

Dr. Rohit Srivastava

Curriculum Vitae

National Centre for Polar and Ocean Research (NCPOR)
Ministry of Eath Sciences
Govt. of India
Headland Sada, Vasco-da-Gama, Goa - 403 804, India

- (+91) 9274584406
- ☎ (+91 832) 2525 590
- \boxtimes rohits@ncpor.res.in
- Dhttp://ncaor.gov.in/profiles/details/229

Present Position

December 2018 - Scientist D, Arctic Ocean - Atmospheric Studies Department, Na-Continue tional Centre for Polar and Ocean Research (NCPOR), Ministry of Earth Sciences, Govt. of India, Vasco-da-Gama, Goa, India, www.ncpor.res.in.

Past Position

May 2012 –	Assistant Professor, Indian Center for Climate and Societal Impacts
December 2018	Research (ICCSIR), Mandvi, Kachchh, Gujarat, India, www.iccsir.org.
August 2014 – March 2018	${\bf Guest \ Faculty},\ Government\ Science\ College,\ Mandvi,\ Kachchh,\ Gujarat,\ India.$
-	Post Doctoral Fellow , <i>Space & Atmospheric Sciences Division</i> , Physical Research Laboratory (PRL), Navrangpura, Ahmedabad, Gujarat, India, www.prl.res.in.

Education

July 2006–July Doctor of Philosophy (Ph.D.), Physical Research Laboratory
 2012 (PRL), Ahmedabad, / Mohanlal Sukhadia University, Udaipur, Rajasthan, India, (Thesis submitted in September, 2011 and degree awarded in July 2012).

 $1 \ of \ 12$

- 2003–2005 Master of Science (M.Sc.), in Physics, Aligarh Muslim University, Aligarh, India, with 1st division (73.29%).
- 2001–2003 Bachelor of Science (B.Sc.), in Physics, Chemistry and Mathematics, Dr. R. M. L. Avadh University, Faizabad, U.P., India, with 1st division (74.55%).
- 1999–2000 Intermediate (XII), in Hindi, English, Physics, Chemistry and Mathematics, U.P. Board, Allahabad, U.P., India, with 1st division (73.4%).
- 1997–1998 High School (X), in Hindi, English, Science, Biology, Social Science and Mathematics, U.P. Board, Allahabad, U.P., India, with 1st division (71.0%).

Doctoral Thesis

- Title Spectral aerosol optical depths and radiative forcing : Seasonal and spatial variations
- Description This thesis explored the differences in model derived and measured atmospheric aerosol forcing. In addition role of different compositional mixing state of aerosols on earth-atmospheric radiation balance over an urban location, populated and polluted region and environmentally distinct locations over the globe were investigated.

Research Experience

- Research on weather research and forecast models and regional climate models (*viz.*, WRF-CHEM and RegCM) regarding the chemical and physical parameterizations of aerosols in the models.
- Research on optical and radiative properties of aerosols.
- Research on remote sensing data of aerosols (viz., MODIS, MISR, OMI and CALIPSO).
- Research on mixing states of aerosols and their impacts on aerosol radiative forcing and heating rate.
- Study of decadal Climate variability (viz., Pacific decadal oscillation, tropical Atlantic sea-surface temperature (SST) gradient (TAG) and Atlantic Multidecadal Oscillation (AMO)) and their predictability in different models in CMIP5 (Coupled Model Intercomparison Project Phase 5).
- Research on the influence of decadal climate variability on south-west Indian monsoon,
- Research on observation rainfall data and their uncertainty.

Masters and pre-Ph.D. Projects

- Title : A Study of transport mechanism in electron doped Manganites.
- Title : Generation and Control of Optical Tweezer.

2 of 12

	Fellowships and Awards
-	Post Doctoral Fellow (P.D.F) by Physical Research Laboratory (PRL), Ahmedabad, India
July 2008 – September 2011	Senior Research Fellowship (SRF) by Physical Research Laboratory (PRL), Ahmedabad, India
July 2006 – June 2008	Junior Research Fellowship (JRF) by Physical Research Laboratory (PRL), Ahmedabad, India
December 2005	Council for Scientific & Industrial Research (CSIR) - JRF (National Eligibility Test, NET) conducted by CSIR-UGC (Joint) qualified in Physical Science (Code-05)
June 2005	National Eligibility Test, NET conducted by CSIR- UGC (Joint) qualified in Physical Science (Code-05)
2003 - 2005	Postgraduate Merit Scholarship by Aligarh Muslim University, Aligarh, India
	Technical Skills (Computer)
Operating Systems:	Linux, Windows, and Working experience on High Performance Com- puting Clusters (HPC)
Languages:	FORTRAN 77, C with parallel (MPI and OPEN-MP) computing, python, and Linux shell script
Computational and plotting packages:	Matlab with statistical and parallel computing tools, Hysplit model, Grads and Grace
Satellite Data:	Good experience in hdf and netcdf file format data handling
Other packages:	
	Parallelized radiative transfer model on HPC with 24 processors using Open MP and MPI, this parallelization has reduced the execution time by an order of magnitude when compared to serial mode
	Sponsored Scientific Project
2011 - 2016	Investigator of Indo-UK project entitled "South Asian Precipitation: A Seamless Assessment: SAPRISE" funded by Ministry of Earth Sci-

(MoES/NERC/16/02/10 PC-II), Project Cost: INR 35.11 Lakhs.
2014 - 2017 Principal Investigator (PI) of project entitled "Investigation of the role of black carbon on aerosol radiative forcing over western India" funded by Department of Science and Technology (DST), Govt. of India (SR/S4/AS-107/2012), Project Cost: INR 16.9 Lakhs.

ences (MoES), under the Indo-UK Changing Water Cycle Programme

Research Students

April 2014 toMr. Sherin Hassan Bran, Presently Research Assistant at NationalFebruary, 2017Astronomical Research Institute of Thailand, Chiang Mai, Thailand.
www.narit.or.th/en/

January 2014 to Mr. Shouvik Jha, Presently Senior Consultant - GIS at Amnex In-December 2018 fotechnologies Pvt. Ltd, Ahmedabad, India. https://www.amnex.com

Expedition

June 25, 2019 to Indian Arctic Expedition, summer batch - 02 (as station leader), July 25, 2019 organized by National Centre for Polar and Ocean Research (NCPOR), India.

Campaigns

December 27, Shi 2008 to January Aer 31, 2009 org October 28 to Shi November 17, mea 2010 Min

December 27, Ship cruise as part of winter campaign of Integrated Campaign for 2008 to January Aerosols, gases and Radiation Budget (WICARB) over Bay of Bengal, 31, 2009 organized by Indian Space Research Organization (ISRO), India.

October 28 to Ship cruise (SK 277) campaign for aerosol optical physical properties November 17, measurements over Bay of Bengal during post-monsoon, organized by 2010 Ministry of Earth Sciences, Government of India.

Membership of professional bodies

Lifetime member	Indian Aerosol Science and Technology Association (IASTA), India
Lifetime member	Indian Society of Remote Sensing (ISRS), India
Lifetime member	Indian Meteorological Society (IMS), India
2011 - 2012	American Geophysical Union (AGU), U.S.A.
2019 - Continue	Member of Atmosphere Working Group (AWG) of International Arctic
	Science Committee (IASC)

Publications

Google Scholar Profile: https://scholar.google.co.in/citations?user=CBtAkLAAAAJ&hl=en

Scopus profile ID: 57002096700

ORCID (Open Researcher and Contributor ID): 0000-0002-1552-9156

Publication Sta	tistics
Citation indices	Since 2011 (as on December, 2020)
Citations	323 (as per Scopus)
h-index	9 (as per Scopus)
i10-index	10 (as per Google Scholar)

Peer-reviewed Journal

- Enhanced dust influx to South Atlantic sector of Antarctica during the late-20th century: Causes and contribution to radiative forcing, C. M. Laluraj, W. Rahaman, M. Thamban, and Rohit Srivastava Journal of Geophysical Research: Atmospheresh, 125, e2019JD030675, DOI: 10.1029/2019JD030675, 2020 (Impact Factor : 3.63)
- Impact of drought on vegetation carbon storage in arid and semi-arid regions, Shouvik Jha, and Rohit Srivastava, Remote Sensing Applications: Society and Environment, 11, 22–29, DOI: 10.1016/j.rsase.2018.04.013, 2018 (Student is 1st and corresponding author)
- Impact of dynamical and microphysical schemes on black carbon prediction in a regional climate model over India, Rohit Srivastava (1st and corresponding author) and S. H. Bran, Environmental Science and Pollution Research, 25, 15, 14844–14855, DOI: 10.1007/s11356-018-1607-0, 2018 (Impact Factor: 2.741)
- Investigation of optical and radiative properties of aerosols during an intense dust storm: A regional climate modeling approach, S. H. Bran, S. Jose and Rohit Srivastava, Journal of Atmospheric and Solar-Terrestrial Physics, 168, 21–31, DOI: 10.1016/j.jastp. 2018.01.003, 2018 (Impact Factor: 1.326) (Student is 1st and corresponding author).
- Investigation of PM2.5 mass concentration over India using a regional climate model, S. H. Bran, and Rohit Srivastava, Environmental Pollution, 224, 484–493, DOI: 10.1016/ j.envpol.2017.02.030, 2017 (Impact Factor: 5.099) (Student is 1st and corresponding author).
- 6. Trends in aerosol optical properties over South Asia, Rohit Srivastava, International Journal of Climatology, 37, 1, 371 380, DOI:10.1002/joc.4710, 2017 (Impact Factor:

 $5 \ of \ 12$

3.76).

- Spatio-temporal variations of black carbon and optical properties in regional climate model, Rohit Srivastava (1st and corresponding author), and S. H. Bran, International Journal of Climatology 37, 3, 1432 – 1443, DOI: 10.1002/joc.4787, 2017 (Impact Factor: 3.76).
- Aerosol mixing over urban region: Radiative effects, Rohit Srivastava (1st author), S. Ramachandran, and T.A. Rajesh, Quarterly Journal of Royal Meteorological Society, 142, 697, 1732–1744, DOI: 10.1002/qj.2769, 2016 (Impact Factor: 3.444) (Paper from Ph.D. Thesis work).
- Mixing states of aerosols over four environmentally distinct atmospheric regimes in Asia: Coastal, urban, and industrial locations influenced by dust, S. Ramachandran, and Rohit Srivastava, Environmental Science and Pollution Research, 23, 11109 – 11128, DOI: 10.1007/s11356-016-6254-8, 2016 (Impact Factor: 2.741) (Paper from Ph.D. Thesis work).
- Long-term changes in the within-season temporal profile of Southwest Monsoon over Western India, S. Bhandari, Rohit Srivastava (Corresponding author) and V. Mehta, Journal of Earth System Science, 125, 7, 1313 – 1319, DOI: 10.1007/s12040-016-0736-4, 2016 (Impact Factor: 0.955).
- Absorbing and scattering aerosols over the source region of biomass burning emissions: Implications in the assessment of optical and radiative properties, A. Singh, Rohit Srivastava, N. Rastogi, D. Singh, Atmospheric Environment, 127, 61–68, DOI: 10.1016/j.atmosenv.2015.12.029, 2016 (Impact Factor: 3.629).
- Observational Challenges in Evaluating Climate Models, M. Collins, K. AchutaRao, K. Ashok, S. Bhandari, A. K. Mitra, S. Prakash, Rohit Srivastava, A. Turner, Nature Climate Change, 3 (11), 940 941, DOI:10.1038/nclimate2012, 2013 (Impact Factor: 19.304).
- The mixing state of aerosols over the Indo-Gangetic Plain and its impact on radiative forcing, Rohit Srivastava (1st and corresponding author) and S. Ramachandran, Quarterly Journal of the Royal Meteorological Society, 139, 137 – 151, DOI: 10.1002/qj.1958, 2013 (Impact Factor: 3.444) (Paper from Ph.D. Thesis work).
- Influences of external vs. core-shell mixing on aerosol optical properties at various relative humidities, S. Ramachandran and Rohit Srivastava, Environmental Science: Processes & Impacts, 15, 1070 – 1077, DOI:10.1039/C3EM30975D, 2013 (Impact Factor: 2.592) (Paper from Ph.D. Thesis work).

- Aerosol optical depth trends over different regions of India, S. Ramachandran, Sumita Kedia, and Rohit Srivastava, Atmospheric Environment, 49, 338 – 347, 10.1016/ j.atmosenv.2011.11.017, 2012 (Impact Factor: 3.629).
- Aerosol absorption over Bay of Bengal during winter : Variability and Sources, Sumita Kedia, S. Ramachandran, T. A. Rajesh and Rohit Srivastava, Atmospheric Environment, 54, 738 – 745, DOI: 10.1016/j.atmosenv.2011.12.047, 2012 (Impact Factor: 3.629).
- Contribution of natural and anthropogenic aerosols to optical properties and radiative effects over an urban location, S. Ramachandran, Rohit Srivastava, Sumita Kedia and T.A. Rajesh, Environmental Research Letters, 7 (034028), DOI:10.1088/1748-9326/7/3/034028, 2012 (Impact Factor: 4.404).
- Aerosol radiative forcing deduced from observations and models over an urban location and sensitivity to Single Scattering Albedo, Rohit Srivastava (First and corresponding author), S. Ramachandran, T. A. Rajesh and S. Kedia, Atmospheric Environment, 45, 6163 – 6171, DOI: 10.1016/j.atmosenv.2011.08.015, 2011 (Impact Factor: 3.629) (Paper from Ph.D. Thesis work).

Peer-reviewed conference proceedings :

- Investigation of an intense dust storm event over Arabian sea, Sherin Hassan Bran, S. Jose, and Rohit Srivastava, Indian Aerosol Science and Technology Association Bulletin, 22, (1–2), ISSN: 0971-4510, 317–319, 2016.
- Aerosol Mixing States over Central Himalayan Region, Rohit Srivastava, Indian Aerosol Science and Technology Association Bulletin, 21, (1–2), ISSN: 0971-4570, 67–68, 2014.
- Spatial Variation of Black Carbon and its climatic implication over western and northern Indian regions, Rohit Srivastava, and Sherin Hassan Bran, Indian Aerosol Science and Technology Association Bulletin, 21, (1–2), ISSN: 0971-4570, 548–549, 2014.
- Aerosol variability over south-western Himalayan region, Mudit Mishra, Mohd. Kamran, S. Sood and Rohit Srivastava, Indian Aerosol Science and Technology Association Bulletin, 21, (1–2), ISSN: 0971-4570, 409–410, 2014.
- Aerosol optical properties during biomass burning period of south-western Himalayan forest region, Rohit Srivastava and Satyendra Bhandari, Vayumandal, 38 (1–4), 2012.
- Aerosol optical and radiative properties during intense dust storm of March 2012
 : A 4- D characterization, Rohit Srivastava and S. M. Bhandari, Indian Aerosol Science and Technology Association Bulletin, 20, (1-2), ISSN: 0971-4570, 535-537, 2012.
- Aerosol Radiative Forcing over an urban location: Observations and Model estimates,

7 of 12

Rohit Srivastava and S. Ramachandran, Indian Aerosol Science and Technology Association Bulletin, 19, (1–2), ISSN: 0971-4570, 387–389, 2010.

Reviewers of the Journals

- Atmospheric Environment (AE)
- Atmospheric Research (AR)
- Environmental Science: Processes & Impacts
- Environmental Science and Pollution Research (ESPR)
- International Journal of Climatology (IJOC)
- Journal of Aerosol Science
- Journal of Earth System Science (JESS)
- The Scientific World Journal

Seminar Organized

January 05, 2013 Convened a seminar on "Challenges in Climate Research" for the university professors and research scholars at Indian Centre for Climate and Societal Impacts Research, Ahmedabad, India

Public Articles

September 13, A Case for Making Seaweed Farming and Mangroves an Integral 2018 Part of India's Blue Economy Initiatives" authored by Mukul Asher, Souvik Jha and Rohit Srivastava, published at MyIndMakers, www.myind.net/Home/viewArticle/a-case-for-making-seaweedfarming-and-mangroves-an-integral-part-of-indias-blue-economyinitiatives

Presentations at Conferences/ Symposiums/ Seminars

International Conferences

- 1. Oral presentation entitled "Investigation of aerosols over the marine region in Arctic using a regional climate model", at International Conference on Frontiers in Marine Science - Challenges and Prospects (MARICON-2019) on December 16 to 20, 2019 at Cochin University of Science and Technology (CUSAT), Cochin, Kerala, India.
- 2. Invited presentation entitled "Weather forecasting for Sustainable Agriculture", at United Nation (UN) Climate Change Conference (COP 22), on November 09, 2016 at Marrakech, Morocco.
- 3. Invited presentation entitled "Role of weather forecasting in arena of Climate change", at International Conference on Food, Water, Energy Nexus in Arena of Climate Change, during December 14 16, 2016 at Anand Agricultural University (AAU), Anand, Gujarat, India.

- 4. Oral presentation entitled "Application of GIS and Remote Sensing for Sustainable Agriculture in Rukmavati River Basin of Kachchh, Gujarat", International Symposium on New-Dimensions in Agrometeorology for Sustainable Agriculture (NASA-2014), during 16 18 October, 2014, GBPUA & T University, Pantnagar, India.
- 5. Poster presentation entitled "Mixing state of aerosols over the Indo-Gangetic Plain: Radiative forcing and heating rate" American Geophysical Union Fall Meeting, during December 03 - 07, 2012, Miscone Centre, San Fransisco, U.S.A.
- 6. Oral presentation entitled "Spectral aerosol optical and radiative properties : Influence of aerosol mixing state", Second International workshop on Spectroscopic signatures of molecular complexes/ions in our atmosphere and beyond, (Focused on Climate Change), during February 07 10, 2012, Banaras Hindu University, Varanasi, India.
- Poster presentation entitled "Spatio-temporal variations in aerosol optical and radiative properties : State of mixing", Challenges and opportunities in Air Pollution and Climate Change (CHOP-C), Indian Institute of Tropical Meteorology, Pune, India during January 16-18, 2012.
- 8. Poster presentation entitled "Aerosol mixing state and its effect on optical and radiative properties over an urban region", World Climate Research Program (WCRP) Open Science Conference, October 24 28, 2011, Denver, Colorado, USA.
- 9. Oral presentation entitled "Modeling of optical characteristics of urban aerosols: External and internal mixing", Asia Oceania Geosciences Society (AOGS), Annual meeting, July 5 9, 2010, Hyderabad International Convention Centre, India.
- 10. Poster presented on "Spectroradiometeric Measurement of Aerosol Optical Depths over Ahmedabad and Mt. Abu" at International Symposium on Aerosol - Chemistry - Climate Interactions (ACCLINT-2007), during November 20 - 22, 2007, Physical Research Laboratory, Ahmedabad, India

National Conferences/ workshop

- Oral presentation entitled "Variations in Black carbon aerosol over the Arctic region using a regional climate model", National Conference on Polar Sciences (NCPS)-2019, during August 20 - 22, 2019 at National Centre for Polar and Ocean Research, Vascoda-Gama, Goa, India.
- Oral presentation entitled "Investigation of the role of microphysical parameterizations on precipitation and black carbon prediction in regional climate model", TROPical ME-Teorology (TROPMET) 2018 Symposium organized by Indian Meteorological Society (IMS), during, October 24 - 27, 2018, Banaras Hindu University (BHU), Varanasi, India.

- Poster presentation entitled "Aerosol (PM2.5) mass concentration over the Indian sub-continent", at National Symposium on Tropical Meteorology (TROPMET) - 2016 Symposium, during December 18 - 21, 2016 at Siksha O' Anusandhan University, Bhubaneswar, Odisha, India.
- Oral presentation entitled "Investigation of influence of decadal climate variability on Southwest Indian monsoon in CMIP5 simulations", National Space Science Symposium (NSSS) - 2016, during 09 - 12 February, 2016, Space Physics Laboratory, Vikram Sarabhai Space Centre, Thiruvananthapuram, Kerala, India.
- 15. Poster presentation entitled "Investigation of role of physical and dynamical parameterizations on meteorology and aerosol properties in WRF-CHEM over Indian region", National Space Science Symposium (NSSS) - 2016, during 09 - 12 February, 2016, Space Physics Laboratory, Vikram Sarabhai Space Centre, Thiruvananthapuram, Kerala, India.
- 16. Poster presentation entitled "Study of cloud microphysical properties over central India", National Space Science Symposium (NSSS) - 2016, during 09 - 12 February, 2016, Space Physics Laboratory, Vikram Sarabhai Space Centre, Thiruvananthapuram, Kerala, India.
- Oral presentation entitled "Seasonal and spatial variations of black carbon over Indian region", TROPical METeorology (TROPMET) 2015 Symposium organized by Indian Meteorological Society (IMS), during, February 15 - 18, 2015, Punjab University, Chandigarh, India.
- Oral presentation entitled "Aerosol Mixing States over Central Himalayan Region", Conference of Indian Aerosol Science and Technology Association, during November 11 - 13, 2014, Banaras Hindu University (BHU), Varanasi, India.
- Poster presentation entitled "Spatial Variation of Black Carbon and its climatic implication over western and northern Indian regions", Conference of Indian Aerosol Science and Technology Association, during November 11 - 13, 2014, Banaras Hindu University (BHU), Varanasi, India.
- Poster presentation entitled "Aerosol variability over south-western Himalayan region", Conference of Indian Aerosol Science and Technology Association, during November 11 - 13, 2014, Banaras Hindu University (BHU), Varanasi, India.
- 21. Poster presentation entitled "Southwest Indian monsoon variability on decadal timescales associated with variabilities in the Pacific and Atlantic regions", National Space Science Symposium (NSSS) 2014, during January 29 February 1, 2014, Dibrugarh University,

10 of 12

Dibrugarh, Assam, India.

- 22. Oral presentation entitled "Aerosol optical and radiative properties during intense dust storm of March 2012 : A 4-D characterization" Conference of Indian Aerosol Science and Technology Association, during December 11 - 14, 2012, Navi Mumbai, India.
- Oral presentation entitled "Aerosol optical properties during biomass burning period of south western Himalayan forest" TROPMET 2012 organized by Indian Meteorological Society (IMS), during, November 20 - 22, 2012, Indian Institute of Remote Sensing (IIRS), Dehradun, India.
- Oral presentation entitled "Measured and modeled aerosol radiative forcing over an urban location", National Space Science Symposium, during February 14 - 18, 2012, S. V. University, Tirupati, India.
- 25. Oral presentation entitled "Aerosol Radiative Forcing over an urban location: Observations and Model estimates", Conference of Indian Aerosol Science and Technology Association, during March 24 26, 2010, Bose Institute, Darjeeling, India.
- 26. Poster presentation entitled "Seasonal variations in aerosol vertical profiles over India" at National Space Science Symposium (NSSS 2010), Saurashtra University, Rajkot, Gujarat during February 24 - 27, 2010.
- Poster presented on "Post Monsoon Spectral Optical Depth Features using High Resolution Spectroradiometer over Urban and Remote Locations" during February 26 - 29, 2008, at National Space Science Symposium (NSSS - 08), RAC, Ooty, India.

Participation in International/ National Training Program

- Attended Sãu Paulo Summer School on Global Climate Modeling during 3 14 October, 2011 organized by National Institute for Space Research (INPE), Brazil held at Ubatuba, Sãu Paulo, Brazil.
- Subject expert for workshop entitled "Capacity building workshop on Climate Modeling", under SAP-DRS (Special Assistance Programme - Departmental Research Support) phase II programme during December 29, 2014 - January 03, 2015, Centre for Atmospheric Studies, Dibrugarh University, Dibrugarh, Assam, India.
- 30. Attended Mathematics training and talent search programme, conducted by National Board of higher Mathematics (NBHM)) at Regional Institute of Education (RIE), Mysore in 2003.

	Mr. Suraj Prasad Srivastava November 6^{th} , 1983
Sex:	Male
Nationality :	Indian
Marital Status :	Married
Languages Known:	English, Hindi
1	National Centre for Polar and Ocean Research (NCPOR), Ministry of Eath Sciences, Govt. of India, Headland Sada, Vasco-da-Gama, Goa - 403 804, India
Email :	rohits(AT)ncpor.res.in
Web :	http://ncaor.gov.in/profiles/details/229

Personal Details

I hereby declare that the above information is correct to the best of my knowledge.

Date : December 22, 2020 Place : Vasco-da-Gama, Goa

Rohit Srivastava