

CURRICULUM VITAE

DR. KINGSHUK MANDAL

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PUBLICATIONS:

International Referred Journals:-

1. "Influence of dielectric conductivity on corner error in wire electrical discharge machining of Al 7075 alloy", Proceedings of the Institute of Mechanical Engineers, Part C: *Journal of Mechanical Engineering Science*, (2020), Vol. 235(20), pp. 5043-5056. <https://doi.org/10.1177/0954406220978268>.
2. "Experimental investigation of process parameters in WEDM of Al 7075 alloy", *Manufacturing Review* (2020), Vol. 7, pp. 30. <https://doi.org/10.1051/mfreview/2020021>.
3. "Statistical analysis of process parameters and multi-objective optimization in wire electrical discharge machining of Al 7075 using weight-based constrained algorithm", *International Journal on Interactive Design and Manufacturing*, (2023), Vol. 17, pp. 1289–1306. <https://doi.org/10.1007/s12008-022-01120-8>.
4. "Impact of dielectric conductivity and other process parameters on machining characteristics in WEDM of Al 6065 alloy", *Journal of Advanced Manufacturing Systems*, (2022). <https://doi.org/10.1142/S0219686723500415>.
5. "Fabrication of array of micro circular impressions using different electrolytes by mask-less electrochemical micromachining" *Manufacturing Review*, (2020), Vol. 7, pp. 15. <https://doi.org/10.1051/mfreview/2020012>.
6. "Surface roughness and surface topography evaluation of Al 6065-T6 alloy using wire electro-discharge machining (wire EDM)", *Advances in Materials Processing and Technologies*, (2019), Vol. 6(1), pp. 75-83. <https://doi.org/10.1080/2374068X.2019.1704547>.
7. "Multi-Attribute Optimization in WEDM of Light Metal Alloy", *Materials Today: Proceedings*, (2019), Vol. 18 (7), pp. 3492–3500. <https://doi.org/10.1016/j.matpr.2019.07.277>.
8. "Parametric analysis and GRA approach in WEDM of Al 7075 alloy", *Materials Today: Proceedings*, (2020), Vol 26 (2), pp. 660–664. <https://doi.org/10.1016/j.matpr.2019.12.361>.
9. "MOGA approach in WEDM of advanced aluminum alloy", *Materials Today: Proceedings*, (2020), Vol. 26 (2), pp. 887–890. <https://doi.org/10.1016/j.matpr.2020.01.127>.
10. "Study on kerf width deviation of microchannel with various medium in laser transmission cutting by diode pump fiber laser", *Materials Today: Proceedings*, (2020), Vol. 26 (2), pp. 804-807. <https://doi.org/10.1016/j.matpr.2019.12.419>.
11. "Prediction and optimization of Nd: YAG laser transmission micro-channelling on PMMA employing an artificial neural network model", *Infrared Physics & Technology*, (2024), Vol. 137, 105121. <https://doi.org/10.1016/j.infrared.2024.105121>.
12. "Prediction of quality characteristics of micro-channels by deep learning algorithm during laser transmission ablation of PMMA", *Materials Today Communications*, (2024), Vol. 38, 108142. <https://doi.org/10.1016/j.mtcomm.2024.108142>.

Book Chapters:-

1. "Analysis of wire-EDM input parameters on kerf width and surface integrity for Al 6061 alloy", *Innovation in Materials Science and Engineering*, Vol. 2, pp 35-41, DOI: 10.1007/978-981-13-2944-9_5.
2. "Multi objective optimization in WEDM of Al 7075 alloy using TOPSIS and GRA method", *Machine Learning Applications in Non-Conventional Machining Processes*, <https://doi.org/10.4018/978-1-7998-3624-7>.

International Conferences (Presented):-

1. "Experimental Observation of Surface Integrity for Inconel 718 with the aid of Wire EDM and Sensitivity Analysis of Process Parameters", 6th International and 27th All India Manufacturing Technology, Design and Research Conference (*AIMTDR-2016*), 16th -18th December 2016, College of Engineering, Pune, Maharashtra, INDIA.
2. "Surface roughness and surface topography evaluation of aluminum alloy using Wire Electro Discharge Machining (wire-EDM) process", 20th Edition of International Conference on Advances in Materials and Processing Technologies (*AMPT-2017*), 11th -14th December 2017, VIT University, Chennai, INDIA.
3. "Analysis of wire-EDM input parameters on kerf width and surface integrity for Al 6061 alloy", International Conference on Energy, Materials and Information Technology (*ICEMIT-2017*), 23rd -24th December 2017, Amity University, City Campus, Ranchi, INDIA.
4. "Multi-Attribute Optimization in WEDM of Light Metal Alloy" 9th International Conference of Materials Processing and Characterization (*ICMPC-2019*), 8th – 10th March 2019, Gokaraju Rangaraju Institute of Engineering and Technology (GRIET), Hyderabad, Telangana.
5. "Influence of the variable process parameters on high conductive new generation aluminum alloy in WEDM" 40th International *MATADOR* Conference on Advanced Manufacturing, 8-10th July 2019, Sailing International Hotel, Hangzhou-310023, CHINA.
6. "Parametric analysis and GRA approach in WEDM of Al 7075 alloy", 10th International Conference of Materials Processing and Characterization (*ICMPC-2020*), 21st - 23rd February 2020, GLA University Mathura, Uttar Pradesh, India.
7. "Analysis of surface roughness and topography of Aluminum alloy (Al 7075) machined by WEDM", International Conference on Advancements in Mechanical Engineering (*ICAME-2020*), 16-18th January, 2020, Aliah University, Kolkata, India.

National Conference (Presented):-

1. "Experimental Investigation & Optimization of Controllable Parameters in CNC Wire-EDM" Proceedings of National Conference on Recent Trends in Manufacturing Science and Technology (*RTMST-2013*) held at the Department of Mechanical Engineering, NITTTR, Kolkata, India, April 18–19, 2013, pp.75-82.

PROFESSIONAL EXPERIENCES:

INSTITUTIONS	DESIGNATION	DURATIONS	
Jadavpur University (<i>Production Engineering Department</i>)	Research Scholar	October 2014	June 2022
Hooghly Engineering and Technology College (<i>Mechanical Engineering Department</i>)	Assistant Professor	March 2014	October 2014
Camellia Institute of Engineering (<i>Mechanical Engineering Department</i>)	Assistant Professor	Sept 2012	March 2014
Gobindapur Sephali Memorial Polytechnic (<i>Mechanical Engineering Department</i>)	Part-Time Lecturer	Aug 2011	Aug-2012

CAREER OBJECTIVE:

To secure a challenging position where I can effectively contribute my skills and share my knowledge as a prominent personality in the era of academics, possessing competent Technical Knowledge and Analytical Skills.

EDUCATIONAL QUALIFICATIONS:

- ❖ Ph.D. in Non-Conventional Machining Process (Specialization: Wire Electrical Discharge Machining) in the Department of Production Engineering from Jadavpur University, Kolkata in the year 2023.
- ❖ M.Tech in Manufacturing Technology in the Department of Mechanical Engineering from National Institute of Technical Teachers' Training and Research (NITTTR), Kolkata, under West Bengal University of Technology in the year 2012.
- ❖ B.Tech in Mechanical Engineering from Mallabhum Institute of Technology, under West Bengal University of Technology in the year 2010.

KEY TEACHING RESPONSIBILITIES:**In Hooghly Engineering and technology college (HETC):-**

1. Engineering Mechanics
2. Welding Technology
3. Basic Thermodynamics

In Camellia Institute of Engineering (CIE):-

1. Basic Thermodynamics & Fluid Mechanics
2. Applied Thermodynamics
3. Heat Transfer
4. Mechanism of linkage and connecting bodies

In Gobindapur Sephali Memorial Polytechnic (GSMP):-

1. Engineering mechanics
2. Heat Power-I, II & III

SHORT TERM TRAININGS:

SL.NO.	FIELD	NAME OF THE ORGANIZATION	DURATION	
I	Coal Handling Plant	Dankuni Coal Complex, Dankuni	26/06/2008	25/07/2008
II	Automobile Engine	Calcutta State Transport Corporation(CSTC), Kolkata	12/07/2009	11/08/2009

POST-GRADUATE PROJECT:

An experimental investigation of different process parameters for brass wire on Inconel-718 workpiece by CNC Wire-EDM process.

UNDER GRADUATE PROJECT:

- Project Title : Design of 4-Wheel Automated Trolley for Material Handling

TECHNICAL SKILLS:

- Design software : MATLAB, Minitab, Design Expert, Auto-CAD

PERSONAL PROFILE:

- Father's Name : **Mr. Mahadeb Mandal**
- Date Of Birth : 20th June, 1988
- Gender : Male
- Marital Status : Single
- Nationality : Indian
- Languages known : Bengali, English, Hindi
- Strength : Patience, Honesty, Good motivation power
- Hobbies : Gardening, Playing Cricket, Making New Friends
- Permanent Address : Vill:- Nanda, P.O:- Jhariakocha, Dist:- Bankura, Pin:- 722136
West Bengal, India.

DECLARATION:

I hereby affirm that the information furnished above is true and correct up to my knowledge.

Place: Kolkata

Date: 07/02/2025

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(KINGSHUK MANDAL)