INSTITUTE COLLOQUIUM

INDIAN INSTITUTE OF SCIENCE

Prof. K. Chattopadhyay

Department of Metallurgy

will deliver a lecture
on

Forms, Patterns and Structures amidst ordering and repulsion

on Wednesday, 23 November 2005
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

Forms, patterns and structures blend to evolve the microstructure of a material. It is the ability of synthesizing and modifying a desired microstructures that is at the core of modern development of Materials Science and Engineering since the microstructural changes exert dominant influence on the properties. The nature of atomic interaction underpins the evolution of forms, patterns and structures and hence microstructure of a material. Understanding and exploiting this linkage together with kinetics of phase change provide the basis for design of engineering materials. In the present talk we shall examine how the ordering and repulsive tendencies of atom which influences the formation of phases can be exploited through the processing parameters to develop distinct multiphase microstructures and hence new materials.
