


St. Joseph's College of Engineering

Department of Mechanical Engineering

Faculty Information Sheet

Staff Name	:	KMB KarthikeyaN	
Faculty ID(College)	:	TME41	
Faculty ID (Anna University)	:	3123283	
Designation	:	Assistant Professor	
Qualification	:	M.E., (Ph. D-Ongoing) *Master CAD/CAM @ Central Institute of Tool Design, Hyderabad *Certified Six Sigma Black Belt	
E-Mail ID	:	karthikeyankmb@stjosephs.ac.in kmbkarthekeyavarshan@gmail.com	
Total Experience (Years)	:	19 Years 8 Months	
Teaching Experience (Years)	:	11 Years 8 Months	
Industrial Experience (Years)	:	08 Years	
Research Area	:	Engineering Design Sustainable Manufacturing Concepts Material Selection and Process Optimization Material Science Engineering	
Google Scholar Link	:	https://scholar.google.com/citations?user=8v4RkOkAAAAJ&hl=en	
Scopus Id:	:	https://www.scopus.com/authid/detail.uri?authorId=57216969988	
Orchid Id	:	https://orcid.org/0000-0001-6150-3355	
Web of Science Researcher ID	:	https://publons.com/researcher/3750798	
Area of specialization	:	<ol style="list-style-type: none">1. Metal Machining and Heat Treatment Techniques2. Integrated Manufacturing Concepts3. Cryogenic Treatment of Materials4. Nanofluids and Nano lubricants5. Surface Engineering of Engineering Materials6. Laser Surface Hardening of Alloy Steels7. Automotive Light Weighting Materials	

Subjects handled in UG	: <ol style="list-style-type: none"> 1. Engineering Graphics 2. Computer-Aided Design 3. Design of Transmission Systems 4. Engineering Economics 5. Principles of Management 6. Computer Integrated Management 7. Production Planning and Control
Subjects handled in PG	: <ol style="list-style-type: none"> 1. Computer-Aided Product Design 2. Lean Manufacturing 3. Materials Management
Department Responsibilities Held	: <ul style="list-style-type: none"> * Value Added Course – In Charge * Industrial Visits –In Charge * MoU-Industrial and Training Academy-Member * Industry Institute Interaction Committee-Member * NBA Criteria 1- In charge * Bureau of Indian Standards Club – Co-ordinator
Journals published	: <ol style="list-style-type: none"> 1. A.H. Abishini, KMB. Karthikeyan, “Application of MCDM and Taguchi super ranking concept for materials selection problem”, Materials Today Proceedings, Volume 72, Part 4, 2023, Pages 2480-2487. https://doi.org/10.1016/j.matpr.2022.09.526 2. KMB.Karthikeyan, C.Yuvaraj, T.Balasubramanian, “Tensile Test Fractography of Subzero Treated EN24 Alloy Steel”, Materials Today Proceedings, Volume 46, Part 9, 2021, Pages 3205-3211. https://doi.org/10.1016/j.matpr.2020.11.192 3. KMB.Karthikeyan, C.Yuvaraj, "A Taguchi-based Fuzzy Grey Relational Analysis of Hard Part Turning of Subzero Treated EN24 Steel", Materials Today Proceedings, Volume 46, Part 9, 2021, Pages 3275-3281. https://doi.org/10.1016/j.matpr.2020.11.356. 4. Karthikeyan.KMB, T. Balasubramanian, A. Ruskin Bruce, P. Premkumar, "Pressure Vessel Design by Design by Analysis Route", IOP Conference Series: Materials Science and Engineering, Volume 923. https://doi.org/10.1088/1757-899X/923/1/012020. 5. KMB.Karthikeyan, J. Vijayanand, K. Arun, Vaddi Seshagiri Rao, "Thermophysical and Wear Properties of Eco-friendly Nano Lubricants", Materials today proceedings, Volume 39, Part 1, 2021, Pages 285-291. https://doi.org/10.1016/j.matpr.2020.07.128. 6. Karthikeyan.KMB, R. Ajay Aravind, S. Brammod, T. Cyril Emmanuel, M. Frederick Rexton, “Electro-Mechanically Actuated Resuscitator for Open-

	<p>Source Ventilator Support", International Journal of Scientific Research in Engineering and Management, ISSN: e2582-3930, Volume: 04 Issue: 04 April -2020, pp. 01-03. UGC Approved; Google Scholar Indexed.</p> <p>7. KMB.Karthikeyan, T. Balasubramanian, V. Thillaivanan, G. Vasanth Jangetti, "Laser transformation hardening of EN24 alloy steel", Materials today proceedings, Volume 22, Part 4, 2020, Pages 3048-3055. https://doi.org/10.1016/j.matpr.2020.03.440</p> <p>8. KMB.Karthikeyan, Muneer Ahmed. J, V. Mithun Chander, Kushal Raman, Leo Vimal, "Synthesis and Study of Hybrid Nanofluid" International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.68 -2015, pp. 682-685, Scopus (2010-2017); UGC Approved (2018)</p> <p>9. KMB.Karthikeyan, Muneer Ahmed. J, V. Mithun Chander, Kushal Raman, Leo Vimal, "Thermophysical Properties of Coconut Oil Based Nanofluid" International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.62 -2015, pp. 47-49. Scopus (2010-2017); UGC Approved (2018)</p> <p>10. KMB.Karthikeyan, R. Gowtham Raj, K. Dinesh, K. Aravindhkumar, "Effect of Subzero Treatment on Microstructure and Material Properties of EN24 Steel" International Journal of Modern Engineering Research, Vol. 4, Iss.11, November- 2014, pp. 85-92.</p>
<p>International Conference Attended</p>	<p>:</p> <p>1. A.H. Abishini, KMB. Karthikeyan, "Application of MCDM and Taguchi super ranking concept for materials selection problem", International Conference on Processing and Characterization of Materials - ICPCM 2022 held at SSN College of Engineering, Tamilnadu between 7th and 8th March 2022.</p> <p>2. Karthikeyan KMB, C. Yuvaraj, "A Taguchi-based Fuzzy Grey Relational Analysis of Hard Part Turning of Subzero Treated EN24 Steel", International Conference on Materials, Manufacturing and Mechanical Engineering for Sustainable Developments- ICMSD 2020 held at Sairam Institute of Technology, Tamilnadu on 19th November 2020.</p> <p>3. Karthikeyan KMB, C. Yuvaraj, T. Balasubramanian, "Tensile Test Fractography of Subzero Treated EN24 Alloy Steel", International Conference on Materials, Manufacturing and Mechanical Engineering for Sustainable Developments-ICMSD 2020 held at Sairam Institute of Technology, Tamilnadu on 19th</p>

		<p>November 2020.</p> <p>4. KMB. Karthikeyan, T Balasubramanian, A Ruskin Bruce, P Premkumar, "Pressure Vessel Design by Design by Analysis Route", International Conference on Technological Advancements in Materials, Design, Manufacturing and Energy Sectors (ICTaMDMES-20') held at St. Joseph's College of Engineering, OMR, Chennai, Tamilnadu, India on 20th February 2020.</p> <p>5. KMB.Karthikeyan, J. Vijayanand, K. Arun, Vaddi Seshagiri Rao, "Thermophysical and Wear Properties of Eco-friendly Nano Lubricants", International Conference on Advanced Materials and Manufacturing Methods (ICAMMM-20) held at Adhi College of Engineering and Technology, Kancheepuram, Tamilnadu, India on 29-30 May 2020.</p> <p>6. KMB. Karthikeyan, T. Balasubramanian, V. Thillaivanan. V, G. Vasanth Jangetti, " Laser transformation hardening of EN24 alloy steel" in the 2nd International Conference on Material, Manufacturing, and Modeling (ICMMM 2019) held at Vellore Institute in Technology (VIT), Vellore, Tamilnadu, India on 29th - 31st March 2019.</p> <p>7. Karthikeyan K.M.B, Muneer Ahmed. J, V. Mithun Chander, Kushal Raman, Leo Vimal, "Thermophysical Properties of Coconut Oil Based Nanofluid" International Conference of Applied Engineering, Science and Technology-ICAE^ST-2015, held at Madurai Institute of Engineering and Technology, Madurai, Tamilnadu.</p>
National Conference Attended	:	<p>1. Karthikeyan K.M.B, Muneer Ahmed. J, V. Mithun Chander, Kushal Raman, Leo Vimal, "Synthesis and Study of Hybrid Nanofluid" National Conference on Trends and Innovations in Mechanical Engineering-TIME 2015, held at Dr. M. G. R. Educational and Research Institute, Chennai, Tamilnadu.</p>
Resource Person		<p>1. Speaker on "Quality Management, Skills, and Opportunities" on 11/Dec/2023 in the six-day online FDP on "Quality Concepts and Research Issues in Engineering Applications"</p>
FDP / STTP/ STC Attended	:	<p>1. FDP on "Machine Learning Applications for Mechanical Engineers", organized by CVR College of Engineering, December 18-23, 2023</p> <p>2. FDP on "Tools for Research Paper and Indexing", organized by Scientific Research Reports, from 15th to 19th March 2023.</p> <p>3. International Symposium on "Additive Manufacturing of Metals and Alloys", organized by PDPM Indian Institute of Design and Manufacturing, online, April 11-13, 2023.</p> <p>4. Short-term course on "Metals and Alloys for Defense</p>

Applications", organized by IIT, Varanasi, between 2nd and 6th March 2023 under NM-ICPS and IDAPT, a technology innovation hub.

5. A 5-day online **FDP** on "**Exploring Research using SEM and XRD**", jointly organized by the Department of Mechanical Engineering, CARE College of Engineering, Trichy, Tamilnadu and the department of Materials and Metallurgical engineering, IITE, Indus University, Ahmedabad, Gujarat between 19th and 23rd December 2022.
6. An international **FDP** on "**Futuristic Research in Mechanical Engineering**" organized by the mechanical-SRM Institute of Science and Technology department and the Institution of Engineers-India between 8th August to 13th August 2022.
7. A **TEQIP** sponsored 5 days **FDP** on "**Novel Engineering Materials and Processing Techniques**", conducted by Coimbatore Institute of Technology, between 18th and 22nd March 2021.
8. A **TEQIP-sponsored FDP** on "**Novel Engineering Materials and Processing Techniques**", conducted by the department of mechanical engineering, IIT-Guwahati, scheduled between 18/03/21 and 22/03/21
9. A **TEQIP-sponsored short-term course** on "**Recent Advances in Manufacturing Science and Technology**", conducted by the Department of Mechanical Engineering, IIT-Guwahati, between 22/02/2021 and 26/02/2021.
10. One-week **FDP** on "**Advanced Optimization Techniques for Research Problem Solving**", conducted by Mahatma Gandhi Institute of Technology from 04/08/2020 to 08/08/2020. (65/100)
11. One-week **FDP** on **Advances Welding Technologies**", conducted by Jain (Deemed to be University) from 04/08/2020 to 08/08/2020.
12. One-week **FDP** on "**Recent Trends in Manufacturing**", conducted by Mahatma Gandhi Institute of Technology from 28/07/2020 to 01/08/2020. (70/100)
13. One-week online **FDP** on "**Optimization Techniques for Mechanical Engineers**", conducted by Vignan Institute of Technology and Science from 27/07/2020 to 01/08/2020.
14. Three Days online **FDP** on "**Recent advances in Composite Materials and its Applications**", conducted by Cambridge Institute of Technology-North Campus, Bengaluru, from 27/07/2020 to 29/07/2020.
15. Six days online **FDP** on "**Advanced Materials (Fabrication, Characterization, and Applications)**", conducted by Kalinga Institute of Industrial Technology (KIIT) Deemed to be University, between 20/07/2020 to

	<p>25/07/2020.</p> <p>16. Short Term Course on "Tribology for Sustainable Development", organized by the Department of Mechanical Engineering, Shri Mata Vaishno Devi University, from 20/07/2020 to 24/07/2020.</p> <p>17. Online Short-Term Training Program (STTP) on "Smart Manufacturing-Opportunities and Challenges", organized by the Department of Mechanical Engineering, St. Joseph's College of Engineering, from 13/07/2020 to 18/07/2020. (82/100)</p> <p>18. Five days online FDP on "Digital Tools for Smart Manufacturing Systems-DTSM-2020", conducted by VIT-Chennai from 06/07/2020 to 10/07/2020.</p> <p>19. Five days online FDP on "Recent Advances in Mechanical Engineering-a Research Perspective", conducted by Mahatma Gandhi Institute of Technology, Hyderabad from 06/07/2020 to 10/07/2020.</p> <p>20. Three days online FDP on "Recent Advances in Material Science", conducted by St. Joseph's Institute of Technology, Chennai from 08/07/2020 to 10/07/2020.</p> <p>21. Five days online FDP on "Mechanical Behaviour of Advanced Materials and Its Scope for Engineering Applications", conducted by the Department of Mechanical Engineering, Sri Venkateswara College of Engineering, Sriperumbudur, Tamilnadu, from 10/06/2020 to 14/06/2020.</p> <p>22. Five days online National Level FDP on "Testing of Materials for Engineering Applications", conducted by Meenakshi Sundararajan Engineering College, from 22/06/2020 to 26/06/2020.</p> <p>23. Six days online FDP on "Advanced Machining Techniques", conducted by the department of Mechanical Engineering, Sathyabama Institute of Science and Technology, from 22/06/2020 to 27/06/2020.</p> <p>24. Five days online FDP on "Emerging Research Areas in Mechanical Engineering", conducted by the Department of Mechanical, CMR Technical Campus, Hyderabad, from 29/06/2020 to 03/07/2020.</p>
Workshops /Seminars Attended	<p>:</p> <p>1. One-day workshop on "Thermal Analysis (TGA/DTA/DSC)", conducted by the Department of Chemistry and International Research Centre, Sathyabama Institute of Science and Technology, on 29th September 2022</p> <p>2. One day virtual National workshop on "Advanced Non-</p>

	<p>destructive Testing Techniques and its Applications", organized by the Department of Mechanical Engineering, SSN College of Engineering, on 28/06/2021.</p> <p>3. Two days online webinar on "RAMAN Spectroscopy-Basics Instrumentation and Application", conducted by Sathyabama Institute of Science and Technology with Renishaw and Lab India Instruments between 2nd and 3rd July 2020.</p> <p>4. Online workshop on "Material Characterization Techniques for Mechanical Engineers", conducted by the School of Mechanical Engineering, VIT Chennai on 26th June 2020.</p>
Online Webinars	<p>:</p> <ol style="list-style-type: none"> 1. Online webinar on "Role of Material Properties in Defense", conducted by Nehru Institute of Engineering and Technology on 29th September 2020. 2. Online webinar on "Art of Publishing Review & Research Articles", conducted by Sri Venkateswara College of Engineering on 8th August 2022. 3. Online webinar on "Light Weighting Techniques for Product Design", conducted by Nalla Narasimha Reddy, Hyderabad on 07/08/2020. 4. Online webinar on "Research Scope in Tribology", conducted by Vignan Institute of Technology and Science, Hyderabad on 21/07/2020 5. Online webinar on "Biomaterials Science & Engineering: A Brief Introduction and its Future Scope", conducted by SJP Institute of Technology, Bengaluru on 22/07/2020 6. Online Webinar on "Friction-based additive Manufacturing for Industry 4.0" conducted by SSN College of Engineering on 22/07/2020. 7. Online Webinar on "High Fidelity Imaging to Assess the Local Structure-Property Relationships of Weld Sub-regions" conducted by SSN College of Engineering on 21/07/2020. 8. Online webinar on "Additive Manufacturing Fundamentals and Applications", conducted by Francis Xavier Engineering College, Tamilnadu on 14/07/2020. 9. Online Webinar on "Friction Based Solid State AM Techniques" conducted by Methodist College of Engineering and Technology on 08/07/2020. 10. Online Webinar on "Fully Bio-degradable Composites- a new era in Materials", conducted by aacharya.net Dr. Rajesh Gunti on 05/07/2020. 11. Online Webinar on "Ultra Fine-Grained Materials – Old Materials with Futuristic Properties", conducted by the Department of Mechanical Engineering, Francis Xavier Engineering College, Tamilnadu on 4th July

		<p>2020.</p> <p>12. Online Webinar on "Publishing in International Journals of high repute: Do's and Don'ts", conducted by the Department of Chemistry, Saveetha Engineering College on 25th June 2020</p> <p>13. Online Webinar on "Manufacturing Analytics-I", conducted by the Department of Mechanical Engineering, Rajalakshmi Engineering College, Tandalam, Chennai, Tamilnadu on 25th June 2020</p> <p>14. Online Webinar on "Manufacturing Analytics-II", conducted by the Department of Mechanical Engineering, Rajalakshmi Engineering College, Tandalam, Chennai, Tamilnadu on 26th June 2020</p> <p>15. Online Webinar on "Digital Manufacturing—a New Era", conducted by the Department of Mechanical Engineering, Sri Sai Ram Engineering College, Chennai, Tamilnadu on 10th June 2020.</p> <p>16. Online Webinar on "Design of Experiments for Parameter Optimization", conducted by the Department of Mechanical Engineering, Rajalakshmi Engineering College, Tandalam, Chennai, Tamilnadu on 8th June 2020</p> <p>17. Online Webinar on "Introduction to Multicriteria Decision Making Approach", conducted by the Department of Mechanical Engineering, Rajalakshmi Engineering College, Tandalam, Chennai, Tamilnadu on 8th June 2020</p> <p>18. Online Webinar on "Meta-heuristic Optimization Algorithm", organized by the Department of Mechanical Engineering, SRM Institute of Science and Technology on 26th May 2020.</p> <p>19. Online Webinar on "Roadmap to get a Quality Patent", conducted by the Department of Mechanical Engineering, Sri Venkateswara College of Engineering, Sriperumbudur, Tamilnadu on 12th June 2020.</p> <p>20. Online Webinar on "Recent Trends and Development in Welding", conducted by Mechanical Engineering Association, Bangalore Institute of Technology, Bengaluru in Association with Fronius India Pvt. Ltd on 26th May 2020.</p>
Certificate Course Completed	:	1. "Become a good MATLAB programmer in 30 days", July 2022, duration 15 hours, taught by Hossein Tootoonchy on Udemy. Udemy Course Completion Certificate Udemy
Professional Membership	:	Society of Automobile Engineers (SAE) Membership Id- 7180410426
Funded project details	:	Nil

Patent details	:	" Double Oscillating Automotive Windshield Wiper System ", Intellectual Property India -Date of Filing: 07/03/2017; Application No: 201741007868; Publication Date: 07/04/2017.
No. of UG Projects Guided	:	25 - In-house and 10 - Industrial Projects
No. of PG Projects Guided	:	02
Achievements / Awards	:	<ol style="list-style-type: none"> 1. "Thermophysical and wear properties of eco-friendly nano lubricants" linked to United Nations (UN) Sustainable Development Goals (SDGs-7 & 9). 2. Gold Medalist in ME-Engineering Design, Anna University 2007.