

## Kings College of Engineering

### Department of Mechanical Engineering

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|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Name:                                        | <br>Dr.P.P.Shantharaman                                      |
| Designation:                                 | Professor                                                                                                                                     |
| Qualification:                               | M.E., Ph.D.                                                                                                                                   |
| Area of Specialization:                      | Thermal, Nano composites, Optimization                                                                                                        |
| Experience:                                  | Teaching: 24 years                                                                                                                            |
|                                              | Industry: 4 years                                                                                                                             |
| E-mail:                                      | shantharaman.mech@kingsengg.edu.in & ppshantharaman@gmail.com                                                                                 |
| Mobile                                       | 9944876644                                                                                                                                    |
| Journal publication:                         | 14                                                                                                                                            |
| Conference Publications                      | 04                                                                                                                                            |
| Books & Book Chapters Publications           | 05                                                                                                                                            |
| No. of workshop / Conference / FDP organized | 30                                                                                                                                            |
| No. of workshop / Conference / FDP attended  | 31                                                                                                                                            |
| Google Scholar link:                         | <a href="https://scholar.google.com/citations?user=LWM03ycAAAJ&amp;hl=en">https://scholar.google.com/citations?user=LWM03ycAAAJ&amp;hl=en</a> |
| Membership                                   | <b>1. ISTE      LM99444</b><br><b>2. SAE      7210410122</b>                                                                                  |

## **I Journal Publications**

1. P.P.Shantharaman, G.Vijayan & R. Karunakaran, "Exploring performance variations of mono-nanofluid-based parabolic trough solar collectors at various concentrations and mass flow rates: an experimental analysis" *Journal of Thermal Analysis and Calorimetry*, 15 Feb'2025.
2. P. P. Shantharaman, E. Priya, R. Rajadurai, M. Vivekananthan & S. Balaganesh, "Performance Characteristics of Diesel Engine Using Biodiesel Blends", *International Journal for Research in Applied Science & Engineering Technology*, Volume 11, Sep'2023.
3. P.P.Shantharaman, V. Anandakrishnan, S. Sathish, M. Ravichandran, R. Naveenkumar, S. Jayasathyakawin, & S. Rajesh, "Investigations on the microstructure and properties of yttria and silicon carbide reinforced aluminium composites", *Heliyon*, Volume 9, Issue 4, April 2023
4. P.P.Shantharamana, V. Anandakrishnanb, S. Sathishc and M. Ravichandrand, "Spark erosion behaviour of SiC and Yitria ceramic particles reinforced aluminium hybrid nano-composites" *Journal of Ceramic Processing Research*, Vol. 23, No. 5, pp. 589-594 (2022)
5. M. Kumar, P.P. Shantharaman & N.Magesh, "Performance Characteristics of Diesel Engine using Different Biodiesel Blends" *International Journal of Innovative Research in Science, Engineering and Technology*, Volume 11, Issue 6, pp 8581-8589 June 2022
6. P.P.Shantharaman, M.Melwin Jagadeesh Sridhar & S.Sabanayagam, "Mechanical Properties of Aluminium Metal Matrix Composites using Stir Casting Method", *Journal of Huazhong University of Science and Technology*, Volume50, issue 3, Page 10, 2021
7. P.P.Shantharaman, G.Vijayan, Ramalingam Senthil & R. Karunakaran, "Thermal performance analysis of a low volume fraction  $Al_2O_3$  and deionized water nanofluid on solar parabolic trough collector" *Journal of Thermal Analysis and Calorimetry*, 147, pages753–762 (2021).
8. P.P.Shantharaman, M. Prabhakar, V. Anandakrishnan & S. Sathish, "Multi-objective Optimization of Cold Upsetting Parameters for Aluminium Metal Matrix Composites" *Transactions of the Indian Institute of Metals* volume 71, pages909–914 (2018)
9. Pushparaj, T, Shantharaman, P.P & John Panneer Selvam, D, 2017, "Effect of Blending Nano additive with Cashew Nut Shell Liquid Bio-oil on Performance, Combustion and Emission Characteristics of Four Stroke Diesel Engine – An Experimental Study", *International Journal of Scientific Engineering and Research*, vol.5, no.3, pp. 45-50.
10. P.P.Shantharaman, T.Pushparaj & M.Prabhakar, "Performance And Emission Studies On Cashewnut Shell Liquid Bio-Oil Fuelled Diesel Engine With Acetone As Additive", *Advances in Natural and Applied Sciences*, Vol. 11, Issue 12, 2017

11. P.P.Shantharaman, K.Balachander, "Performance and Characteristics of Biodiesel by Using Compression Ignition Engine", International Journal Of Core Engineering & Management, Volume 2, Issue 1, pp 228-235, 2015..
12. P.P.Shantharaman, S.Nandakumar, "Fabrication of solar water distillation system", International Journal Of Core Engineering & Management , Volume 2, Issue 1, pp 179-186, 2015.
13. P.P.Shantharaman, T.Pushparaj and K.Balachandar, "Effects of Ethanol Additive on Mahua Biodiesel in DI Diesel Engine", International Journal of Applied Engineering Research, vol.10, no. 50, pp. 387-391, 2015.
14. P.P.Shantharaman & M Prabhakar, "Workability Behavior of Aluminium Hybrid Composites(P/M)", Advanced Materials Research Vols. 984-985 (2014) pp 390-401, 2014.

## **II Conference Publications**

1. International Conference on Engineering, Energy & Environment, 'Performance and Emission studies on Cashewnut Shell Liquid Bio-oil Fuelled Diesel Engine with Acetone as Additive' 31<sup>st</sup> March to 2<sup>nd</sup> April 2017.
2. First International Conference on Emerging Trends in Engineering, Technology and Science (ICETES-2016), ' Synthesis of Chicken Feather/Sisal Reinforced Polyester Hybrid Composite through Compression Molding Technique', 24<sup>th</sup> – 26<sup>th</sup> February, 2016.
3. First International Conference on "Multidisciplinary Research Approach for the Accomplishment of Academic Excellence in Higher and Technical Education Through Industrial Practices" Organized under ISTE, New Delhi By ISTE, Gujarat section at Pattaya, Bangkok-Thailand. 'Mechanical Properties of Aluminium Metal Matrix Composites Using Stir Casting Method' June 10-11, 2016.
4. International Conference on Recent Advances in Mechanical Engineering and Interdisciplinary Developments (ICRAMID-2014) 'Workability Behavior of Aluminium Hybrid Composites' at Ponjesly College of Engineering, Nagercoil on 7th & 8th March 2014.

## **III Books & Book Chapters Publications**

1. PP Shantharaman, M Prabhakar, V Anandakrishnan, Alokesh Pramanik and Animesh Basak. "Synthesis and cold workability behavior of Al-SiC-Y<sub>2</sub>O<sub>3</sub> hybrid nanocomposites produced through powder metallurgy" Book chapter in Nanocomposite Manufacturing Technologies: Fundamental Principles, Mechanisms and Processing, Woodhead Publishing, pp-281, 2025.

2. Vijayan G, Shantharaman & Ashok Henry, Online book titled "Power Generation – Lightening the World, Fuels, Energy & Power Plants", LAP Lambert Academic Publishing, 120, High Road, East Finchley, London, N2 9ED, United Kingdom. ISBN:978-620-6-16205-6.
3. P.P.Shantharaman, T.Pushparaj & M.Prabhakar, "Study on Performance And Emission Studies On Cashew nut Shell Liquid Bio-Oil Fuelled Diesel Engine With Acetone As Additive" Book chapter in New Ideas Concerning Science and Technology Vol. 10, 68-76, 2021
4. P.P.Shantharaman & R.Shankar, Book titled "Power Plant Engineering", 2021, ISBN:9789354455711, Kings Publications.
5. P.P.Shantharaman & T.Pushparaj, Book titled "Internal Combustion Engines", 2021, ISBN:9789354373404, Kings Publications.

#### IV Short term Courses / Seminars /FDP/Workshop/Conference organized:

| S.No | Title of the event                                                            | Organized by                                                   | Date     |          |
|------|-------------------------------------------------------------------------------|----------------------------------------------------------------|----------|----------|
|      |                                                                               |                                                                | From     | To       |
| 1    | KINGS PROJECT EXPO'25                                                         | Centre for Promotion of Research, Kings College of Engineering | 09.05.25 |          |
| 2    | International Conference on Sustainable Technologies in Engineering & Science | Centre for Promotion of Research, Kings College of Engineering | 08.05.25 | 09.05.25 |
| 3    | KINGS PROJECT EXPO'24                                                         | Centre for Promotion of Research, Kings College of Engineering | 02.05.24 |          |
| 4    | International Conference on Recent Trends in Engineering and Science          | Centre for Promotion of Research, Kings College of Engineering | 02.05.24 | 03.05.24 |
| 5    | Webinar on "Paper Writing and Patents"                                        | Research & Development Section, Kings College of Engineering   | 28.10.23 |          |
| 6    | KINGS PROJECT EXPO'23                                                         | Research & Development Section, Kings College of Engineering   | 04.05.23 |          |

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|----|---------------------------------------------------------------------------------|--------------------------------------------------------------------|----------|----|
| 7  | International Conference on Recent Advances in Civil and Mechanical Engineering | Department of Mechanical Engineering, Kings College of Engineering | 27.04.23 |    |
| 8  | Workshop on Outcome based assessment and evaluation                             | Research & Development Section, Kings College of Engineering       | 19.01.23 |    |
| 9  | Online workshop Intellectual Property Rights (IPR) & Patents and Design filing  | Research & Development Section, Kings College of Engineering       | 18.10.22 |    |
| 10 | Seminar on "World Intellectual Property Day"                                    | Research & Development Section, Kings College of Engineering       | 26.04.22 |    |
| 11 | Sir CV Raman's Science Expo'22                                                  | Research & Development Section, Kings College of Engineering       | 28.02.22 | -- |
| 12 | National Webinar on "Advanced Materials for Engineers"                          | Research & Development Section, Kings College of Engineering       | 15.09.21 | -- |
| 13 | National Conference on Energy & Manufacturing Scenario - 2021                   | Department of Mechanical Engineering, Kings College of Engineering | 31.03.21 | -- |
| 14 | National Science Day Contest                                                    | Research & Development Section, Kings College of Engineering       | 28.02.21 | -- |
| 15 | National Webinar on "Art of Writing Research Article"                           | Research & Development Section, Kings College of Engineering       | 20.02.21 | -- |
| 16 | National Webinar on "Patents and Trademarks"                                    | Research & Development Section, Kings College of Engineering       | 19.01.21 | -- |
| 17 | A National Level Webinar on "Lead                                               | Research & Development Section, Kings College of                   | 26.09.20 | -- |

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|----|------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------|----|
|    | Cadmium Tin Alloys and its Mechanical and Corrosion Behaviours"              | Engineering                                                           |          |    |
| 18 | National level Webinar on "Introduction on Industrial Revolution 4.0"        | Research & Development Section, Kings College of Engineering          | 29.07.20 | -- |
| 19 | Webinar on "Application of Design Expert Software in Manufacturing Industry" | Research & Development Section, Kings College of Engineering          | 22.07.20 | -- |
| 20 | National level webinar on "Recent Trends in Automotives"                     | Dr. APJ Abdul Kalam Memorial Foundation, Kings College of Engineering | 10.06.20 | -- |
| 21 | National level webinar on "Fundamentals of Product Design"                   | Research & Development Section, Kings College of Engineering          | 23.05.20 | -- |
| 22 | First National level webinar on "MACHINE TOOLS"                              | Department of Mechanical Engineering, Kings College of Engineering    | 21.05.20 | -- |
| 23 | webinar on "Role of Embedded Systems in Data Processing"                     | Research & Development Section, Kings College of Engineering          | 30.04.20 | -- |
| 24 | "Workshop on Welding Technologies"                                           | Department of Mech. Engineering, Kings College of Engineering         | 07.02.20 | -- |
| 25 | Seminar on "Soft Skills"                                                     | Research & Development Section, Kings College of Engineering          | 24.01.20 | -- |
| 26 | "Einstein Expo – 2019"                                                       | Department of Mech. Engg. Kings College of Engineering                | 01.04.19 | -- |
| 27 | Seminar on                                                                   | Research &                                                            | 02.01.19 | -- |

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|    | "Industrial Automation"                                       | Development Section, Kings College of Engineering                  |            |          |
| 28 | Seminar on "Aero Engines and Air Frames"                      | Research & Development Section, Kings College of Engineering       | 28.09.18   | --       |
| 29 | National Conference on Energy & Manufacturing Scenario - 2015 | Department of Mechanical Engineering, Kings College of Engineering | 14.03.2015 | --       |
| 30 | STTP on "Recent Trends in Advanced Welding Technology"        | Department of Mechanical Engineering, Kings College of Engineering | 16.06.08   | 20.06.08 |

**V Short term Courses / Seminars /FDP/Workshop/Conference Attended:**

| S.No | Title of the event                                             | Organized by                                         | Date     |          |
|------|----------------------------------------------------------------|------------------------------------------------------|----------|----------|
|      |                                                                |                                                      | From     | To       |
| 1    | International Workshop on "Additive Manufacturing"             | EGS Pillay Engineering College                       | 28.09.18 | --       |
| 2    | Workshop on "Siemens CoE in Manufacturing for South TN"        | NIT, Trichy                                          | 20.02.16 | --       |
| 3    | Two-day Workshop on "Research Methods and Tools"               | AVC College of Engineering, Mannampandal-609305,     | 06.11.14 | 07.11.14 |
| 4    | National seminar on "An Insight into Supercritical Technology" | Organized by IEI in NIT, Trichy.                     | 06.07.13 | 07.07.14 |
| 5    | ISTE Workshop on "Engineering Thermodynamics"                  | Sudarshan Engineering College, Sathiamangalam-622501 | 11.12.12 | 21.12.12 |
| 6    | FDP in "Finite Element Analysis and Solar Applications"        | Kings College of Engineering                         | 01.04.11 | --       |

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|----|----------------------------------------------------------------------------|------------------------------------------------------|----------|----------|
| 7  | Short Term Course on "Laser Processing of Materials"                       | National Institute of Technology, Trichy.            | 06.03.08 | 07.03.08 |
| 8  | STTP on "Recent Trends in Advanced Welding Technology"                     | Kings College of Engineering.                        | 16.06.08 | 20.06.08 |
| 9  | One day Workshop on "Finite Element Analysis"                              | Sudarshan Engineering College, Sathiamangalam-622501 | 24.03.07 | --       |
| 10 | Workshop on "Emerging Trends in Corrosion Control and Surface Engineering" | National Institute of Technology, Trichy.            | 09.02.07 | 10.02.07 |
| 11 | FDP in "Engineering Graphics"                                              | CSI College of Engineering, Ketti-643215.            | 21.06.06 | 22.06.06 |
| 12 | FDP in "Engineering Thermodynamics"                                        | IRTT, Erode.                                         | 02.03.05 | 07.03.05 |
| 13 | FDP in "Heat and Mass Transfer"                                            | Kongu Engineering College, Perundurai.               | 22.11.04 | 26.11.04 |
| 14 | Staff Development Programme                                                | Hindusthan College of Engg., Kelambakkam-603103.     | 01.12.03 | 11.12.03 |

## VI Online Courses:

| S.No | Course title                                                   | University                                                                       | Date     |          |
|------|----------------------------------------------------------------|----------------------------------------------------------------------------------|----------|----------|
|      |                                                                |                                                                                  | From     | To       |
| 1    | Recent development in additive manufacturing process           | Department of mechanical engineering, Ramakrishna College of Engineering, Trichy | 24.05.24 | 25.05.24 |
| 2    | Emerging Trends In Engineering and Technology at ETET 2024     | Department of Mechanical, SAE Collegiate Club, NIT, Karaikal - 609609.           | 15.02.24 | 16.02.24 |
| 3    | Recent Development in Automobile technology"                   | NITTTR-Chennai                                                                   | 17.08.23 | --       |
| 4    | Recent Advancements in Materials, Manufacturing and Technology | Swarnandhra College of Engineering and Technology SeetharamPuram                 | 30.10.23 | 04.11.23 |



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|----|-------------------------------------------------------------------|----------------------------------------------------|----------|----------|
| 5  | “Compendium of Electric Vehicle Engineering”                      | Sri Ramakrishna Engineering College – Coimbatore   | 04.10.23 | 06.10.23 |
| 6  | FDP on SOLAR, WIND AND BIO ENERGY APPLICATIONS                    | NITTTR, Chennai                                    | 17.10.22 | 21.10.22 |
| 7  | FDP on Trends in CNC Machining and Metrology                      | NITTTR, Chennai                                    | 27.06.22 | 01.07.22 |
| 8  | Developing Activities for OBE Attributes                          | NITTTR, Chennai                                    | 07.02.22 | 11.02.22 |
| 9  | An insight into Novel Research Aspects in Manufacturing Processes | SRM Institute of Science & Technology, Chennai     | 22.11.21 | 27.11.21 |
| 10 | Trends in CNC Machining & Metrology                               | NITTTR, Chennai                                    | 04.10.21 | 08.10.21 |
| 11 | Non-Traditional Machining                                         | NITTTR, Chennai                                    | 25.01.21 | 30.01.21 |
| 12 | Fuel Cell Technology & its Research opportunities                 | NIT, Warangal                                      | 04.01.21 | 08.01.21 |
| 13 | Energy Engineering                                                | ATAL, Government College of Engineering, Thanjavur | 21.12.20 | 25.12.20 |
| 14 | Refresher course on Energy, Thermal and R&AC                      | NITTTR, Chennai                                    | 14.12.20 | 18.12.20 |
| 15 | Robotics                                                          | ATAL, KCG College of Technology                    | 8.12.20  | 12.12.20 |
| 16 | 3D Printing & Design                                              | ATAL, KLN College of Engineering                   | 30.11.20 | 04.12.20 |
| 17 | “Green & Sustainable Energy Development”                          | NITTTR, Chennai                                    | 23.11.20 | 27.11.20 |