

Dr.T.Mohanraj

Assistant professor (Sr.Gr),

Department of Mechanical Engineering,

Amrita School of Engineering, Coimbatore.

Email: t_mohanraj@cb.amrita.edu

Mobile No: 9842581696

Area of Specialization: Optimization Techniques

Publications of Last Five Years:

- 1) Mohankumar, P., Ajayan, J., Mohanraj, T., &Yasodharan, R. (2021) Recent developments in biosensors for healthcare and biomedical applications: A review. *Measurement*, 167, 108293. (SCI / SCOPUS indexed)
- 2) Moganapriya, C., Rajasekar, R., Kumar, P. S., Mohanraj, T.,Gobinath, V. K., &Saravanakumar, J. (2020). Achieving machining effectiveness for AISI 1015 structural steel through coated inserts and grey-fuzzy coupled Taguchi optimization approach. *Structural and Multidisciplinary Optimization*, 1-18. (SCI/SCOPUS indexed)
- 3) Mohanraj T, Yerschuru J, Krishnan H, Nithin Aravind RS, Yameni R (2020) Development of tool condition monitoring system in end milling process using wavelet features and Hoelder's exponent with machine learning algorithms. *Measurement*:108671. doi:<https://doi.org/10.1016/j.measurement.2020.108671> (SCI / SCOPUS indexed)
- 4) Mohanraj, T., Deepesh, T., Dhinesh, R., Jayaprakash, S., & Sai Krishna, S. (2020). Design and analysis of a strain gauge based eight-shaped elliptical ring dynamometer for milling force measurement. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, 0954406220967681. (SCI / SCOPUS indexed)
- 5) Prabhu, S. R., Ilangkumaran, M., &Mohanraj, T. (2020). 3D Printing of automobile spoilers using MCDM techniques. *Materials Testing*, 62(11), 1121-1125. (SCI/SCOPUS indexed)
- 6) Suganeswaran, K., Parameshwaran, R., Mohanraj, T., & Radhika, N. (2020). Influence of secondary phase particles Al₂O₃/SiC on the microstructure and tribological

characteristics of AA7075-based surface hybrid composites tailored using friction stir processing. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, 0954406220932939. (SCI/SCOPUS indexed)

- 7) Sreenivasan, M., Kumar, M. D., Krishna, R., Mohanraj, T., Suresh, G., Kumar, D. H., & Charan, A. S. (2020). Finite element analysis of coil spring of a motorcycle suspension system using different fibre materials. *Materials Today: Proceedings*. (SCOPUS indexed)
- 8) Tamilvanan, A., Balamurugan, K., Mohanraj, T., Selvakumar, P., & Madhankumar, B. (2020). Parameter optimization of copper nanoparticle synthesis by electrodeposition process using RSM and CS. *Materials Today: Proceedings*. (SCOPUS indexed)
- 9) Mohanraj, T., Shankar, S., Rajasekar, R., & Uddin, M. S. (2020). Design, development, calibration, and testing of indigenously developed strain gauge based dynamometer for cutting force measurement in the milling process. *Journal of Mechanical Engineering and Sciences*, 14(2), 6594-6609. (SCOPUS indexed)
- 10) Mohanraj, T., Shankar, S., Rajasekar, R., Sakthivel, N.R., Pramanik, A. (2020). Tool condition monitoring techniques in milling process - a review, *Journal of Materials Research and Technology*, 9(1), 1032-1042. DOI:10.1016/j.jmrt.2019.10.031 (SCI / SCOPUS indexed) [IF:5.27]
- 11) Vijay Anand, M., Vijayakumar, K. C. K., & Mohanraj, T. (2020). Evaluation of shoulder pain among the workers involved in ironing process using Surface Electromyography. *Journal of Medical Imaging and Health Informatics*, 10(1), 86-92. DOI:10.1166/jmihi.2020.2846 (SCI/SCOPUS indexed) [IF 0.549]
- 12) Thangarasu, SK., Shankar, S., Mohanraj, T., Devendran, K. (2020). Tool wear prediction in hard turning of EN8 steel using cutting force and surface roughness with artificial neural network. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, 234 (1), 329-342. DOI: 10.1177/0954406219873932 (SCI/SCOPUS indexed) [IF 1.359]
- 13) Shankar, S., Mohanraj, T., & Pramanik, A. (2019). Tool Condition Monitoring While Using Vegetable Based Cutting Fluids during Milling of Inconel 625. *Journal of Advanced Manufacturing Systems*. 18(4), 563-581. DOI:10.1142/S021968671950029X (SCOPUS indexed) [IF: 0.44]

- 14) Shanmugam. A, Krishnamurthy. K, &Mohanraj. T., (2019). Experimental Analysis on the Performance of Abrasive Waterjet Cutting of Glass Fiber Reinforced Plastics Using Response Surface Methodology. *Journal of the Balkan Tribological Association*. 24(4), 1029-1038. (SCOUPS Indexed).
- 15) Mohanraj, T.,& Dinesh kumar.M, (2019). The Process Parameter Optimization for Grey Cast Iron in Turning Process using Response Surface Methodology. *International Journal of Mechanical and Production Engineering Research and Development*, 9(2), 997 – 1006. (SCOPUS indexed)
- 16) P.M.Arunkumar, T.Mohanraj. (2019). Optimization of Milling Parameters using Vegetable Oil by Measuring Vibration Signal. *International Journal of Innovative Technology and Exploring Engineering*, 8(8), 706 – 711. (SCOPUS indexed)
- 17) Shanmugam, A., Krishnamurthy, K., &Mohanraj, T. (2019). Experimental study of surface roughness and taper angle in abrasive water jet machining of 7075 aluminum composite using response surface methodology. *Surface Review and Letters*, 1950112. DOI: 10.1142/S0218625X19501129(SCI/SCOPUS indexed) [IF:0.748]
- 18) Shankar, S., Mohanraj, T., & Rajasekar, R. (2019). Prediction of cutting tool wear during milling process using artificial intelligence techniques. *International Journal of Computer Integrated Manufacturing*, 32(2), 174-182. (SCI/SCOPUS indexed) [IF:2.090]
- 19) Mohanraj, T., Shankar, S., Rajasekar, R., Deivasigamani, R., &Arunkumar, P. M. (2019). Tool condition monitoring in the milling process with vegetable based cutting fluids using vibration signatures. *Materials Testing*, 61(3), 282-288. (SCI/SCOPUS indexed) [IF 0.573]
- 20) Shankar, S., Mohanraj.T. (2017). “Experimental investigation and process parameter optimization in milling of 7075 – T6 hybrid aluminium metal matrix composite using response surface methodology”. *Journal of the Balkan Tribological Association*. 23(1): 124-138. (SCOPUS indexed)
- 21) Shankar, S., Mohanraj.T, Ponappa.K (2017). "Influence of vegetable based cutting fluids on cutting force and vibration signature during milling of aluminium metal matrix composites." *JurnalTribologi* 12: 1-17. (WoS indexed)

- 22) Shankar, S., Mohanraj, T. Thangarasu, S. K., (2016). "Multi-response milling process optimization using the Taguchi method coupled to grey relational analysis." *Materials Testing* 58.5: 462-470. (SCI/SCOPUS indexed) [IF 0.573]
- 23) Arulmozhivarman. J, Radhika. N., Mohanraj. T&Vairavel. M., (2019). The effect of bio-cutting fluids on surface roughness during end milling of A359 Aluminium alloy. *International Journal of Mechanical and Production Engineering Research and Development*, 9(2), 987 – 996. (SCOPUS indexed)
- 24) Suganeswaran,K., Parameshwaran,R, Mohanraj,T,&Meenakshipriya,B.,(2020). Process parameter optimization for the magnetic abrasive finishing of SS310s steel. *MaterialsTesting*, 62(2). 157-164. DOI:10.3139/120.111467 (SCI/SCOPUS indexed) [IF 0.573]
- 25) Tamilarasi, T., Rajasekar, R., Saminathan, K., Ravichandran, K., Mohanraj, T., Moganapriya, C., &Gobinath, V. K. (2020). Experimental investigation on the influence of carbon-based nanoparticle coating on the heat transfer characteristics of the microprocessor. *Journal of Composite Materials*, 54(1), 61-70. DOI: 10.1177/0021998319859926 (SCI/SCOPUS indexed) [IF 1.755]