


Faculty Profile

Name :	Dr. G. PAULRAJ					
Date of Birth :	27.01.1970					
Highest Qualification :	Ph.D.,					
Date of Joining :	04.07.2019					
Designation :	Professor & Head					
Date of promotion (Present Designation) :	-					
Area of Interest :	Tool Design, Finite Element Analysis, Composite Materials, Additive Manuf.					
Mobile No :	+91 9865777288	Email ID :	hod.mech@trp.srmtrichy.edu.in			
Experience :	Teaching:	22 Years	Industry :	5Years	Research:	
Address (for Communication) :	Plot No 5, Chokkalingampillai Nagar, Bikshandarkovil (PO)					
	No 1 Tollgate, Trichy-621216.					

Association with Professional Bodies

Name (Professional Body)	Indian Society For Technical Education (ISTE)	International Association of Engineers (IAENG)	Institute of Research Engineers and Doctors (IRED)
Type of Membership	Life Member	Life Member	Life Member
Membership Number	LM47268/2005	239198	SM101000601119

Research

Ph. D Guidance					
Supervisor / Guide ship No. :	1920311	University:	Anna University	No. of Scholars:	02
Publication*					
International Journals :	21	National Journals :	1		
International Conference :	15	National Conference:	07		
Project Grants (Research projects guided or undertaken/ Sponsored Projects)					
Received (Amount) :	-	Applied (Amount) :	Rs. 91,82,749		
Patent					
Published :	8	Granted :	1		

Books/ Book Chapters

Published:	2
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FDPs / STTPs / Workshops / Seminars etc.,

FDP		STTP		Workshop		Seminar		Others	
Attended :	30	Attended :	1	Attended :	10	Attended :	1	Attended :	-
Organized :	1	Organized :	-	Organized :	1	Organized :	3	Organized :	-
Online courses (NPTEL, MOOC etc.)					4				

***List of Publications :**

Inter National Journals:

1. Sivakumar, K. and Paulraj, G. "Genetic algorithm based deformation control and clamping force optimization of workpiece- fixture system," International Journal of Production Research, ISSN 0020–7543, Vol. 49, No.7, pp.1903 -1935, 2011.(SCi Journal)
2. Sivakumar, K. and Paulraj, G. "Geometric error control of workpiece during drilling through optimization of fixture parameter using Genetic algorithm," International Journal of Production Research, ISSN 0020–7543, DOI:10.1080/0020 7543.2011.588616 U.K , Vol: 50, Issue:12, P.No:3450-3469, August 2011. (SCi Journal)
3. Sivakumar, K. and Paulraj, G. "Analysis and Optimization of fixture under dynamic machining condition with chip removal effect," Journal of Intelligent Manufacturing, ISSN 0956-5515, Vol.25, No.1, P.No:85-98, Feb 2014, DOI: 10.1007/S 10845-012-0677-Y, 2012. (SCi Journal)
4. Bovas Herbert Bejathin A. and Paulraj G. "Experimental analysis of effective stress in High Speed Milling of Al/SiC/Zn Metal Matrix Composite" International Journal of Advanced Engineering Technology (E-ISSN 0976-3945), Vol. V II/ Issue III/ July-Sept., 2016/142-145.
5. Paulraj, G., Viswabharathy, P., Vadivel, M and Vairamuthu, A. "Analysis of Tool Geometry on Cutting Tool during Turning of EN 24 Mild Steel," International Journal On Engineering Technology and Sciences – ISSN(P): 2349-3968, ISSN (O): 2349-3976, Volume IV, Issue II, February – 2017.
6. G.Paulraj G, Harimaheswaran R, Viswabharathy P, Surendiran N, "Experimental Investigation of Composite Material to increase the Mechanical Characterization using Aluminium with Silicon Carbide Composites" International Journal of Novel Research and Development – ISSN : 2456-4184, P.No. 157-171, Volume 2, Issue 6, June 2017.
7. G.Paulraj G, Harimaheswaran R, Viswabharathy P, Arockiasamy S, " Design And Analysis of Dual Brake Drums on Various Material (AL6061, High Carbon Steel, Manganese) using CATIA" International Journal of Novel Research and Development – ISSN : 2456-4184, P.No. 172-186, Volume 2, Issue 6, 2017.
8. Bovas Herbert Bejathin A. and Paulraj G. "A Review on Effect of Coatings on Tools and Surface Roughness as Vibration Resistance" International Journal of Emerging Technologies in Engineering Research (IJETER), (ISSN 2454-6410), Vol. 5/Issue 10/October 2017/ P.N:50-56.
9. Ramkumar K, Paulraj G, Elangovan K, Sathiya Narayanan C "FLD, Void Analysis, Strain distribution and Surface roughness for SS430 sheets during Multipoint Incremental Forming" Archives of Metallurgy and Materials, ISSN 1733-3490, DOI:10.24425/amm.2018.125096,63(2018),4,1709-1714. (SCi Journal)
10. Bovas Herbert Bejathin A. and Paulraj G. "Identification of Surface Roughness and Removal rate of EDM machining of Al-SiC-FA Metal Matrix Composite" International Journal of Creative Research Thoughts(IJCRT), (ISSN 2320-2882), Vol. 6/Issue 02/April 2018/ P.N:348-353.
11. Bovas Herbert Bejathin A and Paulraj G. "Experimental Investigation of Vibration Intensities of CNC Machining centre by Microphone Signals with the Effect of Tin/Epoxy Coated Tool Holder" Journal of Mechanical Science and Technology, 33(3) (2019) 1321-1331. (SCi Journal).
12. Ramkumar K, Baskar k, Paulraj G, Elangovan K, Sathiya Narayanan C "Optimization of multipoint incremental sheet metal forming of SS430 sheets using GRA" Indian Journal of Engineering and Materials Sciences, ISSN: 0971-4588 vol.26, Oct- Dec 2019, 326-333. (SCi Journal).
13. Bovas Herbert Bejathin A and Paulraj G. "Effect of optimised cutting constraints by AlCrN/epoxy coated components on surface roughness in CNC milling" International Journal of Rapid Manufacturing, Vol.8 , o 4 , 2019, 397-417 .
14. Bovas Herbert Bejathin A and Paulraj G. "Performance Characterization of Surface Quality and Tool Wear of Wet/Dry Drilling on Steels by Using Coated Drill Bits " Proceedings of Engineering and Technology Innovation, vol.12, 2019, pp.09-20.

15. Bovas Herbert Bejaxhin A and Paulraj G. "Inspection of casting defects and grain boundary strengthening on stressed Al6061 specimen by NDT method and SEM micrographs" *Journal of Materials Research and Technology*, vol. 8 (3), 2019, pp. 2674 - 2684, ISSN No.: 2238-7854. (Scopus Journal).
16. Bovas Herbert Bejaxhin A and Paulraj G. "Influence of TiN/AlCrN electrode coatings on surface integrity, removal rates and machining time of EDM with optimized outcomes" *Materials Today: Proceedings*, Vol 21, 3 (3) (2020) 340-345. (Scopus Journal).
17. Bovas Herbert Bejaxhin A, Paulraj G, Jayaprakash. G and Vijayan V, "Measurement of roughness on hardened D-3 steel and wear of coated tool inserts" *Transactions of the Institute of Measurement and Control*, P.N:1-9,2020. (SCi Journal).
18. Jones Preveen J, Vinish M, Bovas Herbert Bejaxhin A and Paulraj G. "Embedded effect of ZrB₂-Si₃N₄ on tribological behaviour of Al 8011 metal matrix composite" *Materials Today: Proceedings*, Doi.org/10.1016/j.matpr.2020.10.954.(Scopus Journal).
19. Thilak M, Jayaprakash G, Paulraj G and Bovas Herbert Bejaxhin A, "Non-Traditional Tolerance Design Techniques for Low Machining Cost" *International Journal on Interactive Design and Manufacturing (IJIDeM)*, (Scopus Journal), <https://doi.org/10.1007/s12008-022-00992-0>.Aug2022.
20. Y. Brucely, Y. Christabel Shaji, G. Paulraj and D. Manikandan, "Synthesis and characterization of natural fibre with ZnO nanocomposites" *International Journal on Interactive Design and Manufacturing (IJIDeM)*, (Scopus Journal), <https://doi.org/10.1007/s12008-022-01027-4>.
21. Brucely Y, Paulraj G, Thilak M and Ganesh Karthikeyan M, "Minimization of Defects in Glove Manufacturing Using Total Failure Mode Effects Analysis Flower Pollination Optimization".

National Journals:

1. Sivakumar,K. and Paulraj, G. "Deformation Control of Workpiece during Drilling through Optimization of Fixture Parameter," *Emerging Technology in Mechanical* No.2, pp.23 -31,2010. *Journal of Science and Engineering*, Vol.1

Inter National Journals:

1. Sivakumar, K. and Paulraj, G. "Analysis of Clamping and Locator Surfaces of Workpiece Using Finite Element Analysis," *Flexible Automation and Intelligent Manufacturing-FAIM2007*, June 18-20, Philadelphia, USA, 2007.
2. Sivakumar, K. and Paulraj, G. "Analysis of Workpiece Error Using Coordinate Measuring Machine," *TEAM TECH-2007*, IISC, BANGALORE, 2007.
3. Sivakumar, K. and Paulraj, G. "Analysis of Deformation of Prismatic Component Using Finite Element Analysis," *ICAME-2007*, Manipal Institute of Technology, Manipal. October 24-26, 2007.
4. Sivakumar, K. and Paulraj, G. "Optimization of Clamping Configuration Using Finite Element Analysis in Workpiece Fixture System," *IISc International Conference on Advances in Mechanical Engineering (IC-ICAME)*, Bangalore, India, July 2-4, 2008.
5. Sivakumar, K. and Paulraj, G. "Prediction of contact force in active and passive element surfaces of workpiece," *International Conference on Fascinating Advancement in Mechanical Engineering (FAME2008)*, MEPCO College of Engineering, Sivakasi, 11-13, DEC2008.
6. Sivakumar, K. and Paulraj, G. "Prediction of Contact pressure distribution in Clamping and Locator Element Surfaces of Workpiece-Fixture System," *2nd International & 23rd All India Manufacturing, Design and Research Conference*, IIT MADRAS, 15-17, Chennai, Dec2008.
7. The paper "A Study on Machining Parameters Optimization of Electrical Discharge Machining using Genetic Algorithm" has been selected for the *International Conference on Recent Trends in Materials and Mechanical Engineering (ICMME 2008)* Dr Mahalingam College of Engineering and Technology

Pollachi, Tamil Nadu, India, 18-20, December, 2008.

8. Sivakumar, K. and Paulraj, G. "Optimization of fixture element layout through Genetic Algorithm," International Conference on Advances in Industrial Engineering Applications (ICA IEA2010), Anna University Chennai, India, January, 6-8, 2010.
9. Sivakumar, K. and Paulraj, G. "Deformation control of Workpiece during drilling through optimization of Fixture Parameter" International Conference on Recent Advances in Mechanical Engineering (ICRAME2010), Noorul Islam University, Kumaracoil, India, 8-9, April 2010.
10. Sivakumar, K. and Paulraj, G. "Finite element method based transient temperature and deformation control in workpiece fixture system during milling process," International Conference on Recent Advances in Mechanical Engineering (ICRAME2010), Noorul Islam University, Kumaracoil, India, 8-9, April 2010.
11. Sivakumar, K. and Paulraj, G., "Deformation control of workpiece during drilling through optimization of fixture parameter using Genetic algorithm," 3rd International & 24th All India Manufacturing Tech. Design and Research (AIMTDR) Conference 2010, A.U College of Engineering, Andhra University, Visakhapatnam, India, December 13-15, 2010.
12. Sivakumar, K. and Paulraj, G. "Micrograph analysis of contact point region in workpiece-fixture system," 3rd International & 24th All India Manufacturing Technology, Design and Research (AIMTDR) Conference 2010, A. U College of Engineering, Andhra University, Visakhapatnam, India, December 13-15, 2010.
13. Paulraj G, Evangeline A and Arun Prakash G, "Nanomaterials in Gas Sensors: A big leap in Technology" International Conference on Emerging Trends in Science, Engineering & Technology (INCOSSET-2012), J. J. College of Engg. & Technology, Tiruchirappalli, India, December 13-14, 2012.
14. Bovas Herbert Bejathin A and Paulraj G, "Experimental Evaluation of EDM Machining of Al-SiC-Fly ash Metal Matrix Composite" International Conference on Design and Manufacturing 2014, National Institute of Technology, Tiruchirappalli, December 5-7, 2014.
15. Bovas Herbert Bejathin A and Paulraj G, "Experimental analysis of effective stress in high speed milling of Al/SiC/Zn Metal Matrix Composite" International Conference on PECMD 2016, PSG college of Technology, Coimbatore, January 7-9, 2016.

National Conferences:

1. Paper titled "Theory of Constraints (TOC) Based Material Requirements Planning (MRP) System" has been selected, and presented and published in National Conference on 'Modeling and Simulation in Manufacturing-MOSIM 2003' dated 15-16 March 2003 Organized by Department of Manufacturing Engineering, Annamalai University.
2. Presented and published title on "Analysis of Manufacturing Error of the Features in Workpiece in the Fixture System" ETIMES-2007, 19-20 December 2007, Bannari Amman Institute of Technology, Sathyamangalam.
3. Paper titled "Optimization of Electrode Wear and Material Removal Rate in Electrical Discharge Machining using Genetic Algorithm and Non-Dominating Sorting Genetic Algorithm" has been selected, and published in National Conference on 'Optimization Techniques in Engineering Sciences and Technologies' dated 27-28 March 2009 Organized by Department of Mechanical Engineering, Bannari Amman Institute of Technology, Sathyamangalam, Erode.
4. Paper titled "Machining Parameters Optimization of electrical Discharge Machining using Genetic Algorithm" has been selected, and published in National Symposium on 'Materials Research Scholars' - (MR-09) dated 8TH -9TH May 2009 Organized by Department of Metallurgical Engineering and Materials Science, Indian Institute of Technology Bombay, Mumbai.
5. Paper titled "Deformation Control of Workpiece- Fixture System by using Finite Element Analysis" has been selected, and published in National Conference on Advance in Heat And Mass Transfer -

(AHMT- 2009)”dated 30-31 October 2009 Organized by Department of Mechanical and Chemical Engineering, Finolex Academy of Management and Technology, Ratnagiri.

6. Paper titled “Manufacturing Error Control of Workpiece in Drilling Machine” has been selected, and published in National Conference on ‘Recent Advances in Mechanical and Materials Processing’ - (RAMMP - 2010)”dated 13 March 2010 Organized by Department of Manufacturing Engineering, Moogambigai College of Engineering.
7. Paper titled “Finite Element Method based Deformation Control of Workpiece during Slot Milling Operation” has been selected, and published in National Conference on ‘Recent Advances in Mechanical and Materials Processing’ - (RAMMP-2010)” dated 13th March, 2010 Organized by Department of Manufacturing Engineering, Moogambigai College of Engineering.

Patent Filed / Published:

1. Water Harvesting Provision in Underground Drainage Pipes (202041013755A)- Published
2. Aerial Surveillance Vehicle (DRONE) (334233-001) - Published
3. Portable Wheel Chair Assembly (202041052086) - Published
4. Device to Measure Surface Roughness and Method thereof (202041052087) - Published
5. Strapless Nasal and Oral Mask (202041052088) – Published
6. Analysis of CA-TiO₂ Catalysts For The Best Adsorption/ Photocatalysis Compromise For Water Depollution (202241027176) – Published
7. A Formulation of 2D Layered Double Hydroxide Composition System for Drug Delivery and Process Therof. (202241073365) – Published
8. Linear Surgical Stapler (388522-001) – Published

Books/Book Chapter Published:

1. Recent Trends in Engineering and Technology-978-93-90856-10-7-ANVI Books & Publishers
Delhi-110053 (India)
2. Mechanical Properties and Characterization of Additively Manufactured Materials- 9781032392776- DOI:
10.1201/9781003430186.