

## 6. PUBLICATIONS, PRESENTATIONS & OTHER SCIENTIFIC ACTIVITIES

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### 6.1 Publications in Journals/Books

- Binson Joseph and P. S. Swathi**, 1999  
Lagrangian Particle Transport in the Indian Ocean-A Model Study  
JGR-Oceans, 104 (C3), pp 5211-5224
- A. O. Gliko, **R. N. Singh** and **P. S. Swathi**, 1999  
Physical Approach to the Problem of Origin of Charnockitic Rocks of Southern India: Mechanisms of Crustal Heating and Transfer of Carbon Dioxide  
Russian Journal of Earth Sciences, 1 (5)
- P. Goswami**, 1999  
Experimental Forecasts of All-India Monthly and Summer Monsoon Rainfall Using Neural Networks  
Current Science, 76, pp 1481-1483
- N. K. Indira** and **K. S. Yajnik**, 2000  
Statistical Analysis and Visualisation of Gold Mine Data - A Case Study of Kolar Gold Mine  
Journal of Geophysics, Vol. 21 (N1)
- T. R. Krishna Mohan**, 1999  
Bioremediation of Contaminated Soil Beds and Groundwater- A Simulation Study  
Sadhana, Vol. 24, Parts 1&2, pp 41-52
- A. Kumar**, 1999  
Role of Flow Consistent Grid in CFD  
Computers and Fluids, 28, pp 265-280
- M. Mukul**, 1999  
Strain variation in Fold-and-Thrust Belts: Implications for Construction of Retrodeformable Models  
Proceedings of the Indian Academy of Sciences, (Earth & Planetary Sciences), 108 (3), pp 207-221
- K. Rameshan** and **P. Goswami**, 1999  
Mechanism of Broad Spectrum Variabilities in the Tropics  
Geophy Res. Lett, 26, pp 323-326
- M. K. Sharada** and **K. S. Yajnik**, 1999  
Comparison of Simulations of a Marine Ecosystem Model with CZCS Data in the North Indian Ocean  
*In: Inverse Methods in Global Biogeochemical Cycles*  
American Geophysical Union, Geophysical Monograph No. 114, pp 197-203

**Sridevi Jade** and T. G. Sitharam, 2000  
Analysis of Strength and Moduli of Jointed Rocks  
International Journal of Geotechnical and Geological Engineering, 18, pp 1-19

### 6.2 General Articles

- M. Mukul**, 2000  
Researching a Ph.D. in the USA  
Current Science, 78 (4), pp 368-369
- P. S. Swathi**, 1999  
Biogeochemistry of the Arabian Sea: Modelling and Synthesis  
Current Science, 76 (10), pp 1294

### 6.3 Presentations at Conferences/ Symposia/Workshops

- P. Goswami**  
An Integrated Meso-Scale Modelling Programme  
Discussion Meeting on Issues in Meso-Scale Modelling  
C-MMACS, Bangalore, Aug 6-7, 1999
- P. Goswami**  
Exploration of Implicit Structure in Genetic Sequences Using Neural Networks  
Interactive meet on Genomic Research in New Millennium  
CBT, New Delhi, Feb 23-25, 2000
- N. K. Indira**  
Estimation of Coal Properties in Wardha Valley Coalfields  
National Seminar on Recent Techniques in Mineral Processing, Waste and Environment Management (RETMEM)  
Bhubaneswar, Feb 1-2, 2000
- John Paul, M. B. Ananda, P. Dileep Kumar** and **V. K. Gaur**  
On Strain Rate of South Indian Peninsula and Slip Rate of Garhwal Himalayan Thrusts Using GPS  
IUGG General Assembly 1999  
Birmingham, U.K., Jul 18-24, 1999
- R. N. Singh** and **P. S. Swathi**, 1999  
General Circulation Modelling of the Indian Ocean with Satellite Inputs  
*In: Proceedings of International Year of the Oceans:*

Tutorials-Cum-Workshop on Satellite  
Oceanography, Methods and Applications (SOMA)  
S. K. Basu and B. Manikkam (eds.)  
SAC, Ahmedabad, pp 179-190

**Sridevi Jade**, B. C. Bhat, **M. B. Ananda** and **V. K. Gaur**  
GPS Derived Slip Rate along the Karakoram Fault in the  
Indo-Eurasian Continental Collision Zone  
IUGG General Assembly 1999  
Birmingham, U.K., Jul 18-24, 1999

**Sridevi Jade** and T. G. Sitharam  
Finite Element Modeling of Jointed Rock Mass  
*In: Proceedings of the International Conference on Rock  
Engineering Techniques for Site Characterization*  
P. C. Jha and R.N. Gupta (eds.)  
Oxford PIBH Publishing Pvt. Ltd., 1999, pp 375-380

**P. S. Swathi**  
Searching for Scientific Data  
Web '99: Scientific India on the Web During the Next  
Millennium  
NAL/C-MMACS, May 5-7, 1999

**P. S. Swathi**  
Large-Scale Ocean Modelling  
Indo-Myanmar Workshop on Oceanography  
NIO, Goa, Sep 28-29, 1999

**P. S. Swathi**  
Validation of MSMR SST data  
MSMR User Workshop  
SAC, Ahmedabad, Mar 2000

**P. S. Swathi**, **M. K. Sharada** and **K. S. Yajnik**  
A Coupled Physical-Chemical-Biological Model of the  
Indian Ocean  
IUGG General Assembly 1999  
Birmingham, U.K., Jul 20, 1999

O. Talagrand, **P. Goswami** and F. Bouttier  
A Posteriori Validation of Assimilation Algorithms  
Third WMO Symposium on Assimilation of Observations  
in Meteorology and Oceanography  
Qubec, Canada, Jun 7-11, 1999

## 6.4 Invited Talks

**P. Goswami**  
Neural Network : A New Modelling Tool  
IIA, Bangalore, Oct 2, 1999

**A. Kumar**  
Supersymmetric Finite - Difference Formulae  
TIFR, IISc Campus, Bangalore, Apr 1, 1999

**M. Mukul**  
Neotectonics in the Darjeeling Himalayas: Implications for  
the Deformation Characteristics of the Himalaya Wedge  
Centre for Earth Science Studies, Thiruvananthapuram,  
Jun 23, 1999

## 6.5 Conferences/Symposia/Workshops Attended

**V. Anil Kumar**, **G. K. Patra**, **P. S. Swathi** and  
**R. P. Thangavelu**  
Web '99: Scientific India on the Web During the Next  
Millennium  
NAL/C-MMACS, May 5-7, 1999

**M. P. Joy** and **T. R. Krishna Mohan**  
Discussion Meeting on Recent Trends in  
Nonequilibrium Statistical Physics  
IISc, Bangalore, Nov 15-25, 1999

**P. S. Swathi** and **R. P. Thangavelu**  
Workshop on Parallel Computing Algorithms and  
Applications (PCAA 99)  
C-DAC, Pune, Jun 21-25, 1999

## 6.6 At C-MMACS

### 6.6.1 Meetings and Workshops

Workshop on Sea Level Variations  
Apr 13-14, 1999

Discussion Meeting on Issues in Meso-Scale Modelling  
Aug 6-7, 1999

### 6.6.2 Lectures

Apr 8, 1999  
Prof. P. G. Vaidya, University of Washington, USA  
Correcting Leakage and Aliasing Errors in FFT

Apr 22, 1999  
Dr. Pierre Mazzega, CNES, Toulouse, France  
Non-Linear Inverse Problems in Biogeochemical  
Modelling

- May 26, 1999  
Prof. A. Kapur, JMI University, New Delhi  
Mathematical and Numerical Modelling of Certain Duct Acoustics Problems
- May 27, 1999  
Prof. J. Bona, University of Texas, Austin, USA  
Wave-Generated Sediment Transport and the Formation of Sand Bars
- May 31, 1999  
Dr. H. A. Nagarajaram, University of Cambridge, UK  
Comparative Modelling of Proteins- State of the Art
- Jun 16, 1999  
Dr. A. K. Singh, NAL, Bangalore  
From Laboratory Experiments to the Earth's Inner Core
- Jun 23, 1999  
Prof. P. G. Vaidya, University of Washington, USA  
Synchronisation- Action at a Distance
- Jul 9, 1999  
Prof. Lakshmi Kantha, University of Colorado, USA  
Real Time Nowcast/Forecasts in Marginal and Semi - Enclosed Seas
- Jul 9, 1999  
Prof. J. N. Reddy, Texas A&M University, Texas, USA  
Penalty Finite Element Models in Incompressible Fluid Flow
- Jul 15, 1999  
Prof. Jagdish Shukla, George Mason University and Director, Center for Ocean-Land- Atmosphere Studies, Calverton, Maryland, USA  
Predictability of Short-Term Climate Variations
- Aug 20, 1999  
Dr. R. N. Singh, NEERI, Nagpur  
Mathematical Modelling Requirements for Environment
- Sep 6, 1999  
Dr. Venugopal Vuruputur, COLAS, Maryland, USA  
A Space-Time Downscaling Model for Rainfall
- Sep 27, 1999  
Dr. R. Schlich, Universite De Strasbourg, France  
Structure and Geological History of the Kerguelen Plateau
- Nov 12, 1999  
Dr. A. Gnanadesikan, Program in Atmospheric & Ocean Sciences, Princeton University, USA  
How the Southern Ocean Affects the Global Thermohaline Circulation
- Nov 18, 1999  
Dr. T. R. Ramamohan, RRL, Trivandrum  
Modelling the Effect of Strong Brownian Motion on Chaos in Suspension Rheology
- Nov 19, 1999  
Dr. Anita Mehta, S.N. Bose National Centre for Basic Sciences, Calcutta  
Avalanching on Rough Surfaces
- Dec 9, 1999  
Dr. P. K. Gupta, University of Roorkee, Roorkee  
An Overview of Optimisation Technique
- Dec 10, 1999  
Dr. P. K. Gupta, University of Roorkee, Roorkee  
Local Optimisation Technique
- Dec 13, 1999  
Dr. P. K. Gupta, University of Roorkee, Roorkee  
Global Optimisation Technique – I
- Dec 15, 1999  
Dr. P. K. Gupta, University of Roorkee, Roorkee  
Global Optimisation Technique – II
- Dec 17, 1999  
Dr. P. K. Gupta, University of Roorkee, Roorkee  
Hybrid Technique of Optimisation
- Jan 4, 2000  
A. J. Bhattacharyya, S. N. Bose National Centre for Basic Sciences, Calcutta  
Study of Ion Conducting Polymers by Experiment and Computer Simulation
- Feb 22, 2000  
Dr. D. Shankar, NIO, Goa  
Low-Frequency Variability of Sea Level Along the Coast of India
- 6.6.3 Visitors**
- Prof. A. Kapur, JMI Univ., New Delhi  
May 21- Jun 2, 1999
- Prof. D. Gupte Sarma, NGRI, Hyderabad  
Jun 1, 1999

Dr. M. D. Gupte, Director, National Institute of Epidemiology, Chennai  
Jun 1999

Dr. Jagdish Shukla, Professor, George Mason University and Director, Center for Ocean-Land- Atmosphere Studies, Calverton, Maryland, USA  
Jul 15, 1999

Mr. Kishore Kumar and Mr. Elangovan, National Institute of Epidemiology, Chennai  
Aug 23-24, 1999

Shri B. N. Krishnamurthy, DOD, New Delhi  
Sep 7, 1999

Dr. R. Schlich, Univ. De Strasbourg, France  
Sep 27-29, 1999

Dr. D. R. Sikka, IITM, Pune  
Sep 30 - Oct 8, 1999

Prof. U. C. Mohanty, CAS, IIT, Delhi  
Oct 3-4, 1999

His Excellency Claude Blanchemaison, Ambassador of France to India, New Delhi  
Nov 3, 1999

Dr. Olivier Pironneau, Univ. of Paris, France  
Prof. Jean-Pierre Violette, IGP, Jussieu, France  
Dr. Olivier Monga, INRIA, France  
Mr. Bertrand Fleutiaux, Counsellor for Science and Technology, French Embassy, New Delhi  
Nov 3-4, 1999

Dr. A. Gnanadesikan, Atmospheric and Ocean Sciences Program, Princeton University, USA  
Nov. 7-12, 1999

Dr. Murali Manohar Joshi, Hon'ble Minister for HRD, S&T, DOD and Vice President, CSIR, New Delhi  
Nov 26, 1999

Dr. M. D. Gupte, Director, National Institute of Epidemiology, Chennai  
Nov 30, 1999

Dr. P. K. Gupta, Univ. of Roorkee, Roorkee  
Dec 6-18, 1999

Mr. Kishore Kumar and Mr. Elangovan, National Institute of Epidemiology, Chennai  
Dec 29-31, 1999

A. J. Bhattacharya, S.N. Bose National Centre for Sciences, Calcutta  
Jan 1-9, 2000

Dr. V. Balaji, GFDL Princeton and SGI, USA  
Jan 3-4, 2000

Dr. V. S. Somavanshi, Director-General, Fishery Survey of India (FSI), Bombay  
Dr. A. K. Bhargava, FSI, Bombay  
Dr. (Mrs.) S. Varghese, FSI, Bombay  
Jan 27-28, 2000

Dr. M. D. Gupte, Director, National Institute of Epidemiology, Chennai  
Feb 23, 2000

Dr. D. Shankar, National Institute of Oceanography, Goa  
Feb 22, 2000

Mr. Kishore Kumar and Mr. Elangovan, National Institute of Epidemiology, Chennai  
Feb 23-25, 2000

Mr. P. V. S. Raju, IIT, Delhi  
Feb. 28 - Mar 21, 2000

Prof. U. C. Mohanty, CAS, IIT, Delhi  
Feb 28 – Mar 21, 2000

Prof. Alain Derdulede, CNRS & European Commission, France  
Mar 11, 2000