Research Publications of Prof Nirmal Kumar Singh as on 25.12.2024

(i) Research publications in Journals of Web of Science Database(SCIE/SCI)

1. Mukherjee, S.P. and Singh, N.K., 1997-98.Sampling properties of an estimator of a new process capability index for Weibull distributed quality characteristics. *Quality Engineering*, 10(2),pp. 291-294. ASQ and Taylor &Francis https://doi.org/10.1080/08982119708919136. (SCIE IF: 1.32). Q2(Statistics & Probability)/Q3(Industrial Engg)

2. Ghosh, A., Chattopadhyaya, S., and Singh, N. K., 2012. Assessment of heat affected zone of submerged arc welding processthrough digital image processing. *Defect and Diffusion Forum*, 326-328, pp. 400-404. Durnten-Zurich Switzerland Trans Tech Publications, Switzerland doi:10.4028/www.scientific.net/DDF.326-328.400. (SCIE IF:.0.712) Q3
3. Ghosh, A, Chattopadhyaya, S.,and Singh, N. K.,2012. Prediction of weld bead parameters, transient temperature distribution and HAZ (heat affected zone) width of submerged arc welded structural steel plates.*Defect and Diffusion Forum*,326-328 pp. 405-409.Durnten–Zurich Switzerland Trans Tech Publications, Switzerland doi:10.4028/www.scientific.net/DDF.326-328.400 (SCI IF: 0.712) Q3

4. Tiwari, V. and Singh, N. K.,2016. Process Capability Index for Bivariate Exponentially Distributed Quality Characteristics and its Sampling Properties.*Communications in Statistics – Theory and Methods*, 46(3),pp. 11099-11109(Online since 2016) https://doi.org/10.1080/03610926.2016.1257717. (SCIE IF:0.612) Q4

5. Kumar, V., Hussain, M., Mohammad,S. R., Das, A. K., and Singh, N.K.,2016. Fiber laser welding of thin nickel sheets in air and watermedium. *Arabian Journal for Science and Engineering*, 42, 1765–1773, https://doi.org/10.1007/s13369-016-2305-1(Online since 30.08.2016) (SCIE IF: 1.518) Q3

6. Bajpai, V., Yadav, A., Kumar, M., and Singh, N.K., 2017. FE modeling of burr size in high- speed micro-milling of Ti6Al4V.*Precision Engineering*,49 pp. 287-292.https://doi.org/10.1016/j.precisioneng.2017.02.017(SCIE IF: 2.8) Q2

7. Kumar, H.Ahmad, G.N., and Singh,N. K., 2018. Activated flux TIG welding of Inconel 718 super alloy in presence of tri-component flux. *Materials and Manufacturing Processes*,34 (2),pp. 216-223. https://doi.org/10.1080/10426914.2018.1532581. (SCIE) (IF: 2.7) Q2

8. Taye, D.,Mohanty, S., Das, A.K.,and Singh, N. K. 2019. Electroless Ni-Al2O3 WS_2 composite coating on aluminum substrate. *Transactions of The Indian Institute of Metals*,72, pp. 2281–2292. (Online from 17.04.2019) DOI:10.1007/s12666-019-01677-1(SCIE IF:1.17).Q3

9. Sharma, P.,Chattopadhyaya, S., and Singh, N. K., 2019. A review on magnetically supported gas metal arc welding process for magnesium alloys.*Materials Research Express*6(8), https://doi.org/10.1088/2053-1591/ab1e67 082002 (IF: 1.449) (SCIE) Q3.

10. Sharma,P.,Chattopadhyaya, S., and Singh, N. K. (2019). Optimization of Gas metal arc welding parameters to weld AZ31B alloy using response surface methodology. *Materials Research Express*, 6(10) 106569 https://doi.org/10.1088/2053-1591/ab3887 (SCIE)(IF:1.449) Q3

11. Ahmad, G.N.,Mohammad, S. R., Singh, N. K.,and Kumar, H., 2020. Experimental investigation on Ytterbium fiber laser butt welding of Inconel 625 and duplex stainless steel 2205 thin sheets. *Optics and Laser Technology*,126 pp.106117. https://doi.org/10.1016/j.optlastec.2020.106117 (SCIE: IF 3.3) Q1

12. Kar,T., Mandal, N. K.,Singh, N.K., 2020. Multi-response optimization and surface texture characterization for CNC Milling of Inconel 718 alloy. *Arabian Journal for Science and Engineering*,45, pp. 1265–1277 doi.org/10.1007/s13369-019-04324-5 (SCI: IF-1.518) Q3

13. Kumar, D., Singh, N.K., and Bajpai, V., 2020. Recent trends, opportunities and other aspects of micro-EDM for advanced manufacturing: a comprehensive review. *J Braz. Soc. Mech. Sci. Eng.*, 42(5),pp. 222 https://doi.org/10.1007/s40430-020-02296-4 (SCIE IF: 1.743 Mech Engg.Q2(CA).
14. D. Kumar, Rai, R.S., Singh*, N.K., 2020. An innovative approach to deposit ultrathinZnO nano-flakes (2D) through hydrothermal assisted electrochemical discharge deposition and growth method. *Ceramics International*,46(16), pp.26216-26220 https://doi.org/10.1016/j.ceramint.2020.07.009(SCI IF: 3.83) Q1. (CA)

15. Mandal, N. K., Singh, N.K., Tarafdar, N. H., Hazra A., 2020.Correlating tool wear and surface integrity of a CNC turning process using Naïve Bayes classifiers. *Proceedings of The Institution of Mechanical Engineers, Part B:Journal of Engineering Manufacture*, Vol. 235(5) pp.772-781 (SCI IF: 1.982) https://doi.org/10.1177/0954405420972980 Q2

16. Sharma, P., Chattopadhyaya, S.,Singh, N. K.Marta Bogdan-Chudy, Grzegorz Krolczyk, 2020.The effect of external magnetic field on aspect ratioand heat input of Gas Metal Arc welded AZ31B alloy weld joints using response surface methodology. *Materials(MDPI), 13*(22), 5269 ; (SCI IF: 3.057) Q1https://doi.org/10.3390/ma 13225269.

17. D., Kumar, Bajpai, V, Singh, N.K, 2021.Nano Electrical Discharge Machining-The Outlook, Challenges, and Opportunities. *Materials and Manufacturing Processes*.pp-1-36,DOI:10.1080/10426914.2021.1905832 Q2. (CA)

18. Deepak Kumar, Ravi Shankar Rai, VivekBajpai, Nirmal Kumar Singh 2021.Mass fabrication of 2D nanostructure (ZnO) in chemical growth solutionusing tip induced lithography.*Materials and Manufacturing Processes*.pp.177-185,https://doi.org/10.1080/10426914.2021.1960993 Q2(CA).

19. Gulshad Nawaz Ahmad, Mohammad ShahidRaza, N K Singh, GopinathMuvvala 2021·Investigating the effect of process parameters on weld pool thermal history and mechanical properties of laser welded Inconel 625 and Duplex stainless steel 2205 dissimilar welds.Optik - International Journal for Light and Electron Optics 248 https://doi.org/10.1016/j.ijleo.2021.168134 Q2(CA).

20. D., Kumar, , Singh, N.K, Bajpai, V. 2022.Achieving nano-patterned features by micro-EDM process using vertically aligned ZnOnanorods grown on microprobe tip: a scaling approach.*Microelectronic Engineering* 260 (2022) 111792,https://doi.org/10.1016/j.mee.2022.111792 Q2.

21. Pankaj Sharma, SomnathChattopadhyaya, Nirmal Kumar Singh, Ashok Kumar, Shubham Sharma, Changhe Li, Vineet Kumar, SzymonWojciechowski, GrzegorzKrólczysk, SayedM.Eldin 2022. Recent developments in the design, development, and analysis of the influence of external magnetic-field on gas-metal arc welding of non-ferrous alloys: review on optimization of arc-structure to enhance the morphology and mechanical properties of welded joints for automotive applications, Heliyon, 8(12) e11812, https://doi.org/10.1016/j.heliyon.2022.e11812.(Q1)

22. Rajesh Sahoo, Nirmal Kumar Singh, VivekBajpai, 2023. A novel approach for modeling MRR in EDM process using utilized discharge energy. Mechanical Systems and Signal Processing, 185 (2023) 109811 https://doi.org/10.1016/j.ymssp.2022.109811 (IF:8.9(Q1)

23. Ahmad GN Singh N K et al. 2023 Monitoring of thermo-cycles in fibre laser welding of duplex stainless steel 2205 sheets and its correlation with microstructures and mechanical properties" Materials Research Express Vol. 10 No. 10 **DOI** 10.1088/2053-1591/ad0095 Impact Factor: 2.3 (Q3).

24. D., Kumar, Singh, N.K, 2023. A novel maglev μ-EDM and its signal processing for machine condition monitoring on duplex stainless steel (DSS-2205). Mechanical Systems and Signal Processing. Impact Factor: 8.9(Q1). Under revision

25. Kumar Deepak, Kumar Mohan, Singh, N.K, 2023.Geometrically irregular nanopatterning through novel maglev EDM using ZnOnanopillars: A feasibility study towards nano-EDM. Materials Science in Semiconductor Processing Vol.169/107924 https://doi.org/10.1016/j.mssp.2023.107924 Vol. 169 Impact Factor: 4.5 (Q1).

26. Rajesh Sahoo, Nirmal Kumar Singh, Vivek Bajpai, 2023. Approach towards green manufacturing in Maglev EDM using different bio-degradable dielectrics at variable discharge conditions. Journal of Cleaner Production Vol. 430/ 139623 https://doi.org/10.1016/j.jclepro.2023.139623 Impact Factor: 11.1 (Q1).

(ii) Research publications in Journals of Scopus Database

27. Mukherjee, S.P. and Singh, N.K., 1994.Sampling properties of an estimator of bivariate process capability index.*Economic Quality Contro*l,(Now *Stochastic and Quality Control)*, 9(2), pp. 73-78. Wurzburg, Germany, ISSN (printed): 0940-5151. ISSN (electronic): 1869-6147/Online ISSN: 2367-2404 Print ISSN: 2367-2390(Scopus).

28. Ghosh A., ChattopadhyayaS.,and Singh, N. K., 2011. 3rd degree mathematical model appropriate for parametric estimation of SAW process.*Advanced Materials Research(Materials and Design), 284-286*, pp. 2473-2476, Trans Tech Publication Durnten-Zurich, Switzerland DOI: 10.4028/www.scientific.net/AMR.284-2862473(Scopus).

29. Danish M., Pingali, V. K., Chattopadhyay, S., Singh, N. K., and Ray, A.K.2012. Idealisation and formulation in structural dynamics using modal analysis. *Advanced Materials Research*,418-420 (2012) pp. 1022-1025. (Online available since 2011/Dec/06 at www.scientific.net)Durnten-ZurichTrans Tech Publications, Switzerland doi:10.4028/www.scientific.net/AMR.418-420.1022 (Scopus).

30. Mukhopadhyay, P., Chattopadhyaya, S.,Bhatia. S., Singh,N. K. and Mukhopadhyay, A.K.,2013. Prediction of weldparameters in gas metal arc welding process using curve fitting techniques and graphical methods.*Advanced Materials Research*, 652-654pp. 2352-2356.doi:10.4028/www.scientific.net/AMR.652-654.235.2Trans Tech Publications ,Switzerland(Scopus).

31. Vates, U.K. and Singh, N.K., 2013. Optimization of surface roughness process parameters of electrical discharge machining of EN-31 by response surface methodology.*International Journal of Engineering Research and Technology*, 6(6), pp.835-840 ISSN: 0974-3154https://www.ripublication.com/irph/ijert_spl/ijertv6n6spl_17.pdf(Scopus)

32. Vates, U. K, Singh N. K. and Singh, R.V., 2014. Effect of alloying content on surface roughness of die materials at optimal parametric condition using WEDM.*International Journal of Applied Engineering Research* 9(19),pp.5301-5312 (Scopus)

33. Vates, U. K, Singh, N. K. and Singh R.V., 2014. ANN Modelling and Optimization of Ra with MRR on HSS T42 Steel using WEDM process.*International Journal of Mechanical & Mechatronics Engineering*, 14(03) pp. 114-128. https://ijens.org/Vol_14_I_03/1410501-1403-6767-IJMME-IJENS.pdf(Scopus).

34. Vates, U. K, Singh, N. K. and Singh R.V., 2014. Modelling and prediction of Ra of EN31 in wire electrical discharge machining using ANN and MSE approach. *International Journal of Applied Engineering Research*, 9(21),pp. 9273- 9296 (Scopus).

35. Tripathi B. N., Vates, U.K., Singh, N.K., 2015. Ra Modelling and optimization of Honda bike cylinder liner in honing using RSM & RSME Technique.*International Journal Applied Engineering Research*, 10(8), pp.1087-1090.ISSN: Print 0973-4562 online (Scopus).

36. Tripathi, B. N., Singh, N. K., 2015. Surface roughness influencing process parameters and modeling techniques for four stroke motor bike cylinder liners during honing: Review'*International Journal of Mechanical & Mechatronics Engineering*, 15(01), pp.106-112. ISSN: 2077-124X (Online) 2227-2771(Scopus).

37. Danial, N. A. Singh, N. K., and Vates, U. K.2015. Parametric optimization & simulation of mild steel cup in deep-drawing using LS-Dyna. *International Journal of Applied Engineering Research* 10(9),pp. 24479-24489. (Scopus).

38. Vates, U. K, Singh, N. K. and Singh R.V., 2016. Modelling and optimization of wire electrical discharge machining process on D2 Steel using ANN and RMSE Approach. *International Journal of Computational Materials Science and Surface Engineering*, 6(3/4), pp.161-185. (Scopus).

39. Tripathi, B. N. and Singh, N. K., 2015. Experimental investigation of surface roughness of cylinder liner for HT 100material using RSM Technique.*International Journal of Applied Engineering Research*,10(18),pp. 39239-39246. (Scopus).

40. Swati and Singh, N. K., (2015).Gas metal arc welding process: review of historical and recent development.*International Journal of Applied Engineering Research*,10(23),pp. 43722-43725. (ISSN0973-4562)Research India Publications.(Scopus)

41. Kumar, P. Kumar, M., Bajpai, V., and Singh, N. K., 2017. Recent advances in characterization, modeling and control of burr formation in micro-milling.*Manufacturing Letters*,13, pp. 1-5.https://doi.org/10.1016/j.mfglet.2017.04.002 (Scopus)

42. Mandal,,N. K., Mondal, M., and Singh, N. K., 2017. Modelling and optimisation of a sustainable manufacturing process with CNC turning centre.*International Journal of Applied Environmental Sciences*,12(6), pp. 1101-1116. ISSN 0973-6077 https://www.ripublication.com/ijaes17/ijaesv12n6_05.pdf(Scopus)

43. Kumar,H. and N. K. Singh (2017): "Performance of activated TIG welding in 304 austenitic stainless steel welds. *Materialstoday: PROCEEDINGS* 4(9), pp. 9914-9918. https://doi.org/10.1016/j.matpr.2017.06.293 (Scopus).

44. Mandal, V.,Hussain M., Kumar, V., Das, A. K.,and Singh, N. K. 2017. Development of reinforced TiN-SS316 metal matrix composite (MMC) using direct metal laser sintering (DMLS) and its characterization" *Materialstoday: PROCEEDINGS* 4 pp. 9982–9986. https://doi.org/10.1016/j.matpr.2017.06.306 (Scopus).

45. Ranjan,R. Singh, N. K.Jaiswal,A.P.,andBajpai.,V., 2018. Metal matrix nano composites using graphene nano platelets indented on copper particle in aluminum matrix. *Advanced Materials Letters*, 9(9), pp. 652-655. DOI: 10.5185/amlett.2018.2078(Scopus)(CA)

46. Ahmad,G.N., Padman, J., Raza,M.S., Kumar,A., and Singh, N. K., 2018. Analyzing the effect of tool pin design and process parameters on the microstructural and mechanical properties of friction stir welded 6061 aluminum alloy. *IOP Conference Series: Material Science and Engineering*, 377, 012059 DOI: 10.1088/1757-899X/377/1/012059(Scopus).

47. Kumar, V., Kumar, A., Kumar, S., and Singh, N. K., 2018. Comparative study of powder mixed EDM and conventional EDM using response surface methodology.*Materialstoday:PROCEEDINGS*Volume 5, Issue 9, Part 3,pp 18089-18094 https://doi.org/10.1016/j.matpr.2018.06.143 (Scopus)

48. Kumar, S., Kumar, A., Kumar, V. and Singh, N.K., 2018. Study of machining of INCONEL825 super alloy using powder mixed EDM process" *Materialtoday: PROCEEDINGS*,5(9) part 3,pp. 18129-18134https://doi.org/10.1016/j.matpr.2018.06.148 (Scopus)

49. Daniel, N.A., Singh, N.K., Vates, U.K., Sharma, B.P., Subramanian, S. 2019. Optimization of critical parameters of EDD Steel in die cavity manufacturing" *Advances in Industrial and Production Engineering, Lecture Notes in Mechanical Engineering,* pp. 357-363,Springer, Singapore (Select Proceedings of FLAME 2018) (Q4 IF: 0.13)(Scopus)https://doi.org/10.1007/978-981-13-6412-9_34

50. Sharma,P.Singh, N.K., Das, A.K, 2019. Optical characterization of copper doped lead oxide nanoparticle generated through ECDM process.*International Journal of Engineering Research & Technology*,7(3) AMDMM-2019 Q3ISSN (Online): 2278-0181. (Scopus)

51. Singh, N.K., 2019. Process Capability Index for Geometrically Distributed Quality Characteristics. *Advances in Computational Methods in Manufacturing, Lecture Notes on Multidisciplinary Industrial Engineering,* 1023-1030. Springer, Singapore doi.org/10.1007/978-981-32-9072-3_86 pp.1023-30(Online from 18.10.2019)(eBook)Scopus).

52. Kumar, D., Kumar, S., Kumar, D.andSingh, N.K., 2020. Effect of Two Different Dielectrics on the Machining Performance and Their Parametric Optimization through Response Surface Methodology. *Advances in Materials and Manufacturing Engineering. Lecture, Notes in Mechanical Engineering pp-39-40.* Springer, Singapore https://doi.org/10.1007/978-981-15-1307-7_4 (Scopus).

53. Ahmad, G.N., Kumar, H., and Singh, N. K., 2020. Microstructure and Mechanical Characterization of Laser Welded Dissimilar Joint of DSS 2205 and Inconel 625 Sheets.AIP Conference Proceedings 2273, 050020 https://doi.org/10.1063/5.0024251 Published Online: 02 November 2020(Scopus).

54. Khan, N.,Ahmad, G.N.,and Singh, N. K., 2020. Material Characterization of Resistance Spot Welded Aluminum Alloy 5052 and Stainless Steel 316L Joints. AIP Conference Proceedings 2273, 030003 https://doi.org/10.1063/5.0024249 Published Online: 02 November 2020(Scopus)

55. Kumar, D, Bishwakarma, H, Kumar, M, Singh, NK and Bajpai, V.2021 "Tip Induced Growth of Zinc Oxide Nanoflakesthrough Electro-chemical Discharge Deposition Process and Their Optical Characterization." *Proceedings of the ASME 2020 15th International Manufacturing Science and Engineering Conference*. *Volume 2: Manufacturing Processes;Manufacturing Systems; Nano/Micro/Meso Manufacturing; Quality and Reliability*. Virtual, Online. September 3, 2020. V002T08A008. ASME. https://doi.org/10.1115/MSEC2020-8283(Scopus).

56. Tiwari, V. and Singh, N. K.,2021.Assessment of Quality of Cloths Processed in Two Industries by Statistical Methods International Journal of Applied Engineering Research, 16(9), pp772-777, https://dx.doi.org/10.37622/IJAER/16.9.2021.772-777(Scopus)

57. Kumar, A., Kumar, D., Singh, N.K. (2022). Fabricating Micro-Holes Through Micro-EDM Process and Their Circularity Testing.Recent Trends in Product Design and Intelligent Manufacturing Systems, Lecture Notes in Mechanical Engineering. pp. 731–737, Springer, Singapore. https://doi.org/10.1007/978-981-19-4606-6_67(Scopus).

58. Parida, A.K., Sahoo, R., Singh, N.K., Bajpai, V. (2024). Investigation of Machining Characteristics Using Different Types of Plant-Based Bio-dielectrics in Maglev EDM. Recent Advances in Industrial Machines and Mechanisms. IPROMM 2022.pp 287–295. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-99-4270-1_29.

59. Swain, D., Sahoo, R., Singh, N.K., Bajpai, V. (2024). Effect of Polarity Variation in Maglev EDM Using Nitrogen-Rich Powder-Mixed Dielectric. Recent Advances in Industrial Machines and Mechanisms. IPROMM 2022.pp 257–266 Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-99-4270-1_26

(iii) Book Chapter in Scopus Database

60. Ghosh, A., Chattopadhyaya, S., and Singh, N.K., (2012). Assessment of heat affected zone of submerged arc welding process through digital image processing. In: Delgado J., de Lima A., da Silva M. (eds) *Numerical Analysis of Heat and Mass Transfer in Porous Media, Advanced Structured Materials*,27. Springer, Berlin, Heidelberg DOI: https://doi.org/10.1007/978-3-642-30532-0_8(Scopus)

(iv) Research publications in Journal of IEEEXPLORE database

61. Sriram, M. V. V. N., Singh, N. K., and Rajaraman, G., 2010. Neuro fuzzy modelling of oxygen furnace and its comparison with neural network and GRNN Models. *Proceedings of 2010 IEEE International Conference on Computational Intelligence and Computing Research*, pp.1-8, Coimbatore India. DOI: 10.1109/ICCIC.2010.5705830

(iv) Research Publications in other National and International journals

62. Mukherjee, S.P. and Singh, N.K., 1993. A process capability index for two correlated quality characteristics.*IAPQR Transactions*,18(2), pp. 49-55. Kolkata, India, (Important International Journal).

63. Sandhu, D.S. and Singh, N.K., 1994. Quality related culture-understandable by a common man.*DGQA (Min. of Defence) Journal*,23(2), pp.17-21 New Delhi, India.

64. Singh, N.K. 2010.Performance improvement in supply chain using statistical/management techniques. *Journal of IMS Group*,7(1), pp.76-81 Ghaziabad UP India January- June,2010 (This Journal is listed in Cabell's Management Directory USA).

65. Ghosh, A.,Chattopadhyaya, S., and Singh, N. K., 2011. Analytical solution to transient temperature field in semi-infinite body caused by moving ellipsoidal heat source.*Journal of International Review of Mechanical Engineering*5(5), pp. 987-992.

66. Vates, U. K.,Singh, R. V., and Singh, N. K., 2012. Process parameter optimization of MRR during EDM Process.*International Journal of Materials Processing Science andTechnology*,3(1), pp.35-40.

67. Tripathi, B. N., Singh, N. K., and Vates U. K., 2012. Optimization of surface roughnessprocess parameter during honing of cylinder liner.*International Journal of Manufacturing Science and Engineering*,3(2), pp.33-37.

68. Vates, U. K., Singh, R.V., and Singh, N. K., 2012. Effectiveness enhancement for MRR and surfaces smoothness in wire electrical discharge machining: A review.*InternationalJournal of Production and Quality Engineering*, 3, pp. 13-26.

69. Tiwari, V., and Singh, N. K., 2013. Review of the development in process capability analysis.*International Journal of Scientific & Engineering Research*, 4(7), pp. 2471-2475.

70. Daniel, N.A., Singh, N.K.andVates, U. K., 2013. Investigation of LDR in deep drawing with the influence of artificial neural network.*International Journal of Industrial & Production Engineering &Technology*, 3(1), pp.37-42.

71. Vates, U. K., Singh, N. K., 2014. Modeling of process parameters on D2 steel using wire electrical discharge machining with combined approach of RSM and ANN.*International Journal of Scientific & Engineering Research*,5(1) pp. 2026-2035.

72. Vates, U. K., Singh, N. K., and Tripathi, B.N., 2015. Surface finish analysis of D2 Steel in WEDM using ANN and regression modelling with influence of fractional factorial design of experiment.*International Journal of Engineering Trends and Technology*19(3), pp.159-167.

73. Mandal, N. K., Singh, N. K., Kumar, U.C. and Kumar, V., 2016. Semi-empirical modelling of surface roughness in CNC end milling.*International Journal of Mechatronics, Electrical and Computer Technology*, 6(22), pp.3099-3109.

74. Kumar, M., Mahato, P. K., Kushwaha, D., and Singh, N. K., 2016. Electrochemical machining: Review of historical and recent developments.*International Journal of Advance Research in Science and Engineering*, 5(3) pp. 217-227.

75. Danial, N. A., Singh, N. K., and Vates U. K., 2017. Parametric Optimization of Steel Die and Punch in Bowl Manufacturing. *European Journal of Applied Sciences*,9(5), pp. 224-233.

76. Mandal, N. K., Singh, N. K.,and Kumar, U. C. 2017. Estimation of chatter vibration and quality assessment of EN 24 steel turning. *International Journal of Scientific & Engineering Research*, 8(5), pp. 590-596, ISSN 2229-5518

77. Mandal, N. K., Singh, N. K., and Kumar, U. C. 2017. Determination of optimum parameters for multi-performance in a machining process. *International Journal of Mechanical Engineering and Information Technology*, 5(6), pp. 1630-1638, ISSN 2348-196x.

78. Tiwari,V., and Singh, N. K. 2021.Assessment of Quality of Cloths Processed in Two Industries by Statistical Methods. International *Journal of Applied Engineering Research* 16(9) pp. 772-777 © RI Publications. https://dx.doi.org/10.37622/IJAER/16.9.2021.772-777

79. Rajesh Sahoo,Deepak Kumar, Nirmal Kumar Singh and VivekBajpai 2022. Fabrication of micro-hole using novel Maglev EDM.*Journal of Micromanufacturing*, pp. 1-10 DOI: 10.1177/25165984221129449.

80. Hemlata Jangid, Nirmal K. Singh, Somnath Chattopadhyaya, M. Mohan Krishna Sai and Gaurav Parmar 2023. Deposition of steel over steel by Friction Surfacing Technique and investigation of its physical chemistry. *MIST International Journal of Science and Technology*, Vol. 11, pp 15-25 DOI: https://doi.org/10.47981/j.mijst. 11(2) pp. 15-25.

81. Sahoo, R., Bajpai, V., & Singh, N. K. (2023). Operational feasibility of Maglev EDM using powder mixed dielectric for machining Ti-grade 5 alloy. *Manufacturing Technology Today*, *22*(5), 50–55. https://doi.org/10.58368/MTT.22.5.2023.50-55

(v) Research Publications in National and International Conference Proceedings

82. Bhattacharya, A., and Singh, N.K. 1997. Applications of process capability analysis in the manufacturing industry. *Proceeding of 13th National Convention of Mechanical Engineers,* pp184-199 New Delhi, India,.

83. Singh, N.K. 2008.Smart machineries and processes for crushing, screening and conveying of various materials in mines. *Proceedings of National Seminar on crushing, screening and convening*, pp. 47-58. ISM Dhanbad, India,

84. Singh, N.K., 2010. Study of drills used in machining and mining processes vis-à-vis a comparison. *Proceedings of National Seminar on Drills & Drilling-an Update-2010*, pp.277-283, ISM Dhanbad, India.

85. Singh, N.K. 2011.Different types of jugaad for the fabrication of various furniture / items in the workshop.*Proceedings of National Conference on Jugaad in Manufacturing*-2011, ITBHU Varanasi India.

86. Kumari A.,Chattopadhaya, S., and Singh, N. K. 2012. Life cycle assessment of sinter crusher.*Proceedings of National Seminar on Mining Equipment - New Technologies,Challenges and Applications*-2012,pp. 127-134, ISM Dhanbad India.

87. Vates, U.K., and Singh, N.K. 2013. Enhancement of surface quality of steel during EDM process by response surface methodology. *Proceedings of 6th NCAFCA-2013,* pp. 53-58 (March 01-02, 2013) FET,MRIU Faridabad Haryana India .

88. Singh, N. K.,2013. Applications of weld pool dynamics and Gaussian distribution in submerged arc welding.*Proceedings of 5th International Scientific and Expert TEAM (Technique, Education,Agriculture and Management*-2013 Conference, pp.367-370 (4-6 November, 2013) in Presov Slovakia.

89. Vates U.K., and Singh N.K., 2013. Experimental investigation and optimization of surface roughness process parameters of wire electrical discharge machining of D-2 by ANN Modelling.*Proceedings of 2nd International Conference(IACEECE),* pp.119-121*)*held on 13th October,2013 atThiruvanathapuramISBNNo.978-93-82702-33-7.

90. Tiwari,V., and Singh, N. K.,2014. Comparative study of machining processes by process capability indices.*Proceedings of International Conference on Industrial Engineering Science and Applications (IASA-2014),* pp. 42-45 ISBN: 978-93- 80813-27-1organized by NIT Durgapur (PaschimBanga)during 2-4 April 2014.

91. Kumar, H., and Singh, N. K. 2014.Development of new methods to obtain high penetration depth in TIG Welding: A literature review" *Proceedings of International Mechanical Engineering Congress (IMEC)- 2014,* pp.192-195. ISBN: 978-93-84389-01-7 organized by NIT Thiruchirapalli(Tamil Nadu) during 13-15 June,2014.

92. Singh, N.K.,2014. Prediction and optimization of heat affected zone width of submerged arc welding process. *Abstract of the Proceedings of 3rd International Conference and Exhibition on Material Science & Engineering*.

93. Swati, and Singh,N. K.,2014. Developments in gas metal arc welding process: A review.*Proceedings of International Conference on Industrial. Mechanical and Production Engineering: Advancements and Current Trends(ICIMPACT-2014),(Vol. I),* pp.97-102 organized by MANIT Bhopal India during 27-29 November 2014.

94. Tamang, S., and Singh, N. K. 2015. Optimisation of output parameter of submerged arc welding by response surface methodology.*Proceedings of the* 17th ISME Conferenceon Advances in Mechanical Engineering, pp. 1-6 held during October 3-4, 2015 at Indian Institute of Technology Delhi,New India.

95. Tripathi, B.N., Singh, N.K., and Vates, U.K., 2015. Surface roughness optimization of GJL-250 cylinder liner during honing using RSM & RMSE techniques. *Proceedings of the International Conference on Emerging Trends in Engineering and Technology,* pp. 44-50 held on 10.05.2015 in New Delhi India.

96. Mandal, N. K., Singh, N. K., and Kumar, U. C., 2015. Machining dynamics of a turning centre: A case study" *Proceedings of International Conference on Advances in Dynamics, Vibration and Control (ICADVC- 2016)*pp. 215 – 221 at NIT Durgapur held during 25-27 February,2015.

97. Kumar, R.,Singh, N. K., Kumar, U., Chattopadhyaya, S.,Grzegorz, K., and Stanislaw L., 2016. Topographical studies of wear of the tool surfaces of friction stir welding process. *Proceedingsof 5th International Conference on Surface Metrology(ICSM-2016)* pp. 1-7 held in Poznan, Poland during 4-8 April, 2016 organised by Poznan University of Technology.

98. Singh, P. K.,Kumar, P.,Hussain, M., Das, A. K.,Vishwakarma, H., and Singh, N. K. 2015. Synthesis and characterization of copper nanoparticles by electrochemical discharge process.*Proceedings of the International Conference on Precision, Meso, Micro, Nano Engineering,* held during 10-12 December 2015 organised by IIT Mumbai.

99. Singh,P.K., Shubham, Singh,N.K., Vishwakarma, H., Hussain,M., Das,A.K., and HariPrasad,B., 2016. Effect of annealing on silver oxide nano particles generated by electrochemical discharge machining.*E-Proceedings of International Conference on Advances in Materials and Manufacturing(ICAMM)-2016* held on 8-10 December 2016 at DRDL Hyderabad.

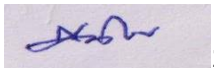
100. Mishra, S., Kumar, A., Kumar, S., and Singh, N. K., 2017. Characterization of micro structure and mechanical properties of Inconel 625 sheet of Nd: YAG laser welding. *Proceedings of 4thInternational Conference on latest trends in Enginnering, Science Humanities and Management*, ISBN 978-93-86171-37-5.

101. Deepak Kumar, Nirmal Kumar Singh, VivekBajpai.2019, Synthesis and Characterization of Zinc Oxide Nano Flakes through Electrochemical Discharge Deposition and Growth Method. *Proceedings of International Conference on Precision, Meso, Micro and Nano Engineering* (COPEN 2019), IIT Indore.

102. Rajesh Sahoo, Deepak Kumar N K Singh and VivekBajpai(2021). Fabrication of micro-hole using Maglev EDM. *Proceedings of World Congress Micro and Nano Manufacturing 2020*.(Organised by IIT Mumbai).

103. Deepak Kumar N K Singh and VivekBajpai(2021). Fabrication of microcylinder using a tubular electrode in magnetic levitation based µ-EDM, *Proceedings of World Congress Micro and Nano Manufacturing 2021*. (Organisedby IIT Mumbai).

104. Rajesh, Sahoo, Nirmal Kumar Singh, Vivek Bajpai.2023. Feasibility assessment of novel Maglev dry-EDM by machining aerospace Al-6062 alloy, Proceedings of WCMNM, RP23-0017 pp. 110-114 doi:10.3850/978-981-18-5180-3_RP23-0017.
105. Anand Kumar, VivekBajpai and Nirmal Kumar Singh (2024). Quality Assessment of fabricated micro-holes on micro-sliced Ti-6Al-4V alloy sheet using Maglev EDM. accepted for publication in the Proceedings of 9th International and 30th All India Manufacturing Technology, Design and Research (AIMTDR-23) (CA)
106. **Book published**
N K Singh (2012): *Process Capability Analysis* Lambert Academic Publishing (LAP) Publishers Saarbrucken Germany.
https://www.lap-publishing.com/catalog/details/store/gb/book/978-3-659-22282-5/process-capability-analysis


25.12.2024

Prof Nirmal Kumar Singh
Professor
Department of Mechanical Engg
IIT(ISM) Dhanbad