



# Techno College of Engineering Agartala

An Engineering College affiliated to Tripura University (A Central University),

Approved by AICTE, MHRD, Govt. of India

Website: [www.tiaedu.org](http://www.tiaedu.org)

**Name of the faculty:** Dr. Shirsendu Das

**Designation:** Associate Professor, Dept. of Mechanical Engg.

**Education:** B.E, M.Tech and PhD

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**Email:** [das.shirsendu@tiaedu.org](mailto:das.shirsendu@tiaedu.org)

## Research Interest:

- Non-traditional Machining
- Robotics
- Additive Manufacturing

## Membership of professional bodies:

**Professional Experience:** 6 years

**Patents:** 02

**Publications:** 32

## Publishes Journal/ Conference papers/ Book/ Book Chapters :

- Paul R, **Das S**, Mahakur VK. A review on tribological performances of plant fibre-reinforced thermoset matrix composites. Proceedings of the Institution of Mechanical Engineers, Part E. 2025;0(0). doi:10.1177/09544089251324605 (SCI)
- Sarkar, A., Rupa, P. K. P., & **Das, S.** (2025). Assessment of the surface-texture of the prototype produced by DIW-3D-Printing process using Methyl cellulose based Aluminium ink. *Journal of Advanced Manufacturing Systems.* (SCI)
- Kumar, T. S., Thankachan, T., Bhowmik, A., Makki, E., Giri, J., & **Das, S.** (2024). Development and characterization of AZ91/AlN magnesium matrix composites via friction stir processing. *AIP Advances*, 14(6). (SCI)
- **Das, S.**, Paul, R., Bhowmik, A., Giri, J., Albaijan, I., & Prakash, C. (2024). Assessment of the influence of flushing on the wear and morphological properties of the tool during electrical discharge machining. *AIP Advances*, 14(4). (SCI)
- **Das, S.**, Paul, S., & Doloi, B. (2023). Bio-dielectric based eco-friendly electrical discharge machining of Ti6Al4V: assessment of the machined-surface morphology and micro-hardness. *Int. J. Surface Science and Engineering*, 17(4), 339. (SCI)
- **Das, S.**, Paul, S., & Doloi, B. (2022). Influence of the flushing on the wear and textural features of the tool of die-sinking EDM. *CIRP Journal of Manufacturing Science and Technology* (Elsevier)- (SCI).
- Biswas, K., **Das, S.**, Paul, S., & Doloi, B. (2021). A morphological and textural analysis of Inconel-718 aerospace alloy processed through electrical discharging machining. *Machining Science and Technology*, 25(5), 776-801 (Taylor and Francis) (SCI).





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- **Das, S.,** Achariya, U., Rao, S., Paul, S., & Saha Roy, B (2021). Assessment of the surface characteristics of aerospace grade AA6092/17.5 SiCp-T6 composite processed through EDM. *CIRP Journal of Manufacturing Science and Technology*, 33, 123-132. (Elsevier)-(SCI)
- **Das, S.,** Paul, S., & Doloi, B. (2021). A gap-active electrical discharge machining (GA-EDM) to rectify the textural defects of the processed surface. *Journal of Manufacturing Processes*, 64, 594-605, (Elsevier)-(SCI)
- **Das, S.,** Paul, S., & Doloi, B. (2021). Assessment of the impacts of bio-dielectrics on the textural features and recast-layers of EDM-surfaces. *Materials and Manufacturing Processes*, 1-11 (Taylor and Francis)-(SCI).
- **Das, S.,** Paul, S., & Doloi, B. (2020). Feasibility assessment of some alternative-dielectric mediums for sustainable electrical discharge machining: A review work. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, DOI: 10.1007/s40430-020-2238-1 (Springer)-(SCI)
- **Das, S.,** Paul, S., & Doloi, B. (2020). Feasibility investigation of neem oil as a dielectric for electrical discharge machining. *The International Journal of Advanced Manufacturing Technology*, 106(3-4), 1179-1189 (Springer)- (SCI).
- **Das, S.,** Paul, S., & Doloi, B. (2019). An experimental and computational study on the feasibility of bio-dielectrics for sustainable electrical discharge machining. *Journal of Manufacturing Processes*, 41, 284-296 (Elsevier)-(SCI).
- **Das, S.,** Paul, S., & Doloi, B. (2019). Application of CFD and vapor bubble dynamics for an efficient electro-thermal simulation of EDM: an integrated approach. *The International Journal of Advanced Manufacturing Technology*, 102(5-8), 1787-1800 (Springer)-(SCI).
- **Das, S.,** & Kumar, A. (2015). Concept of an Electromagnetic Solar Based Power Drive for Automobile. *International Journal of Advanced Science and Technology*, 76(1), 21-26 (Scopus).
- Majumder, M., **Das, S.,** & Chakraborty, T. (2015). Identification and mitigation of difficulties in hydro-power generation in Tripura using MCDM and cost effective analysis. *International Journal of Grid Distribution Computing*, 8(5), 183-196 (Scopus).
- Majumder, M., Chakraborty, T., & **Das, S.** (2016). Find Out the Optimum Condition for a Pump Storage Hydro-Power Plant Using AHP & PSO. *International Journal of Advanced Science and Technology*, 89, 17-26 (Scopus).
- Kumar, A., & **Das, S.** An arrangement for power transmission between co-axial shafts of different diameter. *International journal of engineering research and technology*, ISSN, 2278-0181.
- **Das, S.** (2014). A hydraulic mechanism which works like an engine. *International Journal of Scientific & Engineering Research*, 5(1), 284-288.
- **Das, S.** (2013). An electromagnetic mechanism which works like an engine. *International Journal of Engineering trends & Technology*, 4(6), 2376-2379.
- **Das, S.** (2014). An Efficient Solar Thermal Power Plant. *International Journal of Engineering Research*, 3(5).
- **Das, S.** (2013). A cooling system to increase the efficiency of a gas turbine plant. *International Journal of Engineering Trends & Technology*, 4.
- Das, S., Paul, S., & Doloi, B. (2022). A Sustainable Die-Sinking Electrical Discharge Machining of Ti6Al4V Using Jatropa Bio-Dielectric. *Advances in Modern Machining Processes* (Springer).
- Das, S., Paul, S., & Doloi, B. (2020). Performance Evaluation of Si-Cu- Hybrid Dust as a Powder Additive of EDM Dielectrics to Machine Ti6Al4V with Copper Electrode. *Advances in Micro and Nano Manufacturing and Surface Engineering*-Springer (Editors: Shunmugam, M. S., Kanthababu, M.).
- Das, S., Paul, S., & Doloi, B. (2019, November). Investigation of the machining performance of neem oil as a dielectric medium of EDM: a sustainable approach. In *IOP conference series: materials science and engineering* (Vol. 653, No. 1, p. 012017). IOP Publishing.



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**Achievements (if any):** *International Research Leadership Award-2020* for research activities in the field of 'Sustainable Machining', awarded by 'World Research Council' and 'United Medical Council'

**Hobbies:**