



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2020-2021

LIST OF PUBLICATIONS

Papers Published in Journals by Staff Members International Journals

- **K. Arun Vasantha Geethan** "Optimizations of Extrusion Semi-die Angle And Fabrication of Extrusion Die" AIP Conference Proceedings, October 2020.
- **K. Arun Vasantha Geethan**, J. Francis Xavier, R. Srimurugan, S. Vijay Ananth, and V. Jayaseelan" AIP Conference Proceedings "Design and analysis of chain strip in roller conveyor under tensile load Cite as: AIP Conference Proceedings 2283, 020133 (2020); <https://doi.org/10.1063/5.0025154> Published Online: 29 October 2020.
- **K Arun Vasantha Geethan et al** Fresenius Environmental Bulletin "Analysis of Material Properties Of Recycled Plastic And Rubber Components , Volume 30– No. 02/2021 pages 1353-1362 "
- **K Arun Vasantha Geethan et al** Fresenius Environmental Bulletin, Solid waste generation environmental issues and recycling opportunities in Tailnadu, Vol 30 pages 2503-2512.
- **K Arun Vasantha Geethan et al** AIP Conference Proceedings, Recycling of waste crumb rubber into a commercial materials.
- **K Arun Vasantha Geethan et al** journal of Green Engineering (JGE) "A Study on the Scanning Electron Microscopy Images of the Recycled Materials for Maintaining the Ecosystem, , Journal of Green Engineering (JGE) Volume-10, Issue-9, September 2020 4520–4529.

- **K Arun Vasantha Geethan et al** " AIP Conference Proceedings"Experimental investigation on diffusion bonding of dissimilar metals, Cite as: AIP Conference Proceedings 2283, 020062 (2020); Published Online: 29 October 2020.
- **D.Elilraja, K.Gnanasearan, K.Ramesh, S.Prathap Singh, S.Jagadeesh**, Materials Today: Proceeding , Investigation of machining parameters of super hardened tool in micro electrical discharge machining Materials Today: Proceedings (2021).
- **D.Elilraja, K.Gnanasearan, K.Ramesh, S.Jagadeesh, S.Prathap Singh** , Journal of Engineering Research , Experimental Study of Micro-EDM On EN24 Steel With Normal Brass, Tin Coated Brass, Cryogenic Treated Brass Tool by Varying the Machining Parameters ,Journal of Engineering Research .
- **D. Elil Raja, S. Prathap Singh, J. Immanuel Durairaj, T. Prabhuram, M. Chrispin Das**, Tierärztliche Praxis, "Optimization of Operation Parameters In Machining of Functionally Graded Metal Matrix Composite Using Topsis, Vol 40, 2020, ISSN: 0303-6286, 1659.
- **"D. Elil Raja, M Chrispin Das, S. Prathap Singh, R. Malkiya Rasalin Prince** (2020) Enhancement of behaviors of Areca Fine Fiber/Phenol Formaldehyde Composite by the Addition of Oxide and Carbide Particles, GEDRAG & ORGANISATIE REVIEW, 2606 - 2615.
- **D. Elil Raja et al**, "Multi Response Optimization of Friction Stir Welding Process Parameters on Dissimilar Magnesium Alloys AZ 31 and ZM 21 using Taguchi-Based Grey Relation Analysis"" La Metallurgia Italiana, V (7) pp. 18-27. "
- **"D. Nathan, D. Elilraja, T. Prabhuram, S. Prathap Singh** (2020) Experimental Investigation of Surface Roughness in End Milling of AA6061 Alloy with Flooded Cooling and Minimum Quantity Lubrication (MQL) Technique, Trends in Manufacturing and Engineering Management , 649 - 659.
- **T.Prabhuram, D.Elilraja, S.Prathap Singh and J. Immanuel Durairaj**, "Investigation of Mechanical and Chemical Properties of the Coir Fiber and Wood Powder Reinforced Hybrid Polymer Composites", S. Vijayan et al. (eds.), Trends in Manufacturing and Engineering Management, Lecture Notes in Mechanical Engineering, https://doi.org/10.1007/978-981-15-4745-4_26
- **T.Prabhuram** "Statuc Analysis of Different Spoke Structure of Airless and Conventional Tyre" IOP Conference Series: Materials Science And Engineering. Oct 2020.
- **N.Thangapandian** "Thermal Transport Properties of Carbon-Assisted Phase Change Nanocomposite" Fullerenes, Nanotubes And Carbon Nanostructures. Jul 2020.
- **N.Thangapandian** "Effect of Shot Blasting on Droplet Contact Angle of Carbon Aided Phase Change Nanocomposites" Surface Engineering, Jan 2021.
- **N. Thangapandian** "Machining Behavior, Surface Integrity and Tool Wear Analysis In Environment Friendly Turning of Inconel 718 Alloy" Measurement, Jan 2021.
- **M. Chrispin Das** "Living Prephet, 'Tg/Dta Studies On The Oxidation And Thermal Behaviour of Ti-6al-4v-B4c Coatings Obtained By Magnetron Sputtering" Journal of Applied Research And Technology, June 2020.
- **M. Chrispin Das** "ZrC-Impregnated Titanium-Based Coating as an Effective Lubricating Barrier for Artificial Hip Prosthesis" Materials Performance and Characterization. January 2021.

- **M. Chrispin Das** “Evaluation of Mechanical Properties of Epoxy Matrix Composites For Various Filler Loading” International Journal of Mechanical And Production Engineering Research and Development. June 2020.
- **N. Suresh L. Balamurugan , K. Arun Vasantha Geethan , M.Sathish Kumar ,** Materials Today: Proceedings , "Statistical analysis of mechanical properties of Al-SiC-WC and Al-SiC-Al₂O₃ hybrid composites, September 2020, 2214-7853.
- **Suresh.N, Balamurugan.L, K.Arun Vasantha Geethan,** "Statistical Analysis of Mechanical Properties of Aluminum Tungsten Carbide and Aluminium Alumina Composites" "Materials Today Proceedings" (Published online), <https://doi.org/10.1016/j.matpr.2020.09.211>.
- **Arthur Jebastine Sunderraj. D, Ananthapadmanaban. D, Arun Vasantha Geethan. K,** Johnrajan. Trends in Manufacturing and Engineering Management, Lecture Notes in Mechanical Engineering A “Manufacture, Mechanical Properties and Microstructural Characterization of Aluminium and Iron Metal Matrix Composite Manufactured.
- **Arthur Jebastine Sunderraj. D, Arun Vasantha Geethan. K,** Materials Science and Engineering 770 (2020) “Intermetallic Formation and Characterization of Tin-Copper Manganese Silver”.
- **R.Ranjith Kumar,** “Emulation Of Multi-Rotor Functionalities In Fixed Wing Airplane For Farm Based Land Surveillance With Controlled Fluid Dispersion System” IOP Conf. Series: Materials Science And Engineering. Jan 2021.
- **S.Jagadeesh, K.Narayanamoorthy, K.Ramesh, K.Gnanaekaran, S.Prathap singh.**"Experimental study on modified water injected four stroke petrol engine", Materials Today: Proceedings (2020). <https://doi.org/10.1016/j.matpr.2020.03.229>
- **K.Ramesh, K.Gnanasekaran, S.Prathapsingh,** M.Thayumanavan, Springer, Lecture Notes In Mechanical Engineering "Optimization of turning process parameters in machining of heat treated ductile iron bar using TIC/TICN/AL₂O₃- Coated tungsten carbide tool Springer; Lecture notes in mechanical engineering <https://doi.org/10.1007/978-981-15-3631-1-43>.
- Mr. S. Prathap Singh “Optimization Of Drilling Process In Heat-Treated Al–20% Sic Functionally Graded Composite Using Grey” Lecture Notes in Mechanical Engineering. June 2020
- **Ashwin Kannan, P. Krishna Kumar** and Nathan, D "Feasibility Study of TIG Welding of AA6063-AA7075 Alloys." Trends in Manufacturing and Engineering Management: S 709-719. https://doi.org/10.1007/978-981-15-4745-4_63.
- **P.Sabarish Kumar** “Design And Analysis of Helical Coil Heat Exchanger” IOP Conference Series: Materials Science And Engineering. June 2020.
- **P.Sabarish Kumar** “Design And Analysis of Connecting Rod Using Composite Materials” Iop Conference Series: Materials Science and Engineering. June 2020.
- **Venkatesh, R., Rao, V. S.Ashwin kannan & Mullaikodi, S. M.** (2020, September). IOP Conference Series: Materials Science and Engineering , Analysis and Optimization of Abrasive water Jet Machining processes on the hybrid nano particle reinforced Aluminum alloy matrix composite material. In IOP Conference Series: Materials Science and Engineering (Vol. 923, No. 1, p. 012037). IOP Publishing.
- **P. Krishna Kumar, and A. Sathish Kumar.** "Investigation of frictional characteristics of laser textured aluminium 6061 and aluminium 7071 alloys under dry sliding conformal

contact in pin on disc tribometer." Materials Today: Proceedings (2020).
<https://doi.org/10.1016/j.matpr.2020.02.735>.

- **Mr.P.Krishna Kumar** "Effect of Substrate Temperature And Preferred Orientation On the Tribological Properties of Tantalum Nitride Coatings" Materials Today: Proceedings (Elsevier) October 2020.
- **Mr.P.Krishna Kumar** "Experimental Study On Frictional Characteristics of Alumina Surface Through Biologically Inspired Catfish And Shark Fish Scale Like Laser Textures Under Dry And Lubricating Condition" AIP Conference Proceedings. April 2020.
- **M.Sathish Kumar, R. Sivaraman, John Georg, and S. Aadhiswaran, S. Sundararaj,** Thermodynamic Analysis on Cascade Vapour Compression Refrigeration System with Au-CNT, Ag-CNT and H₂AuCl₄-CNT Composite Nanoparticles', AIP Conference Proceedings 2317, 020037 (2021); <https://doi.org/10.1063/5.0036268>.
- **M.Sathish Kumar** "Design And Impact Analysis of A Jeep Bumper Made of Composite Material" IOP Conference Series: Materials Science And Engineering. October 2020.
- **Muhammed Abraar, Suresh N, Rameeza,** "Stress Analysis of Connecting rod in 1500 hp engine", Cite as: AIP Conference Proceedings 2283, 020004 (2020); <https://doi.org/10.1063/5.0025460>.
- **Muhammed Abraar S.A** "Experimental Studies On Thermal Spray Ceramic Coating (Al/Ti) On Mild Steel Substrate" Gedrag And Organisatie Review, September 2020.
- **K.Gnanasekaran,K.Ramesh,S.Jagadeesh,K.Narayanamoorthy,D.Elil Raja** "Study Of Machining Parameters of Micro Ecm On Ss304 Steel With Nickel Coated Copper Tool" IOP Conference Series: Materials Science And Engineering, March 2020.

Conference Papers Presented By Staff Members International

- **D.Elil Raja, Mr. S. Prathap Singh** "Investigation of Machining Parameters of Super Hardened Tool In Micro Electrical Discharge Machining" ICRADMM 2020, Amity University, 15th -16th October 2020.
- **J.Immanuel Durai Raj,** "Generative adversarial networks for flow approximation of Air foil with Reynold's number increment" ICRTBI20-153, St.Joseph's Institute of Technology, on 23 & 24th July 2020.
- **Suresh N, Dr.K.Arun Vasantha Geethan** "Statistical Analysis of Mechanical Properties of Al-SiC-WC and Al-SiC-Al₂O₃ Hybrid Composites" International Conference on Recent Advances in Materials and Manufacturing Engineering (ICRAMM 21), Vellalar College of Engineering, 21.11.2020.
- **D.Arthur Jebastine Sunderraj,Dr.K. Arun Vasantha Geethan, J.Immanuel Durairaj, S. Prathapsingh, M.Narayanamoorthy** "Study of Tribological Behavior of AL2024 by Power Metallurgy Method" in ICAMM2021, organized by SSN College of Engineering during Feb 18 th and 19th 2021.

- **N.Suresh**, “Analysis of Damping and wear characteristics of tungsten carbide reinforced AA6061 Composites”, in ICMST, Global Conference Hub & Raja Bahudur Venkata Rama Reddy College, Hyderabad on 29.5.2021.
- **R.Ranjith Kumar**, “Emulation of Multi-Rotor Functionalities in Fixed Wing Airplane for Farm Based Land Surveillance with Controlled Fluid Dispersion System International” RIACT 2020, October 2nd & 3rd 2020.
- **Jagadeesh S, K.Ramesh, K.Gnanasekaran, S. Prathap Singh** “Experimental Study Of Micro-EDM On EN24 Steel With Normal Brass, Tin Coated Brass, Cryogenic Treated Brass Tool by Varying the Machining Parameters” ICRAMER, SRM University, on 15&16 april 2021.
- **Jagadeesh S** “Recent Advances In Design, Materials And Manufacturing” ICRADMM 2020, Amity University, 15.10.2020 to 16.10.2020.
- **K.Ramesh, K.Gnanasekaran, S. Prathap Singh** “Investigation of machining parameters of super hardened tool in micro electrical discharge machining” ICRADMM-20 , Amit University ,Gwalior, on 15 &16 October.
- **Sathish Kumar A** “Characteristics study of fibre laser welding on Austenitic and martensitic stainless steel” International conference on Research and Development in Engineering and Management-2021, International Institute of Research in Multidisciplinary, 23.05.2021.
- **P.Sabarish Kumar** “Properties And Potential Applications of CNH Over CNT” Advances In Renewable And Sustainable Energy Systems, SRM Institute Of Science And Technology, 5.12.2020.
- **P.Krishna Kumar** “Experimental study on frictional characteristics of alumina surface through biologically inspired cat fish and shark fish laser textures under dry and lubricating conditions” International Conference on Advanced Materials and Characterization ICAMBC_2021, 24-04-2021 to 24-06-2021.
- **S. Prathap Singh, T.Prabhuram**, “ Effect of drilling operation parameters on surface roughness and thrust force of Aluminium reinforced with 10% Al₂O₃ functionally graded metal matrix composite” ICOFT 2020, in National Institute of Technology, Puducherry on 28th -30th December 2020.

Students Publication along with Staff Members International Journal

- K.R.Vignesh, S.Tharani Dharan, S. Yeswanth, **Dr.K. Arun Vasantha Geethan, Mr.D.Arthur Jebastine Sunderraj**, International Research Journal of Engineering and Technology, "Mechanical And Characteristics Behaviour Of Iron And Aluminium Billets With Addition Of Titanium" Volume: 07 Issue: 09 | Sep 2020.
- S.Sudhagar. S.Sathees Kumar, **K.Arun Vasantha Geethan**, R.Muthalagu , Tierärztliche Praxis , Tensile, thermal and dynamic mechanical analysis of sisal, jute and banana fiber bio composites for various engineering applications, Vol 40, 2020 ISSN: 0303-6286.
- **T.Prabhuram**, S.C.Meenakshi Sundaram, S.Jegadeeswer, V.Sathish Kannan, “ Statuc analysis of different spoke structure of airless and conventional tyre”, IOP Conf.Series:

Materials Science and Engineering 923 (2020) 012017, doi:10.1088/1757-899X/923/1/012017. Scopus Indexed Journal.

- P.Ganesh Kumar, R Prabakaran, D Sakthivadivel, **N Thangapandian**, R Velraj, Sung Chul Kim, Surface Engineering, Effect of shot blasting on droplet contact angle of carbon aided phase change nanocomposites,
- Sung Chul Kim, Rajendran Prabakaran, D. Sakthivadivel, N. **Thangapandian**, Arpit Bhatia & P. Ganesh Kumar, Fullerenes, Nanotubes and Carbon Nanostructures, Thermal transport properties of carbon-assisted phase change nanocomposite.
- Vinothkumar Sivalingam, Yanzhe Zhao, Ramkumar Thulasiram, Jie Sun, **N Thangapandian**, Measurement, Machining Behaviour, surface integrity and tool wear analysis in environment friendly turning of Inconel 718 alloy,
- A.Sujin Jose, V.V Sudheer Babu, S.P.Jani, **M.Chrispin Das**, International Journal of Mechanical and Production Engineering Research and Development , Evaluation of Mechanical Properties of Epoxy Matrix composites for various Filler Loading, Vol 10, Special Issue, pp 9-15, ISSN(P) 2249-6890.
- R. Malkiya Rasalin Prince, N. Selva Kumar, D. Arulkirubakaran, S.Christopher Ezhilil Singh, **M.Chrispin Das**, C.Prabha, Praveen Kumar Bannaravuri, R.B. Jeen Robert, I. Living Prephet, Journal of Applied Research and Technology , ‘TG/DTA Studies on the Oxidation and Thermal Behaviour of Ti-6Al-4V-B4C Coatings Obtained by magnetron sputtering, Vol 18, no 3. pp 108-118.
- Samuel, J. Jenis, **P. Krishna Kumar**, D. Dinesh Kumar, AM Kamalan Kirubakaran, T. Arjun Raj, and P. Aravind. "Effect of substrate temperature and preferred orientation on the tribological properties of Tantalum nitride coatings." Materials Today: Proceedings (2020).
- K Vinoth Babu, **S. Prathap Singh**, S. Marichamy, P. Ganesan, M Uthayakumar (2020) "Optimization of Drilling Process in Heat-Treated Al-20% SiC Functionally Graded Composite Using Grey Relational Analysis" Proceedings of ICDMC 2019, 455 – 464.
- **K.Gnanasekaran,K.Ramesh,S.Jagadeesh,K.Narayanamoorthy,D.Elil Raja**. "Study of machining paramatersof micro ECM on SS304 steel with nickel coated copper tool", IOP Conference Series: Materials Science and Engineering,, 2020, vol.764, doi:10.1088/1757-899X/764/1/012033. Scopus indexed journal.

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