

Publication in SCI journal

From PhD work:

1. **Maity, D.** and Racherla, V., 2023. A new friction processing method for welding of dissimilar metals. *Materials Today Communications*, 35, p.106095.
2. **Maity, D.**, Radhakrishnan, P., Mala, M. and Racherla, V., 2023. Real-time temperature monitoring of weld interface using a digital twin approach. *Measurement*, 219, p.113278.
3. **Maity, D.** and Racherla, V., 2024. Effect of SiC interlayer on microstructure and joint strength of Cu-Al welds obtained using a new friction processing method. *CIRP Journal of Manufacturing Science and Technology*, 52, pp.73-85.
4. **Maity, D.**, Jha, R.K., Mandal, S. and Racherla, V., 2025. Melting phenomenon in Cu- Al joining using a novel friction processing technique: A molecular dynamics study. *Materials Today Communications*, 42, p.111354.
5. **Maity, D.** and Racherla, V., Influence of SiC interlayer on mechanical and electrical joint characteristics of Cu-Al-Cu sandwich welds obtained using a new friction processing technique. *Journal of Materials Processing Technology*, 337, p.118737.

From B.E. work:

1. Acherjee, B., **Maity, D.** and Kuar, A.S., 2020. Optimization of correlated and conflicting responses of ECM process using flower pollination algorithm. *International Journal of Applied Metaheuristic Computing (IJAMC)*, 11(4), pp.1-15.
2. Acherjee, B., **Maity, D.** and Kuar, A.S., 2020. Ultrasonic machining process optimization by cuckoo search and chicken swarm optimization algorithms. *International Journal of Applied Metaheuristic Computing (IJAMC)*, 11(2), pp.1-26.
3. Acherjee, B., **Maity, D.**, Prakash, S., Kuar, A.S. and Mitra, S., 2018. Optimal Process Parameter Selection of Underwater Nd: YAG Laser Micro-channelling on PMMA by Firefly Algorithm and Flower Pollination Algorithm. *Chinese Soc. Mech. Eng.*, 39(5), pp.515-533.

Publications in non-SCI journal

From B.E. work:

1. **Maity, D.**, Acherjee, B. and Kuar, A.S., 2017. Quality improvement of electrochemical discharge machining process using firefly algorithm: a case study. *International Journal of Swarm Intelligence*, 3(2-3), pp.238-260.
2. Acherjee, B., **Maity, D.** and Kuar, A.S., 2017. Parameters optimisation of transmission laser welding of dissimilar plastics using RSM and flower pollination algorithm integrated approach. *International Journal of Mathematical Modelling and Numerical Optimisation*, 8(1), pp.1-22.
3. Acherjee, B., **Maity, D.** and Kuar, A.S., 2016. An approach to select the optimal process parameters of laser transmission welding using firefly algorithm. *International Journal of Innovative Computing and Applications*, 7(3), pp.163-178.

Publication in conference proceedings

From M.Tech work:

1. Sharma, V.M., **Maity, D.**, Racherla, V. and Pal, S.K., 2018, June. Friction Sintering of Copper Powder Using a New Rapid, Cost Effective and Energy Efficient Process. In International Manufacturing Science and Engineering Conference (Vol. 51388, p. V004T03A008). American Society of Mechanical Engineers.

Conference presentation

From PhD work:

1. Study of diffusion mechanism in a friction processing technique for joining of copper and aluminium. Poster presentation at FEMS EUROMAT 2023.
2. Feasibility investigation of a new friction processing-based joining technique for Ni-Al dissimilar metal welding. Oral Presentation at 13th International Symposium on FSW (ISFSW 2024).

Book Chapters

From B.E. work:

1. Acherjee, B., **Maity, D.**, Karia, D. and Kuar, A.S., 2019. Selection of laser micro-drilling process parameters using novel bat algorithm and bird swarm algorithm. In *Optimization Using Evolutionary Algorithms and Metaheuristics* (pp. 83-100). CRC Press.
2. Acherjee, B., **Maity, D.**, Kuar, A.S., Mitra, S. and Misra, D., 2017. Optimization of laser transmission welding parameters using chicken swarm optimization algorithm: Chicken swarm algorithm optimization of laser transmission welding. In *Handbook of Research on Manufacturing Process Modeling and Optimization Strategies* (pp. 142-161). IGI Global Scientific Publishing.

Patent Details

Serial No.	Patent title	Applicants' name	Patent No	Award date/Application date	Country	Status
1	A system and method for diffusion bonding of dissimilar metals by friction processing	Debanjan Maity, Muralidhar Mala, Premchand Radhakrishnan, Vikranth Racherla	Granted Patent No: 494783, Patent Application No: 202231058874	14.08.2022	India	Granted

2	System for real-time temperature monitoring of weld interface in a friction processing technique	Debanjan Maity, Muralidhar Mala, Premchand Radhakrishnan, Vikranth Racherla	Patent application no: 202331029284	Application date: 30.12.2022	India	Published
---	--	---	-------------------------------------	------------------------------	-------	-----------

Copyright Details

Serial No.	Copyright title	Applicants' name	Diary No	Status
1	Transmission aggregate duty cycle development from drive cycle data	TATA Motors Ltd.	13367/2019-CO/SW	Registered
2	Bearing duty cycle estimation software	TATA Motors Ltd.	14657/2019 - CO/SW	Registered