



TANI SATYANARAYANA

Data Scientist | Meteorology | Agrometeorology | Climate Change | Field Measurement | Data Analysis | Modelling | Simulations | Verification | Testing | Projects

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Professional Profile

Data Scientist and Meteorological Professional with a proven track record of delivering quality data analytical and project related services for more than thirteen years. Highly organised, self motivated and with a keen attention to detail that ensures completion of all assigned projects and tasks on time and meticulously to full specification. Fluent in several languages with excellent communication and interpersonal skills, able to work well either as part of a collaborative team or autonomously when required and thriving in challenging and fast moving environments by prioritising tasks and targets with strong time management skills. Now seeking a fresh challenge that will make the most of this skill set, preferably in a Data Scientist role.

Indicative Technical Competencies

- Numerical and Crop Growth Simulation Models: WRF, MM5, INFOCROP and DSSAT
- Languages: FORTRAN, C, Python and R
- Software related visualization of model data: GrADS, NCL and IDL
- Operating systems: WindowsXP, UNIX and LINUX

IT and Software Platforms

MS- Office | SQL | INFOCROP | DSSAT | CROPWAT4.3 | Net CDF | GRIB | MDV | R | Python | RCLindex | ExtRemes | CDO | Arc Info | Arc Map | Pandas | Numpy | Matplotlib | Scikit-learn | Keras | Tensorflow

Tool Development

- Weather Cock: Weather Analysis Tool
Software Package developed at CRIDA, India
Registered under number: L-52901/2013 with the Copyright Office, India
- HAILSYS 3.0: Hail Event and Damage Analysis Tool
Software Package developed at Graz University of Technology, Austria

Career Summary

👤 **UNIVERSITY PROJECT ASSISTANT AND COORDINATOR | JUNE 2015 TO DATE**

🏢 **HAIL DEFENCE INITIATIVES | GRAZ UNIVERSITY OF TECHNOLOGY**

KEY ACHIEVEMENTS AND RESPONSIBILITIES

- Demonstrating consistently strong technical and teamworking competencies as a University Project Assistant in the Radar and Microwave Propagation Group
- Tasked with coordinating Hail Defence Operations since 2018: developing an automatic flight track path for pilots and creating a number of radar derived hail metrics in support of defence operations analysis procedures

- Playing a key part in the Weather Image Information System Project
- Making use of observational and remote sensing data to complete a variety of hail detection, hail climatology and damage assessment assignments as well as subsequently planning, designing and initiating a crowdsourcing platform.
- Playing an integral part in a complex study of radar derived thunderstorm and hail characteristics, using single polarization C-band radar data gathered over a ten-year period focused through the crowdsourcing platform.
- Working on the classification of hail and heavy rain events and helping improve the nowcasting system to enhance the quality of thunderstorm prediction (making use of data fusion methodologies and deep learning techniques)

PROJECTS

- Styria State Hail Defence Platform | Styria, Austria | since June 2015
- Partnering with Styria State Disaster Control System, Styrian Hail Defense Cooperative and the Südflug GmbH
- R.Ice | Risk Analysis on the Impact of Wind Turbine Icing | FFG Austrian Research Promotion Agency | April 2016 to December 2018
- Partnering with Austrian Institute of Technology (AIT), Wegener Center Universität Graz (WEGC), Energiewerkstatt Verein, Interessensgemeinschaft Windkraft (IGW) and Wien Energie GmbH (WE)
- HeDi ("Hail Event Data Interface") | since 2018



SCIENTIST | SEPTEMBER 2011 TO JUNE 2015



REOCLIM GROUP | WEGENER CENTER FOR CLIMATE AND GLOBAL CHANGE, UNIVERSITY OF GRAZ

KEY ACHIEVEMENTS AND RESPONSIBILITIES

- Worked within the Regional and Local Climate Modelling, Analysis and Research Group: creating climate scenarios in support of impact assessments, enhancing empirical statistical downscaling methods and developing uncertainty quantification techniques in regional climate models
- Member of Working Group 4, validating and integrating downscaling methods for climate change research as part of the European Cooperation in Science and Technology Program
- Successfully managed the climate scenario model database
- Completed an innovative bias correction methodology, combining a parameter free approach and extreme value theory to enhance extreme precipitation simulated by regional climate models (RCMs)

PROJECTS

- **ARNICA:** An EU sponsored project to assess risks on transportation networks arising from slope instability and climate change in the Alps | Federal Ministry of Science and Research, Circle Mountain Call | February 2011 to July 2013
Partnering with Centre National de la Recherche Scientifique (CNRS) Meudon, Laboratory of Dendrogeomorphology, University of Bern, Switzerland and the University of Padua
- **DEUCALION:** Determining and visualizing the impact of Greenhouse Climate Rainfall in Alpine Watersheds on Torrential Disasters | FWF (Austrian Climate and Energy Funds | January 2011 to February 2014
Partnering with the Institute of Mountain Risk Engineering, University of Natural Resources and Applied Life Sciences (Vienna), the Austrian Institute of Economic Research (WIFO), the Laboratory of Dendrogeomorphology (Dendrolab) and the University of Bern
- **ClimCatch:** Studying the impact of climate change on the sediment yield of alpine catchments | Austrian Climate and Energy Funds | April 2012 to April 2015
Partnering with the University of Graz, Department of Geography and Regional Science and the Technical University of Graz, Institute for Hydraulic Engineering and Water
- **UNCOMMUN:** Understanding contrasts in high mountain hydrology in Asia | FWF – Austrian Science Fund | November 2013 to October 2016
Partnering with ETH Zürich, Switzerland, University of Utrecht, Netherlands, Centre for Integrated Mountain Development and the Nepal Pakistan Meteorological Department



RESEARCH ASSOCIATE | DECEMBER 2007 TO 2011 AUGUST



AICRPAM | Central Research Institute for Dryland Agriculture (CRIDA) | Indian Council of Agricultural Research (ICAR)

RESPONSIBILITIES

- Worked on a series of initiatives designed to deliver effective solutions for dry land agriculture in coordinating unit of The All India Coordinated Research Project on Agrometeorology (AICRPAM)

PROJECTS

- **Network Project on Impact, Adaptation and Vulnerability of Indian agriculture to climate change**

Estimated climate change signaling through time series trend analysis and Mann-Kendall test; conducted extreme weather event analysis using extreme value theory (EVT), evaluating the spatial and temporal distribution of climate variability and change over study regions

Completed impact, adaptation and vulnerability quantifications for major growing crops in Andhra Pradesh using crop growth simulation models (INFOCROP and DSSAT) and regional climate model (PRECIS) data as well as computing crop water requirements under changing scenarios

- **Utilization of Agroclimatic Information for Agro Advisories**

Developed an agro-climatic database for Climatological and statistical analysis; analyzed crop and climate data to establish the crop weather relationship; developed crop pest and disease forewarning using supervised learning methods and creating statistical forecast verification metrics which were implemented and analyzed for short and medium-range weather forecasting and advice

EARLIER CAREER APPOINTMENTS

- Technical Assistant | Indira Meghamadhana, Cloudseeding Program | May 2005 to November 2006
- Lecturer in Physics | Bharathi Junior College | three and a half years

Education

- **University of Graz, Wegener Center for Climate and Global Change** | expected award in April 2020
Doctoral Candidate in Physics
Thesis: *Innovative methods for empirical-statistical downscaling and error correction for extreme precipitation over the Alpine region*
- **Andhra University, Institute of Physics** | 2001
Masters Degree in Meteorology
- **Kakatiya University, India** | 1999
B.Sc. Degree in Maths, Physics and Instrumentation

Professional Training

- Participated and received certificate on "Introduction Seminar: Forecasting of Severe Convective Storms" | European Severe Storms Laboratory (ESSL) | Pula, Croatia | 23 September 2017
- 2nd VALUE Training School: "Statistical and dynamical downscaling of extreme events" | Trieste, Italy | OCTOBER 2013
- Workshop on High Performance Computing in Sciences: "Modeling and Simulation" | in association with the Wegener Center for Climate and Global Change and the University of Graz | Graz, Austria | MARCH 2013
- Training on programme on "Agriculture Drought - Climate Change and Rainfed Agriculture" | DST sponsored 5th SERC School | CRIDA, Hyderabad | January to February 2011
- DST Training on Advances in Plant-Atmospheric Interactions | CRIDA, Hyderabad | October to November 2010
- Crop Modelling (Crop growth simulation model-INFOCROP) | Division of Environmental Sciences, IARI, New Delhi | November to December 2009
- Web Design & Content Management | CRIDA, NAIP Component 1 project, AGROWEB-Digital Dissemination System for Indian Agriculture Research (ADDSIAR) | February to March 2009
- Three week SERC School on "GPS Augmentation Systems and Atmospheric Corrections" | R&T Unit for Navigational Electronics, Osmania University, Hyderabad.
- Training Course on MM-5 model | Center for Mathematical Modelling and Computer Simulation, Bangalore.
- Environment for Visualizing Images Software | Sierra Atlantic Software Services Limited, Hyderabad.
- Training in WRF model, High Computational Cluster System Facility | IGCAR (BARC)
- Participated in "German International Summer School on "aviation, weather and atmosphere" at Technische Universitaet Braunschweig, Institut fuer Luft-und Raumfahrtssysteme, Hermann-Blenk-Straße 23 | Braunschweig, Germany | August and September 2006

Memberships

- Life Member of the Indian Meteorological Society
- Life Member of the Association of Agrometeorologists
- Member of the European Geosciences Union

Publications

- **Tani, S** & Gobiet, A., (2019): Quantile mapping for improving precipitation extremes from regional climate models. *Journal of Agrometeorology*, 21(4), 434-443 (December 2019)
- Jury, M. W., Mendlik, T., **Tani, S.**, Truhetz, H., Maraun, D., Immerzeel, W. W. and Lutz, A. F. (2019), Climate projections for glacier change modelling over the Himalayas. *International Journal of Climatology*. 2020; 40: 1738-1754. doi:10.1002/joc.6298
- Paulitsch, H., Süsser-Rechberger, B., **Tani, S.**, & Teschl, R. (2018). *Plattform Hagelabwehr Steiermark: Projektbericht 2017*.
- Ballesteros Cánovas, J. A., Stoffel, M., Corona, C., Schraml, K., Gobiet, A., **Tani, S.**, Kaitna, R. (2016). Debris-flow risk analysis in a managed torrent based on a stochastic life-cycle performance. *Science of the total environment*, **557-558**, 142-153. <https://doi.org/10.1016/j.scitotenv.2016.03.036>
- Paulitsch, H., Süsser-Rechberger, B., **Tani, S.**, & Teschl, R. (2017). *Plattform Hagelabwehr Steiermark: Projektbericht 2016*.
- Redtenbacher, M., Schneider, J., Harb, G., Sass, O., Stangl, J., Oberlechner, M., **Tani, S.** (2016). Field measurements in an alpine catchment to evaluate impact of the ongoing climate change on the future sediment yield. In G. Koboltschnig (Ed.), *13th Congress Interpraevent 2016: Extended abstracts* (pp. 152-153)
- Paulitsch, H., Süsser-Rechberger, B., **Tani, S.**, & Teschl, R. (2017). *Plattform Hagelabwehr Steiermark: Projektbericht 2015*.
- Heinrich, G., Gobiet, A., & **Tani, S.** (2014). **Downscaling Report - ClimCatch: Impact of climate change on the sediment yield of Alpine catchments**. Wegener Center for Climate and Global Change. *WEGC Report to ACRP 01/2013*, pp 13.
- Heinrich, G., Gobiet, A., **Tani, S.**, & Scheidl, D. (2014). **Uncertainty Report- ClimCatch: Impact of climate change on the sediment yield of Alpine catchments**. Wegener Center for Climate and Global Change. *WEGC Report to ACRP 01/2013*, pp 26.
- Schneider, J., Redtenbacher, M., Harb, G., Sass, O., Stangl, J., Gobiet, A., **Tani, S.** (2014). Monitoring of sediment transport processes for determining future trends. In *Riverflow 2014: Proceedings of the International Conference on Fluvial Hydraulics* (pp. 1921-1928). CRC Press.
- Eckhart, T., Schraml, K., Hübl, J., Kaitna, R., Hrachowitz, M., Gobiet, A., **Tani, S.** (2013). Auswirkungen des Klimawandels auf den Hochwasserabfluss. *Forstzeitung*, **124**(5), 16-17.
- Boomiraj, K., Marimuthu, S., Wani, S. P., Ravikumar, S. M., & **Tani, S.** (2012). Vulnerability assessment of kharif rainfed sorghum to climate change in SAT regions of India. *Journal of Agrometeorology*, **14**(1), 2-8.
- Rao, V. U. M., Rao, A. V. M. S., Rao, G. G. S. N., **Tani, S.**, & Manikandan, N. (2011). Impact of climate change on crop water requirements and adaptation strategies. In S. D. Attri, L. S. Rathore, M. V. K. Sivakumar, & S. K. Dash (Eds.), *Challenges and Opportunities in Agrometeorology* (pp. 456-465). Springer Verlag.
- Rao, A.V.M.S., Satyanarayana, T., Rao, G.G.S.N., Rao, V.U.M., Bhaskara Rao, D. V., Manikandan, N., Santhi Bhusan Chowdary, P., Ravikumar, V. and Ramakrishna, Y.S. 2010. Utilization of high-resolution short-range weather forecast for weather based agro advisory services. *Journal of Agrometeorology*. 12 (2): 229 – 233 (This paper was awarded as best paper for the period 2010 & 2011 in Journal of Agrometeorology)
- **Tani, S.**, Rao, A. V. M. S., Manikandan, N., Rao, V. U. M., & Rao, G. G. S. N. (2009). Impact of increasing temperature on growing period of wheat crop at Hisar. *Journal of Agrometeorology*, **11**(Spec. Iss.), 33-36.
- Rao, V. U. M., Manikandan, N., Singh, N. P., Bantilan, M. C. S., **Tani, S.**, Rao, A. V. M. S., & Rao, G. G. S. N. (2009). Trends in heavy rainfall events in Anantapur and Mahabubnagar districts of Andhra Pradesh. *Journal of Agrometeorology*, **11**(Spec. Iss.), 195-199.
- Manikandan, N., Rao, G. G. S. N., Rao, A. V. M. S., Rao, V. U. M., & **Tani, S.** (2009). Variations in moisture regime in selected stations over India. *Journal of Agrometeorology*, **11**(Spec. Iss.), 200-203.
- K.P.R, V. M., & **Tani, S.** (2007). Weather modification in India –precipitation enhancement in drought prone districts of Andhra Pradesh. *Ninth WMO scientific Conference on weather Modification conference proceedings*, Antalya, Turkey.

Technical Publication

- Training Manual on Agroclimatic Analysis | Jointly published by ICRISAT and AICRPAM Unit, CRIDA.116p
Rao, G.G.S.N., Rao, V.U.M., Singh, N.P., Bantilan, M.C.S., Rao, A.V.M.S., Manikandan, N and, **Tani S.** 2009

International Scientific Activities

- VALUE 3M-Workshop: “Reflecting the spread in downscaled climate model output: multiple observational datasets, multiple downscaling methods, and multiple climate simulations” | SMHI, Norrköping, Sweden | JUNE 2015
- VALUE Working Group Meeting: Validating and Integrating Downscaling Methods for Climate Change Research | Augsburg, Germany | MAY 2014

- Participated and presented paper “*Trends of Extreme Temperature and Rainfall Indices for selected locations in India*” | Uncertainty in Climate Prediction: Models, Methods and Decision Support | Isaac Newton Institute for Mathematical Sciences, Cambridge, UK | December 2010
- Attended and presented poster at the Ninth WMO Scientific Conference on Weather Modification: “*Weather modification in India –precipitation enhancement in drought prone districts of Andhra Pradesh*” | Antalya, Turkey | October 2007

Awards

- Best paper in *The Journal of Agrometeorology* | 2010 to 2011
- Best oral presentation | CCSHAU Hisar, India | November 2009
- Best Research Paper at the *National Seminar on Sustainable Agriculture and Food Security* | March 2012

Conference and Media Presentations

- **Tani, S.**, Paulitsch, H (2019). An exploratory analysis of radar-derived thunderstorm characteristics over the province of Styria, Austria | European Geosciences Union General Assembly 2019, Vienna, Austria.
- **Tani, S.**, in krone newspaper (02.08.2019). Steirischer „Luftkampf“ gegen die Hagel-Plage(
https://mobil.krone.at/kmm_1/app_CORE/1970390)
- **Tani, S.**, in ORF news (3.7.2018). Hagelabwehr: Im Kampf gegen Eiskristalle
(<https://steiermark.orf.at/v2/tv/stories/2922405/>)(<https://www.youtube.com/watch?v=z2X5PIIMC3E>)
- **Tani, S.**, in Kleine Zeitung news (10.6.2018). Wettflug mit dem Hagelsturm:
https://www.kleinezeitung.at/steiermark/weiz/5443506/Hagelabwehr_Reportage_Wettflug-mit-dem-Hagelsturm
- Süsser-Rechberger, B., **Tani, S.**, Paulitsch, H., & Teschl, R. Lange Nacht der Forschung 2018. Organized the event on hail studies. IHF, TU Graz.
- **Tani, S.**, Paulitsch, H., Süsser-Rechberger, B., & Teschl, R. (2018). *Hagel*. Poster session presented at Lange Nacht der Forschung 2018, Graz, Austria.
- **Tani, S.**, Paulitsch, H., Süsser-Rechberger, B., & Teschl, R. (2018). *Hagelerkennung*. Poster session presented at Lange Nacht der Forschung 2018, Graz, Austria.
- **Tani, S.**, Paulitsch, H., Süsser-Rechberger, B., & Teschl, R. (2018). *Hail event analysis and damage assessment based on multi-data approach*. Poster session presented at The 10th European Conference on Radar in Meteorology and Hydrology (ERAD 2018), Ede-Wageningen, Netherlands.
- Rechberger, A., Steinkellner, A., Süsser-Rechberger, B., **Tani, S.**, Paulitsch, H., & Teschl, R. (2018). *HeDi - Hagelereignis Dateninterface*. Poster session presented at Lange Nacht der Forschung 2018, Graz, Austria.
- **Tani, S.**, Rechberger, A., Süsser-Rechberger, B., Teschl, R., & Paulitsch, H. (2017). *Application of crowd sourced hail data and damage information for hail risk assessment in the province of Styria, Austria*. European Geosciences Union General Assembly 2017, Wien, Austria.
- Jury, M. W., Mendlik, T., **Tani, S.**, Truhetz, H., Maraun, D., Immerzeel, W. W., & Arthur F, L. (2017). *Climate Change in the Himalaya: Providing state of the art climate information*. Poster session presented at European Geosciences Union General Assembly 2017, Wien, Austria.
- **Tani, S.**, Paulitsch, H., Fraundorfer, F., Süsser-Rechberger, B., Teschl, R., Rumpler, M., & Hofer, M. (2017). *Crop hail damage assessment based on radar and drone integrated technologies*. Paper presented at 2nd European Hail Workshop, Bern, Switzerland
- **Tani, S.**, Paulitsch, H., Fraundorfer, F., Süsser-Rechberger, B., Teschl, R., Rumpler, M., & Hofer, M. (2017). *Innovative approaches for crop hail damage assessment based on Radar and drone technologies*. 9th European Conference on Severe Storms – ECSS 2017, Pula, Croatia.
- **Tani, S.**, Paulitsch, H., Teschl, R., & Süsser-Rechberger, B. (2016). *Assessment of crop damage and hail risk based on radar hail signature information*. European Geosciences Union General Assembly 2016, Vienna, Austria.
- **Tani, S.**, Paulitsch, H., Teschl, R., & Süsser-Rechberger, B. (2016). *Evaluation of hail suppression programme effectiveness using radar derived parameters*. EGU General Assembly 2016, Wien, Austria.
- **Tani, S.**, Paulitsch, H., Teschl, R., & Süsser-Rechberger, B. (2016). *Utilizing radar data in support of the hail mitigation operations in Styria, Austria*. Workshop - Microphysics of ice clouds, Vienna, Austria.
- Schneider, J., Redtenbacher, M., Harb, G., Sass, O., Stangl, J., Gobiet, A., **Tani, S.** (2014). *Monitoring of sediment transport processes for determining future trends*. Poster session presented at Riverflow 2014, Lausanne.
- **Tani, S.**, M. Themessl, A. Gobiet, “Empirical-statistical downscaling and error correction of extreme precipitation from regional climate models (poster)”, Geophysical Research Abstracts, Vol. 15, EGU2013-5889, EGU General Assembly 2013, Apr 07 – Apr 12 2013, Vienna, Austria.
- Truhetz, H., A. Csáki, G. Heinrich, M. Jury, T. Mendlik, A. Prein, R. Ritter, **Tani, S.**, R. A. I. Wilcke, A. Gobiet (2013) Climate modelling in the Alps - the latest developments at the Wegener Center (orally, in German), Fifth Austrian meteorological day, Feldkirch, Austria, November 2013

- Eckhart T., M. Hrachowitz, A. Gobiet, M. Themessl, **S. Tani**, S. Huebl, R. Kaitna, "Estimation of climate change impact on the runoff from a small alpine watershed in Austria", Geophysical Research Abstracts, Vol. 15, EGU2013-11681-1, EGU General Assembly 2013, Apr 07 – Apr 12 2013, Vienna, Austria
- K.Schraml, R. Kaitna, M. Stoffel,Chr. Corona, A. Gobiet, **S. Tani**, F. Sinabell,T.Eckhart, "Assessment of Climate Change Impacts on Torrential Disasters: The Deucalion Project (DEUCALION)",Österreichischer Klimatag, 4.–5. April 2013, Vienna, Austria
- Gobiet, G. Heinrich, **S. Tani**, R.A.I. Wilcke (oral) . "Bias correction in hydrological climate change impact studies", 12th EMS Annual Meeting & 9th European Conference on Applied Climatology, 10.-14.9.2012, Lodz, Poland
- Kaitna, K. Schraml, B. Kogelnig, T. Egginger, M. Oismüller, M. Wolfsgruber, Ch. Corona, M. Schneuwly-Bollschweiler, M. Stoffel, A. Gobiet, M. Themeßl, **S. Tani**, F. Sinabell." Assessment of Climate Change Impacts on Torrential Disasters: The Deucalion Project". Austrian Climate day, 14-15, June, 2012,Veinna, Austria
- Participated in "The CIRCLE-2 MOUNTain Mid-Term Meeting", CIRCLE2 (Climate Impact Research & Response Coordination for a Larger Europe) EU FP7 ERA-NET, 29-30, March, 2012, Innsbruck, Austria.
- **Tani, S.**, Rao, A.V.M.S., Rao, V.U.M., Manikandan, N., "Trends of Extreme Temperature and Rainfall Indices for selected locations in India" in "*Uncertainty in Climate Prediction: Models, Methods and Decision Support* ", Isaac Newton Institute for Mathematical Sciences, Cambridge, UK, 6 - 10 December 2010
- Rao, A.V.M.S., Rao, V.U.M., **Tani, S.**, Madhu Malathi, E. and Manikandan, N. 2010. Drought situation under projected climate change scenarios in Andhra Pradesh. Proceedings of the International Conference on Climate Change Perspectives and Projections – A Systems Approach. December 9-11, 2010. Osmania University, Hyderabad p.106
- **Tani, S.** Rao, A.V.M.S., Manikandan, N. Rao, V.U.M. and Rao, G.G.S.N. 2009. Impact of increasing temperature on growing period of wheat crop at Hisar in national seminar on "Agrometeorology – Needs, Approaches and Linkages for Rural Development" held at CCSHAU Hisar, India during 26-27 November, 2009
- Rao, A.V.M.S., Rao, G.G.S.N., Rao, V.U.M., **Tani, S.**, Ravikumar, V., Santhibhushan Chowdary. P., Manikandan, N. and Ramakrishna, Y.S. 2008. Utilization of WRF Model Forecast for Weather Based Agroadvisory services. *Abstracts of the International Symposium on Agrometeorology and Food Security*, February 18-21, 2008. Central Research Institute for Dryland Agriculture, Hyderabad. p.226
- Rao, A.V.M.S., Manikandan, N., **Tani, S.**, Rao, V.U.M. and Rao, G.G.S.N. 2008. Decadal shifts in monthly rainfall and annual drought pattern in different agro-climatic zones of Andhra Pradesh. *Proceedings of the International Workshop on Weather Modification Technologies & Symposium on Natural Disaster Management*. June 27-29, 2008. Jawaharlal Nehru Technological University, Hyderabad.pp.177-189
- **Tani, S.**, Manikandan, N., Rao, A.V.M.S., Rao, V.U.M. and Rao, G.G.S.N. 2008. Implementation of hail-suppression programmes to mitigate and minimize hailstorm damage. *Proceedings of the International Workshop on Weather Modification Technologies & Symposium on Natural Disaster Management*. June 27-29, 2008. Jawaharlal Nehru Technological University, Hyderabad.pp.83-88
- Rao, V.U.M., Rao, G.G.S.N., Rao, A.V.M.S., **Tani, S.** and Manikandan, N. 2008. Climate risk management through weather insurance. *Proceedings of the National Seminar on Climate Changes – Its impact on different sectors in India*. July 30 –31, 2008. VSR & NVR College, Tenali. pp.21-30
- Vittal Murthy, K.P.R., **Tani, S.** (2006) "Cloud seeding and weather modification as a management tool to optimise the hydrological regime of urban centres in India" at national seminar on "CLIMATE CHANGE TO INDIAN CITIES" Held at Andhra University, Visakhapatnam
- **Tani, S.**,(2006) "Recent Trends On Heavy Rainfall In Urban Centres In India - Management Solutions" workshop on "Dynamics Simulation Of Heavy Rainfall" at "Center for mathematical modelling and computer simulation."(C-MMACS), Bangalore.
- **Tani, S.**, Vittal Murthy, K.P.R.(2005) "WEATHER MODIFICATION AND UTILITY" at "*National Seminar On Tsunami And Other Natural Coastal Hazards Over India*" (TONCH) held at Department of Meteorology & Oceanography, Andhra University, Visakhapatnam.
- Vittal Murthy, K.P.R., **Tani, S.** (2005) "Application of radar and titan software for cloud cluster and weather–modification studies aimed at mitigation or minimizing natural hazards" in "XIV National Space Science Symposium" at Andhra University, Visakhapatnam, conducted by Indian Space Research Organization (ISRO) and Andhra University