

Research Scientist I

Development of Pre-mixed Combustion strategies for a duel fuel Compression Ignition Engines

The Bio-fuels and Engine Research Center in the Department of Mechanical Engineering at Kandula Srinivas Reddy Memorial College of Engineering (KSRMCE) invite applications for the appointment of a Research Scientist position to co-lead our efforts in the development of a Duel Fuel Compression Ignition Engine.

This position is made possible by the grants from the Government of India, MAN S.E. (Germany) and DNV (Norway). The project also includes active experimental and modeling collaborations with the Automotive Research Center at the University of Michigan (Ann Arbor, US).

This research focuses on the development of a low temperature pre-mixed combustion strategy for duel fuel compression ignition engine. The initial part (8 months) of the work will include a duel fuel engine set-up in collaboration with MAN S.E. (Germany) and AVL (US) for the measurement of various in-cylinder combustion parameters and operating characteristics. This section also includes the optimization of various fuels combinations to optimize the pilot and main (and post) injection strategies for optimal performance. One of the components of the fuel in the duel fuel engine is going to be several different kinds of bio-fuels our process laboratory generates.

The second phase of the work (6 months) will include the development of combustion strategies with the variation of engine parameters to obtain a low temperature premixed combustion phase for low and medium load conditions. The focus in this part of the work will continue to be the usage of bio-fuels as one of the source of energy in the duel fuel engine.

We seek a motivated researcher with excellent communication skills to co-ordinate with the multi-national research groups involved in this project. Successful candidate will lead a research team consisting of technicians, graduate students and staff to achieve the research goals. He/She will have prior experience in the fields of dynamometer-based experimentation of diesel engine subsystems. A Ph.D. in Mechanical Engineering is a pre-requisite.

Demonstrated experience in the following areas is desired: (1) Internal combustion engines (2) dynamometer based engine testing (3) advanced thermodynamics and heat transfer (4) presentation skills to international audience.

The position will give the candidate an exposure to research groups around the world. The remuneration is extremely competitive given the global research perspective.

KSRMCE is a 200 acre campus and is situated in a serene and congenial atmosphere 7 KM's away from Kadapa town, Andhra Pradesh on Kadapa-Pulivendula state highway. It is ideally located within 3-4 hours of commute to both Chennai and Bangalore by road or 1.5 hours from the Tirupati airport. KSRMCE has three different campuses with excellent research and living facilities. To apply please send a cover letter and resume with references to Dr. Chaitanya Sampara at csampara@ksrmce.ac.in

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