# CURRICULUM VITAE

**SOMESHWAR DAS**
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**Last updated Aug 2020**

## EDUCATION:

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| 1987 | Ph.D. | Atmospheric Science, Indian Institute of Technology, Delhi. |
| 1981 | M.Sc. | Meteorology, Andhra University, Waltair, India. |
| 1977 | B.Sc. | Meteorology, Tribhuvan University, Kathmandu, Nepal. |

## ACADEMIC AND PROFESSIONAL EXPERIENCE:

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| Feb 2017 – Present | Professor, Department of Atmospheric Science, Central University of Rajasthan, Bandar-Sindri, Kishangarh, Ajmer, Rajasthan |
| 2014- Nov 2016 | Scientist-G & Project Director (High Impact Severe Weather & Himalayan Meteorology programmes), NCMRWF & India Meteorological Department, Delhi |
| 2008- Jan 2014 | Scientist-G/ Adviser, National Center for Medium Range Weather Forecasting (NCMRWF), Ministry of Earth Sciences, Noida-Delhi, India |
| Jan 2008- Jan 2011 | Head, Theoretical Division, SAARC Meteorological Research Centre, Bangladesh *(Also served as Director-in-charge of the centre whenever its Director was out of station).* |
| 2002-2007 | Scientist 'F'/ Director, National Center for Medium Range Weather Forecasting (NCMRWF), New Delhi, India. |
| April – July, 2003 | Visiting Scientist, National Center for Atmospheric Research, USA. |
| 1994-2002 | Scientist 'D', Natl. Center for Medium Range Weather Forecasting, India |
| 1996-1998 | USRA Research Scientist, NASA/Goddard Space Flight Center, Maryland. |
| April - Sept, 1995 | WMO Visiting Scientist at the European Center for Medium Range Weather Forecasts (ECMWF), Reading, U.K. |
| 1989-1993 | Scientist 'C', Natl. Center for Medium Range Weather Forecasting, India |
| Nov, 88 - Jan, 1989 | Research Associate (Council of Scientific & Industrial Research) |
| Feb, 88 - Aug, 1988 | Visiting Scientist ,Third World Academy of Sciences (TWAS). |
| 1977-1982 | Asst. Meteorologist, Nepal Meteorological Service, Kathmandu. |

## PROFESSIONAL ACTIVITIES

- Member of International Programme Committee of SAARC STORM Programme (2008- 2016).
- Member of the CAIPEEX (Cloud Aerosol Interaction & Precipitation Enhancement Experiment) team (2014-16).
- Representative of IMD for the Monsoon Mission programme (2014- 2016).
- Member of expert committee on STORM field experiment of India, 2004- 2016.
- Member of Regional Climate Modeling (RCM) project under Indian Space Research Organization (ISRO) – Geosphere Biosphere Program (GBP), 2004-2007

- Member of working group on cloud physics & dynamics of Continental Tropical Convergence Zone (CTCZ) field experiment under Indian climate Research Program (ICRP), 2005-2007.
- Member of working group on model & diagnostics of Extended Range Monsoon Prediction (ERMP), 2004-2007
- Member of task force for development of real-time nuclear emergency response system, 2004-2007.
- Nominee of NCMRWF/ DST for the Mountain Meteorology project of DRDO, 2002-2005; played key role to start Mesoscale modeling (MM5) for mountain weather forecasting at NCMRWF.
- Management of Arabian Sea Monsoon Experiment (ARMEX) data center, 2002-2005.
- Participated in the planning of ARMEX (2001-2002) & Bay of Bengal Monsoon Experiment (BOBMEX), 1999
- Played key role in signing a MOU for collaborative research between NCMRWF and NCAR, USA, 2002.
- Convener of workshop on 'Mesoscale Modeling …', (29-30 July, 2002) at NCMRWF.

## PROFESSIONAL SOCIETY MEMBERS

- Convener, South Asian Meteorological Association (SAMA)
- Fellow of the Royal Meteorological Society, U.K.
- Life Member of the Indian Meteorological Society.
- Member of the American Meteorological Society.
- Member of the American Geophysical Union.

## HONORS AND AWARDS

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| 2008 | SAARC Award for Senior Scientists in the field of Meteorology |
| 2005 | Indian Society of Remote Sensing award for best paper published in their Journal |
| 2003 | IUGG award to present a paper at their XXIII General Assembly, Sapporo, Japan |
| 2003 | German Science Foundation award to present paper at 6th ISTP Symposium, Leipzig |
| 1996-98 | USRA Fellowship, NASA/Goddard Space Flight Center, USA |
| 1995 | UNDP/ WMO Fellowship to pursue research at ECMWF, UK |
| 1988-89 | Research Associate ship, Council of Scientific & Industrial Research, India |
| 1988 | Fellowship of the Third World Academy of Sciences (TWAS) |
| 1984 | Mahendra Vidya Bhushan (A Gold Medal awarded by His Majesty the King Birendra of Nepal for academic excellence) |
| 1982-86 | General Cultural Scholarship, Govt. of India to pursue Ph. D. at IIT-Delhi. |
| 1982 | Indian Meteorological Society (Visakhapatnam) prize. |
| 1982 | B.N. Desai Gold Medal (Andhra University, Waltair, India) for 1st rank with Distinction in M. Sc. |
| 1982 | N. Melanchthon Phillip Memorial Prize (Andhra University) |
| 1979-81 | General Cultural Scholarship, Govt. of India for Postgraduate Studies. |

## RESEARCH INTERESTS

- Atmospheric Convection, Cumulus Parameterization
- Modeling of Clouds and Precipitation, Mesoscale & Cloud Scale Modeling
- General Circulation & Climate modeling, Weather Forecasting

**SUMMARY OF RESEARCH / WORK CONTRIBUTIONS**: Please see Appendix – I

## SERVICES TO ATMOSPHERIC SCIENCE Community at NATIONAL & INTERNATIONAL level

- Peer reviewed research papers submitted for publication in several national & international journals, i.e., the Quarterly Journal of the Royal Meteorological Society, International journal of Meteorology & Atmospheric Physics, Geophysical Research Letter, Terrestrial Atmosphere & Ocean, Journal of Earth System Science, Journal of Climate, Monthly Weather Review, Journal of Applied Meteorology, Current Science, Indian Journal of Remote Sensing, Indian Journal of Radio & Space Physics, Mausam, Vayumanda, etc.

- Peer reviewed research projects submitted for funding by the Department of Science & Technology, Indian Space Research Organization, Ministry of Earth Sciences.

- Convened National & International Seminars/ Symposiums, Chaired scientific sessions, Coordinated internal seminar activities and worked as a member of several local organizing committees.

- Delivered several invited seminars as listed in the Research Publications

**RESEARCH PUBLICATIONS:** Please see Appendix – II

**EDITORSHIP** Editor: Open Journal of Atmospheric Sciences
: Vayumandal (Journal of Indian Meteorological Society)
Co-Guest editor of CURRENT SCIENCE, Vol. 88, No. 6, 2005

**TEACHING EXPERIENCE / POTENTIAL**

Feb 2017 – Present Professor, Department of Atmospheric Science, Central University of Rajasthan

Number of Ph. D. thesis completed under my Supervision: 2

Number of M.Sc./ M. Tech./ M.C.A. Thesis completed under my Supervision: 25

1989- July 2019 Supervised & examined Ph. D./ M. Tech./ MCA thesis of IIT-Delhi, IIT. Kharagpur, IIT-Roorkee, Central University of Rajasthan, Andhra University, Delhi University, M.D. University, University of Dhaka & Jahangir Nagar University, Dhaka, Bangladesh

Delivered several invited talks/lectures at different institutions all over India. Please see the list of invited papers/ seminars in Appendix – II for details.

Nov, 98 – June, 2002 Supervised Research Associate and Projects Scientists working on INDOEX and IRS-P4 projects under the joint collaboration with IIT, Delhi, the National Physical Laboratory & NCMRWF.

July, 1982 Taught Numerical Weather Prediction to M.Sc. students at the Andhra University, Waltair as a Teaching Assistant.

**PROFESSIONAL TRAINING**

Jan 23 – 4 Feb 2006 Training on "Negotiating Strategies in work environment for scientists" at Administrative Staff College of India (ASCI), Hyderabad

Oct 22 - 3 Nov, 1990 Attended a workshop on Tropical Limited Area Modeling at International Center for Theoretical Physics (ICTP), Trieste, Italy under a WMO program.

April, 1989 Attended a course on CRAY operating system, CFT77 & FORTRAN Optimization

**EXTRA CURRICULIES**

- Member of the Amateur Astronomers Club, Delhi.
- Member of the Chinmaya Mission for World Understanding.

**GOOGLE SCHOLAR CITATION INDICES**

**As on July 2020**

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| Citations (Google Scholar) | 713 |
| h-index (Research Gate) | 16 |
| i10-index (Google Scholar) | 25 |
| RG-Score (Research Gate) | 28.25 |

**Appendix – 1**

# Summary of Research / Work Contributions

Dr. Someshwar Das is presently working as Professor of Atmospheric Science, Central University of Rajasthan. Prior to this he worked as Scientist-G and Project Director of 2 programmes namely, (1) Development of High Impact Severe Weather Forecasting System, and (2) Integrated Himalayan Meteorology at the National Centre for Medium Range Weather Forecasting (NCMRWF) and the India Meteorological Department, Delhi. The 2 programmes involved setting up of special Observation Test-beds comprising of mesonet of automatic weather stations, radars, and several other equipments over selected regions in India and over the Himalayas. It also involved development of an Indian Weather Research & Forecasting Model (I-WRF) for assimilating high density of observations at finer resolution for improving skill of forecasting the high impact severe weather systems.

Dr. Das received Ph. D. degree in Atmospheric Science from Indian Institute of Technology, Delhi in 1987 and M. Sc. Degree in Meteorology with specialization in Numerical Weather Prediction (NWP) from Andhra University, Waltair, India. His main areas of interests are cumulus convection, cloud microphysics parameterization, mountain meteorology, global and mesoscale modeling with special emphasis on simulation of high impact severe weather systems.

Dr. Das has been keenly involved in a unique programme on Severe Thunderstorm Observations and Regional Modelling (STORM). He made many contributions as a member of its science plan and implementation committee. In order to popularize and create general awareness on thunderstorms in public, he created an e-forum for discussions among scientists, teachers, students and laymen. His untiring efforts on severe thunderstorm research have led to the establishment of SAARC STORM programme jointly undertaken by 8 South Asian countries under the South Asian Association for Regional Cooperation (SAARC). It has inspired many younger generation. The SAARC STORM programme also compliments the Severe Weather Forecast Demonstration Project (SWFDP) of WMO. It would generate large-scale interest for fuelling research among the scientific community, and broaden the perspectives of operational meteorologists and researchers. Details of this programme is published in the *Bulletin of the American Meteorological Society, 2014 (doi*: 10.1175/BAMS-D-12-00237.1*).*

Dr. Das worked at the SAARC Meteorological Research Centre, Dhaka as Head of the Theoretical Division during 2008-2011 on deputation from the Govt. of India. He worked on the Capacity building of SAARC member states in NWP, conducted many training workshops on modeling and Data Assimilation in the South Asian countries including Bangladesh, Bhutan, Nepal, Pakistan, Sri Lanka, Maldives and Afghanistan. He also served as 'Acting Director' whenever required in the absence of its Director.

Dr. Das worked at the National Centre for Medium-Range Weather Forecasting (NCMRWF) at various positions during 1989-2016. He provided scientific support in the installation and, running the R40 & T80 global models on CRAY machines at NCMRWF. He provided support for upgrading the model with additional physics, and conducted sensitivity experiments with the convective and cloud parameterization schemes. He developed an algorithm to produce weekly cumulative rainfall forecasts over different meteorological subdivisions of India. He started real-time mesoscale weather forecasting using MM5 and WRF models at NCMRWF.

Dr. Das worked at the National Center for Atmospheric Research (NCAR), USA as a Visiting scientist in 2003 on simulation of cloud systems, mesoscale modeling and data assimilation. He played a key role in signing a MOU for collaborative research between NCMRWF and NCAR. Dr. Das worked for the Universities Space Research Association (USRA) at NASA/Goddard Space Flight Center, as a Research Scientist during 1996-1998. At NASA, he worked on the development and verification of a prognostic cloud liquid water parameterization scheme and, tested it with the GATE and TOGA-COARE data sets in a Single Column Model and, verified the results with the Goddard Cumulus Ensemble Model. Dr. Das worked at the European Center for Medium Range Weather Forecasts (ECMWF), UK as a Visiting Scientist under a WMO fellowship in 1995. At ECMWF, he studied a Prognostic Cloud Prediction Scheme with regard to the Asian summer monsoon.

Dr. Das worked as a member of task force/ expert committee of several scientific programmes of national importance, such as BOBMEX (Bay of Bengal Monsoon Experiment), ARMEX (Arabian Sea Monsoon Experiment), implementation of weather based nuclear emergency response system at BARC, mountain meteorology program, ISRO-GBP/ Regional Climate Modeling project, etc. He contributed in making special forecasts for cloud seeding experiments in India. He made the first attempt in simulating the cloudburst events that affect mountain regions using high resolution model. He also made the first attempt to assimilate Doppler Weather Radar observations in a mesoscale model in India and studied their impact on simulation of severe thunderstorms.

Dr. Das has published more than 149 research papers including peer reviewed journals, proceedings of scientific conferences/ symposia and scientific reports. He has served as a Co-Guest editor of the Journal 'Current Science' and editorial board of the Open Journal of Atmospheric Sciences and Vayumandal (Journal of the Indian Meteorological Society). Dr. Das has been bestowed upon with many awards and honors; notable among them are the 'SAARC award for Senior Scientists', 'Indian Society of Remote Sensing Award', Indian Meteorological Society (Visakhapatnam) prize, B.N. Desai Gold Medal & N. Melanchthon Phillip Memorial Prize (Andhra University, India), Mahendra Vidya Bhushan (A Gold Medal awarded by His Majesty the King Birendra of Nepal for academic excellence). He has been a member of many professional societies including Life Member of the Indian Meteorological Society, Member of the American Meteorological Society, Member of the American Geophysical Union and Fellow of the Royal Meteorological Society, U.K.

**Appendix – II**

# List of Technical / Scientific Papers

*The Abstract of all the papers listed here are available on-line through Internet*
*http://www.angelfire.com/sd/somesh/allpub.html*

**(a) Papers published in Peer reviewed Journals / Refereed Books :**

1. Geeta Agnihotri, K. C. Gouda and Someshwar Das, 2020: Characteristics of pre-monsoon convective systems over south peninsular India and neighborhood using tropical rainfall measuring mission's precipitation radar. Meteorology and Atmospheric Physics, https://doi.org/10.1007/s00703-020-00740-7.

2. Das Mohan K., Md. Abdul Mannan Chowdhury, Someshwar Das, Samarendra Karmakar and Surajit Kumar Saha, 2019: Physical and Dynamical Characteristics of MCS Associated with Squalls and their simulation using WRF Model. *The Atmosphere, Vol 8, 33-42*

3. Sarkar Abhijit, Someshwar Das, and Devajyoti Dutta, 2018: Computation of skill of a mesoscale model in forecasting thunderstorm using Radar reflectivity. *Modeling Earth Systems and Environment,* (2019), Vol 5, pp 443-454. https://doi.org/10.1007/s40808-018-0553-7

4. Das Someshwar, 2017: Severe Thunderstorms Observations and Modelling – A Review. *Vayumandal (Bulletin of the Indian Meteorological Society), Vol 43 (2), pp 1-29.*

5. Das Mohan K., Someshwar Das, Samarendra Karmakar, A. K. M. Saiful Islam, Md. Jamal Uddin Khan and Md. Abdul Mannan Chowdhury, 2017: Simulation of Dynamical Features of Squalls over Bangladesh During the Pre-Monsoon Season. *The Journal of NOAMI, 34(1): 39-55 (June 2017).*

6. Sarkar Abhijit, Devajyoti Dutta, Paromita Chakraborty and Someshwar Das, 2017: Numerical diagnosis of situations causing heavy rainfall over the Western Himalayas. *Modeling Earth Systems and Environment, Vol. 3, No. 2, 515-531, DOI:10.1007/s40808-017-0310-3.*

7. Choudhury Devanil and Someshwar Das, 2017: The sensitivity to the microphysical schemes on the skill of forecasting the track and intensity of tropical cyclones using WRF-ARW model. *Journal of Earth System Sciences, Vol. 126, 57, 1-10, DOI 10.1007/s12040-017-0830-2.*

8. Das Someshwar, M. N. Islam and Mohan K. Das, 2016: Simulation of Severe Storms of Tornadic Intensity over Indo-Bangla region. *MAUSAM (Quarterly Journal of Meteorology, Hydrology & Geophysics), Vol. 67, No. 2, 479-492.*

9. Das Someshwar, A. Sarkar, Mohan K. Das, M. M. Rahman, and M. N. Islam, 2015: Composite Characteristics of Nor'westers based on Observations and Simulations. *Atmospheric Research (doi: 0.1016/j.atmosres.2015.02.009).*

10. Das, M. K., Someshwar Das, M. A. M. Chowdhury, and S. Karmakar, 2015: Simulation of Tornado over Brahmanbaria on 22 March 2013 using Doppler Weather Radar and WRF Model. *Geomatics, Natural Hazards and Risk,* DOI: 10.1080/19475705.2015.1115432

11. Chevuturi, A., A. P. Dimri, Someshwar Das, A. Kumar and D. Niyogi, 2015: Numerical simulation of intense precipitation event over Rudraprayag in Central Himalayas during 13-14 Sep 2012. *Journal of Earth System Sciences, Vol. 124, No. 7, 1545-1561.*

12. Das Mohan K., Md. Abdul Mannan Chowdhury and Someshwar Das, 2015: Sensitivity Study with Physical Parameterization Schemes for Simulation of Mesoscale Convective Systems Associated with Squall Events. *International Journal of Earth and Atmospheric Science. Vol. 2, No. 2, 20-36.*

*13.* Das Mohan Kumar, Md. Abdul Mannan Chowdhury, Someshwar Das, Sujit K. Debsarma and Samarendra Karmakar, 2015: Assimilation of Doppler weather radar data and their impacts on the simulation of squall events during pre-monsoon season. *Natural Hazards (http://link.springer.com/article/10.1007/s11069-015-1634-9).*

*14.* Das Someshwar, U. C. Mohanty, Ajit Tyagi, D. R. Sikka, P. V. Joseph, L. S. Rathore, A. Habib, S. Baidya, K. Sonam, and A. Sarkar, 2014: The SAARC STORM - A Coordinated Field Experiment on Severe Thunderstorm Observations and Regional Modeling over the South Asian Region. *Bulletin of the American Meteorological Society (doi*: 10.1175/BAMS-D-12-00237.1*).*

*15.* Das Mohan Kumar, Md. Abdul Mannan Chowdhury, Someshwar Das and Wash Dev Khatri, 2014: Impact of initial time on prediction of squall-line using WRF-ARW model – a case study**.** *KUET Journal of Engineering Sciences*, Vol. 5(1), 1-11.

*16.* Das, M.K., Someshwar Das and Md. Mizanur Rahman, 2013: Simulation of Mesoscale Convective Systems Associated with Squalls Using 3DVAR Data Assimilation over Bangladesh. *High Impact Weather Events over the SAARC Region, Capital Publishing Company, India, 64-74. Editors: Ray, Kamaljit, Mohapatra, M., Bandyopadhyay, B.K., Rathore, L.S. (http://link.springer.com/chapter/10.1007/978-3-319-10217-7_5).*

*17.* Litta A. J, U. C. Mohanty, Someshwar Das and S. M. Ididcula, 2012: Numerical Simulation of Severe Local Storms over East India using WRF-NMM mesoscale model. *Jour. Atmos. Res. http://dx.doi.org/10.1016/j.atmosres.2012.04.015.*

18. Abhilash, S., A. K. Sahai, K. Mohankumar, John P. George and Someshwar Das, 2012: Assimilation of Doppler Weather Radar Radial Velocity and Reflectivity Observations in WRF-3DVAR System for Short-Range Forecasting of Convective Storms. *Pure and Applied Geophysics.* DOI: 10.1007/s00024-012-0462-z.

*19.* Islam, M.N., Someshwar Das and H. Uyeda, 2009: Calibration of TRMM derived rainfall over Nepal during 1998-2007. *The Open Atmospheric Science Journal, Vol. 3, 230-241.*

20. Dutta, S. K., Someshwar Das, S.C. Kar, U.C.Mohanty and P.C. Joshi, 2009: Impact of Vegetation on the Simulation of Seasonal Monsoon Rainfall over the Indian Subcontinent using a Regional Model. *Jour. of Earth System Sciences, Vol. 118, No. 5, 413-440.*

*21.* Dutta, S. K., Someshwar Das, S.C. Kar, U.C.Mohanty and P.C. Joshi, 2009: Impact of Downscaling on the Simulation of Seasonal Monsoon Rainfall over the Indian Region using a Global and Mesoscale Model. *The Open Atmospheric Science Journal, Vol. 3, 79-98.*

*22.* Das Someshwar, R. Ashrit, S. Mohandas, G. R. Iyengar, M. Das Gupta, J. P. George, E. N. Rajagopal and S. K. Dutta, 2008: Skills of different Mesoscale Models over Indian region during Monsoon season: Forecast Errors. *Jour. of Earth System Sciences, Vol. 117, 603-620.*

*23.* Abhilash, S., K. Mohankumar and Someshwar Das, 2008: Simulation of microphysical structure associated with tropical cloud clusters using mesoscale model and comparison with TRMM observations. *International Journal of Remote Sensing (IJRS), Vol. 29, No. 8, 2411-2432.*

24. Das, Someshwar, R. Ashrit, Mitchell W. Moncrieff, M. Dasgupta, J. Dudhia, C. Liu and S. R. Kalsi, 2007: Simulation of Intense Organized Convective Precipitation Observed during the Arabian Sea Monsoon Experiment (ARMEX), *J. Geophys. Res., 112, D20117, doi:10.1029/2006JD007627*.

25. Das Gupta, M, P. K. Pradhan, Someshwar Das and U.C. Mohanty, 2007: Simulation of rain-bearing summer monsoon systems along the west coast of India by use of ARMEX re-analysis. *Natural Hazards*, Vol. 42, 379-390.

26. Abhilash, S., Someshwar Das, K. Mohankumar, S. R. Kalsi, M. Das Gupta, , John P. George, S. K. Banerjee, S. B. Thampi, and D. Pradhan, 2007: Assimilation of Doppler Weather Radar observations in a Mesoscale model for the Prediction of Intense Rainfall Events Associated with Mesoscale Convective Systems using 3DVAR: *Journal of Earth System Science, Vol. 116, No. 3, 275-304.*

27. Abhilash, S., Someshwar Das, S. R. Kalsi, M. Das Gupta, K. Mohankumar, John P. George, S. K. Banerjee, S. B. Thampi, and D. Pradhan, 2007: Impact of Doppler radar wind in simulating the intensity and propagation of rain bands associated with mesoscale convective complexes using MM5-3DVAR system. *Pure & Applied Geophysics (PAGEOPH), Vol. 164, No. 8-9, 1491-1509.*

28. Das, Someshwar, R. Ashrit, and M. W. Moncrieff, 2006: Simulation of a Himalayan Cloudburst Event. *Journal of Earth System Science, Vol. 115, No. 3, 299-313.*

29. Srinivas, C. V., R. Venkatesan, N. V. Muralidharan, Someshwar Das, Hari Dass and P. Eswara Kumar, 2006: Operational Mesoscale Atmospheric Dispersion Prediction using Parallel Computing Cluster. *J. Earth Syst. Sci., Vol. 115, No. 3, 315-332.*

30. Das Someshwar, 2005: Mountain weather forecasting using MM5 modeling system. *Current Science, Vol. 88, No. 6, PP 899-905.*

31. Das Gupta, M, Someshwar Das, K. Prasanthi, P.K. Pradhan and U.C. Mohanty, 2005: Validation of upper-air observations taken during the ARMEX-I and its impact on the global analysis-forecast system. *Mausam, Vol. 56, pp 139-146.*

*32.* Mohanty, U.C., N.V. Sam, Someshwar Das, and S. Basu, 2005: A study on the convective structure of the atmosphere over the west coast of India during ARMEX-I. *Mausam, Vol 56., pp 49-58.*

*33.* Das Someshwar, A.S.K.A.V. Prasad Rao, U. C. Mohanty, A. K. Mitra, D. Rajan, 2004: Study of Cloud Liquid Water Path and Total Precipitable Water Content From IRS-P4/MSMR and Numerical Weather Prediction Model Output. *Journal of Indian Society of Remote Sensing, Vol. 32, No. 2, pp 175-184.*

34. Das, Someshwar, S.V. Singh, E.N. Rajagopal and R. Gall, 2003: Mesoscale modeling for mountain weather forecasting over the Himalayas. *Bulletin of the American Meteorological Society, Vol. 84, no. 9, pp 1237-1244.*

*35.* Das, A.K., U.C. Mohanty, Someshwar Das, M. Mandal and S.R. Kalsi, 2003: Circulation characteristics of a monsoon depression during BOBMEX-99 using high resolution analysis. *Journal of Earth & Planetary Sciences (Proc. Indian Acad. Sci.), 112, No.2, pp 165-184*

36. Mohanty, U.C., N.V. Sam, Someshwar Das, A.N.V. Satyanarayana, 2003: A study on the structure of convective atmosphere over the Bay of Bengal during BOBMEX-99. *Journal of Earth & Planetary Sciences (Proc. Indian Acad. Sci.), 112, No.2,147-163.*

*37.* Das Someshwar, A.K. Mitra, G. R. Iyengar and Jagvir Singh, 2002: Skill of Medium Range Forecasts over The Indian Monsoon region Using Different Parameterizations Of Deep Convection.. *Weather and Forecasting, Vol. 17, No. 6, pp 1194-1210.*

38. Saseendran S.A., S. V. Singh, L.S. Rathore and Someshwar Das, 2002: Characterization of weekly cumulative rainfall forecasts over meteorological sub-divisions of India using a GCM. *Weather and Forecasting, Vol. 17, No. 4, pp 832-844*

***39.*** Das Someshwar, 2002: Mesoscale and cloud-resolving scale simulation of a Heavy precipitation episode and associated cloud system using MM5 model. In *Weather and Climate modeling, Eds. Singh et al., New Age Intl. Ltd. Publishers, New Delhi, 106-117.*

40. Das Someshwar, A.K. Mitra, G. Iyengar and S. Mohandas, 2001: Comprehensive Test Of Different Cumulus Parameterization Schemes For The Simulation Of The Indian Summer Monsoon. *J. of Meteor. & Atmos. Physics, Vol. 78, No.3-4, pp 227-244.*

41. Patra A.K., Someshwar Das, J.P. George, R,K, Paliwal and A.P. Mitra, 2001: Study of the variability of convective heating and moistening using Simplified Arakawa-Schubert convection scheme during INDOEX IFP-99. *Current Science (Indian Journal), Vol. 80, No. 10 (supplement), PP 25-29.*

*42.* Das Someshwar, D. Johnson and Wei-Kuo Tao, 1999: Single-Column and Cloud Ensemble Model simulations of TOGA-COARE convective systems. *J. Meteor. Soc.of Japan, Vol. 77, No. 4, PP 803-826.*

*43.* Das Someshwar, 1999: Suggested observational network for simulation of cloud processes during the Indian Ocean Experiment (INDOEX). *Current Science (Indian Journal),Vol . 76, No. 7 PP 912-915.*

44. Das Someshwar, Y.C. Sud and M.J. Suarez, 1998: Inclusion of a prognostic cloud scheme with the Relaxed Arakawa-Schubert cumulus parameterization; Single Column model studies. *Quart. Jour. of Roy Met. Soc., Vol. 124, PP 2671-2692.*

*45.* Das Someshwar, 1999: Representation of subgrid scale orography and clouds in the context of the Himalayas. *The Himalayan Environment, PP 156-163, S.K. Dash and J. Bahadur, Edt., New Age International (P) Ltd. Publishers, New Delhi.*

*46.* Das Someshwar, 1996: Study of convective heating rates generated at different resolutions with special reference to a depression over the Bay of Bengal. *Advances in Tropical Meteorology*, *PP 92-102, R.K. Datta, Edt., Concept publishing Co., New Delhi.*

47. Das Someshwar, K. Veeraraghavan, Z.N. Begum and Swati Basu, 1993: Evaluation of monsoon - 91 forecasts by R40 model. *Advances in Tropical Meteorology*, PP 500-512, R.N. Keshavamurti and P.C. Joshi, Eds., Tata McGraw-Hill publishing Co., New Delhi.

48. Das Someshwar, A.K. Bohra, L.Harenduprakash , A.K. Mitra and G. Iyengar, 1992: Onset of monsoon-1990: Impact of cumulus parameterization. *Physical Processes in Atmospheric Models,* D.R. Sikka and S.S. Singh, Eds, PP 19-31, Wiley Eastern Limited, New Delhi.

49. Das Someshwar, 1990: Impact of lateral detrainment and downdraft on the summer monsoon cloud clusters. *Mausam (Indian Journal of Meteorology)*, Vol. 41, No.2, PP 227-233.

50. Das Someshwar, U.C. Mohanty and O.P. Sharma, 1988: Study of Kuo-type cumulus parameterization during different epochs of the Asian summer monsoon. *Mon. Wea. Rev*., Vol. 116, No. 3, PP 715-729.

51. Das Someshwar, U.C. Mohanty and O.P. Sharma, 1987: Semiprognostic test of the Arakawa-Schubert cumulus parameterization during different phases of the summer monsoon. *Contrib. Atmos. Phys.*, Vol. 60, No. 2, PP 255-275.

52. Mohanty U.C., and Someshwar Das, 1986: On the structure of the atmosphere during suppressed and disturbed periods of convection over the Bay of Bengal. *Procd. Ind. Natn. Sci. Acad.*, 52, A, 3 PP 625-640.

**(b) Papers Presented/Webinars/ Seminars / Symposia :**

*1.* Das Someshwar, 2020: Challenges in predicting the severe weather: An unfinished symphony, *Workshop on Atmospheric Processes and Applications of Computational Mathematics ($W^3$APACM), jointly organized by Gautam Buddha University, Greater NOIDA and Indian Meteorological Society, NOIDA Chapter, 5-20 June 2020.*

2. Das Someshwar, 2020: Cloudbursts and Rainstorms over Southern Plains of the Himalayas. *International workshop on AsiaPEX-SA, Central University of Rajasthan, India, 1-2 March 2020.*

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21. Mohanty, U. C., O.P. Madan, S.R. Kalsi, R.K. Paliwal, H.R. Hatwar, A.K. Bohra, R. Bhatla, Brij Bhushan, Roy Bhowmik, Someshwar Das, M. Das Gupta, Akhilesh Gupta, G.R. Iyengar, S.C. Kar, R.S. Pareek, A.K. Paluskar, P.S. Rao, Jagvir Singh, R.P. Shivhare, 2002: Weather summary during Arabian sea monsoon experiment (ARMEX) – 2002, Volume – I: Daily weather summary, heavy rainfall events and anomaly fields during 2002. *Centre for Atmospheric Sciences, Indian Institute of Technology, Delhi*, PP 157.

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*23.* Das Someshwar, A.K. Mitra, G. Iyengar and S. Mohandas, 2000: Comprehensive Test Of Different Cumulus Parameterization Schemes For The Simulation Of The Indian Summer Monsoon. *NCMRWF Research Report No.NMRF/RR/1/2000.*

24. Das Someshwar, 1997: Performance of a prognostic cloud scheme with the GEOS-2 General Circulation Model. *Report submitted in fulfillment of DAO/USRA task no. 5025-067-41 (June, 1997)*

*25.* Das Someshwar, Miller, M. and Pedro Viterbo, 1995: Impact of prognostic cloud scheme and subgrid scale orography on the simulation of the Asian summer monsoon. *ECMWF Technical Memorandum No. 224.*

26. Mohanty, U.C., Someshwar Das, S.A. Saseendran and others, 1995: Medium range prediction of atmospheric systems over Indian region by NCMRWF forecasting system. Proc. Fifth regional workshop on Asian/African monsoon emphasizing training aspects (*WMO Tropical Meteorology Research Program series Report no:52,WMO/TD-NO:698),51-62.*

27. Das Someshwar and Vajeera Meshram, 1994: Rainfall forecasts over meteorological subdivisions of India by T80 model. *NCMRWF Memorandum No. 1 / 1994.*

28. Das Someshwar and A.V.R.K. Rao, 1994: Propagation of convective cloud bands generated by NCMRWF model during Monsoon-1994. (Unpublished report).

29. Das Someshwar, 1992: Sensitivity of AMEX results to variations in the initial conditions (unpublished report prepared for WGNE model intercomparison, BMRC, Australia).

30. Das Someshwar, 1992: A sofware for dissemination of forecast to AMFU. *NCMRWF Meteorological Bulletin No. 2 / 1992.*

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32. Das Someshwar, K. Veeraraghavan, Z.N. Begum and Swati Basu, 1992: Evaluation of monsoon - 91 forecasts by R40 model. *NCMRWF Tech Rep No. 2 / 1992.*

33. Basu Swati, Z.N. Begum and S. Das, 1991 : Tracking of April 1991 Bay of Bengal tropical cyclone by NCMRWF (R40) forecast model - impact of physical processes. *NCMRWF Tech Rep. No. 7 / 1991*.

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36. Das Someshwar and A.K. Bohra, 1991: A multipurpose graphics application software using MAGICS. *NCMRWF computer bulletin No. G 8.0*

37. Das Someshwar, A.K. Bohra, E.K. Schneider and J. Shukla, 1991: Error analysis of the NCMRWF R40 global spectral model and impact of new physics. *NCMRWF Tech Report No. 4 / 1991.*

**(d) Dissertations and Project Reports :**

1. Das Someshwar, 1986: Cumulus Cloud parameterization during different phases of the summer monsoon. *Ph. D. thesis , Indian Institute of Technology, Delhi*, PP 277.

2. Das Someshwar, 1981: Inclusion of mountain in numerical weather prediction models. *M. Sc. dissertation, Andhra University, Waltair,* PP 49.

3. Das Someshwar, 1977: Study of Human comfort Indices at Kathmandu valley.*Project report , Dept of Meteorology, Trichandra college, Kathmandu, Nepal,* PP 43.

**(e) Invited Papers/ Seminars/ Training Lectures:**

1. Analysis and Simulation of the Recent Tornado of Bara-Parsa Districts of Nepal. *International (SAARC) Youth Scientific Conference (IYSC) on Science and Technology for Prosperity: "Connecting Lives with Land, Water and Environment" organized by Tribhuvan University, Kathmandu, Nepal*, 5-6 June 2019.

2. Modelling & Forecasting of Severe Storms over the Himalayas and adjoining regions. *International workshop on "Modeling Atmospheric - Oceanic Processes for Weather and Climate Extremes (MAPEX 2019)" during 28-29 March, 2019.*

3. Simulation of Lightning Threat by WRF Model – A Review. *International conference on Thunderstorm and Lightning in Tropics-2019 (ICTLT-2019), SOA University, Bhubneswar, 17-19 Jan 2019.*

4. Desert Storms & Cloudbursts: A hypothetical linkage. *International Workshop on Extreme Severe Storms and Disaster Management Strategies, Central University of Rajasthan, 24-26 Dec 2018.*

5. Desert Storms & Cloudbursts: A hypothetical linkage, Invited paper, *TROPMET-2018, 24-27 Oct 2018, Banaras Hindu University (BHU), Varanasi, India.*

6. Desert Storms - Field observations, Research and Modelling. *Climate change session of Rajasthan Science Congress-2017, 14 Oct 2017, Amity University, Jaipur, Rajasthan.*

7. Understanding Clouds. Celebration of WMO Day 2017 at University of Allahabad, 18 Aug 2017.

8. Numerical Simulation of Cloudburst and Severe Thunderstorms. Workshop on "Observational & Computational tools of Nowcasting (OBSCON-2017)", AFAC, Coimbatore, 15-26 May 2017.

9. Numerical simulations of cloudbursts over mountains. Workshop on "Living Space under Changing Climate and Environment", Northern eastern Hill University (NEHU), 7-9 Nov 2016.

10. Observations and Forecasting of Extreme Weather Events. Short course on weather forecasting using NWP models organized by CSSTEAP, IIRS, Dehradun, 29 April 2016.

11. Six lectures on 'Parameterization of Convection and cloud microphysics' Met-II training course conducted by India Meteorological Department, Pune during 11-13 Jan 2016.

12. Four lectures on 'Parameterization of Convection, cloud microphysics and air-sea interaction' organized by SERB school on Computational Meteorology at K.L. University, Vaddeswaram, Guntur, AP during 28-29 Dec 2015.

13. High Impact Severe Weather over South Asia with special emphasis on Nuclear structures. Invited seminar at BARC, Mumbai, 29 May 2015.

14. High Impact Severe Weather over South Asia and Forecast Demonstration Projects. National Symposium on 'Weather & Climate Extremes- TROPMET-2015', Panjab University, Chandigarh, 15-18 February 2015.

15. The National Severe Weather Integrated Research Programme. Nowcasting workshop, India Meteorological Department, New Delhi, 22-23 Dec 2014.

16. Remote Sensing in Weather Forecasting. 2nd User Interaction Meeting (IUIM-2014), Indian Institute of Remote Sensing, Dehradun, 22-21 Feb 2014.

17. Numerical simulation of Cloudbursts. Brainstorming session on "Hydrological aspects of Cloudburst & Flash Floods in Himalayas". Organized by National Institute of Hydrology, 10 Jan 2014, CWC, New Delhi.

18. General Circulation Models, Problems & prospectus in Tropics. Training programme on "Agrometeorology towards better advisories for serving end users requirement', 29 Nov 2013, IMD, Pune.

19. Tropical Weather System. *SERB School on "Weather and Climate in Tropics", 3-26 June 2013, IIT-Delhi.*

20. Indian Monsoon. *SERB School on "Weather and Climate in Tropics", 3-26 June 2013, IIT-Delhi.*

21. Simulation of Lightning Threat by WRF Model – A Review. *Training Course on Numerical Weather Prediction for Indian Navy, 8-19 Oct 2012, NCMRWF*

22. Characteristics of cloud systems associated with southwest monsoon. *SERC School on Dynamics & forecasting of the Indian summer monsoon, 27 June-20 July 2011, IIT-Delhi.*

23. Parameterization of cloud microphysics for numerical prediction of thunderstorm. *Workshop on Observations and data Analysis for STORM, 13-19 April 2011, IIT, Kharagpur.*

24. Parameterization of Cumulus Convection in NWP models, *Training workshop on WRF Model, 28 March – 8 April 2011, RMC Training Centre, IMD, New Delhi.*

25. Overview of NCMRWF modeling activities. *Advance Training workshop for Indian Air Force, NCMRWF, 28 Feb - 4 March 2011*

26. Introduction to General Circulation Models – Problems and perspectives in tropics. Training Workshop on Agrometerology towards better advisories for serving end users requirement' 21 Feb 2011, IMD, Pune

27. An overview of Data Assimilation in WRF model. *SMRC Training Workshop on "Data Assimilation for Numerical Weather Prediction", 26-28 October 2010, SMRC, Dhaka.*

28. Introduction to Numerical Weather Prediction. *SMRC Workshop/ Brainstorming Session on "Application of Numerical Weather Prediction Model Products in Making Agro-Meteorological Advisories", 24-25 October 2010, SMRC, Dhaka, Bangladesh.*

29. Introduction to SMRC and its Activities: Potential Contributions to SASCOF Implementations. SASCOF *(South Asian Climate Outlook Forum) meeting organized by WMO at IMD, Pune,13-15 April 2010.*

30. A Coordinated Field Experiment on Thunderstorms over the SAARC Region, and Mitigation of Disasters related to Hazardous Weather in South Asia. *Intl. Conf. on Radar & Modeling studies of the Atmosphere" held during 10-13 November 2009, Kyoto University, Japan.*

31. Introduction to SMRC and its Activities: Potential Contributions to SASCOF Implementations. *SASCOF meeting organized by WMO at ICTP, Italy, 6 August 2009.*

32. The Science of Weather Forecasting. Popular talk delivered at *National Science Centre, Delhi & Vigyan Prasar, 7 August 2007.*

33. STORM lectures on Numerical Modeling of Severe thunderstorms. *Workshop on thunderstorm research, Calcutta University, 15 March 2007.*

34. Two lectures on Mesoscale modeling and Overview of cumulus parameterization to *NAVAL officer's training course held at NCMRWF during 26-27 July 2006.*

35. Two lectures on the Mesoscale modeling system for the *IAF officer's training course held at NCMRWF on 14 September 2006.*

36. CEP lectures on convection & cloud parameterizations. *Snow & Avalanche Study Estt (SASE), Manali, 7-8 July, 2005.*

37. SERC lectures on thunderstorms & cloud parameterizations. *2nd SERC school on Aviation Meteorology with emphasis on Thunderstorm & Modeling, Air Force Administrative College, Coimbatore, 17-18 May, 2005.*

38. SERC lectures on cumulus & cloud microphysics parameterization schemes. *Advance training school on Tropical Cyclones held at Andhra University, Waltair, 14-16 December 2004.*

39. SERC lectures on process modeling, convection and cloud parameterization. *SERC school on Process modeling held at Center for Atmospheric Science, Indian Institute of Technology, Delhi, 18-20 April, 2003.*

40. SAARC training seminar on Fundamentals of Numerical Weather Prediction and parameterization of cloud and precipitation processes, Part I to IV. *Organized by HMG Dept. of Hydrology & Meteorology, Kathmandu, Nepal, 17-20 December, 2002.*

41. UGC sponsored lectures on Atmospheric convection and parameterization of cloud microphysics, Part I to VI. *Cochin University, India, 2-5 Dec, 2002.*

42. Simulation of weather systems affecting Indian region using global and mesoscale models. *Dept. of Atmospheric Science, Colorado State University, USA, 1 July, 2002.*

43. SERC lecture on convection, the Boussinesq and Anelastic approximations, Rayleigh-Benard convection. *SERC school on parameterization of physical processes held at Center for Atmospheric Science, Indian Institute of Technology, Delhi, 12 April, 2002.*

44. SERC lecture on Convective boundary layers, characteristics of non-precipitating cumuli, Mixing in cumulus clouds, characteristics of precipitating convection. *SERC school on parameterization of physical processes held at Center for Atmospheric Science, Indian Institute of Technology, Delhi,* 13 April, 2002.

45. SERC lecture on Modeling of convective clouds, dynamics of precipitating convection, slantwise convection. *SERC school on parameterization of physical processes held at Center for Atmospheric Science, Indian Institute of Technology, Delhi,* 26 April, 2002.

46. SERC lecture on Cumulus parameterization schemes, part-I & II. *SERC school on parameterization of physical processes held at Center for Atmospheric Science, Indian Institute of Technology, Delhi,* 29 April, 2002.

47. SERC lecture on Parameterization of cloud microphysics in NWP models. *SERC school on parameterization of physical processes held at Center for Atmospheric Science, Indian Institute of Technology, Delhi,* 30 April, 2002.

48. Convection and Cloud microphysics parameterization in NWP models. *K. Banerjee Centre for Atmospheric & Oceanic Sciences, Allahabad University, 16th March, 2002*.

49. Current Research and Future plans at NCMRWF. *Presented at the Indian Meteorological Society, Bombay chapter, August 8, 2001.*

50. Comprehensive Test Of Different Cumulus Parameterization Schemes For The Simulation Of The Indian Summer Monsoon using NCMRWF model. *Presented at the Indian Meteorological Society, Pune chapter, 25 June, 2001.*

51. Cumulus convection and cloud microphysics parameterization. *Delivered two lectures for the students of the SERC school on Cloud Physics & Atmospheric Electricity held at Indian Institute of Tropical Meteorology, Pune,* 21-22 June, 2001.

52. Physics and Modeling of Convection. *Advanced School on Recent Advances in Climate and Environment (RACER) held at Center for Mathematical Modeling and Computer Applications (C-MMACS), Banglore, India, 11-14 April, 2001.*

53. Cumulus convection and cloud microphysics parameterization. *Delivered two lectures and conducted one practical for the students of the SERC school on NWP held at Center for Atmospheric Science, Indian Institute of Technology, Delhi,* 24 March, 2001

54. Cumulus convection and cloud microphysics parameterization. *Delivered three lectures and conducted one practical for the students of the SERC school on NWP held at Center for Atmospheric Sciences, Indian Institute of Technology, Delhi,* 16-17 December, 1999.

55. Simulation of TOGA-COARE convective systems using Single-Column and Cloud Ensemble Models. *Workshop on 'Advances in Tropical Weather Prediction' held at IBM Solutions research center, New Delhi, December 10, 1999.*

56. Cloud Resolving Model: Review & Applications. *Brain strorming session on Mesoscale Modeling held at C-MMACS (Center for Mathematical Modeling & Computer Simulations),* Banglore, 6-7 August, 1999.

57. Representation of subgrid scale orography and clouds in the General Circulation Models. *Brain Storming Session on the Himalayan Experiment (HIMEX),* held at the *Indian Institute of Technology, Delhi,* 8-10 December, 1995.

58. Impact of Prognostic Cloud Scheme and Subgrid Scale Orography on the simulation of the Asian Summer Monsoon. *Department of Meteorology (CGAM), University of Reading, UK,* Sept. 26, 1995.

59. Evaluation of Monsoon-1994 forecasts by the NCMRWF model. *National coordinated meeting on Atmospheric Sciences, Indian Institute of Science, Banglore,* Sept., 5,1994.

60. Cloud parameterization in climate models - A review. *Natl. Sympo. on climate variability. TROPMET - 94, Indian Institute of Tropical Meteorology, Pune,* 8-11 Feb., 1994.

61. Cumulus parameterizations for climate studies. At the *Winter workshop on Climate modeling, Indian Institute of Technology, Delhi,* 14-18 Dec, 1992.

**(f) Titles of Ph. D. thesis supervised:**

1. Data Assimilation and Simulation of Mesoscale Convective Systems Associated With Squalls by Mohan Kumar Das. Ph. D. thesis, Dept. of Physics, Jahangirnagar University, Dhaka, Bangladesh, 2015 (Jointly supervised with Prof. Md. Abdul Mannan Chowdhury).

2. Mesoscale Data Assimilation for Simulation of Heavy Rainfall Events Associated With South-West Monsoon by Ashish Routray, Ph. D. thesis, Indian Institute of Technology, Delhi, 2010 (Jointly supervised with Prof. U.C. Mohanty).

**(g) Titles of M.Sc./ M. Tech./ M. C.A. thesis supervised (Co-Supervised):**

1. Sensitivity Analysis of Parameterization Schemes in the Simulation of Winter Fog Events over Delhi using WRF Model by M. Midhun, M.Sc. Dissertation, Dept. of Atmospheric Science, Central University of Rajasthan, 2019.

2. The Simulation of Heavy Rainfall Event over Kerala using WRF Model by Merlin Jestice, M.Sc. Dissertation, Dept. of Atmospheric Science, Central University of Rajasthan, 2019.

3. Simulation of Series of Thunderstorms over Delhi During May 2018 using WRF Model By Ashish Shaji, M.Sc. Dissertation, Dept. of Atmospheric Science, Central University of Rajasthan, 2019.

4. Simulation of a Severe Winter Hailstorm Event over Delhi using Weather Research and Forecasting Model by Jigisha Dhakar, M.Sc. Dissertation, Dept. of Atmospheric Science, Central University of Rajasthan, 2019.

5. Simulation of Clear Air Turbulence for Mitigation of Aviation Weather Hazard Using Weather Research and Forecasting Model by Chandni Chandran, M.Sc. Dissertation, Dept. of Atmospheric Science, Central University of Rajasthan, 2019.

6. Numerical Simulation of Cloudburst Event over Munsiyari, Uttarakhand using WRF Model by Athul C. P., M.Sc. Dissertation, Dept. of Atmospheric Science, Central University of Rajasthan, 2019.

7. Study on the Relationship between Lightning Flash Rate and Cloud Microphysical Parameters Derived Through WRF Model by Javed Meandad, M.Sc. Dissertation, jointly supervised by Dept. of Atmospheric Science, Central University of Rajasthan, and Department of Meteorology, University of Dhaka, Bangladesh, 2019.

8. Study on Physical & Dynamical Properties of Pre-monsoon Thunderstorm over Bangladesh using WRF-ARW Model by K. M. Golam Rabbani, M.Sc. Dissertation, jointly supervised by Dept. of Atmospheric Science, Central University of Rajasthan, and Department of Meteorology, University of Dhaka, Bangladesh, 2019.

9. A Study on Tropical Cyclone Track and Intensity Forecasting Technique in the Bay of Bengal by Tanzim Rahman Fariha, M.Sc. Dissertation, jointly supervised by Dept. of Atmospheric Science, Central University of Rajasthan, and Department of Meteorology, University of Dhaka, Bangladesh, 2019.

10. A Study on the Application of Numerical Models for Analyzing Flash Flood Events in Bangladesh by Saurav Dey Shuvo, M.Sc. Dissertation, jointly supervised by Dept. of Atmospheric Science, Central University of Rajasthan, and Department of Meteorology, University of Dhaka, Bangladesh, 2019.

11. Simulation of Hailstorm Event During Pre-monsoon Period over Bangladesh by Syeda Sabrina Sultana, M.Sc. Dissertation, jointly supervised by Dept. of Atmospheric Science, Central University of Rajasthan, and Department of Meteorology, University of Dhaka, Bangladesh, 2019.

12. WRF Model Performance in Simulating the Interannual Variability of Summer Monsoon over Bangladesh: The Role of ENSO & IOD by Umme Farzana Siddiqua Ela, M.Sc. Dissertation, jointly supervised by Dept. of Atmospheric Science, Central University of Rajasthan, and Department of Meteorology, University of Dhaka, Bangladesh, 2019.

13. Analysis of Active and Break phases of Southwest Summer monsoon over Bangladesh for the Year 2011, 2012, and 2013 by Zannatul Ferdoushi, M.Sc. Dissertation, jointly supervised by Dept. of Atmospheric Science, Central University of Rajasthan, and Department of Meteorology, University of Dhaka, Bangladesh, 2019.

14. Impact of Dust on Tropical Cyclone Ockhi: A Case Study by Archana Tripathy, M.Sc. Dissertation, Dept. of Atmospheric Science, Central University of Rajasthan, 2018.

15. Estimation of Wind power potential of Rajasthan using WRF (Weather Research & Forecasting) Model by Pradeep Attri, M.Sc. Dissertation 2018, Dept. of Atmospheric Science, Central University of Rajasthan, 2018.

16. A Case Study of Uttarakhand Cloudburst; Investigating the Role of Synoptic Scale Features in the Development of the Cloudburst Using WRF Model by M. Ganesan, Dept. of Atmospheric Science, Central University of Rajasthan, 2018.

17. The Impact of Microphysical Schemes on the Skill of Forecasting the Track and Intensity of Tropical Cyclones using ARW Model by Devanil Choudhury. M. Tech Dissertation, Cochin university of Science and Technology (CUSAT), India, 2015.

18. Numerical Simulation of Severe Thunderstorm over North India using WRF Model by Jaya Singh. M. Tech Dissertation, Indian Institute of Technology, Roorkee, India, 2015.

19. A study of skill score of WRF model for simulating the Tropical Cyclone 'Hudhud' along with 3-dimensional Interactive Visualization by Ankur Srivastava, M. Tech Dissertation, Indian Institute of Technology, Roorkee, India, 2015.

20. Regional Climate simulation of monsoon during July 2002 using MM5 model by K. Sowjanya. M. Tech dissertation, Andhra University, Waltair, 2003.
21. Forecast skills of MM5 and T80 models for heavy rainfall episodes over the west coast of India during ARMEX-2002 by L. Prabhawati. M. Tech dissertation, Andhra University, Waltair, 2003.

22. Impact of nudging aviation weather observations on thunderstorm forecasting using the MM5 model by Sqn. Ldr. P. K. Arora. Indian Air Force, 2003.

23. Numerical simulation of Orissa super cyclone using MM5 & T80 models by Ashish Routray. M. Tech dissertation, Andhra University, Waltair, 2002.

24. Animation and visualization of cloud systems over India using VIS5D by Amit Sharma. M.C.A. project report, M.D. University, Rohatak, 2002.

25. Development of software algorithms applied to numerical weather prediction by Preeti Kharga and Sadhana Jain. M.C.A. project report, Delhi University, 1989.

**(h) Interviews in popular Magazines:**

UCAR Quarterly, Winter 2002-03: The 2002 monsoon: not soon enough,
http://www.ucar.edu/communications/quarterly/winter02/india.html

Telegraph Newspaper, India: Sept 10, 2005: The skies over Bengal may explain why Mumbai got deluged in July.
http://www.telegraphindia.com/1050911/asp/nation/story_5224492.asp#

**(i) Papers Submitted for Publication in Journals:**

1. Rabbani, K.M.G., Someshwar Das, M.A.K. Mallik, S.K. Panda, and A. Kabir, 2020: A comprehensive analysis of the Nor'westers over Bangladesh based on observations and simulations by the WRF Model: Sensitivity of physical processes and verification using Model Evaluation Tools. Submitted to Meteorology & Atmospheric Physics.

2. Javed Meandad, Towhida Rashid, Someshwar Das, and Subrat Kumar Panda, 2020: Study on the Relationship between Lightning Flash Rate and Cloud Microphysical Parameters Derived Through WRF Model. Under preparation.

3. Saurav Dey Shuvo, Towhida Rashid, Someshwar Das, and Subrat Kumar Panda, 2020: Delineation of lag-time for pre-monsoon flash flood events in the northeastern Bangladesh using NWP models. Under preparation.

4. Archana Tripathy, Subrat Kumar Panda and Someshwar Das, 2020: Impact of dust on tropical cyclone Ockhi: a case study simulated by WRF-Chem. Under preparation.