

You Choose, We Do It

St. JOSEPH'S COLLEGE OF ENGINEERING

(An Autonomous Institution)

St. Joseph's Group of Institutions

Jeppiaar Educational Trust

OMR, Chennai - 119.

Department of Mechanical Engineering Faculty Information Sheet (As on 1st July 2024)

Staff Name	:	T. Balasubramanian	
Faculty ID(College)	:	TME49	
Faculty ID(Anna University)	:	3123316	
Designation	:	Assistant Professor	
Qualification	:	M.E., (Ph.D)	
E- Mail ID	:	rtbalasubramani@gmail.com balasubramaniant@stjosephs.ac.in	
Mobile no	:	9840131486  	
Total Experience (Years)	:	11 Years	
Teaching Experience (Years)	:	11 Years	
Industrial Experience(Years)	:	-	
Research Area	:	Texture Tooling and Machining	
Google Scholar Link	:	https://scholar.google.com/citations?user=3oM5sEoAAAAJ&hl=en&authuser=1	
Scopus Id:	:	https://www.scopus.com/authid/detail.uri?authorId=57217720159	
Orchid Id	:	https://orcid.org/0000-0001-8534-5929	
Web of Science ResearcherID	:	ABB-3948-2020	
Area of specialization	:	Engineering Design and Manufacturing	

Subjects handled in UG with Subject Code	:	<ol style="list-style-type: none"> 1. GE6152-Engineering Graphics 2. GE6251-Basic Civil and Mechanical Engineering 3. ME8501-Metrology & Measurement 4. ME6503-Design of Machine Elements 5. ME6603-Finite Element of Analysis 6. ME6703-Computer Integrated Manufacturing 7. GE6757-Total Quality Management 8. MG6863-Engineering Economics and Cost Analysis 9. MG8591 – Principles of Management
Subjects handled in PG with Subject Code	:	<ol style="list-style-type: none"> 1. MF5102 - Computer Integrated Manufacturing Systems.
Department Responsibilities Held	:	<ol style="list-style-type: none"> 1. Industry Visit In-Charge 2. Value Added Courses In-Charge 3. SAE Faculty Advisor 4. NGO organizing team 5. Industry Institute Interaction Cell In-Charge 6. Social Media Incharge 7. School Event Coordinator
Journals published	:	<ol style="list-style-type: none"> 1. Mr. T. Balasubramanian, Mr. P. Suresh, Mr. P. Vaithiyanathan, Mr. P. Venkateshwaran" Design and analysis of high speed water pump for domestic purpose" published in International journal of applied Engineering Research, ISSN 0973-4562 Vol. 10No.68 (2015) 2. Mr. T. Balasubramanian, Mr. M. Vincent Raj, Mr. V. Nikshith, Mr. R. Vijay, " Simulation of pressure drop of alternative refrigerants inside evaporator coil using CFD" published in International Journal of Mechanical, Civil, Automobile and structural Engineering, ISSN2395-6755 Vol 1, Issue 1, Pages 27-31(2015) 3. T. Balasubramanian, Richie Allen Vaz.T.J, Thamilazhagan.C, Samuel Praveen Kumar.V," Comparison on Simulation of Pressure Drop and Velocity Contour between Alternative Refrigerants inside Evaporator Coil using Computational Fluid Dynamics " published in International Journal on Recent Technologies in Mechanical and Electrical Engineering, ISSN: 2349-7974 Vol3 Issue 3. Page 1-4 4. Karthikeyan K.M.B, T. Balasubramanian,V. Thillaivanan, G. Vasanth Jangetti, Laser "Transformation Hardening of EN24 Alloy Steel" Published in Materials Today Proceedings, https://doi.org/10.1016/j.matpr.2020.03.440 5. Mr. G. Ashwin Prabu, Mr. N. Sathishkumar,, Mr.

- T. Balasubramanian**, Mr. P. Manojkumar, Mr. K. Pravinkumar, Mr. P.L. sudharsan, "Heat treatment and Analysis of nickel super alloy for gas turbine applications" Published in Materials Today Proceedings, <https://doi.org/10.1016/j.matpr.2020.05.098>
6. Mr. P. Manojkumar, Mr. R. Elakkiyadasan, Mr. N. Sathishkumar, **Mr. T. Balasubramanian**, Mr. G. Ashwin Prabhu, "Performance enhancement of a domestic refrigerator with NanoParticle Enhanced PCM over the condenser side" Published in FME transactions, <https://doi.org/10.5937/fme2003620M>
7. KMB Karthikeyan, **T Balasubramanian**, A Ruskin Bruce, P Premkumar, "Pressure Vessel Design by Design by Analysis Route" Published in IOP Conference Series: Materials Science and Engineering, Volume 923, Issue 1, Page: 01(2020), DOI: 10.1088/1757-899X/923/1/012020.
8. KMB Karthikeyan, C Yuvaraj, **T Balasubramanian**, "A hybrid Taguchi based grey relational analysis of hard turning of subzero treated EN24 alloy steel" Materials Today: Proceedings, Vol: 46, Page 3275-3281, DOI: <https://doi.org/10.1016/j.matpr.2020.11.356>.
9. KMB Karthikeyan, C Yuvaraj, **T Balasubramanian**, "Tensile test fractography of subzero treated EN24 alloy steel" Materials Today: Proceedings, Vol 46, Page: 3205-3211, DOI: <https://doi.org/10.1016/j.matpr.2020.11.192>
10. M Subramanian, S Balakrishnan, N Vinoth Babu, V Hariharan, **T Balasubramanian**, "Implementation and optimization of minimum quantity lubrication for machining LM4 aluminium alloy" Materials Today: Proceedings, Vol: 44, Page 1635-1642, DOI: <https://doi.org/10.1016/j.matpr.2020.11.820>
11. **T Balasubramanian**, M Ganesh, M Subramanian, N Arunkumar, S Aswin, "Experimental studies on the wear and mechanical properties of Al7075-B4C-Al2O3 composite" IOP Conference Series: Materials Science and Engineering, Vol: 1070, Issue: 1, Pages 012125, DOI:10.1088/1757-899X/1070/1/012125
12. M Subramanian, J Mariyappan, ASM Udayakumar, **T Balasubramanian**, S Balakrishnan., "Design and stress distribution analysis of composite spur gear" IOP Conference Series: Materials Science and Engineering., Vol 1070, Issue: 1 Pages 012127, DOI: 10.1088/1757-899X/1070/1/012127
13. M Subramanian, N Arunkumar, George Sahaya Nixon





		<p>Rethnam, T Balasubramanian, “Exploration of the Damping Characteristics of Basalt Hybrid Composites Reinforced with Natural Fibers and Epoxy Resin” <i>Fibers and Polimers</i>, Vol: 22 Issue: 6, Page 1684-1692. The Korean Fiber Society. Doi: https://link.springer.com/article/10.1007/s12221-021-0761-z</p> <p>14.M Diviya, J Jebin Joel, M Subramanian, T Balasubramanian, AV Madhusuthan, N Monish, Nasim Hasan, “Parametric investigation of W-EDM factors for machining AM60B conductive biomaterial” <i>Scientific report</i>, ISSN 2045-2322, Vol 12, Issue 1, Pages 216.</p> <p>15.K Parthasarathy, S Vishvanathperumal, T Balasubramanian, RR Anirudh, “Enhancement of the mechanical properties of EPDM/NBR rubbers using nanosilica for seal applications” <i>AIP Conference Proceedings</i>, Vol 3037, Issue 1. https://doi.org/10.1063/5.0196573</p> <p>16.M Subramanian, R Selvam, T Balasubramanian, AV Madhusuthan, “Optimum cutting performance of AWJM for Fiber/Metal hybrid composites using GRA-ANN methods” <i>Materials Today: Proceedings</i>, https://doi.org/10.1016/j.matpr.2024.04.023</p>
<p>International Conference Attended</p>	<p>:</p>	<ol style="list-style-type: none"> 1. Presented a paper on "Simulation of pressure drop of alternative refrigerants inside evaporator coil using CFD" in International Conference on Technical Advancements in Engineering and Technology. 2. Presented Paper on " Laser Transformation Hardening of EN24 Alloy Steel" in International Conference on Materials, Manufacturing and Modeling (ICMMM 2019) 3. Presented Paper on ““Experimental Studies on TheWear And Mechanical Properties of Al7075-B C-Al O 4 23 composite” in Recent Innovation in Engineering and Technology (ICRIET 2020).
<p>National Conference Attended</p>	<p>:</p>	<ol style="list-style-type: none"> 1. Presented a paper on "Design and analysis of high speed water pump for domestic purpose" in National Conference on Trends and Innovations in Mechanical Engineering(TIME), held at Dr. M.G.R. Educational and Research Institute, Chennai, 17th April 2015. 2. Attended International Conference on Technological Advancement in materials, Design, Manufacturing and Energy Sectors(ICTAMDMES'20), held at St. Joseph's College of Engineering, 20th to 21st February 2020.

**Faculty
Development
Programme
Attended/
Workshops
Attended**

1. One day National Level Workshop on "Basics and Beyond Engineering Graphics-BBEG-2014", held at Jeppiaar Engineering College, August-2014.
2. One day Training Program for SUPRA SAE INDIA FORMULA 2016 organized by SAEINDIA, 9th April 2016.
3. Two days National Workshop on " Latest Trends in Fabrication, Characterization & Analysis of Composite Materials" held at S.A. Engineering College, 30th -31st January 2018.
4. Two days workshop on " Energy Management System" held at St. Joseph's Institute of Technology, 29th -30th November 2018/
5. Three days FDP on "Recent Trends in Optimization (RTIO)" , held at SRM Institute of Science and Technology, 6th- 8th December 2018.
6. Three days Workshop on "Avenues in composite Materials - Processing and characterization" held at Rajalakshmi Engineering College, 6th - 8th June 2019.
7. Fourteen Days FDP on " The Role of Smart Materials in Digital Manufacturing and Fourth Industrial Revolution (Factories for Future) organized by KCG College of Technology, 10th -23rd October 2019.
8. Fourteen days FDP on IoT and "Advanced Technologies In Manufacturing" held at Panimalar Engineering College, 11th -23rd November 2019.
9. Two days National Seminar on " Role of Smart materials in Aerospace and Engineering Applications" held at St. Joseph's College of Engineering, 16th-17th December 2019.
10. Three days National Seminar on "Efficiency Enhancement Through Green Innovation in Manufacturing" held at St. Joseph's College of Engineering, 18th-20th December 2019.
11. Two days Online workshop on " Fuzzy Logic and Neural Network Approaches for Engineering Solutions" organized by " Journal of Advanced Engineering Research & powered by hex cube India on 01st &02nd May 2020.
12. Three Days online workshop on " Basic Optimization Technology Workshop" organized by REST society for Research International from 04th -06th May 2020.
13. Three days online hands-on training on "Level up your Proficiency in Mechanical Engineering" organized by

	<p>Mahindra Institute of Technology" from 13th to 15th May 2020.</p> <ol style="list-style-type: none"> 14. Two days Online workshop n " Additive Manufacturing" organized by " S.A. Engineering College from 15th & 16th May 2020. 15. Three days FDP on " Dynamics of Machines" organized by Mohamed Sathak AJ College of Engineering from 21st to 23rd May 2020. 16. Three days International Online FDP on " Recent Advances in Nano materials" organized by St. Joseph's College of Engineering from 4th -6th June2020. 17. five day Online FDP on " Contemporary Development n Manufacturing Process , Sustainable Manufacturing and Industrial Technologies: organized by Pragati Engineering College from 9th to 13th June 2020. 18. One week online International FDP on " Advanced Engineering Materials for Strategic & Societal Sectors - Current Perspectives" organized by Veltech Hightech-Avadi from 10th to 15th June 2020. 19. Seven days FDP on " Heat Transfer and CFD towards Industrial Applications" organized by Sri Sai Ram Institute of Technology from 12th to 18th June 2020. 20. Five days FDP on "SCILAB' in association with IIT-Bombay organized by St.Peter's Engineering College, Banglore, from 15th - 19th June2020 21. Six Days Webinar on " Modern Materials and Industrial Automation" organized by Sri Sai Ram Institute of Technology from 20th to 25th June 2020. 22. One week National level FDP on " Advancement in Manufacturing and Optimization Technique(AMOT-2020) organized by Jayamukhi Institute of Technological Sciences, From 22nd 26th June 2020. 23. One day National workshop on " Recent Research Trends in Mechanical Engineering" organized by SSN College of Engineering on 25th June2020. 24. Six days Short Term Course on “Recent Advances in Manufacturing Science and Technology” conducted by IIT – Guwahati under TEQUIP from 22-02-2021 to 26-02-2021. 25. Seven Days FDP on “Unconventional Machining Process, organized by Sri Sai Ram Engineering College from 26-07-2021 to 02-08-2021 26. Seven Days One-week Short-term Course On “Computational Fluid Dynamics and Heat Transfer “- Online mode organized by the Department of
--	--

		Mechanical Engineering at Kumaraguru College of Technology, Coimbatore, from April 28 to May 4, 2024.
NPTEL Courses Attended	:	<ol style="list-style-type: none"> 1. Attended 12 Weeks course on " Engineering Metrology" and Provided with Elite certification and FDP Certificate.(Roll no: 19ME70S51210075). 2. Attended 12 Weeks Course on "Basics of Finite Element Analysis-I" and Provide with Elite certification and FDP certificate.(Roll no: NPTEL19ME02S31220203).
Certificate Course Completed	:	<ol style="list-style-type: none"> 1. "Fundamentals of Graphic Design", By CALARTS a Joint program of COURSERA. http://coursera.org/verify/FKEA33PNQLF8 2. "CAM and Design Manufacturing for Mechanical Engineers with Autodesk Fusion 360" By AutoDesk, http://coursera.org/verify/P78Z2N4PYJ4V 3. "Introduction to Mechanical Engineering Design and Manufacturing with Fusion 360" " By AutoDesk http://coursera.org/verify/K3GUEH6VBUN5 4. "Materials Science: 10 Things Every Engineer Should Know" by University of California, Davis, Joint Program from COURSERA. http://coursera.org/verify/SE3KMSFJ4PWL 5. "Modeling and Design for Mechanical Engineers with Autodesk Fusion 360" by Autodesk http://coursera.org/verify/GMA2BDZ6X5KX 6. "Simulation Analysis for Mechanical Engineers with Autodesk Fusion 360" by Autodesk http://coursera.org/verify/9QS7366YXYR 7. "Google analytics for beginners" by Google Analytics academy https://analytics.google.com/analytics/academy/certificate/2LcR7q8OQ_iNAaKaXvt_1A
Professional Membership	:	Society of Automobile Engineers(SAE) Membership Id- 7140413762
Funded project details	:	Nil
Patent details	:	<ol style="list-style-type: none"> 1. "Double Oscillating (Do) Automotive Windshield Wiper System" Application number: 201741007868 Authors : Mr. K.M.B. Karthikeyan, Mr. T. Balasubramanian, Mr. Yuvaraj, Mr. Vigneshwaran , Ms. Gowri(IIT Madras). 2. "An Apparatus for Resisting the motion of Vehicles" Application number: 201941043930, Authors Mr. T. Balasubramanian, Mr. M. Subramanian, Dr. N. Arunkumar, Mr. S. Joses Samuel Sasthrigal, Mr. J, Ferin Joseph, Mr. V. Hariharan

		<p>3. “NOVEL X ELECTRODE FLOW CHANNEL TO IMPROVE THE PERFORMANCE OF PEMFC” Application number: 202241008128, Authors: Mr. T. Balasubramanian, Mr. M. Ganesh, Mr. S. Praveenkumar, Mr. K Parthasarathy, Mr. G Prabakaran, Dr. S Baskar, Mr. D Harish, Dr. S Ramachandran</p> <p>4. Canadian Patent on “Electric vehicle chassis with easily removable battery module replacement” Registration no: 1188548, Author: Mr. T. Balasubramanian, Mr. Rajeev Kumar, Dr. Santosh Kumar Sahu, Mr. Mahmood Alam, Dr. Vinayaka N, Dr. Surinder Singh.</p> <p>5. “Development Of Electrically Insulating Biodegradable Shellac Based Fibers And Method Thereof” Application number: 202341052668 Author: Mr. D. Murali, Mr. Satheeskumar T, Mr. T. Balasubramanian, Dr. T. Karthikeyan, Dr. B. Ramesh, Mr. S. A. Muhammed Abraar.</p> <p>6. Patent Grant on “An Auxiliary Braking Apparatus For Vehicles And A Method To Operate The Same” Patent no: 531051, Application number: 201941043930, Patent valid from: 30/10/2019 to 29/10/2039 (20 Years).</p>
No. of UG Projects Guided	:	18
No. of PG Projects Guided	:	Nil
Awards or Achievements	:	University Gold Medalist in Master Degree.
 balasubramanian-thanigaiarasu		 balasubramanian_thanigaiarasu
 balasubramanianthanigaiarasu		 balasubramanian_thanigaiarasu