

CURRICULUM VITAE

Personal Details **Dr. ANANDA KUMAR SAHOO**

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Email: anandasahoo123@gmail.com
Date of Birth: 17 December 1990
Nationality: Indian



Educational Qualification

Jan 2025 **National Institute of Technology Rourkela, Odisha**
Doctor of Philosophy (Ph.D.) in Mechanical Engineering
Thesis Title: **Ultrasonic vibration assisted turning of Inconel 825: Tool Design, Experimental Investigations and Numerical Modelling**

Jun 2015 **Veer Surendra Sai University of Technology, Burla, Odisha**
Master of Technology (M.Tech) in Mechanical (Production) Engineering

May 2012 **EAST Bhubaneswar, BPUT Odisha**
Bachelor of Technology (B.Tech) in Mechanical Engineering

May 2008 **Council of Higher Secondary Education, Odisha**
+2 Science

May 2006 **Board of Secondary Education, Odisha**

Work Experience (Research/Teaching)

Oct 2024 - Aug 2025 **Capital Engineering College, Odisha**
Assistant Professor, Mechanical Engineering Department

Aug 2016 – Mar 2019 **National Institute of Technology Rourkela, Odisha**
Senior Research Fellow, Mechanical Engineering Department
Project Title: Ultrasonic vibration assisted turning of difficult-to-cut materials: Design and Development of tool holding system and parametric analysis of the process

July 2015 – July 2016 **Indira Gandhi Institute of Technology, Sarang, Odisha**
Assistant Professor (Contractual), Production Engineering Department

May 2015 – June 2015 **NM Institute of Technology, Bhubaneswar, Odisha**
Assistant Professor, Mechanical Engineering Department

Research Interests and Skills

Research Interests:

- Manufacturing
- Non-traditional Manufacturing
- Superalloys
- Thermal management
- Statistical Analysis
- Numerical Analysis
- Finite Element Analysis

Computer Skills:

- DEFORM 3D
- Matlab
- ANSYS
- Minitab
- Origin Lab
- Solidworks
- Adobe Photoshop
- Microsoft Office

Other/Instrument handled:

- Ultrasonic Welding
- HMT Lathe
- Data Acquisition System
- Thermal Imaging Camera
- Optical Microscope
- Wire EDM
- Surface Roughness Tester

List of Publications

- 1) **A. K. Sahoo**, S. K. Sahoo, S. Pattanayak, M. K. Moharana, 2023, Ultrasonic Vibration Assisted Turning of Inconel 825: An Experimental Analysis in **Materials and Manufacturing Processes**, <https://doi.org/10.1080/10426914.2023.2165675>
- 2) **A. K. Sahoo**, S. K. Sahoo, S. Pattanayak, M. K. Moharana, 2022, Experimental investigation of ultrasonic vibration assisted turning of Inconel 825 using TiAlN/TiAlCrN coated WC cutting tool insert in **Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering**. <https://doi.org/10.1177/09544089221139629>
- 3) R. Kandi, S. K. Sahoo, **A. K. Sahoo**, 2020, Ultrasonic Vibration-assisted Turning of Titanium Alloy Ti-6Al-4V: Numerical and Experimental Investigations in **Journal of the Brazilian Society of Mechanical Sciences and Engineering**. <https://doi.org/10.1007/s40430-020-02481-5>
- 4) S. Pattanayak, S. K. Sahoo, **A. K. Sahoo**, 2022, Experimental investigation on deposits of ER70S-6 wire on SiO₂ substrate using non-transferred arc-based wire arc additive manufacturing in **The International Journal of Advanced Manufacturing Technology**. <https://doi.org/10.1007/s00170-022-10499-3>
- 5) S. Pattanayak, S. K. Sahoo, **A. K. Sahoo**, M. P. Satapathy, 2023, Microstructure, strength, and fiber texture evolutions in arc-based casting using low-carbon steel wire in **Journal of Manufacturing Processes**. <https://doi.org/10.1016/j.jmapro.2023.07.032>
- 6) S. Pattanayak, **A. K. Sahoo**, R. Routray, S. K. Sahoo, 2021, Micro engraving on Ti-6Al-4V using fiber laser for orthopedic implant-A study in **Optical Fiber Technology**. <https://doi.org/10.1016/j.yofte.2021.102745>
- 7) S. Pattanayak, **A. K. Sahoo**, S. K. Sahoo, 2021, CFRP composite drilling through electrical discharge machining using aluminum as fixture plate in **Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science**. <https://doi.org/10.1177/09544062211058675>
- 8) S. Pattanayak, S. K. Sahoo, **A. K. Sahoo**, 2023, Effect of electrode materials and process parameters on deposition characteristics during GMAW-AM in **Materials and Manufacturing Processes**. <https://doi.org/10.1080/10426914.2023.2217895>
- 9) S. Pattanayak, S. K. Sahoo, **A. K. Sahoo**, R. Vinjamuri, P.K. Dwivedi, 2024, Non-transferring arc and wire additive manufacturing: microstructure, mechanical properties and bulk texture evolution of deposits in **Rapid Prototyping Journal**. <https://doi.org/10.1108/RPJ-03-2023-0105>.
- 10) S. Pattanayak, S. K. Sahoo, A. K. Prajapati, **A. K. Sahoo**, C. Upadhyay, M. P. Satapathy, 2024, Adaptive control of filler wire speed in wire arc additive manufacturing: impact of inter-layer dwell time on metallurgical and mechanical aspects of ER70S-6 deposits in **The International Journal of Advanced Manufacturing Technology**. <https://doi.org/10.1007/s00170-024-13981-2>.
- 11) S. Pattanayak, S. K. Sahoo, **A. K. Sahoo**, 2025, An approach to tunable advanced high-strength steel fabrication through multi-wire arc additive manufacturing (M-WAAM) in **Journal of Manufacturing Processes**. <https://doi.org/10.1016/j.jmapro.2024.11.096>.
- 12) S. Pattanayak, P. Dash, S. Satpathi, **A. K. Sahoo**, N. R. Das, B. Nayak, S. K. Sahoo, 2025, Additive manufacturing of 316 L stainless steel orthopedic implant with improved in vitro hemocompatibility and hydrophilicity for osteoinduction in Wistar rat model in **Biomaterials Advances**. <https://doi.org/10.1016/j.bioadv.2025.214322>.
- 13) K. D. Mohapatra, S. K. Bhuyan, P. K. Swain, M. P. Satpathy, R. N. Kandi, **A. K. Sahoo**, S. K. Sahoo, 2021, Optimisation and experimental analysis of response parameters in a gear cutting process of ultrasonic assisted wire EDM in **International Journal of Mechatronics and Manufacturing Systems**. <https://doi.org/10.1504/IJMMS.2021.121247>.
- 14) M. P. Satpathy, K. D. Mohapatra, **A. K. Sahoo**, S. K. Sahoo, 2018, Parametric investigation on microstructure and mechanical properties of ultrasonic spot welded aluminium to copper sheets in **IOP Conference Series: Materials Science and Engineering**. [10.1088/1757-899X/338/1/012024](https://doi.org/10.1088/1757-899X/338/1/012024).