

Dr. Sreekanth Vakacherla

Date of Birth: 07-August-1981 **Address:** D-1004, *Aparna Towers, Kondapur, Hyderabad, Telangana, India. PIN: 500084.*
Sex: Male
Marital Status: Married
Nationality: Indian
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Career:

Project Manager (03-08-2015 till date) Cardiovascular Health impacts of Air Pollution in Telangana, India (CHAI), **University of Washington.**

Post Doctoral Fellow (05-05-2014 to 31-10-2014) at **Indian Institute of Technology, Bombay.**

Assistant Professor (01-02-2012 to 15-05-2013), **CMR Institute of Technology, Bangalore**

Scientist – SD (11-02-2008 to 28-03-2011), **Space Physics Laboratory, VSSC, ISRO, Trivandrum – India**

Education

- **Certificate in Health, Safety and Environment Management**, 2016, Public Health Foundation of India, New Delhi
- **Ph. D (Physics)**, 2008; Andhra University, Visakhapatnam
- **Thesis title:** Aerosol characterization and radiative forcing estimation over eastern India
- **M. Phil (Physics)**, 2004 (**University Gold Medallist**); University of Hyderabad, Hyderabad
- **M. Sc (Physics)**, 2003 with Distinction; Andhra University, Visakhapatnam
- **B. Sc (Maths, Physics, Electronics)**, 2001 with Distinction; Andhra University, Visakhapatnam

Honors and Awards

1. Research Fellowship of Department of Science and Technology (DST)
2. Research Fellowship of Council for Scientific and Industrial Research (CSIR)

Publications and Presentations

- Peer Reviewed Publications: 25
- National and International Proceedings: 5
- Presentations: > 25
- Technical Reports: 1
- Peer reviewer for various international journals (Science of the Total Environment, International Journal of Climatology, Atmospheric Environment, Atmospheric Research, Advances in Space Research, Aerosol and Air Quality Research, Theoretical and Applied Climatology, Remote Sensing, Water Air and Soil Pollution, International Journal of Environment Protection, Journal of Computer Science, Indian Journal of Radio and Space Physics, Athens Journal of Science).

Proficiency and Skills

- Computers:
 - OS: Windows: Dos
 - Packages: *Grads, Origin, Surfer, MS Office, MATLAB*
- Technical:
 - Scientific and Technical writing for publications and reports
 - Analysis of large scientific datasets (including satellite data)
 - Installation and operation of broad range of scientific instruments
 - Planning and setting up experimental campaigns
 - Project Management
 - Teaching and mentoring

Programme/Campaign Involvement

1. **Land Campaign II (LC II):** Participated in the characterization of aerosol properties carried out over the Indo-Gangetic Plain during December 2004 under Geosphere Biosphere Programme of Indian Space Research Organization (I-GBP).
2. **Integrated Campaign for Aerosols, Gases and Radiation Budget (ICARB):** Extensive measurements carried out over the Bay of Bengal, Arabian Sea and northern Indian Ocean during the pre-monsoon period of 2006.
3. **Integrated Campaign for Aerosols, gases and Radiation Budget- Winter (ICARB-W):** Played active role in the design and implementation of air-segment of wintertime ICARB experiment over the Bay of Bengal during 2008-2009.
4. **ISRO-Regional Aerosol Warming Experiment (RAWEX):** Played an active role in establishment and continuous operation of a high aerosol observatory at Hanle (4520 amsl), Leh during 2009-2010.
5. **Sooryagrahan-2010: ISRO-VSSC Solar Eclipse Campaign** during 10th to 15th of January, 2010

Experience & Expertise

Expertise in installation, operation & collection of scientific data using broad range of following scientific instruments & techniques:

- Multi-Wavelength Solar Radiometer (MWR under the ARFI project of ISRO-GBP)
- Integrating Nephelometer (TSI 3563, USA)
- Multi wavelength Aethalometer (Magee Scientific, USA)
- Optical Transmissometer (OT21, Magee Scientific USA)
- Micro Aethalometer (Aeth Labs, USA)
- Photo Acoustic Soot Spectrometer (Droplet measurements)
- Scanning Mobility Particle Sizer (Grimm, Germany and TSI, USA)
- Electrical Low Pressure Impactors (Dekati)
- Quartz Crystal Microbalance (California Instruments, USA)
- Optical Particle Counters (Grimm)
- Microtops Sun-photometer (Solar Light Co. USA)
- Micro Pulse lidar (SESI, USA)
- Dusttrak (TSI 3580, USA)
- Environmental Beta Attenuation Monitor (Metone, USA)
- Micro Personal Exposure Monitoring (RTI, USA)

Invited talks

- “Aerosols, Remote Sensing and Climate Change”, Environmental Training Programme on Climate change and Disaster Management: Future Perspective, PGIMER, Chandigarh, 21-23rd February, 2017.

Publications

1. Niranjana, K., B. Melleswara Rao, P. S. Brahmanandam, B. L. Madhavan, **V. Sreekanth**, and K. Krishna Moorthy (2005), Spatial characteristics of aerosol physical properties over northeastern parts of India peninsular, *Ann. Geophys.*, 23, 3219-3227.
2. Niranjana, K., **V. Sreekanth**, B. L. Madhavan, and K. K. Moorthy (2006), Winter time aerosol characteristics at a North Indian site Kharagpur in the Indo-Gangetic plains located at the outflow region into Bay of Bengal, *J. Geophys. Res.*, 111, D24209, doi: 10.1029/2006JD007635.
3. Niranjana, K., B.L. Madhavan, and **V. Sreekanth** (2007), Micro pulse LIDAR observation of high altitude aerosol layers over Visakhapatnam located on the east coast of India, *Geophys. Res. Lett.*, 34, L03815, doi: 10.1029/2006GL028199.
4. Nair, V. S., K. K. Moorthy, D. P. Alappattu, P. K. Kunhikrishnan, S. George, P. R. Nair, S. S. Babu, B. Abish, S. K. Satheesh, S. N. Tripathi, K. Niranjana, B. L. Madhavan, **V. Sreekanth**, C. B. S. Dutt, K. V. S. Badrinath, and R. R. Reddy (2007), Wintertime aerosol characteristics over the Indo-Gangetic Plain (IGP): Impacts of local boundary layer processes and long-range transport, *J. Geophys. Res.* 112, D13205, doi: 10.1029/2006JD008099.
5. **Sreekanth, V.**, K. Niranjana, and B. L. Madhavan (2007), Radiative forcing of black carbon over eastern India, *Geophys. Res. Lett.*, 34, L17818, doi: 10.1029/2007GL030377.
6. Niranjana, K., **V. Sreekanth**, B. L. Madhavan, and K. K. Moorthy (2007), Aerosol characteristics and Radiative forcing at the outflow region from the Indo-Gangetic plains during typical clear and hazy periods of wintertime, *Geophys. Res. Lett.*, 34, L19805, doi: 10.1029/2007GL032144.

7. Niranjana, K., **V. Sreekanth**, B. L. Madhavan, T. A. Devi and B. Spandana (2008), Temporal characteristics of aerosol physical properties at Visakhapatnam on the east coast of India during ICARB – Signatures of transport onto Bay of Bengal, *J. Earth Syst. Sci.* 117, S1, July 2008, pp. 421–427.
8. Nair, V. S., K. K. Moorthy, S. S. Babu, K. Narasimhulu, L. S. S. Reddy, R. R. Reddy, K. R. Gopal, **V. Sreekanth**, B. L. Madhavan and K. Niranjana (2008), Size segregated aerosol mass concentration measurements over the Arabian Sea during ICARB, *J. Earth Syst. Sci.* 117, S1, July 2008, pp. 315–323.
9. Madhavan, B. L., K. Niranjana, **V. Sreekanth**, M. M. Sarin, and A. K. Sudheer (2008), Aerosol characterization during the summer monsoon period over a tropical coastal Indian station, Visakhapatnam, *J. Geophys. Res.*, 113, D21208, doi:10.1029/2008JD010272.
10. Babu, S. S., **V. Sreekanth**, V. S. Nair, S. K. Satheesh, and K. K. Moorthy (2010), Vertical profile of aerosol single scattering albedo over west coast of India during W_ICARB, *J. Atmos. Solar. Terr. Phys.*, 72, 876–882.
11. Babu, S. S., **V. Sreekanth**, K. K. Moorthy, M. Mohan, N. V. P. Kirankumar, D. B. Subrahmanyam, M. M. Gogoi, S. K. Kompalli, N. Beegum, J. P. Chaubey, V. H. A. Kumar, R. K. Manchanda (2011), Vertical profiles of aerosol black carbon in the atmospheric boundary layer over a tropical coastal station: Perturbations during an annular solar eclipse, *Atmos. Res.*, 99, 471–478.
12. **Sreekanth, V.**, K. K. Moorthy, S. K. Satheesh, S. S. Babu, V. S. Nair, K. Niranjana (2011), Airborne measurements of aerosol scattering properties above the MABL over Bay of Bengal during W ICARB – characteristics and spatial gradients, *Ann. Geophys.*, 29, 895–908.
13. Niranjana, K., B. Spandana, T. A. Devi, **V. Sreekanth**, and B. L. Madhavan (2011), Measurements of aerosol intensive properties over Visakhapatnam, India for 2007, *Ann. Geophys.*, 29, 973–985.
14. Moorthy, K. K., **V. Sreekanth**, J. P. Chaubey, M. M. Gogoi, S. S. Babu, S. K. Kompalli, S. P Bagare, B. C. Bhatt, V. K. Gaur T. P. Prabhu, N. S. Singh (2011), Fine and ultra fine particles at near free-tropospheric environment over the high altitude station Hanle, in *Trans- Himalayas: New particle formation and size distribution*, *J. Geophys. Res.*, 116, D20212, doi:10.1029/2011JD016343.
15. Babu, S. S., J. P. Chaubey, K. K. Moorthy, M. M. Gogoi, S. K. Kompalli, **V. Sreekanth**, S. P Bagare, B. C. Bhatt, V. K. Gaur T. P. Prabhu, N. S. Singh (2011), High Altitude (~ 4520 m amsl) measurements of Black Carbon aerosols over Western Himalayas: Seasonal heterogeneity and source apportionment, *J. Geophys. Res.*, 116, D24201, doi:10.1029/2011JD016722.
16. Chaubey, J. P., S. S. Babu, M. M. Gogoi, S. K. Kompalli, **V. Sreekanth**, K. K. Moorthy and T. P. Prabhu, Black Carbon Aerosol over a High Altitude (~ 4.52 km) Station in Western Indian Himalayas, *J. Inst. Engineering (Nepal)*, Vol. 8, No. 3, pp. 42–51.
17. Kompalli, S. K., **V. Sreekanth**, J. P. Chaubey, M. M. Gogoi, S. S. Babu, T. P. Prabhu, and K. K. Moorthy, Aerosol Number Size Distribution Measurements at Hanle, a Free Tropospheric High-Altitude Site in Western Himalayas, *J. Inst. Engineering (Nepal)*, Vol. 8, No. 3, pp. 140–146.
18. Gogoi, M. M., J. P. Chaubey, **V. Sreekanth**, S. K. Kompalli, S. S. Babu, T. P. Prabhu and K. K. Moorthy, Columnar Aerosol Extinction Characteristics: Measurements from a Free-Tropospheric Observatory in Western-Himalayas, *J. Inst. Engineering (Nepal)*, Vol. 8, No. 3, pp. 52–57.
19. Niranjana, K., T. Anjana Devi, B. Spandana, **V. Sreekanth**, B. L. Madhavan (2012), Evidence for control of Black Carbon and Sulfate relative mass concentrations on composite aerosol radiative forcing: case of a coastal urban area, *J. Geophys. Res.*, 117, D05205, doi:10.1029/2011JD016752.
20. **Sreekanth, V.**, Padmavati Kulkarni (2013), Spatio-temporal variations in columnar aerosol optical properties over Bay of Bengal: Signatures of elevated dust, *Atmospheric Environment*, 69, 249 – 257.
21. **Sreekanth, V** (2013), Satellite derived Aerosol Optical Depth climatology over Bangalore, India, *Adv. Space. Res.* 51, 2297 – 2308.
22. **Sreekanth, V** (2014), On the classification and sub-classification of aerosol key types over south central peninsular India: MODIS-OMI algorithm, *Science of the Total Environment*, 468–469, 1086–1092.
23. **Sreekanth, V** (2014), Dust layer height: Passive remote sensing and modelling synergetic approach, *Atmospheric Environment*, 90, 16 – 22.
24. **Sreekanth, V** (2016), Discussion on linear long-term trends in aerosol and cloud properties over India and its surrounding waters, *Adv. Space. Res.*, 57, 2104 – 2114.
25. Niranjana, K., **V. Sreekanth**, B. Mahesh, S. Kiranmayi (2017), Diurnal variations in the aerosol physical, optical and altitude distributional characteristics over three locations in eastern India: implications to black carbon radiative forcing, *Terr. Atmos. Ocean. Sci.*, 28(3), (in press).

Schools and Functional Training

1. "School on Radar and Lidar remote sensing of the atmosphere", UGC-SVU centre of MST radar applications, Department of Physics, Sri Venkateswara University, Tirupathi during 7th-11th March 2007.
2. "ISRO Induction Training Programme (IITP)" including one-month project work conducted by ISRO during 14th February 2008 to 14th June 2008 at several ISRO centers.
3. Short course on "Cloud Modeling" at IITM Pune, during 1st to 5th April, 2010.
4. NASA-ARSET webinar series on "Introduction to Remote Sensing for Air Quality Applications for the Indian Sub-Continent and Surrounding Regions" March 19 – April 23, 2014.
5. NASA-ARSET webinar series on "Introduction to Global Precipitation Measurement (GPM) Data and Applications", March 17 – 31, 2015.
6. NASA-ARSET webinar series on "NASA Earth Observations and Tools for Air Quality Applications in South East Asia", April 01 – 29, 2015.
7. NASA-ARSET webinar series on "Introduction to Remote Sensing for Wildfire Applications", March 31 – April 28, 2015.

Seminars and Conferences

- "4th Asian Aerosol Conference" held at Grand Hyatt, Mumbai during 13-16th December 2005.
- "XIV National Space Science Symposium" held at Andhra University, Visakhapatnam during 9-12th February 2006.
- "National Seminar on Atmospheric Science"; Sri Krishna Devaraya University, Anantapur; 24, 25th February 2006.
- "95th Indian Science Congress" Andhra University, Visakhapatnam during 3-7th January 2008.
- One-day workshop: "Cloud Aerosol Interaction, Precipitation Enhancement EXperiment (CAIPEEX)"; IITM, Pune, 4th March, 2009.
- "XVI National Space Science Symposium" held at Saurashtra University, Rajkot during 24-27th February 2010.
- 7th Annual Meeting of "Asia Oceanic Geosciences Society", 5-9th July 2010, Hyderabad.
- "National Workshop: Results on Solar Eclipse" held at Vikram Sarabhai Space Centre, Trivandrum, 27-28th January 2011.
- "1st Climate Science and Policy Workshop", Indian Institute of Technology, Bombay, 6-7th March, 2014.
- "Indo-US workshop to explore Bilateral Research Opportunities to Address Air Quality and Health Issues, India Habitat Centre, New Delhi, 8-10th November 2016.
- "Urban Air Pollution in Indian and UK cities: Characterization and Prediction of Chemically Reactive Air Pollutants", Indian Institute of Technology, Delhi, 28th Nov – 1st Dec 2016.
- "IASTA conference on Aerosols and Climate change: Insights and Challenges", Physical Research Laboratory, Ahmedabad, 6-8th December 2016.

Hobbies

- Philately
- Numismatics
- Cooking