# 8

## C-MMACS ACADEMIC PROGRAMME

In keeping with its objective of developing skill and expertise in Mathematical Modelling and Computer Simulation in the country, C-MMACS maintains an active academic programme. The activities span the entire spectrum from Ph D guidence to undergraguate/postgraduate student projects to specialized courses. Students and professionals from a wide spectrum of organizations including industries across the country have been benefiting from our various academic programmes over the years.

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- ❖ *Ph D Programme*
- ❖ *Thesis/Project by M. Tech/BE/MCA students*
- ❖ *Faculty Participation*

## 8.1 Ph D Programmes

**Goswami P**

**Gouda K C,** Multi-scale Modelling and Forecasting of Monsoon Weather and Processes
**Himesh S,** Dynamics of Land Surface-Atmosphere Interactions: Coupled Dynamics and Scale Interaction
**Jurishmita Baruh,** Modelling and Simulation of Air Pollution: Process Identification, Impact Analysis and Evaluation of Forecast Potential
**Mahapatra G N,** Impact of Local Climate Variability and Anthropogenic Processes in Extreme Weather Events over India
**Swapan Mallick,** Development and Evaluation of an Algorithm for Objective Bias Correction of Dynamical Forecasts at Different Scales

Sudarshan T S B and  **Patra G K**

Santhana Lakshmi S**,** Design of Cryptographic Protocols u sing Computational Intelligence Techniques
Supriya M, Trust Building in Distributed Storage using Cryptography.

Prathap G and Pradhan S C (IIT KGP),
**Senthilkumar V**,  Small scale effect on Structural Behaviour of Carbon nanotubes

**Ramamohan T R** and  Shivakumara I S (Bangalore University).
**Madhukar K,** The Dynamics and Rheology of Periodically Forced Particles in a Newtonian Fluid at Low Reynolds Numbers

**Sridevi Jade**

**Saigeetha A J**, Tectonic implications of GPS studies in Significant tectonic zones of India,
**Shrungeshwar T S,** Modelling deformation in Indian subcontinent.

Ashok Kumar and  **Sridevi Jade**

Prakash Burman (Tezpur University), Estimation of Precipitable Water Vapor and Crustal  deformation in Northeast India

Malay Mukul and **Sridevi Jade**

Kutubuddin Ansari (IIT  Mumbai), Modelling of Global Positioning System (GPS) based surface deformation using Dislocations.
Ashok Shaw (IIT Mumbai),  Geological and contemporary deformation in the internal thrust sheets of the higher Darjeeling Sikim Himalayas

## 8.2 Thesis/Project by M. Tech/BE/MCA students

**Anil Kumar V**

*Unsolicited Network Traffic Analysis for Denial of Service Attacks Inference,* Vinod Kumar V (M.Tech Thesis), Vellore Institute of Technology, Vellore, March 2010.

**Gouda K C**

*Text Extraction from an Image*, Ramyashree G, Ranjitha K, Smitha S, Vaishali C S (B.E), Department of Computer Sc. & Engg., East west Institute of Technology (VTU), August 2010.

*Meteorological Data Analysis*, Vinodha and Vineetha (B.E), East Point College(VTU), Bangalore, May 2010.

*Development of software for Conversion of NuSDAS to NetCDF*, Sonal Mishra and Sanjay Kamti (B.E), HMS Institute of Technology (VTU), May 2010.

*Software Development for Multi-Format Data Analysis*, Shruti and Shobhanjana Kalita (B.Tech), Jorhat Engg. College, Assam, May 2010.

*Extraction and Analysis of Satellite Derived HDF Data,* Biswajit Bhuyan, Ranadeep Ghosh, Diganta Bhattacharjya, M. Ravi Kumar Singh  and Tapash Paul (MCA), Tezpur University, Assam, May 2010.

**Parvez I A**

*Deterministic Seismic Hazard Assessment of North-East India and Adjacent Regions*, *Animesh Barman(M.Tech), Tezpur University.*

*Attenuation of P and S Waves in North-West Himalayas*, *Nagaraj K (M.Tech), Tezpur University.*

*Microearthquake locations using arrival time and mathematical operators*, *Biswaranjan Das (M.Tech),  Tezpur University.*

**Patra G K**

*Word Based Stream Cipher,* Dhinakaran T, Vijayaraghavan I, Seetha Bopaiah, Kusuma P (B E), Amrita School of Engineering, Bangalore, April 2010.

*Performance Boost using Neural Cryptography,* Ashutosh Kalasi, Rafath Hajira, Farah Nishath, Arshiya Sultana(B E), Vemana Institute of Technology, Bangalore, May 2010

*GMP Implementation Of Cryptographic Protocols,* Akshay Razdan (Summer Training),  Graphic Era University, Dehradun July 2010

## 8.3 Faculty Participations

*Training School on Analysis of Meteorological Data, CSIR C-MMACS, Bangalore, 18-19 Jan 2011.*

**Gouda K C**
Multi-Scale Forecasting of Monsoon Weather and Processes

**Kantha Rao Bhimala**
Dynamical Soil Moisture Model for Indian Region; validation with CSIR-COMON Data


**Mahapatra G N**
Atmospheric Processes and Mesoscale Model

**Patra G K**
Scope of Observation and Telemetry