# SRINIVAS UNIVERSITY

College of Engineering and Technology,
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## RESEARCH CENTRE FOR STUDY ON IC ENGINE

**Mr. Srinath Pai**

The Internal combustion engines are the most important power plants in the modern world. However, it has an effective efficiency of 30-35%. This means that almost 65%-70% of the chemical energy contained in the fuel is lost in the coolant, in the exhaust gases, as incomplete combustion of fuel and as radiation. On the other hand, the global community is concerned by the climate change, challenges to continuing success are control of its emission to confirm the tightening legislation to protect the environment. A need to improve the vehicle energy efficiency with the reduction in emission is the major engineering and scientific challenge. Total dependence on the crude oil and oil refinery products together with the latest rise in oil prices adversely affect the security of energy supply on the global scale. This calls for placing intensive research efforts on development and implementation of alternative fuels, especially renewable automotive fuels together with novel propulsion systems. Hence, improvement in the performance, as well as the reduction in emission, is the must. To meet both needs and challenges through improvements and innovations in technology and advances continues research is required.

This research center aimed to find out the various methodologies and techniques to improve the performance of an IC engine with the reduction in emissions so as to optimize the engine outcome. Research on IC engine will help to enhance the performance of an engine with the reduction in air pollution and finally facilitates the better living.

Members:

1. Dr. Krishna Murthy,
   Professor of Mechanical Engineering& Manufacturing Engineering, MIT, Manipal.
2. Dr. N. Satheesh Kumar,
   Associate Professor of Mechanical Engineering, CEC, Bantwal.
3. Dr. N Venkatesh,
   Professor of Mechanical Engineering, CEC, Bantwal.
4. Prof. Madhwesh N
   Assistant Professor - Senior Scale of Mechanical Engineering& Manufacturing Engineering, MIT, Manipal.

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Journal Publications:

1. Combined Impact of High Injection Pressure and Injection Timing on the Performance and Combustion of Common Rail Direct Injection (CRDI) Engine Fueled with a Simarouba Biodiesel Blend, Srinath Pai, Abdul Sharief, Shiv Kumar - Indian Journal of Science and Technology, DOI: 10.17485/ijst/2016/v9i45 2016.
2. A Study on Increased Fuel Injection Pressure Role in Promoting Biodiesel Blends Usage in a Diesel Engine - A Review, Srinath Pai, Abdul Sharief, Shiva Kumar, Shree Prakash B, International Conference on Recent Trends in Engineering & Technology 313-317, Elsevier proceedings.
3. Studies of the effect of nanoparticle dopants and blending of different polymers on Physical, Electrical, Optical and Micro structural properties of PVA-a Review
   S Pai, V Crasta, B Shreeprakash, Advanced Nanomaterials and Emerging Engineering Technologies (ICANMEET) 2013.
4. Effect of Compression Ratio on the Performance and Emission Characteristics of a Direct Injection CI engine fuelled with Pongamia biodiesel blends, Srinath Pai, Shrivathsa, Dr. Abdul Sharief , Dr. Shiva kumar www.ijettjournal.org 1 (1), 327-332.
5. Emission Analysis of a Diesel Engine Using ANN–A Review, S Pai, A Sharief, Shiva kumar, International Journal of Engineering Trends and Technology 40, 123-129.
6. High Injection Pressure Impact on a Direct Injection Diesel Engine, Srinath Pai, Abdul Sharief, Shiva Kumar, Sreeprakash B 2014/8 International Journal of Engineering Research & Technology (IJERT)Volume3 Issue 8, 1494 – 1498. DOI 10.18000/ijabeg.10122
7. Effect of Injection Timing on Performance and Emission of a Direct Injection Diesel Engine Fueled with Simarouba Biodiesel blend, Srinath Pai, A Shettigara, A Sharief, B Shreeprakash, International Journal of Engineering Trends and Technology 40, 312-317
8. A Comparative Study of Injection Pressure Impact on Performance and Emission of a Diesel Engine Fueled with neat Diesel and Jathropa Biodiesel blends, Srinath Pai, Abhishek Rao, Dr. Abdul Sharief , Dr. Shiva kumar, www.ijettjournal.org 1 (1), 333-339
9. Study of fuel injection pressure and injection timing effect on a diesel engine performance and emission, S Pai, A Sharief, CG Ramachandra, B Sreeprakash International Journal of Research in Science And Technology 4 (3), 71-80
10. Study of impact of ethanol blends on SI engine performance and emission, S Pai, HRA Tasneem, A Rao, N Shivaraju, B Sreeprakash, IEEE Digital Library

11. Study of Performance of Petrol Engine with Variable Compression Ratio using Ethanol as a Blend, S Pai, NS Kumar, N Madhwesh, A Sharif, International Journal of Earth Sciences and Engineering, 81-85, ISSN 0974-5904
12. The Study of EGR Effect On Diesel Engine Performance And Emission - A Review
Srinath Pai, Amriya Tasneem H.R, Shivaraju N, Shree Prakash B, International Conference on Emerging Innovative Technologies for a Sustainable World, ICEITSW.
13. Study of the effect of Fuel Injection Pressure on Diesel Engine Performance and Emission - A Review, Srinath Pai, Abdul Sharief, Shreeprakash B, IEEE- International Conference on Research and Development Prospectus on Engineering and Technology Volume 1 Pages 221 – 22, IEEE explorer.
14. Effect of Ignition Timing on the Performance of Diesel-Methane Dual Fuel, Srinath Pai, Recent Trends in Emerging Technologies on 27-28th February 2009, at NMAMIT, Nitte.
15. Effect of Ignition Timing on the Performance of Twin Plug Spark Ignition Engine With Gasoline as Fuel, Srinath Pai, Sateesh Kumar N, Srinivas Rao B.R, 19-20th February 2010, National Conference On Mechanical Engineering Trends (COMET) at Ballari.
16. Dual Plug Spark Ignition Engine – Developments And Future Prospects, 5-6th March 2009 "Recent Developments in Mechanical Engineering" RDME – 2009 national level Conference at Sree Chitra Thirunal College of Engineering. Pappanamcode, Thiruvananthapuram.
17. Influence of Ultra Injection Pressure with Dynamic Injection Timing on the Common Rail Direct Injection (CRDI) Engine Performance and Emissions for Diesel and Simarouba Biodiesel Blends, Srinath Pai, Abdul Sharief, Shiva Kumar (yet to publish with Id IJAME1711276) in IJAME journal.