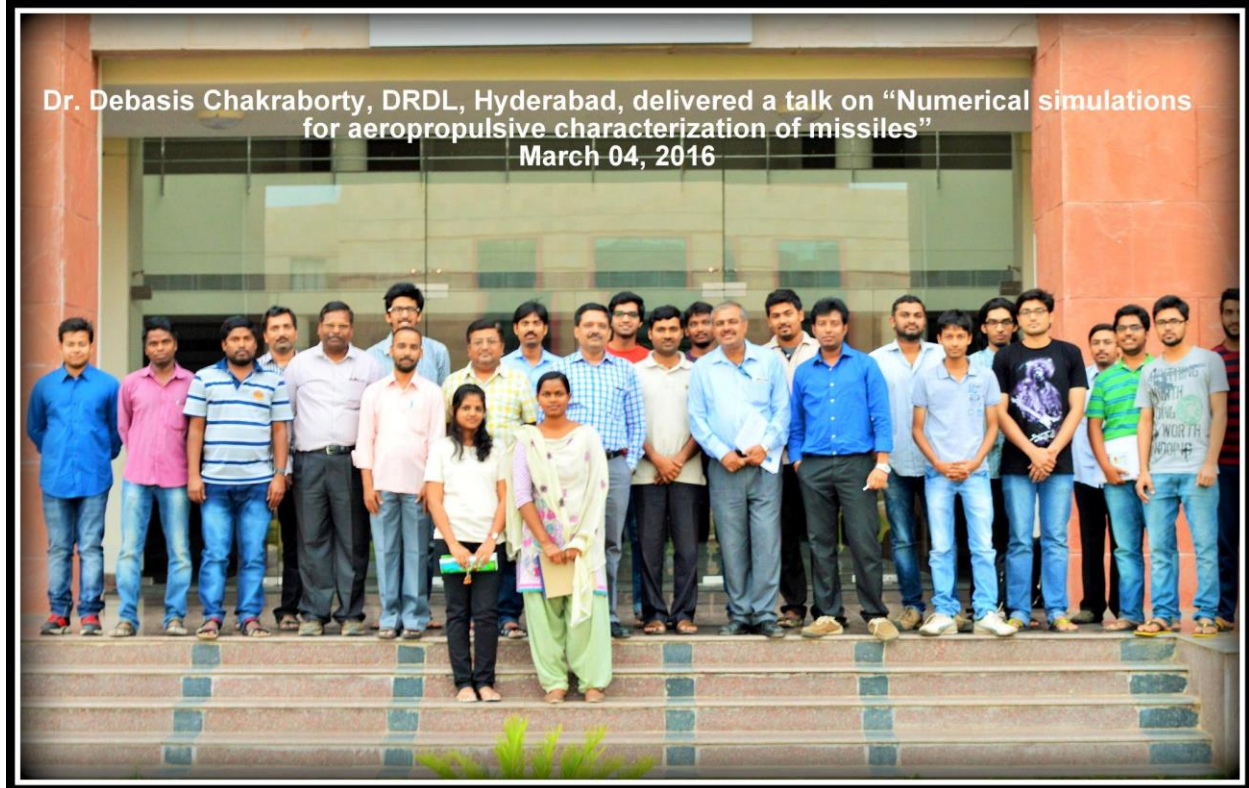


Guest-talk 2016

Dr. Debasis Chakraborty, Scientist, Defense Research and Development Laboratory, Hyderabad, delivered a talk on “Numerical simulations for aeropropulsive characterization of missiles” on March 04, 2016



Abstract:

Over the last few decades, CFD has developed into a rich and diverse subject and is emerged as a major component of applied and basic fluid dynamic research along with theoretical and experimental studies. Navier Stokes equations that describe the conservation of mass, momentum and energy mimics all the essential features of fluid flow. As, only few problems are amenable to analytical approach, numerical discretization of the governing equations are required to get the practical solution of the problems involving fluid flows. Numerical integration of the Navier Stokes equations (or its inviscid counterpart Euler Equations) is the major features of any CFD Techniques. Simultaneous development of new computers, numerical algorithms, physical and chemical models of flow physics are responsible for the great impact of CFD in both basic and applied scientific/engineering problems. Presently, CFD methods are employed routinely for the estimation of various complex aerodynamic and propulsion flow parameters where experimental data cannot be obtained economically or feasibly. CFD has emerged as one of the important design tool along with the wind tunnels and other experimental testing and contributing significantly in reducing developmental cost and time for aerospace vehicle design. In India, the designers of missiles, launch vehicles, military and transport aircrafts are depending heavily on CFD techniques for the accurate prediction of various aerodynamic and propulsion parameters in the design exercise.

Prof. Dario Darji, Professor, University of Louisville, USA, delivered a talk on “Dynamics of Cantor Set” on November 07, 2016.



Abstract:

Topological Dynamics is a rich subject which enjoys attention from mathematicians working in various fields such as analysis, descriptive set theory, model theory etc. Often, complicated dynamics is modeled by dynamical systems on the Cantor set. Originally, this is how symbolic dynamics arose.

In this talk, he will discuss about the dynamical behavior of a ‘random’ homeomorphism of the Cantor space. This talk is pitched at non-specialists and students. All terminology and background material will be explained