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Knowledge Products Publications, Presentations.....

Knowledge creation, knowledge enhancement, knowledge dissemination and knowledge management have been among the core activities of C-MMACS ever since its inception. C-MMACS has maintained high knowledge output in terms of publications and other scientific programmes, knowledge synthesis and exchange through conferences, workshops, brainstorming sessions etc.

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6.1 Publications in Journals

R Bendick, R Bilham, E Fielding, **V K Gaur**, S E Hough, G Kier, M N Kulkarni, S Martin, K Mueller and **M Mukul**, 2001

The 26 January 2001 "Republic Day" Earthquake, India
Seismological Research Lett., 72(3), 328-335

G Prathap & D V T G Pavan Kumar, 2001
Error Analysis of Timoshenko Beam Finite Element
Dynamics Models
Int. J. Comp. Engg. Sc., 2, 1-10

Imtiyaz A Parvez, A A Gusev, G F Panza & A G Petukhin, 2001
Preliminary Determination of Interdependence among
Strong Motion Amplitude, Magnitude and distance for the
Himalayan region
Geophys. J. Int. 144, 577-596

Imtiyaz A Parvez, G F Panza, A A Gusev and F Vaccari (2002) "Strong Motion Amplitudes in Himalayas and a Pilot Study for the Deterministic First Order Microzonation in a Part of Delhi City", Current Science, 82(2), 158-166

S Mukherjee & **G Prathap**, 2001
Analysis of Shear Locking in Timoshenko Beam
Elements using the Function Space Approach
Comm. In Num. Methods in Engg., 17(6), 385-393

S Raja, **G Prathap** & P K Sinha, 2001
Active Vibration Control of Composite Sandwich Beams
with Piezoelectric Extension-bending and Shear
Actuators
Smart Mater. Struct., 10, 1-7

S Raja, **G Prathap** & P K Sinha, 2002
Active Vibration Control of Composite Sandwich Beams
with Piezoelectric Extension-bending and Shear
Actuators
Smart Mater. Struct., 11, 63-71, 2002

T G Sitharam, **Sridevi Jade** & N Shimizu, 2001
Practical Equivalent Continuum Characterization of
Jointed Rock Masses
Int. J. of Rock Mechanics and Mining Sciences, 38, 437-448

Sridevi Jade, Malay Mukul, **Imtiyaz A. Parvez**, **M B Ananda**, P Dileep Kumar and **V K Gaur**, 2002

Estimates of Coseismic Displacement and Post-seismic
Deformation using Global Positioning System Geodesy
for the Bhuj earthquake of January 26, 2001
Curr. Sci., 82(6), 748-752

Prashant Goswami & Sowmya Raghavan, 2001
A Gradient Measure to Characterize the Interface
Between Non-Coding and Coding Regions in Genomic
DNA Sequences
Curr. Sci., 81(8), 1090-91

A Kumar, 2001
A Discretisation of the n-dimensional Laplacian for a
Dimension – Independent Stability Limit
Proc. Royal Society, London, A457, 2667-2674

J Balakrishnan, 2002
Symmetry Scheme for Amino Acid Codons. **Phys.Rev.**
E 65, 021912

J Balakrishnan, 2002
Stochastic quantization of order of two parafermi fields.
Eur.Phys.J C23, 389

6.2 General Articles

S Himesh, 2001
Invisible Pollution
Curr. Sci., 89(11), 1363

S Himesh, 2001
Dilemma of Development and Environment : A
Perspective
Curr. Sci., 80(9), 1101-1102

6.3 Publications in Books/Proceedings

M Mukul, 2001
The Critical Wedge Theory Approach to Studying
Deformation in Fold-and-Thrust Belts : An example from the
Darjeeling-Sikkim-Tibet (DaSiT) Himalayan Wedge:
Abstracts, Proceedings of Conference on Contributions to
Himalayan Geology, Dehradun, Oct, 22-25, 2001, p.41

M Mukul, 2002
The Kinematics of Neotectonics in the
Darjeeling-Sikkim-Tibet (DaSiT) Himalayan Wedge:
Abstracts, Proceedings of International Conference on
Quaternary Climate, Tectonics and Environment of the
Himalaya: Comparison with other regions, Naini Tal, March
11-15, 2002, p.126-127



Sridevi Jade and T G Sitharam, 2001

Finite Element Analysis of Large-Scale Cavern in Jointed Rock Mass using Simple Equivalent Continuum Approach
Proc. of National Workshop on Application of Rock Engineering in Nation's Development
(Eds: S C Handa and N K Samadhiya)
IGC RLC, 328

J Sridevi, M Mukul, I A Parvez, M B Ananda, P D Kumar,

V K Gaur, R Bendick, R Bilham, Wallace, 2001
Preseismic, Coseismic and Post-Seismic Displacements related to the Bhuj 2001 Earthquake using Global Positioning System (GPS) Geodesy International Conference on Seismic Hazard with particular reference to Bhuj Earthquake of January, 26, October 3-5, 2001, 73-75

Imtiyaz A Parvez, F Vaccari and G F Panza

A Deterministic Seismic Hazard Map of India and Adjacent Areas
The Abdus Salam International Centre for Theoretical Physics, Pre-Print IC/2001/129

Imtiyaz A Parvez, G F Panza, A A Gusev and F

Vaccari
The Strong Motion Amplitudes from Himalayan Earthquakes and a Pilot Study for the Deterministic First Order Microzonation of Delhi City
The Abdus Salam, International Centre for Theoretical Physics, Pre-Print, IC/2001/130

6.4 Presentations at Conferences and Symposia

Mukul M, 2001

The Critical Wedge Theory Approach to Studying Deformation in Fold-and-Thrust Belts: An example from the Darjeeling-Sikkim-Tibet (DaSiT) Himalayan Wedge: Conference on Contributions to Himalayan Geology, Dehradun, Oct, 22-25, 2001

Mukul M, 2002

The Kinematics of Neotectonics in the Darjeeling-Sikkim-Tibet (DaSiT) Himalayan Wedge: International Conference on Quaternary Climate, Tectonics and Environment of the Himalaya: Comparison with other regions, Naini Tal, March, 11-15, 2002

K S Yajnik

Modelling of Cataract Epidermiology
World Bank, New Delhi, 16 January 2001

Imtiyaz A Parvez

Deterministic Seismic Zonation and Microzonation in India and Strong Motion Amplitudes in Himalayas Indo-Italian Workshop on Seismic Risk Evaluation, NGRI, Hyderabad, 06 - 08 March 2001

P Goswami, P V S Raju & U C Mohanty

Intraseasonal Oscillations and Interannual Variabilities of Indian Summer Monsoon
International Conference on Forecasting Monsoons from Days to Years, New Delhi, 21-22 March 2001

P Goswami

Evaluation of a Gradient Measure for Genome Sequence Analysis
Workshop on Computational Methods in Protein Sequence Analysis, JNU, New Delhi, 30 March 2001

P Goswami

Internal Dynamics and Observed Precipitation
Climatology, LMD, Paris, 05 January 2001

J Sridevi, M Mukul, I A Parvez, M B Ananda, P D Kumar,

V K Gaur, R Bendick, R Bilham, Wallace
Preseismic, Coseismic and Post-Seismic Displacements related to the Bhuj 2001, Earthquake using Global Positioning System (GPS) Geodesy, International Conference on Seismic Hazard with particular reference to Bhuj Earthquake of January, 26, October 3-5, 2001

6.5 Internal Reports

TR CM 0102

P Goswami

Experimental Forecasts of All-India Summer Monsoon Rainfall for 2001 and 2002 using Neural Networks
April 2001

TR CM 0103

T Pasupathi, M B Ananda, T R Krishna Mohan

Details of Objective-wise Projects undertaken during 1996-2001
May 2001

TR CM 0104

P Goswami, R Sadourny

Indo French Centre for Environmental Research (IFCER)
Centre France-Indien De Recherche Sur L'Environment
June 2001

TR CM 0201

P Goswami, S Himesh

Coupled Atmospheric-Hydrologic Models to Forecast Spatio-temporal variability of Water Resource: A Concept Paper
January 2002

RR CM 0103

Anand Kumar

An Isotropic Numerical Scheme for Spinodal Decomposition
July 2001

RR CM 0104

Janaki Balakrishnan

A Symmetry Scheme for Amino Acids Codons
August 2001

RR CM 0105

Imtiyaz A Parvez, G F Panza, A A Gusev, F Vaccari

Strong Motion Amplitudes in Himalayas and Deterministic Approach towards First Order Microzonation Studies in a Part of Delhi City
September 2001

RR CM 0106

Somenath Mukherjee, Gangan Prathap

Analysis of Delayed Convergence in the Three Noded Timoshenko Beam Element using the Function Space Approach
September 2001

PD CM 0201

M Mukul, D Roy, S Satpathy, V A Kumar

Bootstrapped Spatial Statistics: A More Robust Approach to the Analysis of Spatial Data
January 2002

PP CM 0101

Malay Mukul, Sridevi Jade, V K Gaur, A P Krishna, Abdul Matin

The Geometry, Kinematics and Deformation Mechanisms in the Himalayan Hinterland and the Fish Transverse Zone in the Darjiling-Sikkim Himalayas and Deformation in the Shillong Plateau, North Eastern India
April 2001

PP CM 0102

Imtiyaz A Parvez, Sridevi Jade, V K Gaur

Microzonation and Site Specific Ground Motion Modelling of Delhi City
May 2001

PP CM 0103

Sridevi Jade, Malay Mukul, V K Gaur

Establishment of Continuous Recording GPS Systems at Four Sites in North Eastern India
August 2001

PP CM 0104

K S Yajnik, S Himesh

Investigations into Environmental Restoration Strategies of Thungabhadra River System
November 2001

PP CM 0105

S Himesh, Shakeel Ahmed, K Subrahmanyam, Malay Mukul, Imtiyaz A Parvez, Prashant Goswami

Comprehensive Assessment of Groundwater Resource in Delhi and Surroundings
December 2001

PP CM 0201

Sridevi Jade and M RadhaKrishna

A Kinematic Study of suspected Major Active Shear/Fault Zones in the west Southern eninsular Shield of India: Implications on Seismogenesis
March 2002

PP CM 0202

Sridevi Jade, Imtiyaz A Parvez and V K Gaur

Microzonation studies in Trans-Jamuna area of Delhi city using micro-tremor measurements, Indo french proposal,
March 2002

6.6 Invited Talks

M Mukul

Tectonic Setting and Kinematics of the Kachchh Basin and the Bhuj 2001 Earthquake at Physical Research Laboratories, Ahmedabad. June 21, 2001

G Prathap

From Art to Science, Engineering and Technology to Modelling : 'A historical journey. AICTE-ISTE Summer School on Advances in Mathematical Modelling and Engineering Solutions, Vellore Engineering College, Vellore 08 June 2001

From Models to Super Models : Error Analysis of FEA. AICTE-ISTE, Summer School on Advances in Mathematical Modelling and Engineering Solutions Vellore Engineering College, Vellore, 08 June 2001

Computational Structural Mechanics : From Science to Computation, AICTE-ISTE Short term Course on Computer Applications to Civil Engineering Problems (Inaugural Lecture)
Malnad College of Engineering, Hassan, Karnataka, 03 September 2001

FEA as Fun : Mathematical Games and Metamagical Themes, Three day continuing Education Programme on Finite Element Analysis for Mechanical Engineering Problems (Valedictory Lecture)
Sir M Visvesvaraya Institute of Technology, Bangalore
19 October 2001

Anand Kumar

Oscillatory Rayleigh-Benard Convection in Viscoelastic Liquid, Fluid Dyn. Coll., Bangalore, August 1, 2001

Isotropic Averaging for Spinodal Decomposition Simulation, Raman Res. Inst., Bangalore
January 23, 2002

Oscillation Rayleigh-Benard Convection in Viscoelastic Liquid, Ind. Inst. Tech., Kanpur
February 19, 2002

M K Sharada

Mathematical Modelling of Marine Biogeochemical Cycles at C-MMACS
Space Application Centre, Ahmedabad,
05 December 2001

Imtiyaz A. Parvez

“Deterministic Seismic zonation and Microzonation in India and Strong Motion Amplitudes in Himalayas”, in the Indo-Italian workshop on Seismic Risk Evaluation at National Geophysical Research Institute, Hyderabad on March 7, 2001

6.7 Conferences/Symposia/Workshops Attended

9 - 14 April 2001

S Himesh

Indo-French Workshop on Climate and Environment
C-MMACS, Bangalore

9-14 April 2001

G K Patra

School on Recent Advances in Climate and Environmental Research

Indo-French Workshop on Climate and Environment
Bangalore

M K Sharada

Indo-French Workshop on Climate and Environment
Bangalore

Imtiyaz A Parvez

Training program on “GPS Theory, Data Analysis and Processing” sponsored by Department of Science and Technology at C-MMACS, Bangalore during January 21-February 01, 2002

Workshop/Training Course on “Broad-Band Seismology” sponsored by Department of Science and Technology at National Geophysical Research Institute, Hyderabad during September 3-22, 2001

Sridevi Jade

International Conference on Seismic Hazard with particular reference to Bhuj Earthquake of January 26, 2001, October 3-5, 2001

At C-MMACS

6.8 Workshops/Scientific Meetings

Indo-French Workshop on Climate and Environment
09-14 April 2001

Advanced School on Recent Advances in Climate and Environmental Research (RACER)
11-13 April 2001

Quantum Information System and Cryptography
29 May 2001

Indo-French Centre for Environment and Climate Discussion Meeting on Forecasting Extreme Events (FOXES), C-MMACS, March 5-9, 2002

6.9 Lectures

23 February 2001

Itamar Procaccia

Weizmann Institute of Science, Rehovot, Israel
Statistical Theory of Turbulent Transport

19 April 2001

C Shaji

Natl. Res. Instt. for Earth Science and Disaster Prevention,
Japan
Response of the North Tropical Indian Ocean Associated
with the Dominant Modes of Interannual Climate Variability

29 May 2001

P G Vaidya
National Institute of Advanced Studies, Bangalore
Recent Development in Chaotic Cryptography

08 August 2001

Jean Michel Andre
Land-Ocean Interactions in the Coastal Zone (LODYC),
Paris
Modelling Tuna Environment in the Tropical Oceans

18 September 2001

S Mukherjee
National Aerospace Laboratories, Bangalore
Analysis of Delayed Convergence in the Three Noded
Timoshenko Beam Element Using the Function Space
Approach

12 November 2001

M Dileep Kumar
National Institute of Oceanography, Goa
West Coast of India – a Biogeochemically Dynamic and
Sensitive Ecosystem

13 November 2001

M M Sarin
Physical Research Laboratory, Ahmedabad
Importance of Riverine C-Fluxes for the C-Cycle in Asian
Countries

05 December 2001

Eugene I. Nikiforovich
Institute of Hydromechanics, National Academy of Science,
Ukraine, Kiev
A New Approach to the Study of Organised Vortical Motion
Effected by Body Forces

07 December 2001

V Satyan
Indian Institute of Tropical Meteorology, Pune
Climate Modelling Activities at IITM: An Overview

10 December 2001

K Vala Ragnarsdottir
University of Bristol, United Kingdom
The Uranium Cycle and Depleted Uranium

10 December 2001

Berney J Wood
University of Bristol, United Kingdom
Organised by C-MMACS, held at GSI,
Mantle Dynamics

6.10 Seminars by C-MMACS staff

09 February 2001

Gopal Krishna Patra
Cryptography : A Symmetric Encryption Scheme Using
Modified Back-Propagation Algorithm

01 March 2001

P Goswami
High Resolution Monsoon Simulation : Experiments with a
GCM

02 May 2001

Gopal Krishna Patra
Quantum Cryptography : The Future Technology

16 May 2001

V Anil Kumar
Network Intrusion Detection Systems, Its need and
Capabilities in a Packet Switched Network

14 June 2001

Malay Mukul
Tectonic Setting and Kinematics of the Kutch Basin and
the Bhuj 2001 Earthquake

19 June 2001

Anand Kumar
Oscillatory Rayleigh-benard Convection in a Viscoelastic
Liquid

04 July 2001

P Goswami
High Frequency Oscillations and their Impact on Interannual
Variabilities of Monsoon

18 July 2001

Anand Kumar
Isotropic Average for Microstructural Simulation

February 2002

M K Sharada and K S Yajnik
Ammonium Inhibition of Nitrate uptake: Implications of
recent experiments on modelling

An Introduction to information security in inter-networked environment. Brainstroming Session on “Quantum Information System and Cryptography
Bangalore, May 29, 2001

Quantum Cryptography?
Brainstroming Session on “Quantum Information System and Cryptography
Bangalore, May 29, 2001

6.11 Seminars by C-MMACS Fellows/ Associates

12 January 2001
Sandeep K, SRF
Inverse Problems and Adjoint Method

07 August 2001
Janaki Balakrishnan, Fellow
A Symmetry Scheme for Amino Acids Codons

21 August 2001
Imtiyaz Ahmed Parvez, SRA
Strong Motion Amplitudes in Himalayas and Deterministic Approach towards Microzonation in the Part of Delhi City

6.12 Visitors

Simon See Chong Wee, Asia Pacific Technology Networks, SGI, Singapore
12 January 2001

Howard Barnes, Post Sunlight Lab, UK
18 January 2001

Keith Priestly, Bullard Labs, University of Cambridge, UK
22 – 30 January 2001

Andrew Wyatt, Silicon Graphics, Australia
22 February 2001

Itamar Procaccia, Weizmann Institute of Science, Rehovot, Israel
23 February 2001

S Elmaleh, Alliance Franchise, Bangalore
08 March 2001

Acad. Yatskiv, Ministry for Education and Science, Ukraine
16 March 2001

S Elmaleh, Alliance Franchise, Bangalore
09 – 14 April 2001

C Shaji, Shaji Nivas, Palayam Kunnu P.O., Trivandrum
18 – 20 April 2001

Harish Upadhyaya, Centre for Atmospheric Sciences, IIT, Delhi
07 – 12 May 2001

P V S Raju, CAS, IIT, Delhi
29 May – 15 June 2001

Simon Hosking, British High Commission, New Delhi
11 June 2001

Saha, Dept. of Ocean Development, New Delhi
12 – 14 June 2001

Jeff Patton, Platform Computing Corporation, Ontario, Canada
20 June 2001

Prof Leorotheng, Dept. of Civil Engineering, University of Waterloo, Ontario, Canada
20 July 2001

Leo Ro Renbung & Rollen Bung, University of Waterloo, Ontario, Canada
20 – 26 July, 2001

Prof Norikazu Shimuzu, Dept. of Civil Engg., Yamaguch University, Japan
22 July 2001

Y Pande, Central Building Research Institute, Roorkee
23 – 25 July 2001

Ashok Kumar, Tezpur University, Napaam, Tezpur
24 July – 7 August, 2001

Jean Michel Andre, LODYC, France
07 – 09 August 2001

B N Krishnamurthy, Department of Ocean Development, New Delhi
10 – 16 August 2001

Dr Chantal Kahn Malek & Dr Samuel Elmaleh, Attache for Science & Tech., Alliance Franchise, Bangalore
27 September 2001

Robert Duncan Kerr & Richard Fowler, M/s. Beyond
Productions, Australia
27 – 28 September 2001

Mark Garlinghouse & Rajdev Narayanasamy, Institute of
Scientific Information, Philadelphia
12 October 2001

Jean Phillippe Duvel & Jerome Vialard
LMD – ENS –24, Rue Lhemond, France
23 October 2001

G Ragesh, National Institute of Ocean Technology, Chennai
24 – 26 October 2001

Mohan Kumar & P V Joseph, Cochin Univ. of Science &
Technology, Kochi
24 – 27 October 2001

C V K Prasada Rao, National Physical Oceanographic Lab,
Kochi
24 – 27 October 2001

K Radhakrishnan, K Ravichandran, Sudheer Joseph & T V
S Udaya Bhaskar, INCOIS, Hyderabad
24 – 27 October 2001

Safi Naqvi, Department of Ocean Development, New Delhi
11 – 14 November 2001

T K Jana, Calcutta University, Kolkata
11 – 14 November 2001

R Ramesh, Instt. of Ocean Management, Anna University,
Chennai
11 – 14 November 2001

Dr V Satyan, Dr R Krishnan, K V, Ramesh, Indian Institute
of Tropical Meteorology, Pune
05 – 07 December, 2001

Prof B J Wood & Prof K Vala Ragnarsdo Hir, University of
Bristol, UK
08 - 11 December 2001

Prof S Elmaleh, Alliance Franchise, Bangalore
11 December 2001

N N Dutta, Regional Research Laboratory, Jorhat
21 – 23 December 2001