



INDIAN INSTITUTE OF SCIENCE

INSTITUTE COLLOQUIUM

((Mechanical Sciences))

Prof. B.N. Raghunandan

Chairman, Department of Aerospace Engineering

will deliver a lecture

on

ATOMIZATION PROBLEMS IN AEROSPACE PROPULSION

**on Monday, April 23, 2007
at 4.00 pm in the Faculty Hall**

THE DIRECTOR

will preside

All are cordially invited

Coffee/Tea: 5.00 pm

Venue: Reception Hall

Abstract

One of the critical components in any aerospace propulsive device is the fuel/propellant injector. Liquid injection followed by atomization and dispersion within the combustion chamber dictates the overall performance of the device. While injectors have been successfully designed using a semi-empirical approach over the years, there are many mechanistic issues which are not only important from application point of view, but also interesting in terms of underlying physics. This is illustrated by three examples taken from the contributions of the speaker in the recent years. The first one examines the liquid sheet interaction in a coaxial atomizer, the second the jet interaction from impinging injectors and the third the two phase processes in an effervescent atomizer.

