

St. Joseph's College of Engineering – Chennai 600119
Department of Mechanical Engineering
Faculty Information Sheet

Staff Name	:	Muninathan K
Faculty ID	:	TME60
Designation	:	Assistant Professor
Qualification	:	M.E., <u>Ph.D</u>
E- Mail ID	:	muninathankota@stjosephs.ac.in
Total Experience (Years)	:	7
Teaching Experience (Years)	:	6
Industrial Experience(Years)	:	1
Area of specialization	:	Thermal Engineering
Subjects handled in UG with Subject Code	:	ME8391 & ME 6301 - Engineering Thermodynamics ME8493 -Thermal Engineering 1 ME8595 - Thermal Engineering 2 ME6404 – Thermal Engineering ME6604 - Gas Dynamics and Jet Propulsion Advance IC Engines Engineering Graphics Applied Thermodynamics and Fluid Mechanics
Department Responsibilities Held	:	Magazine In-charge Inter and Intra Symposium In-Charge Achievers In-Charge II Year- Placement Activities In-Charge
Journals published	:	<ul style="list-style-type: none"> • K. Muninathan, R. R. Thirumaniraj and M. A. Suryanarayanan, "Heat Transfer Modeling and Analysis of Annular Diffuser With and Without

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		<p>Double Tapered Struts," 2018 IEEE International Conference on System, Computation, Automation and Networking (ICSCA), Pondicherry, 2018, pp. 1-5. doi: 10.1109/ICSCAN.2018.8541227.</p> <ul style="list-style-type: none"> • K. Muninathan, R. Lakshminarayanan and Binesh S. Kumar. Design, Heat Transfer Modeling and Analysis of Environmentally Benign Charcoal Kiln, IJEP 39 (2): 173-177 (2019). • K. Muninathan^{2*}, D. Vishnu Prasanna¹, R. Sriganeshkumar², B. Soruban Raj², K. V. Yogesh², A. Waseem Ahamed², L. Sachin¹, S. Krishnan¹, Shubham Arun Parwate¹, K. Rajkumar³, 'Investigation Of Nitrogen Reduction In Four Stroke Petrol Engine Using Zeolites As Adsorbent', Research Journal of Life Sciences, Bioinformatics, Pharmaceutical and Chemical Sciences, RJLBPCS 2019, DOI: 10.26479/2019.0502.67/E-ISSN : 2454-6348.
International Conference Attended	:	<ul style="list-style-type: none"> • Mr. K. Muninathan Presented a paper in a IEEE International Conference on System, Computation, Automation and Networking (ICSCA) titled on "Experimental and Numerical Studies on Catalytic Converter to Reduce CO2 Emissions in IC Engines," held at ManakulaVinayagar Institute of Technology, Kalitheerthalkuppam, Pondicherry, India on 3rd and 4th July 2020. • Mr. K. Muninathan Presented a paper in a IEEE International Conference on System, Computation, Automation and Networking (ICSCA) titled on "Experimental and Numerical Analysis of Autothermal Portable Charcoal Kiln using Casuarina Wood," held at ManakulaVinayagar Institute of Technology, Kalitheerthalkuppam, Pondicherry, India on 3rd and 4th July 2020. • Mr. K. Muninathan Presented a paper in a IEEE International Conference on System,

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Computation, Automation and Networking (ICSCA) titled on "CFD Analysis on Performance Improvement of Impeller Mixing Solid Waste in Anaerobic Digestion," held at ManakulaVinayagar Institute of Technology, Kalitheerthalkuppam, Pondicherry, India on 3rd and 4th July 2020.

- **Mr. K. Muninathan Presented a paper in a IEEE International Conference on System, Computation, Automation and Networking (ICSCA) titled on "Effect of Wood Size and Stacking on Pyrolysis Process using *Prosopis Juliflora*," held at ManakulaVinayagar Institute of Technology, Kalitheerthalkuppam, Pondicherry, India on 3rd and 4th July 2020.**
- **Mr. K. Muninathan Presented a paper in a International Conference on Technological Advancements in Materials, Design, Manufacturing and Energy Sector (ICTAMDMES'20) titled on Experimental Investigation and Optimization of Eco-Friendly and Energy Efficient Auto and Allo Thermal Charcoal Kiln held at S t. Joseph's College of Engineering, OMR, Tamilnadu, India on 20th and 21st Feb 2020.**
- **Mr. K. Muninathan Presented a paper in a International Conference on Technological Advancements in Materials, Design, Manufacturing and Energy Sector (ICTAMDMES'20) titled on Experimental and Numerical Studies of Thermal Energy Storage Using Paraffin Wax Phase Change Materials held at S t. Joseph's College of Engineering, OMR, Tamilnadu, India on 20th and 21st Feb 2020.**
- **Mr. K. Muninathan Presented a paper in a IEEE International Conference on System, Computation, Automation and Networking (ICSCA) titled on "Heat Transfer Modeling and Analysis of Annular Diffuser With and Without Double Tapered Struts," held at ManakulaVinayagar Institute of Technology, Kalitheerthalkuppam, Pondicherry, India on 6th - 7th**

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July 2018.

National Conference Attended :

- **Mr. K. Muninathan** Presented a paper in a **National Conference on Energy, Ecology and Environment** titled on **“Design, Heat Transfer Modeling and Analysis Of Environmentally Benign Charcoal Kiln”** held at Bannari Amman Institute of Technology, Sathyamangalam, Erode, Tamilnadu, India on 2nd and 3rd Aug 2018
- **Mr. K. Muninathan** Presented a paper in a **National Conference on Current Research outcomes in Mechanical Engineering (NC-CROME19)** titled on **“Experimental and Numerical Analysis of Auto thermal Portable Charcoal Kiln”** held at SRM Institute of Science & Technology, Chennai, Tamilnadu, India on 15th and 16th March 2019.
- **Mr. K. Muninathan** Presented a paper in a **National Conference on Current Research outcomes in Mechanical Engineering (NC-CROME19)** titled on **“Analysis of Thermal Energy Storage Using Phase Change Materials”** held at SRM Institute of Science & Technology, Chennai, Tamilnadu, India on 15th and 16th March 2019.
- **Mr. K. Muninathan** Presented a paper in a **National Conference on Current Research outcomes in Mechanical Engineering (NC-CROME19)** titled on **“Experimental And Numerical Analysis Of Fixed Bed Gasifier Using Different Throat Angles”** held at SRM Institute of Science & Technology, Chennai, Tamilnadu, India on 15th and 16th March 2019.
- Presented a poster entitled **"Improved technologies for charcoal production and economic analysis- a review"** in the **National Conference on Energy and Environment** at AC Tech, Anna University, Chennai (2014).
- Presented a paper titled **"Hydrogen production by using solar thermochemical techniques - a review"** in the **National Conference on Recent Trends in**

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		<p>Mechanical Engineering at Magna College of Engineering (2013).</p> <ul style="list-style-type: none"> Presented a paper titled "Design and Development of Eco-Friendly and Energy Efficient Charcoal Kiln" in the Inter-National Conference on Advance Design and Manufacturing in Mechanical Engineering at Sethu Institute of Technology (2013).
<p>Faculty Development Programme Attended/ Workshops Attended</p>	<p>:</p>	<ul style="list-style-type: none"> Mr. Muninathan K attended One Week Online Faculty Development Programon “Purely Fundamentals of Mechanical Engineering” organized by the Chennai Institute of Technology, Chennai held on 1st to 5th Jun 2020. Mr. Muninathan K attended Two days National Seminar on “Role of Smart Materials in Aerospace and Engineering Application” sponsored by SERB, organized by the St. Joseph's College of Engineering, OMR, Chennai held on 16th and 17th Nov 2019. Mr. Muninathan K attended Short Term Training Program on Prospects and Challenges on “Biofuels and Bioenergy” sponsored by AICTE, organized by the St. Joseph's College of Engineering, OMR, Chennai held on 11th to 16th Nov 2019. Mr. Muninathan K attended Oneday Workshop on 'Smart Energy Technologies for Buildings', ASHRAE EDGE2019, Organized by the ASHRAE on 5th April 2019 at Hyatt Regency, Chennai. Mr. Muninathan K attended Faculty Development Program on “Analytical and Experimental Techniques in Thermal Engineering” sponsored by Indian National Science Academy, New Delhi under Continuing Education Programme in the Department of Mechanical and Industrial Design at National Institute of Technology, Rourkela from 4th June to 8th June 2018. Mr. Muninathan K attended in an AICTE

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		<p>sponsored QIP-short-term course on “HUMAN COMFORT AND INDOOR AIR QUALITY” Organized by the Department of Civil Engineering and Mechanical Engineering at IIT Madras from 20th November 2018 to 25th November 2018.</p> <ul style="list-style-type: none"> • Mr. Muninathan K attended a IIT Madras and Anna university Chennai sponsored workshop on ‘Natural / CO2 Refrigeration Systems for Supermarket and Other Application’ Organized by the Department Mechanical Engineering at CEG, Anna University, Chennai on 5th Oct 2018. • International Workshop on Renewable Energy, Climate Change and Energy Management, organised by the Institute for Energy Studies, AU. (2013). • International Workshop on Alternative Energy in the perspective of Nanotechnology, organised by Department of Manufacturing Engg., CEG, Anna University (2013) • Continuing Education Program on Indoor air quality & health effects at IIT Madras (2013)
NPTEL Courses Attended	:	<ul style="list-style-type: none"> • NPTEL online certification course funded by the Ministry of HRD, Govt. of India on “Energy Conservation and Waste Heat Recovery”, 12 week course from July 2019 to Oct 2019. Conducted by Indian Institute of Technology. • NPTEL online certification course funded by the Ministry of HRD, Govt. of India on “Aircraft Propulsion”, 12 week course from July 2019 to Oct 2019. Conducted by Indian Institute of Technology. • NPTEL online certification course funded by the Ministry of HRD, Govt. of India on “IC ENGINES AND GAS TURBINES”, 12 week course from January 2018 to April 2018. Conducted by Indian Institute of Technology. Type of certificate: Elite Silver.

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		<ul style="list-style-type: none"> • NPTEL online certification course funded by the Ministry of HRD, Govt. of India on “Refrigeration and Air-Conditioning”, 8 week course from July 2018 to Sep 2018. Conducted by Indian Institute of Technology. Type of certificate: Elite Silver.
Funded project details	:	<p>Design and Development of Eco-Friendly & Energy Efficient Charcoal Kiln. In this research work, the Allo Thermal Retort has been tested with dense wood. particularly, the Prosopis juliflora charcoal and the results shows that it has the lowest ash content (<3%) and the highest fixed carbon content (<70%). This kiln has been developed, constructed and tested as a pilot plant.</p>
No. of UG Projects Guided	:	13