

**DEPARTMENT OF MECHANICAL ENGINEERING  
SIDDHARTHA ACADEMY OF HIGHER EDUCATION  
(DEEMED TO BE UNIVERSITY)  
V R S SCHOOL OF ENGINEERING  
Student Publications  
AY 2024-25**

**Lecture Notes:**

1. M.Sumalatha, Chennaiah, M.B., Shoib, S.K., Sai Kumar, B., Ravi Kumar Reddy, T., Musthakheem, M.D,” Investigation on the Mechanical Properties of 3d Printed CF/ABS Materials by Optimized Process Parameters Using Taguchi and ANOVA Analysis”, Recent Advances in Additive Manufacturing, Volume 2. ICAM 2024. Lecture Notes in Mechanical Engineering. Springer, Singapore. [https://doi.org/10.1007/978-981-96-3165-0\\_1](https://doi.org/10.1007/978-981-96-3165-0_1), ISBN : 978-981-96-3164-3, May 2025

**International Journals**

1. Jayanth Datta Thota, Navaneeth Manikonda, Venkateswara Rao Mendol, Balakrishn Murthy Vallabaneni, “Affect of Finite Element Modelling on Static Behavior of Underwater Shell”, Journal of Polymer &Composites, ISSN : 2321-2810, Vol 13, Special issue 2, pp S154-S162, January 2025. Web of Science.

**Conference Proceedings**

1. Srinivas prasad Sanaka, Niharika Devi Mareedu, Yogendra Bonu, “Characterization of Sustainable Solar Absorbing Materials for Solar Thermal Applications”, IEEE Xplore, International Conference on Computational Intelligence for Green and Sustainable Technologies (ICCIGST), VR Siddhartha Engineering College, Vijayawada, India 18-19th July 2024, **SCOPUS**.
2. Dr. M. Bala Chennaiah, K. Ragamayi Sita Mahalakshmi, G. Sai Ram, B. Mahitha, D. Aswini “High power electricity generation by Waste” **IEEE Xplore**, 2024 International Conference on Computational Intelligence for Green and Sustainable Technologies (ICCIGST), July 2024, , **SCOPUS**
3. Aashitha Pamarthi, Sunil Reddy Guntaka, Prakash Babu Kanakavalli, “Modeling microscale defects in CFRP composites: An FEA approach,” Mechanical Engineering

- for Sustainable Development: ISME-2024, Materials Research Proceedings, Vol. 49, pp 529-538, January 2025, <https://doi.org/10.21741/9781644903438-53>, SCOPUS.
4. Jayanth Datta Thota, Murali Karthik Degala, Rahul Gandiboyina, Balakrishn Murthy Vallabaneni, "Investigating the impact of numerical models on buckling and dynamic response of underwater metal and CFRP capsule". Mechanical Engineering for Sustainable Development: ISME-2024, Materials Research Proceedings, Vol. 49, pp 436-445, January 2025, <https://doi.org/10.21741/9781644903438-53>, SCOPUS.
  5. Srinivas Prasad Sanaka, Ramanaiah. K, Durga Rao. K, **Balajee. Landa, Bala Manikanta. Ch and Dhanya. Lahari. G**, "Performance Analysis of PEM Fuel cell using COMSOL," 2024 International BIT Conference (BITCON), Dhanbad, India, 2024, pp. 1-4, doi: 10.1109/BITCON63716.2024.10985655. May 2025, SCOPUS.
  6. Srinivas Prasad Sanaka, **PadmaSri Adigarla, Chaitanya Birudugadda, Mohan Sai. Adapaka, Revanth Kumar Dokku and Akshara Marlapudi**, "Experimental Analysis on Optical Properties of Nanofluids used for Solar applications," 2024 International BIT Conference (BITCON), Dhanbad, India, 2024, pp. 1-5, doi: 10.1109/BITCON63716.2024.10985181. May 2025, SCOPUS.
  7. Sanaka Srinivasa Prasad., Ramanaiah, K., **Garikapati, N.V.S.Sainath**, Prasad, T.S.V. (2025). Realization of Complex Shape Composite Component Using Composite Tooling. In: Patra, A., Rajendrachari, S. (eds) Proceedings of the 6th International Conference on Processing and Characterization of Materials. ICPCM 2024. Springer Proceedings in Physics, vol 317. pp 81-93, 2<sup>nd</sup> July 2025, Springer, Singapore. ISBN 978-981-96-7340-7 [https://doi.org/10.1007/978-981-96-7340-7\\_9](https://doi.org/10.1007/978-981-96-7340-7_9) SCOPUS.
  8. Ramanaiah, K., Sanaka, S.P., Ratna Prasad, A.V., **Pravallika, M.**, Konireddy, H. (2025). Development of Jute Based Composite Materials for Thermal Insulation. In: Patra, A., Rajendrachari, S. (eds) Proceedings of the 6th International Conference on Processing and Characterization of Materials. ICPCM 2024. Springer Proceedings in Physics, vol 317. Pp 102-108, 2<sup>nd</sup> July 2025, ISBN 978-981-96-7340-7, Springer, Singapore. [https://doi.org/10.1007/978-981-96-7340-7\\_11](https://doi.org/10.1007/978-981-96-7340-7_11), SCOPUS.
  9. Sanaka, S.P., **Durga Prasad, Y., Manoj Kumar, P., Alum, S.H.** (2025). Experimental Analysis of a Sustainable Water Purifier Using Bamboo Charcoal as an Adsorbent Material. In: Patra, A., Rajendrachari, S. (eds) Proceedings of the 6th International Conference on Processing and Characterization of Materials. ICPCM 2024. Springer Proceedings in Physics, vol 317. pp 109-114, 2<sup>nd</sup> July 2025, ISBN

### **International Conferences:**

1. **Ramya Chinthamaneni, Sai Keerthi Chavan , Bhagyath Badduri**, Balakrishna Murthy Vallabhaneni, “Modelling of micro-level defects in cfrp and gftp composites for the prediction of coefficient of thermal expansion, for technical session T12” 22nd ISME –international conference on “recent advances in mechanical engineering for sustainable development (ISME-2024) ” organized by the department of mechanical engineering, delhi technological university, Delhi held on July 11<sup>th</sup> -13<sup>th</sup> , 2024.
2. **Jayanth Datta Thota, Navaneeth Mmanikonda, Venkateswararao Mendol** and Bbalakrishna Murthy Vallabaneni, “Exploring the influence of numerical models on static response of underwater capsule, for technical session T9 “, 22nd ISME – international conference on “recent advances in mechanical engineering for sustainable development (ISME-2024) “ organized by the department of mechanical engineering, delhi technological university, Delhi held on July 11<sup>th</sup> -13<sup>th</sup> 2024.
3. K. Ramanaiah, Srinivas Prasad Sanaka, A.V. Ratna Prasad, Surendra Ramineni, M. **Pravallika** , “ Development of 3D printed biodegradable composite materials for acoustic and thermal insulation applications.” 6th International Conference on Processing and Characterization of Materials (ICPCM 2024), NIT Rourkela.
4. K. Ramanaiah, Srinivas Prasad Sanaka, A.V. Ratna Prasad, **Surendra Ramineni, M. Pravallika** “Development of Jute based composite materials for thermal insulation” 6th International Conference on Processing and Characterization of Materials (ICPCM 2024), NIT Rourkela.
5. Srinivas Prasad Sanaka, K Ramanaiah, **N V S Sainath Garikapati** “Realization of Complex Shape Composite Component Using Composite Tooling” 6th International Conference on Processing and Characterization of Materials (ICPCM 2024), NIT Rourkela.
6. Srinivas Prasad Sanaka, **Y. Durga Prasad, P.Manoj Kumar, Shaik Hafeez** “Experimental Analysis of a Sustainable Water Purifier Using Bamboo Charcoal as an Adsorbent Material” 6th International Conference on Processing and Characterization of Materials (ICPCM 2024), NIT Rourkela

7. B.Supraja Reddy, **G.Sidhu, D.Sai Prakash, N.Sashi Kumar, B.Ganesh,**” Experimental Investigation of Mechanical Properties on AA6061 Metal Matrix Composite Friction Stir Welded Joints”, International Conference on advances in Foundry and Forming Technology, 18<sup>th</sup> -19<sup>th</sup> December 2024.
8. Sumalatha Mahankali, Jamuna Rani G, Kamala Priya B, **Pranay Rahul Kesanam, Bhanu Teja Bandar** “Finite element analysis of RPG-7 warhead firing sequence “, Research Conclave Organised by Siddhartha Academy of higher Education (an institution deemed to be university) Vijayawada, Andhra Pradesh, India. 2025 held on 24th-25th January, 2025
9. P. Satheesh Kumar Reddy, K. Ramanaiah, **M. Janardhan, P. Srram, S. Saamuel Babu**” Development of sustainable fire retardant composite materials”, 2<sup>nd</sup> international conference on Sustainable Technologies, Energies and Materials(STEM’25), organised by King Mongkut's University of Technology North Bangkok (KMUTNB), Bangkok from 19<sup>th</sup> to 21<sup>st</sup> February 2025.
10. M. Sumalatha, K. Pranay Rahul, M. B.Chennaiah, M. Geetha Rani, **B. Bhanu Teja, G. Ravi Teja,** “ Experimental Investigation of Tensile and Wear Properties of 3D-Printed Carbon fiber Reinforced Polyactic Acid(CFR-PLA) material” , 2<sup>nd</sup> international conference on Sustainable Technologies, Energies and Materials(STEM’25), organised by King Mongkut's University of Technology North Bangkok (KMUTNB), Bangkok from 19<sup>th</sup> to 21<sup>st</sup> February 2025.
11. G. Jamuna Rani, M. Sumalatha, **K. Kumar swamy, P.Charan Teja, N. Pavan Kumar, I Rohith** “ Distillation of water using single slope type solar still”, 2<sup>nd</sup> international conference on Sustainable Technologies, Energies and Materials(STEM’25), organised by King Mongkut's University of Technology North Bangkok (KMUTNB), Bangkok from 19<sup>th</sup> to 21<sup>st</sup> February 2025.
12. K.Srinivas, **D. kasim Moula, Divya Singhi,** “ Modelling and Analysis of Catlytic Converter”, 2<sup>nd</sup> international conference on Sustainable Technologies, Energies and Materials(STEM’25), organised by King Mongkut's University of Technology North Bangkok (KMUTNB), Bangkok from 19<sup>th</sup> to 21<sup>st</sup> February 2025.
13. K. Ramanaiah, Srinivasa Prasad Sanaka, Ch. Moses Aravind, A. V. Ratna Prasad, **R. Surendra, S. Vinay Babu, G. Yaswanth Sai, G. Chaakri, Ch. Rajesh,** “ Sustainable bio Composites with improved fire resistance and thermal management for electronic components”, 2<sup>nd</sup> international conference on Sustainable Technologies,

- Energies and Materials(STEM'25), organised by King Mongkut's University of Technology North Bangkok (KMUTNB), Bangkok from 19<sup>th</sup> to 21<sup>st</sup> February 2025
14. K. Ramanaih, Haaron Ali Khan, A. V. Ratna Prasad, **K. Pavani, Velpula Kasi Kalyan, Odugu Nagasree**, “ Characterization of Sustainable Hybrid Bio-Composites from Waste Gunny Bags and Bagasse for Heating and Cooling Applications”, Sustainable bio Composites with improved fire resistance and thermal management for electronic components”, 2<sup>nd</sup> international conference on Sustainable Technologies, Energies and Materials(STEM'25), organised by King Mongkut's University of Technology North Bangkok (KMUTNB), Bangkok from 19<sup>th</sup> to 21<sup>st</sup> February 2025.K
  15. **Jayanath datta Thota, Navaneeth Manikonda, Venkateswararao Mendol, Balakrishna Murthy Vallabhaneni**. “ vibroacoustic analysis of cfrp plate at the second international conference on advancements in materials, manufacturing and automation (AMMA-2025) organized by department of mechanical engineering, amrita school of engineering, Chennai, Tamilnadu, India. held during 2nd -3rd April 2025.
  16. C.Mahesh, **B.Thimothi, P.Sriram Koushik R. Jai Siva Kumar, M.Sai Mahendra** “Influence of powder-Fiber Ratio on the Mechanical properties of prunus dulci Mixed (powder and fiber) composite”, organised by Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada & National Institute of Technology , Warangal,on May 8<sup>th</sup>,9<sup>th</sup> 2025.
  17. K.Ramanaiah, A.V.Ratna Prasad, **M.Pravallika, K.Vinay, P.Abhinava Pragathi,K.prasanth,**” Sustainable bio-waste-based composites for thermal management applications”, Two-day International Conference on Recent Advances in Mechanical Engineering -2025, (ICRAMIE-2025). Organised by Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada & National Institute of Technology , Warangal,on May 8th,9th 2025.
  18. Srinivas Prasad Sanaka, **Pulipaka Vanni, Vemuri Sravani, Akula Yagna Vijay Kumar, K.Sujin Kumar, Radhik Daram**, “ Experimental investigation of Temperature Effects on the Performance of PEM Fuel Cells”, Two-day International Conference on Recent Advances in Mechanical Engineering -2025, (ICRAMIE-2025). Organised by Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada & National Institute of Technology , Warangal,on May 8th,9th 2025.
  19. G.Dilli Babu, **K.Tarun Kumar, K. Dilip Kumar, G.Praveen Kumar, K.Manoj Kumar**, “Optimization of Infill Pattern for Enhanced Mechanical Performance of

- FDM-Printed ABS Components”, , Two-day International Conference on Recent Advances in Mechanical Engineering -2025, (ICRAMIE-2025). Organised by Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada & National Institute of Technology, Warangal, on May 8th,9th 2025.
20. **G.Dilli Babu, Md Adnan, M.Mani Kumar, Md Abdul Malik, M.Abhishek**, “ Optimization of FDM 3D Printing Parameters for Dimensional Accuracy of 3D-Printed Components using Taguchi DOE Experimental”, Two-day International Conference on Recent Advances in Mechanical Engineering -2025, (ICRAMIE-2025). Organised by Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada & National Institute of Technology, Warangal, on May 8th,9th 2025.
  21. **G.Sri Kalyan**, G.Dilli Babu, D.Siva Sankar, K.Sivaji Babu, “ Machine Vision-Based Quality Evaluation of Lithium-Ion Battery Spot Welds on Nickel Strips for Electric Vehicle Applications”, Two-day International Conference on Recent Advances in Mechanical Engineering -2025, (ICRAMIE-2025). Organised by Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada & National Institute of Technology, Warangal, on May 8th,9th 2025.
  22. G Dilli Babu, V. **Chandu, Y. Yugandhar Hanuman Sai, S. Satya Durga Prasad, S.Harsha Deva Raj Kumar**, ‘Effect of Printing Orientation on the Mechanical Properties of FDM-Printed ABS Components’, International Conference on Recent Advances in Mechanical and Industrial Engineering 2025 (ICRAMIE 25) Organized by NIT Warangal & PVPSIT Vijayawada during 08th & 09th May 2025.
  23. **Teja V, V. Sridhar, Sri Vastav Dasari, Bandaru Rohit**, “ CFD –based performance evaluation of ship propeller for different blade angles”, 5<sup>th</sup> international conference on Recent Advances in Mechanical Engineering and Nanomaterials (ICRAMEN 2025), 16<sup>th</sup> -17<sup>th</sup> May 2025, organised by St.John College of Engineering andManagement, Palghar.
  24. **Katakota gunavardhana chari**, V. Balakrishna Murthy , A.Ramesh Babu, “Analysis of variable cross section composite pressure vessel”, 5th international conference on recent advances in mechanical engineering nanomaterials (ICRAMEN 2025), organised by Department of Mechanical Engineering, St.John College of Engineering and Management, Palghar held on 16th and 17th May 2025