



TAGORE ENGINEERING COLLEGE

(A Member of Tagore Group of Institutions Chennai)

Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai

ACCREDITED BY IQAC-NAAC WITH 'A' GRADE

FACULTY PROFILE

PERSONAL DETAILS			
Name & Qualification		Dr. M.DURAIRAJ, M.E., Ph.D,	
Designation		PROFESSOR & HEAD	
Department		MECHANICAL	
Total Teaching Experience		18	
Total Research Experience		13	
Total Industry Experience		1.5	
Area of Specialization		MANUFACTURING	
AICTE Faculty ID		I-49493648	
Email ID		durairajtagore@gmail.com	
			
EDUCATIONAL DETAILS			
Degree	Branch/ Specialization	University	Year
UG	B.E MECHANICAL	MADRAS UNIVERSITY	2002
PG	M.E CIM	ANNA UNIVERSITY	2008
Ph.D	MICROMACHINING	ANNA UNIVERSITY	2015
RESEARCH / PUBLICATION DETAILS			
Publications in Journal			
1. M.Durairaj^{1a}, S.Gowri^{2,b} “Optimization of Inconel 600 alloy Micro turning process using Grey Relational Analysis”, published in Advanced Materials Research Vol. 576 (2012) pp 548-551,Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMR.576.548 which was presented in the International Conference on Advances in Manufacturing and Materials Engineering, organized by International Islamic University Malaysia, held during 3-5 July 2012 , Kuala Lumpur, Malaysia. 2. M. Durairaj^{1, a}, S.Gowri^{2, b}, M.H.Gauthamkumar^{3, c}, M. Ashok kumar^{3, d}, R.Aishwarya^{3, e} “Optimization of Wire Cut Electrical Discharge Machining of Inconel 800 using Grey Relational Analysis”, published in Advanced Materials Research Vol. 576 (2012) pp 552-			

555, Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMR.576.552 which was presented in the International Conference on Advances in Manufacturing and Materials Engineering, organized by International Islamic University Malaysia, held during 3-5 July 2012 , at Kuala Lumpur, Malaysia.

3. **M.Durairaj**, S.Gowri “Parametric Optimization for Improved Tool Life and Surface Finish in Micro Turning using Genetic Algorithm”, published in Procedia Engineering 64 (2013)878–887, available online at science direct. com/www.elsevier.com/locate/procedia which was presented in the International Conference on DESIGN AND MANUFACTURING, IConDM 2013organised by (IITD&M) Kancheepuram, held during 18-20 July 2013, at Melakottaiyur, Chennai.
4. **M. Durairaj**, D.Sudharsun, N.Swamynathan, “ Analysis of Process Parameters in Wire EDM with Stainless Steel using Single Objective Taguchi Method and Multi Objective Grey Relational Grade,, published in Procedia Engineering 64 (2013) 868 – 877, available online at science direct. com/www.elsevier.com/locate/procedia which was presented in the International Conference on DESIGN AND MANUFACTURING, IConDM 2013organised by (IITD&M) Kancheepuram, held during 18-20 July 2013, at Melakottaiyur, Chennai.
5. **M.Durairaj**, S.Gowri, P.Sri Balakumaran, S.Subash and J.M.A.Thoufiq Abdul Aziz “Experimental Investigation of process parameter in wire cut electrical discharge Machining Using Titanium Alloy” , published in the International Journal of Mechanical Engineering and Material sciences ,IJMEMS,6(2) July - December 2013,pp.159 - 162, which was presented in the International conference on Engineering Materials and Processes (ICEMAP -2013) held during 23rd and 24th May 2013 organised by Tagore Engineering college, Chennai.
6. **M.Durairaj**, S.Gowri, D.Sudharsun, N.Swamynathan, “Application of Genetic Algorithm in the optimization of cutting parameters in wire cut EDM using stainless steel AISI 304”, published in the International Journal of Mechanical Engineering and Material sciences ,IJMEMS,6(2) July - December 2013,pp.123- 127, which was presented in the International conference on Engineering Materials and Processes (ICEMAP -2013) held during 23rd and 24th May 2013 organised by Tagore Engineering college, Chennai.
7. **M.Durairaj**, S.Gowri, “Gravitational Search Algorithm - based Optimization of process parameters in Micro turning process”, published in the International Journal of Applied Mechanics and Materials ,(AMM) June 2014, which was presented in the International conference on Mechanical Engineering Congress (IMEC-2014) held during 13 - 15th June

2014 organised by Department of Mechanical Engineering ,NIT Trichy.

8. **M.Durairaj**, S.Elanthirayan, K.Aanand and J.Poornachandran “Optimization Of Cutting Parameters In Wire cut EDM of D₂ Die Steel Using Gravitational Search Algorithm”, published in the International Journal of Applied Mechanics and Materials, (AMM) June 2014, which was presented in the International conference on Mechanical Engineering Congress (IMEC-2014) held during 13th - 15th June 2014 organised by Department of Mechanical Engineering, NIT Trichy.
9. M. Pradeep, P.Vignesh, M.Arun and **M. Durairaj**, "Investigation of Surface Roughness on R19 Steel Using Pin on Disc Apparatus", published in the International Journal of Applied Mechanics and Materials ,(AMM) June 2014,which was presented in the International conference on Mechanical Engineering Congress (IMEC-2014) held during 13 - 15th June 2014 organised by Department of Mechanical Engineering ,NIT Trichy.
10. **M.Durairaj**, A.K.S.Ansari, M.H. Gauthamkumar, "Parametric Optimization of Wire Cut Electrical Discharge Machining", published in the International Journal of Engineering & Technology,(IJET) 3, (2) (2014) 21-215.
11. R.Rajamouli, **M.Durairaj**, “Surface roughness and kerf width Optimisation in WEDM using taguchi Method”, Published in Journals of chemical and pharmaceutical Sciences, ISSN: 0974-2115,pp,172-182, which was presented in International Conference on Recent Advancement in Mechanical Engineering and Technology(ICRAMET -15), during April 23 – 24, 2015 in Aarupadai Veedu Institute of Technology.

Conference Proceedings

1. M.Durairaj, S.Gowri, “Tool Condition Monitoring through Acoustic Emission Signal in Micro-Turning of Inconel 600 Alloy”, published in the International Journal of Recent Innovations in Production Engineering (RIPE-2017), organised by the department of Production Engineering, MIT Campus, Anna University, Chennai, Tamilnadu, India on March 24-25, 2017.
2. S. Sathish, D.Vignesh, S.Vishal, M.Durairaj, “Optimization of the WEDM parameters on machining Incoloy 825 with zinc coated brass tool, which was presented in International Conference on Recent Advancement in Mechanical Engineering and Technology(ICRAMET -15), during April 23 – 24, 2015 in Aarupadai Veedu Institute of Technology.
3. M.Durairaj, S.Elanthirayan, K.Aanand , J.poornachandran, " Application Of Genetic Algorithm In The Optimization Of Cutting Parameters In Wire cut Edm Using D2 Die Steel" , was presented in the 3 rd International conference on Futuristic trends in Mechanical

Engineering' organized by Thiruvalluvar college of Engineering and Technology, held during 1st and 2nd March 2014.

4. M.Durairaj, S.Gowri "Multi Objective Optimization of Machining Parameters in Micro Turning Process using Genetic Algorithm and Particle Swarm Optimization", was presented in the International conference on Engineering Materials and Processes (ICEMAP - 2013) held during 23rd and 24th May 2013 organised by Tagore Engineering college, Chennai.
5. M.Durairaj, S.Gowri "Monitoring of Micro Turning Process of Inconel 600 Alloy through Acoustic Emission Signals", was presented in the International conference on Engineering Materials and Processes (ICEMAP -2013) held during 23rd and 24th May 2013 organised by Tagore Engineering college, Chennai.
6. M.Durairaj, S.Gowri, P.Sri Balakumaran, S.Subash and J.M.A.Thoufiq Abdul Aziz "Experimental Investigation of process parameter in wire cut electrical discharge Machining Using Titanium Alloy", was presented in the International conference on Engineering Materials and Processes (ICEMAP -2013) held during 23rd and 24th May 2013 organised by Tagore Engineering college, Chennai.
7. M.Durairaj, S.Gowri, D.Sudharsun, N.Swamynathan, "Application of Genetic Algorithm in the optimization of cutting parameters in wire cut EDM using stainless steel AISI 304", was presented in the International conference on Engineering Materials and Processes (ICEMAP -2013) held during 23rd and 24th May 2013 organised by Tagore Engineering college, Chennai.
8. V.Lakshman, G.JoeInigoFelix, D.karthick, M.Durairaj, S.Gowri,, "Influence of roughness parameters on Coefficient of friction of cast Iron" was presented in the International conference on Engineering Materials and Processes (ICEMAP -2013) held during 23rd and 24th May 2013 organised by Tagore Engineering college, Chennai.
9. M.Durairaja, S.Gowri "Parametric Optimization for Improved Tool Life and Surface Finish in Micro Turning using Genetic Algorithm", published in Procedia Engineering 64 (2013)878–887, available online at [science direct. com/www.elsevier.com/locate/procedia](http://science.direct.com/www.elsevier.com/locate/procedia) which was presented in the International Conference on DESIGN AND MANUFACTURING, IConDM 2013organised by (IITD&M) Kancheepuram, held during 18-20 July 2013, at Melakottaiyur, Chennai.
10. M. Durairaj, D.Sudharsun, N.Swamynathan, " Analysis of Process Parameters in Wire EDM with Stainless Steel using Single Objective Taguchi Method and Multi Objective Grey

Relational Grade,, published in Procedia Engineering 64(2013)878–887,available online at science direct. com/www.elsevier.com/locate/procedia which was presented in the International Conference on DESIGN AND MANUFACTURING, IConDM 2013organised by (IITD&M) Kancheepuram, held during 18-20 July 2013, at Melakottaiyur, Chennai.

11. M.Durairaj¹, M.H.Gauthamkumar², R.Aishwarya², M. Ashok kumar² ‘Optimisation of Electrical Discharge Machining of Inconel 800’, International conference on Futuristic trends in Mechanical Engineering’ organized by Thiruvalluvar college of Engineering and Technology, held during 28th and 29th of January 2012.
12. .M.Durairaj^{1,a}, S.Gowri^{2,b} “Optimization of Inconel 600 alloy Micro turning process using Grey Relational Analysis”, International Conference on Advances in Manufacturing and Materials Engineering, organized by International Islamic University Malaysia, held during 3-5 July 2012 , Kuala Lumpur, Malaysia.
13. .M. Durairaj^{1, a}, S.Gowri^{2, b}, M.H.Gauthamkumar^{3, c}, M. Ashok kumar^{3, d}, R.Aishwarya^{3, e} “Optimization of Wire Cut Electrical Discharge Machining of Inconel 800 using Grey Relational Analysis”, International Conference on Advances in Manufacturing and Materials Engineering, organized by International Islamic University Malaysia, held during 3-5 July 2012 , at Kuala Lumpur, Malaysia.
14. Durairaj^{1,,} S.Gowri², “Micro turning – A Review”, International Conference on Advanced Materials And processing(ICAMP-2011), organized by RMK Engineering College, held during 19-20 December 2011 , in RMK Engg, college, Chennai.
15. M. Durairaj, P. Sri Balakumaran, S. Subash, J.M.A. Thoufiq Abdul Aziz, 2013, “Application of Taguchi Method in Optimization of Cutting Parameter for Kerf Width in Wire EDM” Proceedings of the National Conference on Fascinating Advancements in Mechanical Engineering, pp. 165–169,held on 11th March 2013,organized by RMK college of Engineering and Technology.
16. M. Durairaj, D. Sudharsun, N. Swamynathan, 2013, “Surface Roughness Optimization in Wire Cut Electrical Discharge Machine using Taguchi Method” Proceedings of the National Conference on Fascinating Advancements in Mechanical Engineering, pp. 176, ,held on 11th March 2013,organized by RMK college of Engineering and Technology.
17. M. Durairaj, G.Joe Inigo Felix, V.Lakshman and D.Karthick. “Investigation of tribological properties of cast iron using pin on disc apparatus” National Conference on Recent Trends In Manufacturing Technology(RTMP 2013), organized by Department of Manufacturing Engineering, held during 25-26 April 2013, at college of Engineering Guindy Campus, Anna

University, Chennai-25.

18. N.Karthick , R.Karthik, R.Lokesh & M.Durairaj “Minimization of work steering knuckle in four – wheeler, pp – 71,National conference on ‘Research Trends in Mechanical Engineering’ held at Department of Mechanical Engineering, Vel’s University, Pallavaram, Chennai 0n 11th April 2012.
19. N.Karthick, R.Karthik, R.Lokesh, M.Durairaj , Dr.S.Gowri ‘Design & fabrication of a Drill jig for a steering knuckle in four wheeler,’pp-173, National Conference on Advances in Mechanical Science “AIMS 2012” held at Fathima Michael college of Engineering & Technology, Madurai on 24th March 2012.
20. M.H.Gautham kumar¹, R.Aishwarya¹, M. Ashok kumar¹, M.Durairaj¹, Dr.S.Gowri² ‘Optimisation of Electrical Discharge Machining using Taguchi’s Method’. Pp-168, National Conference on Advances in Mechanical Science “AIMS 2012” held at Fathima Michael college of Engineering & Technology, Madurai on 24th March 2012.
21. B.Keerthi Barman, P.Prabhakaran, M.Durairaj ‘ Optimisation of wire cut – Electrical Discharge machining of copper’, National Conference on Recent Trends In Manufacturing Technology(RTMP 2011), organized by Department of Manufacturing Engineering, held during 11 – 12 March 2011, at college of Engineering Guindy Campus, Anna University, Chennai-25.
22. M.Durairaj, Dr.S.Gowri ‘Optimization of Micro wire-Electrical Discharge Machining For Alumunium alloy’- National Conference on Advances in Robotics, Precision Engineering & Manufacturing Techniques AIRPAM 2008, held during 14 – 15 March 2008 at MIT campus, Anna university, chennai-44.
23. M.Durairaj, Dr.S.Gowri ‘Multi-Objective Optimization of Micro Wire -Electrical Discharge Machining’- National Conference on Trends and Innovations in Manufacturing Engineering (TIME), held during 6- 7 Feb 2008 at Tagore Engineering College, Chennai.-48.
24. T. Hariharan, M. Durairaj, " Enhance the Structural performance of a passenger car during frontal crash", presented in the National Conference on Contemporary approach in Mechanical, Automobile and Building Sciences (NCCAMAB'14) organized by Karpaga Vinayagar college of Engineering and Technology.
25. P.T. Gokul Ram, M.Durairaj, " Optimization study on automotive body structure weight reduction using structural adhesives", presented in the National Conference on Contemporary approach in Mechanical, Automobile and Building Sciences (NCCAMAB'14) organized by Karpaga Vinayagar college of Engineering and Technology.

26. M.Pradeep, P. Vignesh, M. Arun and M.Durairaj, "Experimental analysis of Tribological properties of R19 steel using Pin on Disc Apparatus", presented in the National Conference on Contemporary approach in Mechanical, Automobile and Building Sciences (NCCAMAB'14) organized by Karpaga Vinayagar college of Engineering and Technology. 27. Sakthivel, M.Durairaj, "Investigation of micro wear abrasion and thermal expansion of grade 17 cast iron", presented in the National Conference on Contemporary approach in Mechanical, Automobile and Building Sciences (NCCAMAB'14) organized by Karpaga Vinayagar college of Engineering and Technology. 28. R.Rajamouli, M.Durairaj, “Optimization of the WEDM parameters on machining Inconel x750 with Brass tool”, presented in the National Conference on Recent Advances in Science, Engineering and Management (NCRASEM -2015) , organized by Tagore engineering college on 20th March 2015. 29. S. Sathish, D.Vignesh, S.Vishal, M.Durairaj, “Optimization of Electrical discharge Machining using Taguchi Method”, presented in the National Conference on Recent Advances in Science, Engineering and Management (NCRASEM -2015) , organized by Tagore Engineering College on 20th March 2015.		
Books / Chapters Published		
-		
Fund Received		
-		
Patent Applied / Published/Granted		
-		
CITATIONS	--	
H-INDEX	--	
RESEARCH GUIDANCE DETAILS		
Sl.No	University	Supervisor ID / Reference
1	Anna University, Chennai	--
2	Number of UG Scholars Guided	7

3	Number of PGScholars Guided	3
4	Number of Ph.D. Scholars Guided	--
5	Number of Ph.D. Scholars Pursuing	--
PROFESSIONAL SOCIETY MEMBERSHIP DETAILS		
Sl.No	Professional Society Name	Member ID
1	Lifetime Member in ISTE (LM 112466)	LM 112466