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Collaborative Programmes and Projects

Multi-institutional, national and international collaborative research programmes have been the core of C-MMACS overall research. C-MMACS to-day has active collaboration with a number of national and international institutions.

Highlights:

The year 2004-05 had been an active one in terms of multi-institutional collaborative programmes. The long-awaited MoU between CSIR and CNRS, France was finally signed on 28-09-2004 between Dr Mashelkar, DG, CSIR and Bernard Larroutourou, DG, CNRS, France.

A new collaborative research programme under the Global Opportunities Fund, UK was launched in the area of Carbon Cycle Modelling. At national level, C-MMACS is now a major participant in a national programme on Multi-Institutional Extended Range Monsoon Prediction.



Discussion Meeting towards signing of MoU between CSIR/C-MMACS and CNRS, France, 27th September 2004

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8.1 Sponsored and Collaborative Projects

Scale Interactions in Air, Land, Sea Coupled Environment & North-east Monsoon, USIF ONR - P Goswami, S Himesh.

Evaluation and Validation of Systems of Assimilation, IFCPAR - P Goswami, G K Patra.

Modelling of Atmosphere-Hydrosphere-Biosphere Interaction, ISRO - P Goswami, S Himesh.

Impact of GCM-generated Dynamical Boundary Fields on Meso-scale Simulations, SAC/DOS - P Goswami, S Himesh, A Mandal.

Active Tectonics in the Shillong Plateau using Global Positioning System (GPS) based Geodesy, Department of Science and Technology (India) - Malay Mukul, Sridevi Jade.

Active Tectonics of the Darjeeling-Sikkim Himalayas using Global Positioning System (GPS) based Geodesy, Department of Science and Technology (India) - A P Krishna, K Kumar, A Matin, Malay Mukul, Sridevi Jade.

Active Tectonics in the Kutch, Cambay and Narmada Rift Systems using Global Positioning System (GPS) Geodesy, Department of Science and Technology (India) - K. C. Tiwari, A. Joshi, Malay Mukul, Sridevi Jade.

Dynamics of Continental Collision and Rheology of Lower Crust based on GPS studies in Indian Sub-Continent, Department of Science and Technology (India) - Sridevi Jade, V K Gaur, Malay Mukul.

Geometry, Kinematics and Deformation Mechanisms in the Gish Transverse Zone in the Darjiling-Sikkim Himalaya, India, Department of Science and Technology (India) - Malay Mukul, Sridevi Jade, V K Gaur, A. P. Krishna, A. Matin.

Assimilation of In-situ and Satellite Altimeter Data into an OGCM, Department of Ocean Development - P S Swathi, Kalyani Devasena.

Modelling Biogeochemical Cycles in Bay of Bengal, Department of Ocean Development - M K Sharada, P S Swathi, Kalyani Devasena, K S Yajnik.

Development of Indian Ocean Community Model, Department of Ocean Development - P S Swathi, C Kalyani Devasena.

Carbon Source and Sinks in Asia and the Indian Ocean, GOF, British High Commission- P S Swathi, M K Sharada, N K Indira, K S Yajnik, R P Thangavelu.

Microzonation Investigations and Study of Building Parameters in the Anjar (Kutch) Area using Microtremor Recordings, Department of Science and Technology (India) - Imtiyaz A Parvez.

Site effects in Ahemedabad based on Array Observations of Microtremors, Department of Science and Technology (India) - Imtiyaz A Parvez, Sridevi Jade.

Thermal Structure and Mixed Layer Variations of the Indian Ocean in an OGCM and Intercomparison with Institution and Satellite Observations, Department of Science and Technology (India)- C Kalyani Devasena.

A Kinematic Study of Suspected Major Active Shear/fault Zones in the West Southern Peninsular Shield of India: Implication on Seismogenesis, Department of Science and Technology (India) - M R Radhakrishna, Sridevi Jade.

Establishment of Continuous Recording GPS Systems at four Sites in North Eastern India. Department of Science and Technology (India) - Sridevi Jade, Malay Mukul, V K Gaur.

Measurement of Accurate Coordinates for ACMI, Gwalior, Airforce (ACMI), Gwalior, Air HQ - Sridevi Jade, M B Ananda.

Procurement of GPS Receiver Systems for DST National Network, Department of Science and Technology- Sridevi Jade.

GPS Measurements in the Andaman and Nicobar Islands, Department of Science and Technology- Sridevi Jade, M B Ananda, P Dileep Kumar.

Practical Equivalent Continuum Modelling of Jointed rocks and Analysis of Large Scale Excavations in Rock Mass, CSIR, EMR Division- T G Sitharam, Sridevi Jade.

Inertial Effects on Forced particles in Unsteady Flow at Low Reynolds Numbers, Department of Science and Technology - T R Ramamohan.

8.2 Joint Projects with Laboratories

Director and Concentration Profiles in 2-component Liquid Crystals, RRI, Bangalore-N V Madhusudana, Anand Kumar.

Carbon Fluxes in India and Central Asia, IIAP, Bangalore- N K Indira, P S Swathi, V K Gaur.

Variations in Deformation and Kinematics along and across the Himalayan Arc through Time: Insights from the Darjeeling-Sikkim-Tibet Transect, University of Rhodes, USA- Gautam Mitra, Malay Mukul.

8.3 In-house Projects

Complex Fluid Flow Modelling and Simulation - Anand Kumar.

Mesoscale Modelling for Monsoon Related Predictions - P Goswami

Coupled Atmospheric - Hydrological Model to forecast Spatio-temporal Variability of Water Resource - P Goswami, S Himesh.

Site Specific Ground Motion Modelling and Microzonation Studies in Indian Megacities- Imtiyaz A Parvez, Sridevi Jade.

GPS Measurements to Determine Time Evolving Surface Strain Field in the Bhuj Region - Sridevi Jade, Malay Mukul.

Monitoring of Continuously Operating CMMACS GPS station located in the IISC campus - Sridevi Jade, R P Thangavelu, M S M Vijayan.

The Dynamics and Rheology of Periodically Forced Particles in Simple Shear Flow at Low to Moderate Reynolds Numbers - T R Ramamohan.

Network Security in an Inter-networked Environment- R P Thangavelu, V Anil Kumar, G K Patra.

8.4 CSIR Network Project

Sub -Task 1: Computational Mechanics for Modelling, Analysis and Design of High-performance Structures, Materials and Process Applications, Participating Labs: C-MMACS, SERC-Chennai, RRL-Bhopal, RRL-Trivandrum, NML-Jamshedpur- Nagesh Iyer.

Sub -Task 1: Multi-scale Modelling Platform for Environmental Forecasting and Management, Participating Labs : C-MMACS, NEERI-Nagpur, NIO-Goa, RRL-Bhubaneshpur, CRRI-Roorkee, CBRI-New Delhi- P Goswami.