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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,** Yerchuru 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/S02196867 1950029X(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]**