for tilling, ploughing, spraying pesticides and fertilizers, pumping water to the farm seamlessly. The machine uses rechargeable battery as a power source and works for an hour per every hour of charging



DEPARTMENT OF MECHANICAL ENGINEERING
V.R. SIDDHARTHA ENGINEERING COLLEGE
Kanuru, Vijayawada - 520 007.