

# Collaborative Programmes and Projects

Multi-institutional, national and international collaborative research programmes have been at the core of C-MMACS overall research. C-MMACS to-day has active collaboration with a number of national and international institutions. At the national level, C-MMACS is a participant of projects like Indian Ocean Modelling Programme (INDOMOD) and New Millenium Technology Leadership Inititive (NMITLI) project on Monsoon Related Meso-scale Forecasting. At the international level, C-MMACS is the Indian Node of the Indo-French Centre for Environment and Climate (IFCEC)

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Indo-French Centre for Environmental Research() Centre Franco-Indien de Recherche sur l'Environnement

#### **Sponsored Projects**

C-MMACS caters to the needs of the country by taking up projects from various agencies in areas where mathematical modelling is critical.

- 1. ECF of C-MMACS
- 2. Scale interactions in air, land, sea coupled, environment & North-east monsoon
- 3. Hierarchical lattices for non-linear dynamical models of earthquake processes
- 4. A mathematical modelling approach to the study of the deformation characteristics of natural fault zones
- 5. Indian ocean modelling and dynamics
- 6. Modelling of the biogeochemical cycles in the bay of Bengal
- 7. Mesoscale modelling for monsoon related predictions
- Establishment of Continuous Recording GPS stations at four sites in north-east India

# **Collaborative Projects**

Finite element modelling: A priori error analysis

# **The INDOMOD Project**

The INDOMOD project is an ambitious, multi-institutional natonal project that aims at a comprehensive modeling of the Indian Ocean. The project also encisages development of assimilation methodology etc. leading eventually to ocean forecasting capability.

# The NMITLI Project

C-MMACS is a major participant in the New Millenium Indian Technology Leadership Initiative (NMITLI) project on Monsoon Related Meso-scale Forecasts. As a part of this project C-MMACS is engaged in simulation of tropical cyclones using a Variable Resolution General Circulation Model.

# **In-house Projects**

General budget of C-MMACS

Capital equipment for C-MMACS

Complex fluid flow modelling and simulation

Determination of shear velocity structure of the Indian crust beneath a few geodynamically significant regions using broad band seismic records