

**DEPARTMENT OF MECHANICAL ENGINEERING::VRSEC**

**FACULTY PUBLICATIONS**

**AY 2020-21**

**International Journals**

- 1) 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. **SCIE indexed.**
- 2) 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**
- 3) Akash Vyas, Jyoti Menghani, Pringal Patel, Satish More, C. P. Paul, Amar Patnaik, S.P.Ingole, “ Characterization and Optimization of Slurry Erosion Behavior of SS 316 at Room Temperature”, Transactions of the Indian Institute of Metals (IIM Metallurgy Materials Engineering), vol 74, pages839–849 Feb 2021, ISSN 0975-1645, **SCIE** .
- 4) 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), **73**, pages2955–2964,10 October 2020, **SCIE**
- 5) G. V. N. B. Prabhakar, L Dumpala, N. Ravi Kumar, “Mechanical, machining and corrosion properties of Al5083-carbon nanotubes composite produced by friction stir processing”, Material Science & Engineering technology, vol 52, issue 7, pp 520-528, ISSN 1521-4052 , May 2021, Impact Factor 0.854, **SCIE**.
- 6) Gudlavalleti Vamsi Babu 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**
- 7) 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**.

- 8) Ch Hari Krishna, Ch Nagaraju, “Modelling of Cylindrical Upsetting Process for Enhanced Ductile Fracture”, Materials Today Proceedings, ISSN: 2214 – 7853, July 2020, **Scopus Indexed**.
- 9) VemuriSravani, S. Srinivas Prasad, M. Ravi Teja, K. Ramanaih, “Acoustic Analysis of ship propeller using CFD”, International Journal of Ambient Energy, 5th November 2020. ISSN 2162-8246, **ESCI, SCOPUS**.
- 10) Vijaya Kanth P., and Balakrishna Murthy V., “A numerical simulation for prediction of thermal ablation in composite rocket motor casing”, International Journal of Computational Materials Science and Engineering, Vol 9, No.4, PP ISSN : 2047-685X, December 2020.<https://doi.org/10.1142/S2047684120500207>. **ESCI, SCOPUS**.
- 11) V.V. Venu Madhav, A.V.S.S.K. Gupta, S. R. More, “Study of the Fracture Behavior under the Effect of Cross-ply and Angle -ply arrangement of FRP Composite Laminate Subjected to Central Circular Cut-out with Mechanical and Thermal Loading Conditions”, International Journal of Engineering Transactions C: Aspects Vol.34, No.6, (June 2021) PP 1526-1532 **SCOPUS**
- 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”, Materials Today Proceedings, November 2020 ISSN : 2214-7853 . **SCOPUS**
- 13) S. Ravi Theja Reddy, A.V. Ratna Prasad, K. Ramanaih, “Tensile and flexural properties of biodegradable jute fiber reinforced poly lactic acid composites”Materials Today: Proceedings. ISSN : 2214-7853 PP 917-921, January 2021. <https://doi.org/10.1016/j.matpr.2020.10.806>. **SCOPUS**.
- 14) G. Jamuna Rani, G Sai Rani, Anchupogu Praveen, “ Nano fluids effect on crossflow heat exchanger characteristics – Review “, Materials Today: Proceedings. ISSN: 2214-7853, January 2021. **SCOPUS**
- 15) K. Ramanaih, A.V. Ratna Prasad, K. HemaChandara Reddy “ Experimental study on thermo physical properties of biodegradable borassus fruit fiber-reinforced polyester composite”. Materials Today Proceedings, ISSN : 2214-7853 . January 2021, PP 1857-1859, **SCOPUS**

- 16) 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, Vol 39, part 4, 2021, pg 1553-1558. **SCOPUS**
- 17) Jyoti Menghani, Akash Vyas, Pringal Patel, Harshad Natu, Satish More “Wear, erosion and corrosion behavior of laser cladded high entropy alloy coatings – A review”. *Materials Today Proceedings*. ISSN : 2214-7853, October 2020. **SCOPUS**
- 18) Rahul Jagtap, Ganesh Kakandikar, AjitDhanawade, 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. **SCOPUS**
- 19) Ratna Kumari, K. Ramanaiyah , A.V. Ratna Prasad, K. Hemachandra Reddy , Srinivas Prasad Sanaka , A. Kalyan Prudhvi,, “Experimental investigation of water absorption behaviour of sisal fiber reinforced polyester and sisal fiber reinforced poly lactic acid composites”*Materials Today: Proceedings*. ISSN: 2214-7853, PP 935-940, January 2021. **SCOPUS**
- 20) S.R. More, D.V. Bhatt, J.V. Menghani, C.P.Paul, G.R.Desale “Laser Cladding of PAC 718, Tribaloy T-700 and METCO 41 C Hard Facing Powders on AISI SS 304L Substrate”. *International Journal of Engineering Transactions B: Applications*, vol 34, no.2, PP 478-484, February 2021. ISSN :1735-9244, **SCOPUS**.
- 21) M. BalaChennaiah, 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](https://doi.org/10.1007/978-981-15-4745-4_48). **SCOPUS. ISBN 978-981-15-4745**
- 22) MallapuramBalaChennaiah, 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**
- 23) G DilliBabu, Garikapati Bhavan and K. SivajiBabu “Mechanical and machining characterization of Agave Americana, pineapple and its hybrid fiber composites” *AIP Proceedings*, Feb 2021, vol 2317 , Issue- 1 <https://doi.org/10.1063/5.0036545>. **SCOPUS**.

- 24) M. BalaChennaiah, K. Ravi Kumar, V. Sridhar, "Influence of tool profiles on similar Al – 5083 alloys using friction stir welding", *Materials Today: proceedings*, 23 March 2021, 2214-7853, <https://doi.org/10.1016/j.matpr.2021.02.787>. **SCOPUS**
- 25) Muthuluru Rajesh, Y.V.Hanumantha Rao, P.S.Srinivas, A.V.Sitarama Raju, "Bio-Diesel Generation with IC Engine – An Investigation and Analysis of Trio Fuel", *Journal of Green Engineering (JGE)*, Volume-10, Issue-9, September 2020. **SCOPUS**
- 26) Kanchibhotla Hima Teja, G. Srivalli and V. Balakrishna Murthy, "A Numerical Model to Study the Fluid-Structure Interaction at a Bridge Pier", *Theoretical, computational and experimental solutions to thermo-fluid systems, Lecture Notes in Mechanical Engineering* pp 379-390, March 2021, [https://doi.org/10.1007/978-981-33-4165-4\\_35](https://doi.org/10.1007/978-981-33-4165-4_35). ISBN NO 978-981-33-4165-4. **SCOPUS**.
- 27) Raviteja Chopparapu, Kartik Raju Sambattula, Dileep Kumar Edara, Ravitejadasari, Vignesh Sycam, G.Srivalli, Mallapuram BalaChennaiah, "A Review Article on Water Purification Techniques by Using Fiber Composites and Biodegradable Polymers", *AIP Conference Proceedings*, Volume 2247, 040007 (2020); <https://doi.org/10.1063/5.0004069>. **SCOPUS**.
- 28) M. Sumalatha, J. N. Malleswara Rao, B. Supraja Reddy, "Optimization Of Process Parameters In 3d Printing-Fused Deposition Modeling Using Taguchi Method", *IOP Conference series: Materials science and Engineering*, Vol 112, 2021, <https://doi.org/10.1088/1757-899X/1112/1/012009>.
- 29) 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.
- 30) 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.
- 31) 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.

- 32) 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.
- 33) 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.
- 34) 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.
- 35) K. Siva Prasad “Multi-objective optimization of process parameters in GFRP composite drilling using GRA-PCA technique”. *Journal of Xidian University*. ISSN No. 1001-2400, Vol 15, issue 1, <https://doi.org/10.37896/jxu15.1/014>. PP 116-121, 2021
- 36) K. Siva Prasad, G. Chaitanya “Experimental investigation on dimensional accuracy in drilling of GFRP composite”. *Solid State Technology*. Volume: 64, Issue: 2. 2021.
- 37) Alapati Venkateswarlu, A. Adilakshmi, V.K. Sharma, “Analysis and Design of ejector freezing system”, *GORTERIA JOURNAL*, VOLUME 33, ISSUE 12 – 2020, ISSN:0017-2294.
- 38) Adusumilli Adilakshmi, Rithvik Alapati, Alapati Venkateswarlu, Raghu Veera Gudapati, “The Internet Of Things And Agriculture: An Enriching And Empowering Combination”, *International Journal of Advanced Research in Engineering and Technology*, Volume 12, Issue 3, March 2021, pp.86-96, ISSN Online: 0976-6499, DOI:10.34218/IJARET.12.3.2021.010.
- 39) Prakash Babu Kanakavalli, Vijaya Babu Vommi, “A Comparison of Hybrid Metaheuristics Performances in Simultaneous Scheduling of Machines and AGVs in FMS”, *International Journal of Engineering Research and Applications*, ISSN: 2248-9622, Vol. 10, Issue 12, (Series-I) December 2020, pp. 50-56, DOI: 10.9790/9622-1012015056.

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**FACULTY PUBLICATIONS**

**AY 2020-2021**

**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. Anchupogu Praveen, G. Jamuna Rani, B. Balakrishna, “ Effect of MWCNT as nano additives in CalophyllumInophyllum biodiesel blends on the performance and emission parameters of a diesel engine”, 4<sup>th</sup> international Conference on Soft Materials (ICSM 2020) organized by Malaviya National Institute of Technology, Jaipur, from 13<sup>th</sup> to 18<sup>th</sup> December 2020. PP 116.
3. 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 18<sup>th</sup> -19<sup>th</sup> December 2020.
4. 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 18<sup>th</sup> -19<sup>th</sup> December 2020.
5. 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 9<sup>th</sup> to 11<sup>th</sup> December, 2020.
6. Mukesh CH.S.N.S.B., Venkateswarao A. and Balakrishna Murthy V., “Analysis of Two-Phase Flow Around a Pier through Numerical Simulations”, 65<sup>th</sup> CONGRESS OF ISTAM, an International Conference being organized by GITAM University, Hyderabad during 9<sup>th</sup> to 11<sup>th</sup> December, 2020.

7. Sri Pavan Krishna A, Mohan Sai Raju, Md. Mukheem and Balakrishna Murthy V., “A numerical simulation for reducing the scouring effect using sacrificial piers”, 65<sup>th</sup> CONGRESS OF ISTAM, an International Conference being organized by GITAM University, Hyderabad during 9<sup>th</sup> to 11<sup>th</sup> December, 2020.
8. 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 4<sup>th</sup> to 5<sup>th</sup> December 2020.
9. Ch. Prabhu Kumar, K. Ramanaih, A. V. Ratna Prasad, K. Hema Chandra Reddy, “Development of Sustainable Jute/ Polylactic acid Composite Material for Thermal Insulation Applications”, International Conference on recent technologies and advanced Materials for green energy and sustainable environment (RTAMGESE) organized by Department of Chemical Engineering, NIT Tiruchunapalli , 12-13<sup>th</sup> March, 2021
10. P. Sateesh Kumar Reddy, Ch. Nagaraju, “ Size Optimization of Heavy Duty Truck Chassis Frame for Maximum Stiffness to Weight Ratio”, International Conference on Recent Advances in Mechanical Engineering (ICRAME-2021), Organized by Dept of Mechanical Engineering, Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada. PP 17- 14, 26<sup>th</sup> & 27<sup>th</sup> March 2021.
11. Mallapuram Bala Chennaiah, Srivalli Gollamudi, Sai Teja Kola, “Experimental Analysis on Friction stir processing of Al-2014 with SiO<sub>2</sub> Reinforcement”, International Conference on Recent Advances in Mechanical Engineering (ICRAME-2021), Organized by Dept of Mechanical Engineering, Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada. PP 15-21, 26<sup>th</sup> 27<sup>th</sup> March 2021.
12. K. Ramanaih, A.V. Ratna Prasad, K. Hema Chandara Reddy “Eco friendly sisal fiber /poly lactic acid composite material for thermal insulation applications”. Indo-Korean work on Multifunctional Materials for Extreme Loading (MFMEEL2021). The virtual workshop was jointly organized by IIT-Madras and Hanyang University, South Korea during 22<sup>nd</sup> to 24<sup>th</sup> of February 2021.
13. V. Sudheer Kumar, Ch. Nagaraju, ” Optimization of input parameters in rotor bearing system: using Taguchi method and ANOVA” international conference on Engineering

research and Teechnology transfer (ICERTT-2K21) organized by BULE HORA University college of engineering and technology, 14<sup>th</sup> – 15<sup>th</sup> May 2021.

14. Ch.Venkata Prasad, G. Sulochana, “ Modelling and analysis of a car rear spoiler”, international conference on technological advancements in Mechanical Engineering (ICTAME 2021) organized by Department of Mechanical Engineering, Academy of Maritime Education and Training (AMET), Deemed to be university, Chennai, held on 15<sup>th</sup> & 16<sup>th</sup> June 2021.
15. 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 18<sup>th</sup> -19<sup>th</sup> December 2020.
16. M. Susmitha, N. Ravi Kumar, “ Evaluation of Mechanical Properties of Aluminium 6082/Sic/Gr/Mn/Al<sub>2</sub>O<sub>3</sub>Hybrid Metal Matrix Composites”, International Conference on Recent Advances in Design, Materials and Manufacturing (ICRADMM 2020) held on 15<sup>th</sup> and 16<sup>th</sup> October 2020, at Amity School of Engineering and Technology, Gwalior, Madhya Pradesh.
17. Srinivas Inturu, B. Raghava Rao, “ Numerical Simulation of Sudden expanded flows from convergent-divergent Nozzles-using CFD”, International conference on Recent Developments in Mechanical Engineering ICRDME-2020, being organized by KL University held during 18<sup>th</sup> -19<sup>th</sup> December 2020.

### **National Conference**

1. K. Ramanaiah, A. V. Ratna prasad, Shaik Galshid Vali, “ Experimental investigation of tensile properties of wood- Poly lactic acid biocomposites developed via 3D prnting”, in National conference on Biological, Biochemical, Biomedical, Bioenergy, and Environmental Biotechnology (NCB<sup>4</sup>EBT – 2021) , conducted by the department of Biotechnology from 29<sup>th</sup> to 30<sup>th</sup> January 2021.