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Professor

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## Research Interests

Production and Industrial Engineering, Optimization of design and manufacturing processes parameters, Design of Experiments, MCDM Methods, Environmental Ergonomics

## Bio-sketch

### Educational Details

|   |      |
|---|------|
| Jamia Millia Islamia, New Delhi, India<br>Ph.D., Mechanical Engineering                               | 2001 |
| Aligarh Muslim University, Aligarh, India<br>M.Sc. Engineering, Industrial and Production Engineering | 1989 |
| Aligarh Muslim University, Aligarh, India<br>B.Sc. Engineering, Mechanical Engineering                | 1986 |

### Professional Background (In India)

|   |                           |
|---|---------------------------|
| Professor, Department of Mechanical. Engineering<br>Jamia Millia Islamia, New Delhi, India          | 27 July 2009-till date    |
| Associate Professor, Department of Mechanical Engineering<br>Jamia Millia Islamia, New Delhi, India | 27 July 2006-26 July 2009 |
| Reader, Department of Mechanical Engineering<br>Jamia Millia Islamia, New Delhi, India              | 27 July 2003-26 July 2006 |

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|---|---------------------------|
| Senior Lecturer, Department of Mechanical Engineering<br>Jamia Millia Islamia, New Delhi, India | 27 July 1998-26 July 2003 |
| Lecturer, Department of Mechanical Engineering<br>Jamia Millia Islamia, New Delhi, India        | 01 Aug. 1990-26 July 1998 |
| Lecturer, Department of Mechanical Engineering<br>Aligarh Muslim University, Aligarh, India     | 02 Nov. 1987-31 July 1990 |

## Professional Background (Abroad)

|   |                               |
|---|-------------------------------|
| Lecturer, School of Mechanical Engineering<br>University Sains Malaysia, Malaysia                         | 25 June 2002-24 June 2005     |
| Associate Professor, Industrial Engineering Department<br>King Abdulaziz University, Jeddah, Saudi Arabia | 13 November 2006-31 July 2008 |

## Research

### Projects

Completed UGC funded research project “Friction Stir Welding, Ultrasonically Assisted Machining” (worth INR 33.0 lacs).

Completed AICTE sponsored project “Effect of NOISE on industrial workers in and around Delhi” (worth INR 6.0 lacs)

Developed “Mobile Vibration and Noise Research Unit (MOVINRU) of AICTE Grant of Rs. 4.0 lacs in the Department of Mechanical. Engineering, Jamia Millia Islamia, New Delhi, India.

Completed several research projects in the University Sains Malaysia (worth INR 5.0 lacs).

## Books

B1. Noor Zaman Khan, Arshad Noor Siddiquee, **Zahid A. Khan**, *Friction Stir Welding: Dissimilar Aluminium Alloys*, CRC Press, Taylor and Francis, 2017, eBook ISBN 9781315116815.

B2. Arshad Noor Siddiquee, **Zahid A. Khan**, Pankul Goel, *Engineering Mechanics: Problems and Solutions*, Cambridge University Press, 2018, ISBN-13 978-1108411622.

B3. **Zahid A. Khan**, Arshad N. Siddiquee, Brajesh Kumar, Mustufa H. Abidi, *Principles of Engineering Economics with Applications*, Cambridge University Press, 2018, ISBN-13 978-1108458856.

B4. Arshad N. Siddiquee, **Zahid A. Khan**, Mukhtar Ahmad, *Engineering Drawing with a Primer on AUTOCAD*, Prentice Hall India, 2004, ISBN-13 978-8120324404.

## Monographs

M1: PankulGoyal, Arshad Noor Siddiquee, **Zahid A. Khan**, *Some Studies on Surface Integrity of Machined Surfaces*, LAP LAMBERT Academic Publishing GmbH & Co. KG, Germany, 2012, ISBN 978-3-659-18744-5.

M2. Suresh Maniyan, **Zahid A. Khan**, K. N. Seetharamu, *Quantitative analysis of heat transfer on human operators*, VDM Verlag, Germany, 2010, ISBN: 978-3-639-18910-0.

## Patents

P1. Sameera Mufazzal, Arshad Noor Siddiquee, **Zahid A. Khan**, an INDIAN Patent entitled “**DOUBLE STROKE CUTTING MECHANISM**” granted on July 16, 2021.

P2. Noor Zaman Khan, Arshad Noor Siddiquee, **Zahid A. Khan**, an INDIAN Patent entitled “**UNIVERSAL FRICTION WELDING/PROCESSING WORK FIXTURE**” granted on March 14, 2023.

P3. Arshad Noor Siddiquee, Kishore Kumar Mistri, **Zahid A. Khan**, Dinakar Kanjilal an INDIAN Patent entitled “**Cu to AISI-316 AUTOGENOUS DISSIMILAR JOINING BY ELECTRON BEAM WELDING**” Published in the Official Journal of Patent Office: Application No -201611032879. International Classification: B23K-9/00.

P4. Noor Zaman Khan, Arshad Noor Siddiquee, **Zahid A. Khan**, an INDIAN Patent entitled “**UNIVERSAL FRICTION WELDING/PROCESSING TOOL ADOPTER**” Published in the Official Journal of Patent Office: Application No -201911002618. International Classification: B23K-9/00.

## Publications

### 2025

1. Kumari, S., Ahmad, K., **Khan, Z. A.**, & Ahmad, S. (2025). Analysing the failure modes of water treatment plant using FMEA based on fuzzy AHP and fuzzy VIKOR methods. *Arabian Journal for Science and Engineering*, 1-16.
2. VMS, H., Equbal, A., Equbal, M. I., **Khan, Z. A.**, Badruddin, I. A., & Kamangar, S. (2025). A novel vibration-analysis based reliability quantification model for flexible coupling hub subjected to misalignment. *Scientia Iranica*.
3. Gautam, A., **Khan, Z. A.**, Gani, A., & Asjad, M. (2025). Identification, ranking and prioritization of Key Performance Indicators for evaluating greenness of manufactured products. *Green Technologies and Sustainability*, 3(1), 100114.

### 2024

4. Alam, M. N., Siddiquee, A. N., & **Khan, Z. A.** (2024). Machining of ZrO<sub>2</sub> using wire EDM: an experiment based investigation via assisted electrode. *Advances in Materials and Processing Technologies*, 10(4), 3473-3490.
5. Kumari, S., Ahmad, K., & **Khan, Z. A.** (2024). An Overview of Treatment Approaches for Handling of Common Effluent Treatment Plant's Sludge. *In IOP*

*Conference Series: Earth and Environmental Science* (Vol. 1326, No. 1, p. 012132). IOP Publishing.

6. Iqbal, A., **Khan, Z. A.**, & Badruddin, I. A. (2024). A critical review on smart manufacturing. *Smart Systems*, 16-33.
7. Equbal, A., Equbal, M. A., **Khan, Z. A.**, & Badruddin, I. A. (2024). A review on the rapid liquid printing (RLP): *future 3D printing technology*. *Progress in Additive Manufacturing*, 1-17.
8. Khan, O., Mufazzal, S., **Khan, Z. A.**, Sherwani, A. F., Yahya, Z., & Alhodaib, A. (2024). Optimizing the performance parameters of vacuum evaporation technology for management of anaerobic digestate in a waste water treatment plant using fuzzy MCDM method. *Desalination and Water Treatment*, 320, 100864.
9. Equbal, M. A., Equbal, A., **Khan, Z. A.**, & Badruddin, I. A. (2024). Machine learning in additive manufacturing: a comprehensive insight. *International Journal of Lightweight Materials and Manufacture*.
10. Siddiqui, T. U., **Khan, Z. A.**, Siddiquee, A. N., & Kumar, V. (2024). Experimental Investigations for Assessment of Carbon Emissions and Tool Temperature in Dry Turning Operation Using Al1070 Alloy. *Key Engineering Materials*, 996, 3-11.
11. Sharma, A., **Khan, Z. A.**, Siddiquee, A. N., & Arif, M. (2024). Study of friction stir welding effects on the microstructure & mechanical properties of AA3003 pipes. *Physica Scripta*, 100(1), 015046.
12. Khanam, S., Khan, O., Ahmad, S., Sherwani, A. F., **Khan, Z. A.**, Yadav, A. K., & Ağbulut, Ü. (2024). A Taguchi-based hybrid multi-criteria decision-making approach for optimization of performance characteristics of diesel engine fuelled with blends of biodiesel-diesel and cerium oxide nano-additive. *Journal of Thermal Analysis and Calorimetry*, 1-20.
13. Qazi, A. M., Lone, N. F., Ali, N., Mukhopadhyay, A. K., Khan, T., **Khan, Z. A.**, & Siddiquee, A. N. (2024). Electrochemical behavior of friction stir welded AA2519 plates. *Sādhana*, 49(1), 72.
14. Momina, M., Ahmad, K., & **Khan, Z. A.** (2024). Facile synthesis of biomass derived economically viable carbon dot polymer nanocomposite: A perspective towards sustainable removal of dyes from synthetic wastewater. *Journal of Water Process Engineering*, 58, 104748.
15. Husain, A. M., Hasan, M. M., **Khan, Z. A.**, & Asjad, M. (2024). A robust decision-making approach for the selection of an optimal renewable energy source in India. *Energy Conversion and Management*, 301, 117989.
16. Equbal, A., Ahmad, S., Badruddin, I. A., **Khan, Z. A.**, Kamangar, S., & Javed, S. (2024). Evaluating machining performance of acrylonitrile-butadiene-styrene (ABS) based electrical discharge machining (EDM) electrodes fabricated by fused deposition modelling (FDM) followed by a novel metallization method. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, 238(1-2), 164-174.

## 2023

17. Khan, O., Mufazzal, S., Sherwani, A. F., **Khan, Z. A.**, Parvez, M., & Idrisi, M. J. (2023). Experimental investigation and multi-performance optimization of the

- leachate recirculation based sustainable landfills using Taguchi approach and an integrated MCDM method. *Scientific Reports*, 13(1), 19102.
18. Ahmad, S., **Khan, Z. A.**, Ali, M., & Asjad, M. (2023). An ANN Model to Predict Select Performance Measures for Job Scheduling System. *Journal of Industrial Integration and Management*, 1-18.
  19. Jain, V. K., Yadav, M. K., Siddiquee, A. N., & **Khan, Z. A.** (2023). Fabrication of surface composites on different aluminium alloys via friction stir process-A review report. *Australian Journal of Mechanical Engineering*, 21(5), 1489-1512.
  20. Ahmad, S., **Khan, Z. A.**, Ali, M., & Asjad, M. (2023). A Novel Framework Based on Integration of Simulation Modelling and Mcdm Methods for Solving Fms Scheduling Problems. *Informatica*, 47(4).
  21. Rahman, W. U., Khan, R. I. A., Ahmad, S., Yahya, S. M., **Khan, Z. A.**, Rokhum, S. L., & Halder, G. (2023). Valorizing waste palm oil towards biodiesel production using calcareous eggshell based heterogeneous catalyst. *Bioresource Technology Reports*, 23, 101584.
  22. Alam, M. N., Siddiquee, A. N., & **Khan, Z. A.** (2023). Machining of ZrO<sub>2</sub> using wire EDM: an experiment based investigation via assisted electrode. *Advances in Materials and Processing Technologies*, 1-18.
  23. Shaikh, M. B. N., Ali, M., **Khan, Z. A.**, & Asjad, M. (2023). An MCDM approach for multi-response optimisation of machining parameters in turning of EN8 steel (AISI-1040) for sustainable manufacturing. *International Journal on Interactive Design and Manufacturing (IJIDeM)*, 1-18.
  24. Ahmad, S., Khan, J., **Khan, Z. A.**, & Asjad, M. (2023). A comparative assessment of Conventional and Rough-Based Multi-Criteria methods for failure mode and effects analysis of Root canal treatment. *Decision Analytics Journal*, 6, 100170.
  25. Kumari, S., Ahmad, K., **Khan, Z. A.**, & Ahmad, S. (2023). Failure mode and effects analysis of common effluent treatment plants of humid sub-tropical regions using fuzzy based MCDM methods. *Engineering Failure Analysis*, 145, 107010.
  26. Khan, S. A., Siddiqui, M. A., Asjad, M., **Khan, Z. A.**, & Husain, S. (2023). CFD simulation and optimization of natural convection in a vertical annulus with nanofluids. *International Journal of Thermal Sciences*, 185, 108079.
  27. Koli, Y., Arora, S., Ahmad, S., Priya, Yuvaraj, N., & **Khan, Z. A.** (2023). Investigations and Multi-response Optimization of Wire Arc Additive Manufacturing Cold Metal Transfer Process Parameters for Fabrication of SS308L Samples. *Journal of Materials Engineering and Performance*, 32(5), 2463-2475.
  28. Ahmad, S., Masood, S., Khan, N. Z., Badruddin, I. A., Ahmadian, A., **Khan, Z. A.**, & Khan, A. H. (2023). Analysing the impact of COVID-19 pandemic on the psychological health of people using fuzzy MCDM methods. *Operations Research Perspectives*, 10, 100263.
  29. Equbal, A., Masood, S., Equbal, I., Ahmad, S., Khan, N. Z., & **Khan, Z. A.** (2023). Artificial Intelligence against COVID-19 Pandemic: A Comprehensive Insight. *Current medical imaging*, 19(1), 1-18.

30. Jain, V. K., Yadav, M. K., Siddiquee, A. N., **Khan, Z. A.**, & Sharma, C. (2022). Synthesis of Fe–Al Intermetallic by Mechanical Alloying Process. *Journal of The Institution of Engineers (India): Series D*, 103(2), 621-628.
31. Sharma, G., Ahmad, S., Mallick, Z., **Khan, Z. A.**, James, A. T., Asjad, M., ...& Ahammad, N. A. (2022). Risk Factors Assessment of Musculoskeletal Disorders among Professional Vehicle Drivers in India Using an Ordinal Priority Approach. *Mathematics*, 10(23), 4492.
32. Equbal, A., Equbal, M. A., Equbal, M. I., Ravindrannair, P., **Khan, Z. A.**, Badruddin, I. A., ...& Kittur, M. I. (2022). Evaluating CNC milling performance for machining AISI 316 stainless steel with carbide cutting tool insert. *Materials*, 15(22), 8051.
33. Sharma, G., Mallick, Z., Ahmad, S., **Khan, Z. A.**, James, A. T., & Asjad, M. (2022). An integrated multi-criteria decision-making approach for estimating the importance of the cognitive function impairment risk factors. *Decision Analytics Journal*, 4, 100107.
34. Ahmad, T., Khan, N.Z., Mohsin Khan, M., Lone, N.F., Siddiquee, A.N., Ahmad, B., Ahmad, S., **Khan, Z.A.** and Shahid Ul Islam, S., (2022). Fabrication and machinability study of Zn-Al-TiC composite using wire EDM with different dielectric media. *Advances in Materials and Processing Technologies*, 1-16.
35. Prakash, B., Yasin, M. Y., Khan, A. H., Asjad, M., & **Khan, Z. A.** (2022). Optimal location and geometry of sensors and actuators for active vibration control of smart composite beams. *Australian Journal of Mechanical Engineering*, 20(4), 981-999.
36. Asjad, M., Gani, A., & **Khan, Z. A.** (2022, August). Synthesis and Analysis of Vital Social Sustainability Indicators Using Pareto Analysis. In *Biennial International Conference on Future Learning Aspects of Mechanical Engineering* (pp. 333-343). Singapore: Springer Nature Singapore.
37. Alam, M. N., Siddiquee, A. N., **Khan, Z. A.**, & Khan, N. Z. (2022). A comprehensive review on wire EDM performance evaluation. *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, 236(4), 1724-1746.
38. Sood, A. K., Equbal, A., **Khan, Z. A.**, Badruddin, I. A., & Hussien, M. (2022). FEM-Based Simulative Study for Multi-Response Optimization of Powder Bed Fusion Process. *Mathematics*, 10(14), 2505.
39. Equbal, A., Ali, M., Equbal, M. A., Srivastava, S. C., **Khan, Z. A.**, Equbal, M. I., ... & Kamangar, S. (2022). Characteristics of Conventional and Microwave Sintered Iron Ore Preform. *Materials*, 15(7), 2655.
40. Khan, N. Z., Siddiquee, A. N., **Khan, Z. A.**, Badruddin, I. A., Kamangar, S., & Maqbool, A. (2022). Improvement in joint efficiency with high productivity and narrow weld formation in friction stir welding. *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, 236(2), 383-393.
41. Khan, S. A., Siddiqui, M. A., **Khan, Z. A.**, Asjad, M., & Husain, S. (2022). Numerical investigation and implementation of the Taguchi based entropy-ROV method for optimization of the operating and geometrical parameters during natural convection of hybrid nanofluid in annuli. *International Journal of Thermal Sciences*, 172, 107317.

42. Mufazzal, S., Khan, N. Z., Muzakkir, S. M., Siddiquee, A. N., & **Khan, Z. A.** (2022). A new fuzzy multi-criteria decision-making method based on proximity index value. *Journal of Industrial and Production Engineering*, 39(1), 42-58.
43. Ansari, T. S., Khan, N. Z., Maqbool, A., **Khan, Z. A.**, & Attri, R. (2022). Ranking model for human seating comfort factors in automobiles: a best worst approach. *International Journal of Services and Operations Management*, 42(3), 353-378.
44. Sharma, A., **Khan, Z. A.**, & Siddiquee, A. N. (2022). A short review of the effect of plunge depth on friction stir welding of aluminium pipes. *Materials Today: Proceedings*, 64, 1504-1506.
45. Ahmad, S., Ali, M., **Khan, Z. A.**, & Asjad, M. (2022). Investigating the effect of input variables on the performance of FMS followed by multi-response optimization: a simulation study. *Materials Today: Proceedings*, 64, 1500-1503.
46. Sharma, A., **Khan, Z. A.**, & Siddiquee, A. N. (2022). Review of various methods of keyhole removal in friction stir welding sheets and pipes. *Materials Today: Proceedings*, 62, 404-409.
47. Rahman, M. Z., Siddiquee, A. N., **Khan, Z. A.**, & Ahmad, S. (2022). Multi-response optimization of FSP parameters on mechanical properties of surface composite. *Materials Today: Proceedings*, 62, 5-8.

## 2021

48. Jain, V. K., Yadav, M. K., Siddiquee, A. N., & **Khan, Z. A.** (2021). Optimization of friction stir processing parameters for enhanced microhardness of AA5083/Al-Fe in-situ composites via Taguchi technique. *Material Science, Engineering and Applications*, 1(2), 55-61.
49. Rahman, M. Z., **Khan, Z. A.**, Siddiquee, A. N., Abidi, M. H., Aboudaif, M. K., & Al-Ahmari, A. (2021). Mechanical and microstructural characterization of Ti-SiC reinforced AA5083 surface composites fabricated via friction stir process. *Materials Research Express*, 8(12), 126523.
50. Equbal, A., Equbal, A., **Khan, Z. A.**, Badruddin, I. A., Bashir, M. B. A., & Alrobei, H. (2021). Investigating the dimensional accuracy of the cavity produced by ABS P400 polymer-based novel EDM electrode. *Polymers*, 13(23), 4109.
51. Equbal, A., Sood, A. K., Equbal, M. I., Badruddin, I. A., & **Khan, Z. A.** (2021). RSM based investigation of compressive properties of fdm fabricated part. *CIRP Journal of Manufacturing Science and Technology*, 35, 701-714.
52. Ahmad, S., **Khan, Z. A.**, Ali, M., & Asjad, M. (2021). Geometric and Harmonic means based priority dispatching rules for single machine scheduling problems. *International Journal of Production Management and Engineering*, 9(2), 93-102.
53. Yadav, M. K., Siddiquee, A. N., & **Khan, Z. A.** (2021). Characterization of Ti–Al intermetallic synthesized by mechanical alloying process. *Metals and Materials International*, 27, 2378-2386.
54. Gani, A., Asjad, M., Talib, F., **Khan, Z. A.**, & Siddiquee, A. N. (2021). Identification, ranking and prioritisation of vital environmental sustainability indicators in manufacturing sector using pareto analysis cum best-worst method. *International Journal of Sustainable Engineering*, 14(3), 226-244.

55. Rahman, Z., Siddiquee, A. N., & **Khan, Z. A.** (2021, May). Effect of Ti/SiC Reinforcement on AA5083 Surface Composites Prepared by Friction Stir Processing. In *IOP Conference Series: Materials Science and Engineering* (Vol. 1149, No. 1, p. 012001). IOP Publishing.
56. Rahman, W. U., Yahya, S. M., **Khan, Z. A.**, Khan, N. A., Halder, G., & Dhawane, S. H. (2021). Valorization of waste chicken egg shells towards synthesis of heterogeneous catalyst for biodiesel production: Optimization and statistical analysis. *Environmental Technology & Innovation*, 22, 101460.
57. Mufazzal, S., Masood, S., Khan, N. Z., Muzakkir, S. M., & **Khan, Z. A.** (2021). Towards minimization of overall inconsistency involved in criteria weights for improved decision making. *Applied Soft Computing*, 100, 106936.
58. Attri, R., Khan, N. Z., Siddiquee, A. N., & **Khan, Z. A.** (2021). Analysing the barriers to successful implementation of total quality management in Indian manufacturing organisations using best-worst method. *International Journal of Business Excellence*, 24(2), 275-294.
59. Khan, N. Z., Maqbool, A., Ahmad, T., Siddiquee, A. N., & **Khan, Z. A.** (2021). Fracture behaviour of friction stir welded dissimilar aluminium alloys. *Materials Today: Proceedings*, 46, 6688-6691.
60. Jain, V. K., Yadav, M. K., Saxena, A., Siddiquee, A. N., & **Khan, Z. A.** (2021). Effect of tool rotational speed on microstructure and mechanical properties of friction stir processed AA5083/Fe-Al in-situ composite. *Materials Today: Proceedings*, 46, 6496-6500.
61. Wahid, M. A., Goel, P., **Khan, Z. A.**, Agarwal, K. M., & Hasan Khan, E. (2021). Underwater Friction Stir Welding of AA6082-T6: Thermal Analysis. In *Advances in Engineering Materials: Select Proceedings of FLAME 2020* (pp. 365-375). Springer Singapore.
62. Khan, N. Z., Siddiquie, R. Y., Shihab, S. K., Siddiquee, A. N., & **Khan, Z. A.** (2021). Analyzing the Important Factors Causing Fatigue in Industrial Workers Using Fuzzy MCDM Technique. In *Ergonomics for Improved Productivity: Proceedings of HWWE 2017* (pp. 25-31). Springer Singapore.
63. Chaudhary, T., Siddiquee, A. N., Chanda, A. K., Ahmad, S., Badruddin, I. A., & **Khan, Z. A.** (2021). Multiple response optimization of dimensional accuracy of nimonic alloy miniature gear machined on wire edm using entropy Topsis and pareto anova. *Comput Model Eng Sci*, 126(1), 241-259.
64. Ahmad, S., Akber, A., **Khan, Z. A.**, & Ali, M. (2021). Selection of best dispatching rule for job sequencing using combined best-worst and proximity index value methods. In *Advances in Manufacturing and Industrial Engineering: Select Proceedings of ICAPIE 2019* (pp. 783-792). Springer Singapore.
65. Alam, M. N., **Khan, Z. A.**, & Siddiquee, A. N. (2021). A hybrid multi-criteria decision-making approach for selection of sustainable dielectric fluid for electric discharge machining process. In *Advances in Manufacturing and Industrial Engineering: Select Proceedings of ICAPIE 2019* (pp. 519-527). Springer Singapore.
66. Alam, M. N., Siddiquee, A. N., & **Khan, Z. A.** (2021). Experimental Studies on Machining of SiC Under Different Assisted Electrode Conditions Using WEDM. In *Recent Advances in Mechanical Engineering: Select Proceedings of ITME 2019* (pp. 313-318). Springer Singapore.



67. Ahmad, S., Ali, M., & **Khan, Z. A.** (2021). A Simulation-Based Study for Multi-response Optimization of FMS Performance Measures Using Combined Grey Relational and Principal Component Analyses. In *Recent Advances in Mechanical Engineering: Select Proceedings of ITME 2019* (pp. 275-281). Springer Singapore.
68. Singh, A., Asjad, M., Gupta, P., **Khan, Z. A.**, & Siddiquee, A. N. (2021). Measuring the relative importance of reconfigurable manufacturing system (RMS) using best–worst method (BWM). In *Advances in Electromechanical Technologies: Select Proceedings of TEMT 2019* (pp. 253-275). Springer Singapore.

## 2020

69. Mehat, N. M., Zainuddin, M. A., Kamaruddin, S., & **Khan, Z. A.** (2020). OPTIMIZATION OF MULTI FACTORS FOR INJECTION-MOULDED MICRO GEAR VIA NUMERICAL SIMULATION INTEGRATED WITH THE TAGUCHI METHOD AND PRINCIPAL COMPONENT ANALYSIS. *Journal of Advanced Manufacturing Technology (JAMT)*, 14(2).
70. Talib, F., Asjad, M., Attri, R., Siddiquee, A. N., & **Khan, Z. A.** (2020). A road map for the implementation of integrated JIT-lean practices in Indian manufacturing industries using the best-worst method approach. *Journal of Industrial and Production Engineering*, 37(6), 275-291.
71. Wakeel, S., Ahmad, S., Bingol, S., Bashir, M. N., Paçal, T. C., & **Khan, Z. A.** (2020, August). Supplier selection for high temperature die attach by hybrid entropy-range of value MCDM technique: a semiconductor industry. In *2020 21st International Conference on Electronic Packaging Technology (ICEPT)* (pp. 1-5). IEEE.
72. Equbal, A., Shamim, M., Badruddin, I. A., Equbal, M. I., Sood, A. K., Nik Ghazali, N. N., & **Khan, Z. A.** (2020). Application of the combined ANN and GA for multi-response optimization of cutting parameters for the turning of glass fiber-reinforced polymer composites. *Mathematics*, 8(6), 947.
73. Qeays, I. A., Yahya, S. M., Asjad, M., & **Khan, Z. A.** (2020). Multi-performance optimization of nanofluid cooled hybrid photovoltaic thermal system using fuzzy integrated methodology. *Journal of Cleaner Production*, 256, 120451.
74. Wahid, M. A., Siddiquee, A. N., & **Khan, Z. A.** (2020). Aluminum alloys in marine construction: characteristics, application, and problems from a fabrication viewpoint. *Marine Systems & Ocean Technology*, 15, 70-80.
75. Ali, M., Anjum, S., Siddiquee, A. N., **Khan, Z. A.**, Chen, X., Konovalov, S., ...& Ibrahimi, H. (2020). Defect formation during dissimilar aluminium friction stir welded T-joints. *Mechanics & Industry*, 21(2).
76. Attri, R., Khan, N. Z., Siddiquee, A. N., & **Khan, Z. A.** (2020). Quantifying the factors affecting the 5S implementation in manufacturing organisations using graph theory and matrix method. *International Journal of Services and Operations Management*, 37(1), 90-113.
77. Muqem, M., Sherwani, A. F., Ahmad, M., & **Khan, Z. A.** (2020). Taguchi based grey relational analysis for multi response optimisation of diesel engine performance and emission parameters. *International Journal of Heavy Vehicle Systems*, 27(4), 441-460.
78. Attri, R., Ashishpal, Khan, N. Z., Siddiquee, A. N., & **Khan, Z. A.** (2020). ISM-MICMAC approach for evaluating the critical success factors of 5S implementation in

manufacturing organisations. *International Journal of Business Excellence*, 20(4), 521-548.

79. Singh, B., Khan, Z. A., Siddiquee, A. N., & Maheshwari, S. (2020). Optimal design of flux for submerged arc weld properties based on RSM coupled with GRA and PCA. *International Journal of Manufacturing Technology and Management*, 34(1), 97-109.
80. Wahid, M. A., Masood, S., **Khan, Z. A.**, Siddiquee, A. N., Badruddin, I. A., & Algahtani, A. (2020). A simulation-based study on the effect of underwater friction stir welding process parameters using different evolutionary optimization algorithms. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, 234(2), 643-657.

## 2019

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## Subjects Taught

Production Engineering, Manufacturing Sciences, Workshop Technology, Advance Manufacturing Processes, Advance Manufacturing Technology, Industrial Engineering, Quality Engineering, Engineering Economy & Management, , Manufacturing Systems, Elements of Mechanical Engineering, Ergonomics & Industrial Safety, Production & Operations Management (Production Planning, Facility Design), Operations Research, Statistics for Decision Making, Design of Experiments, Research Methodology, and Managerial Economics.

## Ph.D. Supervision

1. Some Studies on Machining of Metal Matrix Composite Using Wire Electric Discharge Machining. March 25, 2010-November 20, 2014

Scholar: Vinod Kumar Saini

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2. Fabrication and Machining of Metal Matrix Composite.

Other Supervisors(s): Sudhir Kumar, Scholar: Shayam Lal Verma

March 25, 2010-February 10, 2014

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3. Some Studies on Submerged Arc Welding of Steel.

Scholar: Brijpal Singh

March 25, 2010-October 28, 2015

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4. Influence of Thermomechanical Processing on Mechanical and Corrosion Properties of Titanium Alloys.

Scholar: Mohsin Talib Mohammed

June 15, 2011-June 23, 2015

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5. Experimental Studies on Turning High Hardness Alloy Steel with High Performance Tools.

June 15, 2011-July 16, 2015

Other Supervisors(s): Aas Mohammad, Scholar: Suha Karim Shihab

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6. An Investigation on the Friction Stir Welding of Dissimilar Aluminium Alloys

Other Supervisors(s): Arshad Noor Siddiquee, Scholar: Noor Zaman Khan

September 26, 2013-December 27, 2017

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7. Some Studies on Friction Stir Welding (FSW) of Non Ferrous Dissimilar Materials

Other Supervisors(s): Arshad Noor Siddiquee, Scholar: Nidhi Sharma

September 26, 2013-July 23, 2018

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8. Some studies on Under Water Friction Stir welding

Other Supervisors(s): Arshad Noor Siddiquee, Scholar: Mohd Atif Wahid

September 26, 2013-June 22, 2018

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9. Some Studies on Friction Stir Welding of Dissimilar Materials

Scholar: Pankul Goel

September 10, 2012-December 27, 2018

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10. Surface Hardening Using Hybrid FSP

Other Supervisors(s): Arshad Noor Siddiquee, Scholar: Md. Ziyaar Rahman

September 29, 2015-January 19, 2023

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11. Surface Density Modification Using Hybrid FSP

Other Supervisors(s): Arshad Noor Siddiquee, Scholar: Firasat Husain

|   |                                   |
|---|-----------------------------------|
|   | September 29, 2015-May 17, 2023   |
| 12. Investigation on Surface Modification Using Friction Stir Processing (FSP)                    |                                   |
| Other Supervisors(s): Arshad Noor Siddiquee, Scholar: Vivek Kumar Jain                            |                                   |
|   | September 29, 2014-April 26, 2022 |
| 13. Some Studies on Surface Modification Using Hybrid Friction Stir Processing Approach.          |                                   |
| Other Supervisors(s): Arshad Noor Siddiquee, Scholar: Manoj Kumar Yadav                           |                                   |
| September 29, 2015-March 30, 2022   |                                   |
| 14. Investigation on Machining of Hard-to-Machine Material Using EDM.                             |                                   |
| Other Supervisors(s): Arshad Noor Siddiquee, Scholar: Md. Nadeem Alam                             |                                   |
|   | August 14, 2018-May 17, 2023      |
| 15. Modelling and Simulation of a Flexible Manufacturing System with Dynamic Scheduling of Parts. |                                   |
| Other Supervisors(s): Mohammed Ali, Scholar: Shafi Ahmad  |                                   |
| August 17, 2018-March 14, 2023  |                                   |
| 16. Friction Stir Welding of Nonferrous Curved Section.   |                                   |
| Other Supervisors(s): Arshad Noor Siddiquee, Scholar, Scholar: Ashish Sharma                      |                                   |
|   | Continuing from February 08, 2019 |
| 17. Investigation on Machining of Hard Material.  |                                   |
| Other Supervisors(s): Arshad Noor Siddiquee, Scholar, Scholar: Visnu Kumar Tiwari                 |                                   |
|   | Continuing from February 08, 2019 |
| 18. Developing an Index for Rating Greenness of the Manufactured Products.                        |                                   |
| Other Supervisors(s): Mohammad Asjad, Scholar, Scholar: Amit Gautam                               |                                   |
| Continuing from October 01, 2010  |                                   |

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