

MEXPRESS



Attitude takes you to Altitude

A Half-Yearly Newsletter from Department of Mechanical Engineering
Dr. M.G.R. EDUCATIONAL AND RESEARCH INSTITUTE,
Maduravoyal, Chennai-600 095.

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Editorial Board:

Department of Mechanical
Engineering



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Dean and Addl. Dean (E & T)

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Engineering)

Technical Board:

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Message

*The first Newsletter **MEXPRESS** published by Mechanical engineering department for the period Jan – May 2018 has come out quite well. It covers all the important activities of the department during this period, Do keep up the good work in the subsequent issues too.*

A. C. S. Arunkumar,

President,

Dr. M.G. R. Educational and Research Institute,

Chennai-600 095

Editor's Desk

Dear Readers,

We are very happy to continue the newsletter at half yearly named *MeXpress* of our Department. We thank our beloved chairman Dr. A. C. Shanmugam for his constant encouragement and support in launching this maiden venture. The newsletter is a brainchild of our President, who is keen in developing our Institute as a leading technical university. Your suggestions and criticisms are most welcome for embellishing this newsletter.

“Happiness is a Habit”

Technical Events Organized for Students

Sl. No.	Topic	Date	Resource Person
1	Industry 4.0	23/07/18	Mr. P.B. Sunilkumar, Technical Director
2	"Lean - Six Sigma For Manufacturing Excellence"	14/08/18	Dr. G.SIVAKUMAR Intelligence Quality College Chapter
3	Total Quality Management	20/08/18	Mr. S. Sundar, MGRE&RI, ME
4	Natural Fibre Composite Usage	20/08/18	Dr. J. Jayaseelan, Asst. Professor
5	Troubleshooting & Service of Automotives	19 th & 20 th Sep. 2018	Mr. Xavier Jagannathan, Goodwin Motors
6	Internet Of Things (IOT)	04/10/18	Mrs. Nirmala Sugirtha Rajini, Asst. Professor
7	Memorial Lecture – 87 th birth anniversary of Bharat Ratna Dr.A.P.J.Abdul Kalam	24/10/18	Mr. APJ Sheikh Dawood, Trustee of APJ Abdul Kalam International Foundation,.
8	Employability Skills	31/10/18	Mr. Jerin Rajan, Diyar Loaders Pvt. Ltd.



Industry 4.0



Lean Six Sigma



Total Quality Management



Natural Fibre Composite Usage Troubleshooting & Service Of Automotives



Internet of Things



Dr. A.P.J. Abdul Kalam -Memorial Lecture

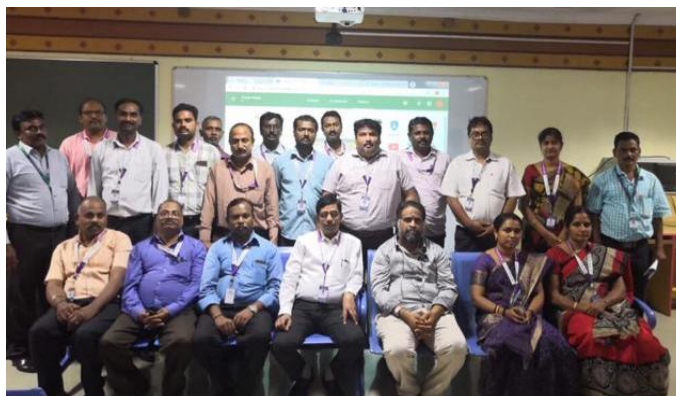


Employability Skills

1. Technical Symposium “YANTRAM 18” organized by our department was conducted on 11th & 12th October 2018. Theme was “SMART MANUFACTURING”
2. Faculty Development Program on “Digital Learning & Creation of e-content” was conducted on 10th November 2018. Resource person was Dr. A.G. Srinivasan, MGRE&RI, Mathematics Department.



“YANTRAM 18”



Faculty Development Program

IIT ALUMNI PALS EVENTS

Sl. No.	Event	Date	Resource Person
1	PALS 2018-19 Inauguration	18/08/18	1.M.K.Soorappa (Vice Chancellor Anna University) 2.Prof. Bhaskar Ramamoorthy (Director IIITM)
2	Campus Lecture (Behavioral Skills For Digital Age)	24/08/18	1.Mohan Srinivasan (Principle Consultant and Delivery Head, Wipro Technologies) 2.TIJU THOMAS (Asst Professor Department of Metallurgy&, IITM)
3	T2P	29/08/18	Dr. Kanagasababathi Subramanian (Executive Director, R&D, Power Gear limited, Chennai)
4	Campus Lecture	30/08/18	1.Mr.J.Krishnan (MD&CEO Unimity Solutions, Chennai) & 2. Mr.James Rajanayagam (Senior Project Advisor CSIE IIT)
5	Innowah Q/A Session	10/09/18	Mr.P.V.Mohan (Anchor PALS Chennai cluster)
6	T2p Lecture (Submersible Robotics- Opptunities And Challenges	12/09/18	Prof. Prabhu Raja Gopal (Professor, Mechanical Engineering, IITM)
7	Campus Lecture –Automation In Software Development	19/09/18	1.Mr. Rajesh Panchanathan (Cofounder Genwise consulting India) & 2.Mr.Sridhar Tiruchendurai (Senior Vice President , Born group Chennai)

8	Campus Lecture -Digital Marketing &Six Keys To Professional Success	24/09/18	1.Mr. Sriram kalyanasundaram (Digital marketing enabler/SAAS Consultant, Chennai) 2.Ms. Shymala Rajaram (Director& co-founder, Unimity solution)
9	T2p Lecture- Microwave Engineering Application & Measurement Challenges	27/09/18	Prof. Dr. Swaroop Sahoo (Asst .professor IIT palakkad)
10	Annual Conclave Sangam	29/09/18	1.Mr. Lakshmi Narayan (Ex-vice chairman and Ex-CEO of Cognizant) 2. Mr. Chandra Sekhar (Madras Dylexia Association, President)
11	Campus Lecture –IOT &Measurement And Modeling Of Real Time Vehicle Exhaust	04/10/18	1.Dr.R.Chandran (chief information officer, bahwan Cybertech) 2.Prof. Shiva Nagendra (Department of civil IITM)
12	Residential Students Workshop	19/12/18	1.Mr. Mohan Narayanan (R&D power gears) 2. Prof. Siva Subramaian (Management studies IITM)

STUDENTS VISIT TO FORGEIN UNIVERSITIES:

NAME OF THE COUNTRY & VENUE: TAIPEI CITY, TAIWAN: SHIH HSIN UNIVERSITY, TAIPEI
NAME OF THE CONTEST: INTELLIGENT IRONMAN CREATIVITY CONTEST 2018 on 25th JULY 2018 TO 31st JULY 2018

STUDENTS NAMES:

1. Mr. SWAJAY CHOWDARY- Final Year Mechanical
2. Mr. SATHISH KUMAR SUBENDRAN-Final Year Mechanical



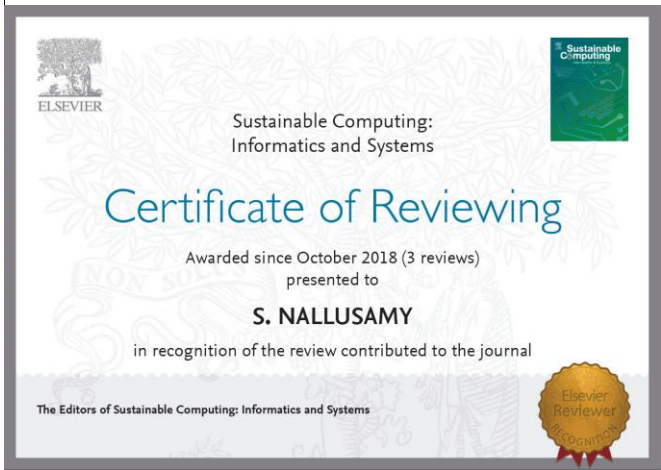
ORGANISED BY:
EDUCATIONAL MINISTRY OF TAIWAN & NATIONAL TAIWAN UNIVERSITY

STAFF ACHIEVEMENTS AWARDS:

ACADEMIC PROFESSIONAL ICON AWARD



Dr. N. ETHIRAJ Received **ACADEMIC PROFESSIONAL ICON AWARD** from The Institution of Engineers (India) Tiruvallur Local Centre on 28th OCT 2018.



STUDENTS INTERNSHIP DETAILS – 2018:

S.No	Year	Program Name	Associated Industry/Institute	No. Of Students Attended
1	2018-19	Industrial training (2 to 4 weeks)	AIEMA (Member Industries)	49
2	2018-19	Industrial training (2 weeks)	NSTI (ATI)	209



NSTI(AUTOMOTIVE MAINTENANCE)



NSTI(LIGHT MOTOR VEHICLE)

PUBLICATIONS BY FACULTY:

- 1.Nallusamy, S., Nivedha, R., Subash, E., Venkadesh, V., Vignesh, S., Vinoth Kumar, P. Minimization of rejection rate using lean six sigma tool in medium scale manufacturing industry (2018) International Journal of Mechanical Engineering and Technology, 9 (1), pp. 1184-1194
- 2.Fredrick Gnanaraj, F., Vijaya Kumar, K.R. Analysis of vibration detection using active controller in the smart cantilever composite beam with LQR and fuzzy techniques (2018) International Journal of Mechanical and Production Engineering Research and Development, 8 (5), Art. no. IJMPERDOCT20189, pp. 67-76. DOI: 10.24247/ijmperdoct20189
- 3.Rao, G.V.P., Nallusamy, S. Execution of lean and ZF production system in manufacturing line for productivity enrichment - A case study(2018) International Journal of Engineering Research in Africa, 40, pp. 171-183. DOI: 10.4028/www.scientific.net/JERA.40.171
- 4.Kumar, A., Rajan, K. Experimental investigation on a direct injection diesel engine using Cashew Nut Shell Oil (CNSO) as fuel with thermal barrier coated piston (2018) Pollution Research, 37 (2), pp. 80-88.
- 5.Rajaram Narayanan, M., Nallusamy, S. Analysis on vibration characteristics of wind turbine blade to improve the effectiveness through cfd developed by ansys (2018) Materials Science Forum, 937 MSF, pp. 43-50. DOI:10.4028/www.scientific.net/MSF.937.43
- 6.Nallusamy, S. Synthesis and performance characterization of nanolubricants proposed for heavy load ball bearing (2018) Journal of Nano Research, 54, pp. 75-87. DOI: 10.4028/www.scientific.net/JNanoR.54.75
- 7.Mohanavel, V., Suresh Kumar, S., Sathish, T., Adithiyaa, T., Mariyappan, K. Microstructure and mechanical properties of hard ceramic pArticulate reinforced AA7075 alloy composites via liquid metallurgy route (2018) Materials Today: Proceedings, 5 (13), pp. 26860-26865. DOI: 10.1016/j.matpr.2018.08.168
- 8.Mohanavel, V., Rajan, K., Sureshkumar, S., Praveenkumar, R. Experimental investigation on mechanical and tribological properties of SiC pArticles reinforced aluminum matrix composites (2018) International Journal of Mechanical and Production Engineering Research and Development, 2018 (Special Issue), Art. no. IJMPERDSPL201854, pp. 459-464.
- 9.Mohanavel, V., Suresh Kumar, S., Mariyappan, K., Ganeshan, P., Adithiyaa, T. Mechanical behavior of Al-Matrix nanocomposites produced by stir casting technique (2018) Materials Today: Proceedings, 5 (13), pp.26873-26877. DOI: 10.1016/j.matpr.2018.08.170

10. Tamil Selvi, M., Dasarathy, A.K., Thandavamoorthy, T.S., Ponkumarllango, S. A study of flexural and bending strength of steel, polypropylene and hybrid fibre reinforced concrete without adding admixture (2018) International Journal of Engineering and Technology(UAE), 7 (2), pp. 278-282. DOI: 10.14419/ijet.v7i2.24.12064
11. Mohanavel, V., Rajan, K., Suresh Kumar, S., Chockalingam, A., Roy, A., Adithiyaa, T. Mechanical and tribological characterization of stir-cast Al-SiCpcomposites (2018) Materials Today: Proceedings, 5 (1), pp.1740-1746. DOI: 10.1016/j.matpr.2017.11.271
12. Saravanan, V., Nallusamy, S., George, A. Efficiency Enhancement in a Medium Scale Gearbox Manufacturing Company through Different Lean Tools - A Case Study (2018) International Journal of Engineering Research in Africa, 34, pp. 128-138. DOI: 10.4028/www.scientific.net/JERA.34.128
13. Kaleel Ahmed, A., SenthilKumar, C.B., Nallusamy, S. Role of supply chain management on indian industrial sectors (2018) International Journal of Mechanical Engineering and Technology, 9 (4), pp. 460-467.
14. Mohanavel, V., Rajan, K., Suresh Kumar, S., Vijayan, G., Vijayanand, M.S. Study on mechanical properties of graphite pArticulates reinforced aluminium matrix composite fabricated by stir casting technique (2018) Materials Today: Proceedings, 5 (1), pp. 2945-2950. DOI: 10.1016/j.matpr.2018.01.090
15. Jeyabalan, S., Cyril Raj, V., Nallusamy, S. A genetic algorithm based protein signal pathway analysis (2018) Indian Journal of Public Health Research and Development, 9 (1), pp. 402-406. DOI: 10.5958/0976-5506.2018.00074.8
16. Dasarathy, A.K., Tamil Selvi, M., Leela, D., Kumar, S. Self compacting concrete - An analysis of properties using fly ash (2018) International Journal of Engineering and Technology(UAE), 7 (2), pp. 135-139. DOI: 10.14419/ijet.v7i2.24.12018
17. Nallusamy, S., Saravanan, V. Optimization of process flow in an assembly line of manufacturing unit through lean tools execution (2018) International Journal of Engineering Research in Africa, 38, pp. 133-143. DOI: 10.4028/www.scientific.net/JERA.38.133
18. Nallusamy, S., Balakannan, K., Chakraborty, P.S., Majumdar, G. A mixed-integer linear programming model of closed loop supply chain network for manufacturing system (2018) International Journal of Engineering Research in Africa, 35, pp. 198-207. DOI: 10.4028/www.scientific.net/JERA.35.198
19. Saravanan, V., Nallusamy, S., Balaji, K. Lead Time Reduction through Execution of Lean Tool for Productivity Enhancement in Small Scale Industries (2018) International Journal of Engineering Research in Africa, 34, pp. 116-127. DOI: 10.4028/www.scientific.net/JERA.34.116
20. Rajaram Narayanan, M., Nallusamy, S., Kumar, S.L. Characterization of machining parameters on en 31 with AL2O3 nanopArticles using taguchi technique (2018) International Journal of Mechanical Engineering and Technology, 9 (1), pp. 1173-1183
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22. Wilson John, M.R., Mamidi, T., Subendran, S., Ganapathy Subramanian, L.R. Experimental investigation of low-temperature latent heat thermal energy storage system using PCM and NEPCM (2018) IOP Conference Series: Materials Science and Engineering, 402, Art. no. 012197, . DOI: 10.1088/1757-899X/402/1/012197
23. Saravanakumar, M., Prabhakar, M., Krishnamoorthi, S., Sendilvelan, S. Emission characteristics of biodiesel derived from used cooking oil blended with diesel in the presence of potassium hydroxide (KOH) catalyst as alternative fuel for diesel engines (2018) Rasayan Journal of Chemistry, 11 (1), pp. 372-377. DOI: 10.7324/RJC.2018.1112024

24. Bhaskar, K., Sendilvelan, S. Experimental studies on the performance and emission characteristics of a compression ignition engine fuelled with jatropha oil methyl ester (2018) *Journal of Mechanical Engineering and Sciences*, 12 (1), pp. 3431-3450. DOI: 10.15282/jmes.12.1.2018.11.0305
25. Bhagyalakshmi, P., Rajan, K., Senthil Kumar, K.R. Experimental study on solar energy storage using phase change materials in spherical shell storage system (2018) *Oriental Journal of Chemistry*, 34 (1), pp. 507-512. DOI: 10.13005/ojc/340156
26. Abhishek, G., Senthilkumar, C.B., Nallusamy, S. Study on effectiveness of internal and external training to the development of employee in corporate sectors and hospitals (2018) *Indian Journal of Public Health Research and Development*, 9 (3), pp. 259-264. DOI: 10.5958/0976-5506.2018.00219.X
27. Suganthi, S., Senthilkumar, C.B., Nallusamy, S. Study on factors affecting the physical and mental health by stress and emotional crisis of working women (2018) *Indian Journal of Public Health Research and Development*, 9 (3), pp. 335-340. DOI: 10.5958/0976-5506.2018.00232.2
28. Bhaskar, K., Sendilvelan, S., Sassykova, L.R. Effect of premix and exhaust gas recirculation on the emission characteristics of biodiesel fueled engine (2018) *News of the National Academy of Sciences of the Republic of Kazakhstan, Series of Geology and Technical Sciences*, 2 (428), pp. 6-17.
29. Gabdrashova, S.E., Rakhova, N.M., Pustovalov, I.O., Elemesova, Z., Tulepov, M.I., Korchagin, M.A., Sassykova, L.R., Sendilvelan, S., Baiseitov, D.A. Preparation of mechanically activated mixtures of titanium with the carbon nanotubes and study of their properties under thermal explosion (2018) *Rasayan Journal of Chemistry*, 11 (1), pp. 324-330. DOI: 10.7324/RJC.2018.1112017
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