

KNOWLEDGE ACTIVITIES & PRODUCTS

Knowledge creation, knowledge enhancement, knowledge dissemination and knowledge management have been among the core activities of CSIR-4PI. Ever since its inception, CSIR-4PI has maintained a high knowledge output in terms of publications and other scientific programmes, knowledge synthesis and exchange through conferences, workshops, brainstorming sessions, etc.

Inside

- *Publications in Journals*
- *Publications in Books/Proceedings*
- *Presentations in Conferences/ Symposia/ Workshops/ Seminars*
- *Participation in Conferences/ Symposia/ Workshops/ Training Programmes*
- *Conference/Workshops/Seminars/Scientific Meetings at CSIR-4PI Invited Talks*
- *Seminars/Lectures*
- *Visitors at CSIR-4PI*

Publications in Journals

Anil Kumar V, Debabrata Das, Data Enriched SACK: A novel acknowledgement generation scheme for secure SCTP, *IEEE Communications Letters*, 18 (12), 2109-2112, 2014.

Devasena C K, Sharada M K, Swathi P S, Yajnik K S, Evaluation of biogeochemical model simulations using World Ocean Atlas and satellite observations in the Arabian Sea, *International Journal of Remote Sensing*, 35(14), 5448-5458, 2014.

Nagaraj Bhat, Sachin S Bhat, Manumohan and **Gouda K C**, Pixel based volume estimation of water bodies using remote sensing and GIS, *International Journal of Electronics & Communication Technology*, 5 (4), Spl-1, 2014.

Kiran Gowda, **Gouda K C**, Naveen L, Nandish, Practical approaches for estimating end-to-end delay in multi-hop networks, *International Journal of Advanced Research in Computer Science and Software Engineering*, 4 (7), 927-930, 2014.

Gouda K C, Chowdari K K, Nagaraj Bhat, Chandrashekar S N, Development of a visualization system for climate data analysis, *International Journal of Engineering Trends and Technology*, 13(4), 166-168, 2014.

Gouda K C, Anurag Patro, Dines Dwivedi, Nagaraj Bhat, Virtualization approaches in cloud computing, *International Journal of Computer Trends and Technology*, 12 (4), 161-166, DOI 10.14445/22312803/IJCTT-V12P132, 2014.

Gouda K C, Dines Dwivedi, Anurag Patro, Nagaraj Bhat, Migration management in cloud computing, *International Journal of Engineering Trends and Technology*, 12(9), 466-472, DOI 10.14445/22315381/IJETT-V12P288, 2014.

Bhaavan M, **Gouda K C**, Anandkumar K R, Virtualization, resource allocation and security measures in cloud computing, *International Journal of Computer Science Engineering and Technology*, 4(6),190-193, 2014.

Pooja V, **Gouda K C**, Anandkumar K R, Impacts of climate parameters on pavement service life at regional scale, *International Journal of Science, Engineering and Technology Research*, 3(6), 1866-1869, DOI 10.14445/22312803/IJCTT-V11P152, 2014.

Vinutha H D, **Gouda K C**, Chandan K N, Electric load forecasting using a neural network approach, *International Journal of Computer Trends and Technology*, 11 (6), 245-249, 2014.

B Indu, **Gouda K C**, Nirmala H, Weather modelling in HPC environment, *International Journal of Scientific Research in Computer Science Applications and Management Studies*, 3(3), 3, 2014.

Mukhesh Gowda, **Gouda K C**, Nirmala H, Development of precision agriculture information system using dynamical model, *International Journal of Scientific Research in Computer Science Applications and Management Studies*, 3(3),4, 2014

Gouda K C, Preetham V R, Shanmukha Swamy M N, Microcontroller based real time weather monitoring device with GSM, *International Journal of Science, Engineering and Technology Research*, 3(7), 1960-1963, 2014.

Goswami P, Murty U S N, Srinivasa Rao M, **Swathi T K**, Relative roles of weather variables and change in human population in malaria: Comparison over different states of India, *PLOS ONE*, 9 (6), e99867, 2014

Lauderdale J M, Caminade C, Heath A E, Jones A E, MacLeod D A, **Gouda K C**, Murty U S N, **Goswami P**, Srinivasa Rao M, Morse A P, Towards seasonal forecasting of malaria in India, *Malaria Journal*, 13 (310), 2014.

Goswami P, Renu Goyal, **Prakasa Rao E V S**, **Ramesh K V**, Susharshan M R, Ajay D, Weather-based forecast model for capsule rot of small cardamom, *Current Science*, 107 (6), 1013-1019, 2014.

Goswami P, **Kantha Rao B**, Simulation of heavy rainfall events over Indian region: a benchmark skill with a GCM, *Climate Dynamics*, 12, 2014, DOI:10.1007/s00382-014-2444-6, 2014

Goswami P, Nishad S N, Assessment of agricultural sustainability in changing scenarios: A case study for India, *Current Science*, 106 (4), 552-557, 2014.

Goswami P, **Baruh J**, Quantitative assessment of relative roles of drivers of acute respiratory disease, *Nature Scientific Reports*, 4, 6532, 2014.

Goswami P, **Nishad S N**, Virtual water trade and time scales for loss of water sustainability: A comparative regional analysis, *Nature Scientific Reports*, DOI: 10.1038/srep09306, 2015.

Goswami P, **Ramesh K V**, Meeting report MP-TRACS crops, *Current Science*, 108 (5), 770-771, 2015.

Goswami P, Need for objective, quantitative and inclusive performance matrix for research design, *Current Science*, 108 (3), 320-321, 2015.

Goswami P, Prevention of malaria through forecast based precision vector sanitation and exposure advisory: A conceptual and feasibility analysis, *Current Science*, 108 (1), 19-21, 2015.

Jayasankar C B, **Sajani Surendran**, and **Rajendran K**, Robust signals of future projections of Indian summer monsoon rainfall by IPCC AR5 climate models: Role of seasonal cycle and interannual variability, *Geophys. Res.*

Lett., DOI: 10.1002/2015GL063659, 2015.

Tiwari M, **Mohan T R K**, Sen S, Drag-force regimes in granular impact, *Physical Review E*, 90 (6), 2014.

Nekrasova A K, Kossobokov V, **Parvez I A**, Seismic hazard and seismic risk assessment based on the unified scaling law for earthquakes: Himalayas and adjacent regions, *Physics of the Solid Earth*, 51 (2), 268–277, 2015.

Nekrasova K V, **Parvez I A**, Tao X Seismic hazard and risk assessment based on the unified scaling law for earthquakes, *Acta Geod Geophys*, 50, 21–37, 2015.

Trivedi P C, Joshi H P, **Parvez I A**, A preliminary study on rainfall pattern before and after the January 26, 2001 Bhuj earthquake (mw 7.7) over Kachchh region of western peninsular, India. *International Journal of Geosciences*, 5, 1080-1087, 2014.

Chakraborty N, **Patra G K**, Functional encryption for secured big data analytics, *International Journal of Computer Applications* (0975-8887), 107 (16), 19-22, 2014.

Chakraborty N, **Patra G K**, Bhilare D S, Gupta V B, On securing big data analytics, *International Journal for Scientific Research & Development*, 2 (2), 2014.

Chakraborty N, **Patra G K**, Advanced cryptographic techniques for secured cloud computing, *International Journal of Computer Application*, 10-13. 2014

Santhanalakshmi S, Sangeeta K, **Patra G K**, Secure key stream generation using computational intelligence techniques, *Int J Computer Technology & Applications*, 5 (3), 967-972, 2014.

Supriya M, Sangeeta K, **Patra G K**, Hierarchical trust model to rate cloud service providers based on infrastructure as a service, *Int J Computer Technology & Applications*, 5 (3), 1102-1111, 2014.

Vandana, **Patra G K**, Heena Kousar, Secure multiparty key generation protocol using neural cryptography, *International Journal of Advanced Research in Computer Science and Software Engineering*, 4(6), 366-369, 2014.

Shashikanth K, Madhusoodhanan C G, Ghosh S, Eldho TI, **Rajendran K**, Murtugudde R, Comparing statistically downscaled simulations of Indian monsoon at different spatial resolutions, *Journal of Hydrology*, 519, 3163-3177, 2014.

Rakesh V, Goswami P, Impact of data assimilation on high-resolution rainfall forecasts: A spatial, seasonal, and category analysis, *J Geophys Res Atmos*, 119, 2014.

Penmatsa R, **Senthilkumar V**, Mathematical modeling of carbon nanostructures using symbolic computing,

International Journal of Engineering and Innovative Technology, 3 (10), 104-106, 2014.

Sharada M K, Devasena C K, Swathi P S, Sundara Deepthi M V, Shelva Srinivasan M K and **Yajnik K S**, Seasonal and interannual variability of marine ecosystem in the north Indian Ocean: A Model Evaluation Study, *International Journal of Ocean and Climate Systems*, 6 (1), 19-34, 2015

Shukla A K, Leal H V, **Ramamohan T R**, Martinez L H, Srinivas S, Chua J H, Application of the homotopy perturbation method and the homotopy analysis method for the dynamics of tobacco use and relapse, *Journal of Interpolation and Approximation in Scientific Computing*, jiasc-00064, 2014.

Srinivas S, Reddy A S, **Ramamohan T R**, Shukla A K, Influence of heat transfer on MHD flow in a pipe with expanding or contracting permeable wall, *Ain Shams Engineering Journal*, 5 (3), 817–830, 2014.

Srinivas S, Reddy A S, **Ramamohan T R**, Shukla A K, Thermal-diffusion and diffusion-thermo effects on MHD flow of viscous fluid between expanding or contracting rotating porous disks with viscous dissipation, *J of the Egyptian Mathematical Society*, doi:10.1016/j.joems.2014.06.017.

Srinivas S, Vijayalakshmi A, **Ramamohan T R**, Reddy A S, Hydromagnetic flow of a nanofluid in a porous channel with expanding or contracting walls, *Journal of Porous Media*, 17 (11), 953-967, 2014.

Srinivas S, Reddy A S, **Ramamohan T R**, Mass transfer effects on viscous flow in an expanding or contracting porous pipe with chemical reaction, *Heat Transfer—Asian Research*, DOI: 10.1002/htj.21136.

K Ansari, M Mukul, **Sridevi Jade**, Dislocation modeling of the 1997-2009 high-precision global positioning system displacements in Darjiling-Sikkim Himalaya, India, *International Journal of Environmental, Ecological, Geological and Mining Engineering*, 8 (10), 614-617, 2014.

Sridevi Jade, Mukul M, **Gaur V K**, Kumar K, Shringeshwar T S, Satyal G S, Dumka R K, Jagannathan S, **Ananda M B, Dileep Kumar P**, and Banerjee S, Contemporary deformation in the Kashmir-Himachal, Garhwal and Kumaon Himalaya: Significant insights from 1995-2008 GPS time series, *Journal of Geodesy*, 88(6), 539-557, June 2014

Glorie S, De Grave J, **Singh T**, Payne J L, Collins A S, Crustal root of the Eastern Dharwar Craton: Zircon U-Pb age and Lu-Hf isotopic evolution of the East Salem Block, southeast India, *Precambrian Research*, 249, 229-246, 2014.

Publications in Books/Proceedings

Anil Earnest, John Paul, Rajendran C P, Kusala Rajendran, Inter-seismic deformation and plate coupling along the Andaman micro-plate margin: Geodetic constraints using 1996-2004 GPS data, American Geophysical Union, Proceedings of AGU Fall Meeting 2014.

Sunilkumar T C, **Anil Earnest**, Source process of the Sikkim earthquake 18th September, 2011, inferred from teleseismic body-wave inversion, American Geophysical Union, Proceedings of AGU Fall Meeting 2014.

Sunilkumar T C, **Silpa K, Anil Earnest**, Source process of the 18th September, 2011 Mw 6.9 Nepal – Sikkim-Himalaya earthquake - insights from tele-seismic body-wave inversion, National Workshop on Continental Crust Sequence in the Evolution of Indian Subcontinent, Trivandrum, January 20-21, 2015.

Chiranjeevi Vivek G, Sudhakar Tata, Tracking ship using INSAT, Coordinates, X(12), 16-21, 2014

Pooja V, **Gouda K C**, Anandkumar K R, Modelling impacts of climate change on road infrastructure at regional scale, Proceedings of 3rd National Conference on Current trends in Computer Science and Engineering (CSECONF-14), Jain University, Bangalore, 14 June 2014.

Indu B, **Gouda K C**, Nirmala H, Benchmark approach for regional climate model, Proceedings of 3rd National Conference on Current trends in Computer Science and Engineering (CSECONF-14) , Jain University, Bangalore, 14 June 2014.

Vinutha H D, **Gouda K C**, Chandan K N, Application of ANN for electric load forecast using weather Parameters, Proceedings of 3rd National Conference on Current trends in Computer Science and Engineering (CSECONF-14) , Jain University, Bangalore, 14 June 2014.

Sadiya Aman, Abhitha J, **Gouda K C**, Development of software system for weather informatics, Proceedings of International Conference on Futuristic Innovations and Challenges to Diversity Management, Emerging Technologies & Sustainability for Inclusive Industrial Growth, Jyotivivas College, Bangalore, 30-31, October 2014.

Nagaraj Bhat, **Gouda K C**, Manumohan, Reshma Bhat, Monitoring and Estimation of Reservoir Water Volume using Remote Sensing and GIS, *Proceedings of AGU Fall Meeting*, San Francisco, 15-19 Dec, 2014.

Joshi S, **Gouda K C**, Kumar K, Pandey B, **Goswami P**, Rainfall Variability in Multi-Source Observations and Simulation over the Uttarakhand Himalaya, India, *Proceedings of AGU Fall Meeting*, San Francisco, 15-19 Dec, 2014.

Shyla B, **Gouda K C**, Laxmikantha B P, Climate Change Studies over Bangalore using Multi-source Remote Sensing Data and GIS, *Proceedings of AGU Fall Meeting*, San Francisco, 15-19 Dec, 2014.

Shruti Y, **Gouda K C**, Nageswar Rao P P, Bhat N, Impact of Climate Change on Sugarcane Crop at Regional Scale: A Study with Remote Sensing and GIS, *Proceedings of AGU Fall Meeting*, San Francisco, 15-19 Dec, 2014.

Gouda K C, Goswami P, Optimization configuration for simulation of ISM, Proceedings of the International Conference on Modeling, Simulation and Optimizing Techniques, DAV College, Jalandhar, 12-14 Feb, 2015.

Parvez I A, Rosset P, The role of microzonation in estimating earthquake risk. Shroder, J., Wyss, M. (Eds.), Earthquake Hazard, Risk, and Disasters. Elsevier, London, 273-308, <http://dx.doi.org/10.1016/B978-0-12-394848-9.00011-0>, 2014

Supriya M, Sangeeta K, **Patra G K**, Estimation of trust values for varying levels of trustworthiness based on infrastructure as a service, Proceedings of the 2014 International Conference on Interdisciplinary Advances in Applied Computing, ACM New York, 16, DOI 10.1145/2660859.2660921, October 2014.

Shekhar S, **Parvez I A**, Finite element analysis of the generalized magneto-thermoelastic inhomogeneous orthotropic solid cylinder, International Conference on Mathematical Sciences, 257-260, ISBN - 978-93-5107-261-4, 2014.

Ansari K, Mukul M, **Sridevi Jade**, Dislocation Modeling of the 1997-2009 high-precision global positioning system displacements in Darjiling-Sikkim Himalaya, India, International Conference on Earth Science and Climate Change (ICESCC 2014), Dubai, Extended Abstract, 2014

Ansari K, Srivastava V, Mukul M, **Sridevi Jade**, Understanding Himalayan earthquakes using high-precision Global Positioning System (GPS): Insights from the Darjiling-Sikkim Himalaya, RSAS 2014, IIT-Bombay, Mumbai, 57-58.

Prakash Barman, **Sridevi Jade**, Ashok Kumar, GPS derived crustal deformation rates in Assam Valley and Kopili Fault, National Seminar on Earthquake hazards: Monitoring, Mitigation and Management, Environmental Watch and Management Institute, Guwahati, Feb 2015.

Jagat Dwipendra Ray, **Vijayan M S M**, Kumar A, On the spectrum of GNSS time series of north-east India, National Seminar on Earthquake Hazards: Monitoring, Mitigation and Management, Environmental Watch and Management Institute, Guwahati, 20-22 February, 2015.

Chandramouli A R, Gokul K, Sivasankari T, Mangala Surya S S, **Vijayan M S M**, Saravanavel J, GPS based

estimation of co-seismic crustal deformation due to 11th April, 2012 Indian ocean Strike-Slip Earthquakes, National Seminar on Remote Sensing and GIS for Disaster Mitigation and Management, 13-14 March 2015

Presentations in Conferences/Symposia/ Workshops/Seminars

Anil Earnest, Active tectonic deformation: Possible applications of NISAR data on plate boundary processes, NISAR Science Workshop, ISRO-SAC, Ahmada-bad, 17-18 November 2014.

Bhimala K R, The role of soil moisture in malaria transmission over India, Indo-UK Workshop on Weather and Climate Informatics for Pro-Active Healthcare (WACIPH), 26-27 November, 2014, CSIR-4PI, Bangalore

Sahoo S K, **Gouda K C**, **Himesh S**, **Goswami P**. Simulation of extreme rainfall event over Himalayan Region using WRF model in Climate Symposium 2014, EUMETSAT, WCRP and ESA held at Darmstadt, Germany, 13-17 October 2014.

Nagaraj Bhat, **Gouda K C**, **Samantray P**, **Goswami P**, Monitoring and Modelling of the Climate Variability over the Western Ghats, *The Climate Symposium-2014*, EUMETSAT, WCRP and ESA, Darmstadt, Germany, 13-17 October 2014.

Gouda K C, **Samantray P**, **Goswami P**, A comparative study of Extreme Rainfall Events across the River Basins in Odisha, Tropmet-2015, National Symposium on Weather and Climate Extremes, IMS & Punjab University, Chandigarh, 15-18 February 2015.

Gouda K C, **Goswami P**, Assessment of wind energy over India, Workshop on Assessment, Modelling and Applications of Renewable Energy (AMARE), 20-22 May 2014, CSIR IICT, Hyderabad.

Gouda K C, **Goswami P**, Seasonal forecasting of Malaria over India using CSIR GCM and LMM., Indo-UK Workshop on Weather and Climate Informatics for Pro-Active Healthcare (WACIPH), 26-27 November, 2014, CSIR-4PI, Bangalore.

Goswami P, Pro-active healthcare: potential of climate and weather informatics, Indo-UK Workshop on Weather and Climate Informatics for Pro-Active Healthcare (WACIPH), 26-27 November, 2014, CSIR-4PI, Bangalore.

Himesh S, COMoN observations: Weather and climate variability, Indo-UK Workshop on Weather and Climate Informatics for Pro-Active Healthcare (WACIPH), 26-27 November, 2014, CSIR-4PI, Bangalore.

Sahoo S K, **Himesh S**, **Gouda K C**, **Mohapatra G N**, **Goswami P**, Simulation and Analysis of a Heavy Rain-

fall Event over Bengaluru during October 2013, Tropmet-2015, National Symposium on Weather and Climate Extremes, IMS & Punjab University, Chandigarh, 15-18 February 2015.

Juri Barua, Drivers of acute respiratory diseases, Indo-UK Workshop on Weather and Climate Informatics for Pro-Active Healthcare (WACIPH), 26-27 November, 2014, CSIR-4PI, Bangalore.

Mahapatra G N, Regional Issues: extreme heat waves in Odisha and role of weather informatics, Indo-UK Workshop on Weather and Climate Informatics for Pro-Active Healthcare (WACIPH), 26-27 November, 2014, CSIR-4PI, Bangalore.

Shekhar S, **Parvez I A**, Finite element method for deformation in porous thermoelastic material with temperature dependent properties, 59th Congress of the Indian Society of Theoretical and Applied Mechanics-ISTAM2014.

Patra G K, Mathematical models in designing cryptographic primitives: An inter-disciplinary approach, International Multi-conference on Innovations in Engineering and Technology (IMCIET-2014), Vijaya Vittala Institute of Technology, Bangalore.

Rajendran K, **Sajani Surendran** and **Kitoh A**, Relevance of climate change projection for India, Kerala Environment Congress 2014 on Water and energy security: Issues, challenges and potentials, Centre for Environment and Development, 22-23 August 2014, Kochi.

Praveen S, **Rakesh V**, Extreme rainfall events over urban cities: evaluation of forecast skill of a mesoscale model, TROPMET-2015: National Symposium on Weather and Climate Extremes, IMS & Punjab University, Chandigarh, 15-18 February 2015.

Rakesh V, High resolution weather forecasting with data assimilation, Workshop on Assessment, Modelling and Applications of Renewable Energy (AMARE), 20-22 May 2014, CSIR IICT, Hyderabad.

Rakesh V, Weather informatics for disease forecasting, Indo-UK Workshop on Weather and Climate Informatics for Pro-Active Healthcare (WACIPH), 26-27 November, 2014, CSIR-4PI, Bangalore.

Alfred Johny, **Ramesh K V**, Understanding the relationship between climate extremes and vector borne diseases in India, TROPMET 2015, National Symposium on Weather and Climate Extremes, IMS & Punjab University, Chandigarh, 15-18 February 2015.

Ramesh K V, Assessment of hydro and solar energy over India, Workshop on Assessment, Modelling and Applications of Renewable Energy (AMARE), 20-22 May 2014, CSIR IICT, Hyderabad.

Ramesh K V, Climate Resilient Pro-Active Healthcare

through Climate Projections, Indo-UK Workshop on Weather and Climate Informatics for Pro-Active Health-care (WACIPH), 26-27 November, 2014, CSIR-4PI, Bangalore.

Neethu C, Shafeer K B, **Ramesh K V**, Understanding the variability and change in coastal rainfall extremes during Southwest and Northeast monsoon seasons under different climate scenarios, TROPMET 2015, National Symposium on Weather and Climate Extremes, IMS & Punjab University, Chandigarh, 15-18 February 2015.

Shafeer K B, **Ramesh K V**, Flood Risk assessment associated with extreme rainfall events over the Himalayas, TROPMET 2015, Chandigarh, 15-18 February 2015.

Jagat Dwipendra Ray, **Vijayan M S M**, Kumar A, On the Spectrum of GNSS time series of North-East India, National Seminar on Earthquake Hazards: Monitoring, Mitigation and Management, Environmental Watch and Management Institute, 20-22 February, 2015, Guwahati.

Chandramouli Ar, Gokul K, Sivasankari T, Mangala Surya S S, **Vijayan M S M**, Saravanavel J, GPS based Estimation of Co-Seismic Crustal Deformation due to 11th April, 2012 Indian ocean Strike-Slip Earthquakes, National Seminar on Remote Sensing and GIS for disaster mitigation and management, 13-14 March 2015.

Internal Reports

Shrugheshwara T S, **Chiranjeevi Vivek G**, **Pavithra N R**, Anil Kumar M, Neelu Sharma, Sarkar S & **Sridevi Jade**, Landslide deformation studies in Uttarakhand, India, TR CM 1501, March 2015.

Goswami P, **Gouda K C**, C-MMACS Long-range High Resolution Forecasting of Monsoon First Outlook 2014, CMMACS Research Report, CM RR1401, May 2014.

Goswami P, **Gouda K C**, C-MMACS Long-range High Resolution Forecasting of Monsoon Second Outlook 2014. CMMACS Research Report, CM RR1402, May 2014.

Himesh S, **Rakesh V**, **Ramesh K V**, **Mohapathra G N**, **Kantha Rao Bhimala**, **Gouda K C**, **Goswami P**, Simulation and validation of heavy rainfall event: A Case Study over Delhi, CM 1403, June 2014.

Kantha Rao, **P Goswami**, **K C Gouda**, **G K Patra**, S N Nishad, Divergence of Simulations due to machine dependence: Implications for accuracy of simulations and forecasts, RR CM1501.

Shrugheshwara T S, **Pavithra N R**, **Chiranjeevi Vivek G**, Anil Kumar M, Sarkar S, **Sridevi Jade**, GPS Site details and observations in Garhwal Himalayas, Uttarakhand, India, PD CM 1501, February 2015.

Conferences/Symposia/Workshops/Seminars attended

Anil Kumar V, 3rd NKN Workshop, IIT Guwahati, 15-17 December 2014

Anil Kumar V, International Conference on High Performance Computing and Applications (ICHPCA-2014), Bhubaneswar, 22- 24 December 2014

Anil Kumar V, National Seminar on Big Data Challenges and Opportunities, Avinashalingam University, Coimbatore, February 19-20. 2015

Ashapura Marndi, Workshop on Visualization for Big Data, C-DAC, Bangalore, 18 September, 2015,

Pavithra N R, Induction Training Programme for Scientists, CSIR-HRDC, Ghaziabad, 15 – 24 December 2014.

Rajendran K, 2nd Asian Network on Climate Science and Technology (ANCST), Workshop on Atmosphere-ocean interactions in the Indo-Pacific basin and their impact on Asian climate, Indian Institute of Science, Bangalore, 23-24 November 2014.

Sajani Surendran, 2nd Asian Network on Climate Science and Technology (ANCST), Workshop on Atmosphere-ocean interactions in the Indo-Pacific basin and their impact on Asian climate, Indian Institute of Science, Bangalore, 23-24 November 2014.

Vijayan M S M, CSIR Leadership Development Programme (LDP-Module IV), CSIR-HRDC, New Delhi, 20-23 April 2014

Vijayan M S M, NISAR Science Workshop, Space Application Centre (ISRO), Ahmedabad, 17-18 November 2014

Invited Talks

Anil Kumar V, Multipath TCP: An innovative transport layer protocol for high performance data transfer, GARUDA-NKN Partner Meet, IISc, Bangalore, 19-20 September 2014

Anil Kumar V, Cyber security in context of big data, National Seminar on Big Data Challenges and Opportunities – A perspective with Security and Social Media Analytics, Avinashalingam University, Coimbatore, 19-20 Feb.. 2015

Anil Kumar V, Supercomputing performance from a protocol and interconnect perspective, Key-Note Talk, International Conference on High Performance Computing and Applications (ICHPCA-2014), 22-24 Dec., Bhubaneswar

Goswami P, Science for Nation Building: Climate, Civilization and Nation, National Science Day 2015, Institute of Advance Study in Science and Technology (IASST, Pachim Boragaon, Guwahati, 1 March 2015.

Goswami P, Agriculture, Disaster and Governance: Sustainable and Disaster Resilient Agriculture through Climate and Weather Informatics, International Conference on Governance in Agriculture and Allied Sectors, Hyderabad, 18-19 December 2014

Goswami P, Proactive Disaster Management: Towards Actionable Forecasts, National Seminar on Disaster Management-Science and Technology Tools in Preparedness, Early Warning and Mitigation Measures, 25-27 September, 2014, Geological Society of India

Goswami P, Sustainable Agricultural Diversification, Lead Talk, Symposium on Agricultural Diversification for Sustainable Livelihood and Environmental Security, Ludhiana, 18-20 November 2014.

Goswami P, Towards 100% Renewable Energy: A Vision to Reality, Workshop on Assessment, Modelling and Applications of Renewable Energy (AMARE), 20-22 May, 2014.

Gouda K C, Disaster management using geospatial tools, Karnataka Remote Sensing Application Centre, Bangalore, 12 July 2014.

Gouda K C, Living with modelling & simulation, Department of Computer Science & Engineering, S M V Institute of Technology & Management, Udipi, 17 Oct 2014.

Gouda K C, Cloud computing for climate informatics, international conference on futuristic innovations and challenges to diversity management, emerging technologies & sustainability for inclusive industrial growth, Jyotivivas College, Bangalore, 30-31 October 2014.

Gouda K C, Modeling, simulation and optimization for monsoon prediction, International Conference on Modeling, Simulation and Optimizing Techniques, Post Graduate Department of Mathematics, DAV College, Jalandhar, 12-14 Feb, 2015.

Gouda K C, Simulation study of extreme rainfall events due to cloud burst using a non hydrostatic model. TROPMET-2015, International conference on weather extremes, IMS & Punjab University, Chandigarh, 15-18, 12-14 Feb, 2015.

Patra G K, Mathematical models in designing cryptographic primitives: An inter-disciplinary approach, Berhampur University, Odisha, November 9, 2014

Patra G K, The big super-compute: Where HPC meets big data, National Seminar on Big Data Challenges and Opportunities – A perspective with Security and Social Media Analytics, Avinashalingam University, Coimbatore, 19-20Feb., 2015.

Rajendran K, Regional Climate Change Projections over India: Problems and Prospects, Science of Climate Change: Indian Ocean and Monsoon, Indian National Centre for Ocean Information Services (INCOIS), Hyderabad, 1-2 September 2014.

Rajendran K, Regional Climate Change Projections over India: Problems and Prospects, Meteorological Research Institute, Japan, 8 Jan 2015.

Rajendran K, Multimodel future projections of Indian summer monsoon, Earth System and General Circulation Modelling Session, Climate Modelling Workshop, IIT-Bombay, 20 March 2015.

Sridevi Jade, GNSS Geodetic Studies- Natural Hazard, CSIR-CBRI, 28 October 2014.

Conference/Workshops/Seminars/ Scientific Meetings organized by CSIR-4PI

The Technology Day, 7 May 2014, S R Valuri Auditorium.

This year's Technology Day function featured a splendid lecture by Dr S Christopher, Outstanding Scientist and Director, Centre for Airborne Systems (CABS), Bengaluru. In his talk on Airborne Early Warning and Control (AEW&C) Systems in India-: Past, Present and Future, Dr Christopher gave an account of how the surveillance system evolved into a force multiplier. He spoke in length on the challenges overcome during the development and flight integration of AEW&C system to make it a highly reliable state-of-the-art surveillance system. He highlighted new technologies developed and patented during the process of meeting the programme requirements.

International Workshop on Assessment, Modelling and Applications of Renewable Energy (AMARE) 20-22 May 2014, Leonia Resorts, Hyderabad, India

AMARE was co-organized by CSIR-4PI, CSIRO, Australia and CSIR IICT; was supported by the Australian

Department of Foreign Affairs and Trade (DFAT) PSLP India activity *Harnessing improved weather and climate information for renewable energy generation* and hosted by CSIR IICT. The primary objective of the event was to fill the current gap in understanding the availability of renewable energy resources in India, and to create a platform for developing a roadmap for meeting the grand challenge of 100% renewable energy. Capabilities and tools needed to evaluate the feasibility and implications of a 100% renewable energy scenario was the focus of the workshop. The participation was by invitation, and included eminent experts/representatives from India and Australia.

Workshop on Weather and Climate Informatics for Pro-Active Healthcare (WACIPH), 26-27 November, 2014

The workshop, funded under the UKIERI project *Integrating disease prediction with weather and climate models seamlessly* (INDRASS), was organized to develop an effective synergy by bringing together a number of active research groups and stake holders to develop an integrated and applicable platform for pro-active healthcare at short and long time scales. A major goal of the workshop was to identify available components, map expertise and strengths and plan an integrated platform for pro-active healthcare; the sessions were thus focused on discussions around selected topics. In addition to the scientists from CSIR-4PI and the University of Liverpool, several R&D organizations and state departments participated in the Workshop.

National Science Day, S R Valluri Auditorium 26 February 2015

CSIR - National Aerospace Laboratories and CSIR-4PI jointly organized National Science Day Celebrations. Science day lecture was delivered by Dr. M Annadurai, Programme Director, IRS & SSS, ISRO, Bangalore

International Women's Day Celebrations 2015

CSIR - National Aerospace Laboratories and CSIR-4PI organized the International Women's Day Celebrations on 6th March 2015 at S R Valluri Auditorium. This year the theme for International Women's Day is "*Make it*

happen". The guests of honour, this year, were Dr. V. Shubha, Chief Scientist & Head, Airport Instrumentation Group, CSIR-NAL and Ms. Subhashini Vasanth, well-known dancer & founder trustee, Vasantha Ratna Foundation for ART.

Seminars/lectures

Lakshmiarahan S, University of Oklahoma, USA
Quantification of Forecast Uncertainty and Data Assimilation using Wiener's Polynomial Chaos Expansion, 30 June, 2014

Dirk Smit, VP, Exploration Technology R&D and SHELL Chief Scientist for Geophysics, Netherlands
Compute Challenges to meet Future Energy Demand, 08 July, 2014

Ashwin Pananjady, IIT, Chennai
Optimization and Scheduling: Tackling Hard Communication Problems through Probabilistic Algorithms, 06 August 2014

Swaminathan Krishnan, California Institute of Technology, USA
Quantitative Risk Assessment Using Rupture-to-Rafters Simulations, 26 August 2014

Narayan Behera, Institute of Bioinformatics and Applied Biotechnology, Bangalore
An Evolutionary Data Mining Algorithm to Find the Candidate Gene for Disease Diagnostics, 11 Sep, 2014

Manik Talwani, Research Professor, Rice University, USA
My Fifty Years of Adventures with Measuring Gravity over the Oceans (and on the Moon), 28 Nov, 2014

Visitor's at CSIR-4PI

Daniel Kerstin Kuehn, Researcher, NOR SAR, Norway, 19-30 May 2014

Dominik Harald Lang, Abdelghani Meslem, Researcher, NOR SAR, Norway, 22-24 May 2014

Conrad Daniel Lindholm, Researcher, NOR SAR, Norway, 23 May 2014

Dowchu Drukpa, Chief Seismologist, Ministry of Economic Affairs, Bhutan, 23 May 2014

Dirk Smit, Fons Kroode, Rob Eppenga, Bertwin van Beest, Suhas Phadke, Shirang Karandikar, Shell Technology, July 2014

Nitin Patil, IIT Bombay, 21 -25 July 2014

Supantha S Paul, IDP Climate Study, IIT Bombay, 8 August 2014

Kiran Akella, Scientist, DRDO, 12 August 2014

Jrffery Phillip Adie, Principle System Engineer, SGI Asia Pacific, 26 August 2014

Swaminathan Krishnan, SEGT Lab, California, USA, 26 August 2014

Abdelghani Meslem, Researcher, NORSAR, Norway, 10 October 2014

Nitin Patil, IIT Bombay, 12 October 2014

Anastasia Nekrasova, Russian Academia of Science, 3-14 November 2014

Supantha S Paul, IDP Climate Study, IIT Bombay, 10 November 2014

Joseph William Spencer, Univ of Liverpool, 21 November 2014

John Stephan Marsland, Univ of Liverpool, 21 November 2014

Frans Pierre Coenen, Univ of Liverpool, 21 November 2014

Manik Talwani, Rice University, 27-28 November 2014

Conrad Daniel Lindholm, Researcher, NORSAR, Norway, 1-3 December 2014

Gil Briman, VP, Mellanox Technologies, USA, 17 December 2014

Mark Clifford Sultzbaugh, Sr VP, Mellanox Technologies, USA, 17 December 2014