

Research and Development

Mechatronics Engineering Department is a recognized research centre of Anna University, Chennai. To cater to its diversified nature, the department has expertise in all areas of mechanical, electronics, electrical and control engineering. All the members of faculty are active and engaged in carrying out projects utilizing the capabilities of students also.

Completed Funded Projects

S.No	Project Title	Funded Agency	Duration	Cost	Investigator and Co-Investigator Details
1	Personal commutator with flexible turning mechanism	IEDC	(2015-2016)	Rs 1 lakhs	P. Sathish Kumar

Publication Details

S.No	Paper title	Author details	Name of the journal	Volume and page number	Year of publishing
1.	Heat and mass transfer studies on compact generator of R134a/DMF vapour absorption refrigeration system	Balamurugan. P and Mani.A	International Journal of Refrigeration	35 (3) &506-517-(Elsevier-web of science)	2012
2.	Experimental studies on heat and mass transfer in tubular generator for R134a-DMF absorption refrigeration system	Balamurugan. P and Mani.A	International Journal of Thermal Sciences	61, 118-128-(Elsevier-web of science)	2012
3.	Comparison of compact and tubular generators performance for R134a-DMF	Balamurugan. P and Mani	Experimental Thermal & Fluids Science	45(Elsevier-web of science)	2013
4.	Production of Orange Oil Methyl Ester and	Karthickeyan, V, P Balamurugan, and	Asian Journal of Research in	Volume 6, Issue 8, pp. 156–178	

	Experimental Investigation on Thermal Barrier Coated Diesel Engine	R Senthil	Social Sciences Humanities		February 2016
5.	Experimental investigation of tyre pyrolysis Oil (TPO) in diesel engine without any engine modification	Karthickeyan V, P.Balamurugan	Journal of Biofuels and Bioenergy	Volume 1, Issue 2	April 2015
6.	Asian Research Consortium	V Karthickeyan, P Balamurugan, R Senthil	Asian Journal of Research in Social Sciences and Humanities	6 (8), 156-178	2014
7.	Comparative studies on emission reduction in thermal barrier coated engine using single blend ratio of various non-edible oils	V Karthickeyan, P Balamurugan, R Senthil	Journal of the Brazilian Society of Mechanical Sciences and Engineering	1-11(web of science)	2016
8.	Investigation of CI Engine Fueled with Ethanol Nano Additives Blended Diesel	Karthickeyan, V, P Balamurugan, and R Senthil	<i>Energy</i>	Volume 5, Issue 9, pp.121–130.(web of science)	2016
9.	Continuous quality improvement in investment castings: An experimental study using a modified FMEA approach called FEAROM	Selvan.T.A, Jegadheesan.C and Senthilkumar.K.M	Eur.j.sci.res	Vol No: 74, issue no.2, pp. 308-325-.Scopus	2012
10.	Enhancing quality using FEAROM model for finalizing casting product methods design in preproduction trials	Selvan.T.A, Jegadheesan.C, Senthilkumar.K.M and Alagirisamy.P.S	Springer-verlag berlin Heidelberg CCIS	Vol No: 330, issue no.2, pp. 511-519.Scopus	2012
11.	A Novel FMEA approach for ranking Mould Designs in foundries	Selvan.T.A, Jegadheesan.C, AshokaVarthanan. P and Senthilkumar.K.M	Life Sci J.	Vol No: 10, issue no.8, pp. 51-60	2013
12.	Failure Effects And Resolution of Modes: A novel FMEA treatise for Finalizing Mould Designs in Foundries	Selvan.T.A, Jegadheesan.C, AshokaVarthanan. P and Senthilkumar.K.M	S.Afr. J. Ind. Eng	Vol No: 24, issue no.2, pp. 181-195	2013
13.	Investigation of vehicle parameters in regenerative coil suspension design	Selvan, T.A., Navin, S., Ram Ganesh, K.R	International Journal of Vehicle Structures and Systems	2-s2.0-84925137754	2014
14.	A new approach for prioritization of failure	Selvan, T.A. and Jegadheesan, C	CSIR Sponsored Natl. Conf.-	pp.8, 5-6	2012

	modes in process FMEA using ANOVA in casting industries		ADAMMS2012, Dep. Mech. Eng., Sri Krishna College of Engineering and Technology		
15.	Satellite Image Steganography using High degree Compressed Embedding Technique	Rohith G, BhuvanewariM, Nithyapriya.SS.Kannaki	International Journal for Research & Development in Technology	Vol 5 Issue 7	July 2016
16.	Optimization of dynamic resistance against malicious attacks & collusion through enhanced authentication schemes in application to smartcard	S.Kannaki	International Journal for Research & Development in Technology	Vol 4, issue 11, pp. 554-558	2015
17.	A single phase Z-Source Matrix Converter for Wind Turbine Generation Systems	NithyaPriya S, Ramya.A,	International Journal of Programmable Device Circuits and Systems	Vol 4, issue 11, pp. 559-563	2012
18.	Hybrid clamped multilevel inverters for grid connected solar electronics	NithyaPriya S, Helen Catherine R.L	International Journal of Programmable Device Circuits and Systems,	Vol 4, issue 11, pp. 554-558	2012
19.	Finite element analysis of butt welded joints under cyclic loading	S.Dineshkumar, S.Bradeeshmoorthy	International journal of modern engineering and research	Vol 1, Issue 2, pp. 117-122	2014
20.	Optimization of Surface Grinding Process Parameters for Minimum Surface Roughness in AISI 1080 Using Response Surface Methodology	M.Aravind, Dr.S.Periyasamy, D.Vivek, Dr.K.S.Amirthagadeswaran	Advanced Materials Research	Vols. 984-985, pp 118-123 (scopus)	2014
21.	Optimization of Surface Grinding Process Parameters By Taguchi Method And Response Surface Methodology	M.Aravind, Dr.S.Periyasamy	International Journal of Engineering Research & Technology (IJERT)	Vol No: 3, issue no.5, pp. 1721-1727	2014
22.	A study of vibration analysis for drillstring using finite element analysis	P.SathishKumar	Journal of Mechanical and Civil Engineering	Vol 61– No.16,pp. 60–74	January 2013
23.	A Review On Efficiency Of Energy Efficient Motor Standards	Manoharan S, Ananthi K	Journal of Electrical Engineering	Vol 4, issue 11, pp. 554-558	2015
24.	Performance Comparison of Vapour Compression Refrigeration System with Mechanical Subcooling	S.Panneerselvam, P.Thangavel, P.Dhamodharan	International Journal of Applied Engineering Research	Vol. 10 No.50	2015
25.	Determination of physical	S. Priyadharsini	International	Volume 3, Issue	April 2016

	properties of sand moulding bonded with composite of ipomoea batatas and bentonite with casting application		research journal of engineering and technology	4	
26.	Comparative analysis of auto - tuners for pressure tank process	R.Priyadharshini, S.Rakesh Kumar	International Journal of Applied Engineering Research	Volume 9, Number 18 pp. 5291-5298	2014