

List of projects (First come, first serve basis):

1. Numerical simulation of electrochemical jet machining - Stainless steel (P)
2. Experimental analysis of electrochemical jet machining - Stainless steel (P)
3. Numerical simulation of rotary ultrasonic machining (P)
4. Experimental analysis of rotary ultrasonic machining - glass (P)
5. Prediction of Machine Removal rate for ultrasonic machining (P)
6. Electrochemical machining of Tungsten (drilling) - Experimental (P)
7. Electrochemical machining of Tungsten (drilling) - Simulation (P)
8. Electrodischarge machining of Stainless steel – multitip array (P)
9. Surface texture using Electrodischarge machining (P)
10. Formation of deep holes in glass by laser ablation (S)
11. Localized glass roughening by various ways (S)
12. Machining of polymer matrix composites (S)
13. Electroless deposition of Copper on silicon/ glass substrates (S)
14. Ultrasonic assisted conventional machining (S)
15. Numerical analysis of Electrochemical machining of titanium (P)
16. Conventional Machining of Ceramic Matrix Composites (Drilling/ Milling) (S)
17. Microchannel formation in non-conductive, brittle materials (S)
18. Electron beam machining of ceramics (S)
19. Machining of Porous metal components made by additive manufacturing (S)
20. Surface finishing of additive manufactured parts (P)
21. Numerical simulation of temperature prediction in orthogonal machining (P)
22. Prediction of overcut in wire-EDM process (P)
23. Roughness measurement of internal surfaces (S)
24. Numerical analysis of horn design (tapered, cylindrical, conical) in ultrasonic machining (P)

(P) : Simulation/Experimental projects

(S) : Seminar

1. Find 2 good review articles on the chosen topics from reputable journals, i.e., Journal of Manufacturing Processes, Journal of Materials Processing Technology, Precision Engineering, Materials and Manufacturing Processes, etc. If not sure about the quality of journal articles, please discuss with me.
2. Go through these articles in detail. Discuss among your team members and with TAs.
3. Find out the methodology, research gaps, and then start your work.