Dr. Amiya Kumar Sahoo

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Areas of Interest: Advanced machining (EDM & LBM), Composite materials, Optimization

Brief Profile:

Dr. Amiya Kumar Sahoo completed his B.E. in Mechanical Engineering from SMIT Degree Engineering College, Berhampur, Odisha (affiliated to B. P. U. T.) in 2006. He completed his M. Tech in Production Engineering from Indian Institute of Technology Delhi (IITD) in 2010. During his M. Tech, he did his thesis work on "Improvement of Grindability of Ti-6Al-4V alloy using Solid Lubricants like Graphite and MoS2" under the guidance of Professor P. V. Rao and Dr. Sudarsan Ghosh. He completed his Ph. D. thesis titled "Optimization of Nd: YAG Laser and EDM Machining Parameters using Stochastic Methods for Composite and Nitinol" under the supervision of Dr. Dhananjay R. Mishra from Department of Mechanical Engineering, Jaypee University of Engineering and Technology (JUET) Guna in 2025. Before joining JUET, he was appointed as an Assistant Professor at IMS Engineering College, Ghaziabad, in 2010 and served there for one year and a month. He joined JUET in September 2011.

Publication@JUET

Publication details google profile link

JOURNALS

1. A. K. Sahoo, P. Pandey, D. R. Mishra, "Multi-response optimization of EDM drilling parameters of the Nitinol SMA", The Journal of Engineering and Exact Sciences, vol. 7, no. 4, pp. 13007-01-17e, Aug. 2021, doi: https://doi.org/10.18540/jcecvl7iss4pp13007-01-17e.

2. A. K. Sahoo and D. R. Mishra, "Characterization of Laser Drilling and Parametric Optimization Using Golden Jackal Optimizer," International Journal of Precision Engineering and Manufacturing, Jun. 2024, doi: 10.1007/s12541-024-01070-z.

3. A. K. Sahoo and D. R. Mishra, "Characterisation of basalt/glass/kevlar-29 hybrid fibre-reinforced plastic composite material through Nd: YAG laser drilling and optimisation using stochastic methods," Journal of Mechanical Science and Technology, vol. 38, no. 8, pp. 4321–4331, Aug. 2024, doi: 10.1007/s12206-024-0728-2.

4. A. K. Sahoo and D. R. Mishra, "Parametric optimization of response parameter of Nd-YAG laser drilling for basalt-PTFE coated glass fibre using genetic algorithm," Journal of Engineering Research, 2023, doi: https://doi.org/10.1016/j.jer.2023.07.014.

5. A. K. Sahoo and D. R. Mishra, "Characterisation and optimisation of the Nd: YAG laser drilling for basalt-glass-kevlar-29 hybrid composite material using particle swarm technique," International Journal on Interactive Design and Manufacturing (IJIDeM), Jul. 2024, doi: 10.1007/s12008-024-01924-w.

6. A. K. Sahoo and D. R. Mishra, “Experimental characteristic evaluation of micro hole EDM drilling of Ni51.58Ti48.34 alloy with copper electrode and response optimization using GRG assisted with GA,” Journal of Engineering and Applied Science, vol. 71, no. 1, p. 117, Dec. 2024, doi: 10.1186/s44147-024-00447-1.

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1. A. K. Sahoo and D. R. Mishra, “Multi-Attribute Optimization of EDM Drilling Process Parameters on Nitinol Using GRA-Assisted PSO”, 2nd. International Architectural Sciences and Applications Symposium (IArcSAS-2022), pp. 1259 – 1276, Sept. 2022

2. A. K. Sahoo and D. R. Mishra, “Multi-response optimization of EDM drilling of nitinol submerged in distilled water using GRA and Taguchi analysis”, Baskent International Conference on Multidisciplinary Studies, Ankara, Turkey, pp. 57 – 73, Feb. 2022

PATENT

1. D. R. Mishra, R. Bisht, and A. K. Sahoo, “Composite Laminate,” 363695–001, May 04, 2022