


**Prof. (Dr.) Sandeep Raghunath Varpe**

<b>Designation</b>	Associate Professor	
<b>Department</b>	Engineering Sciences	
<b>Email id</b>	sandeepv@isquareit.edu.in	
<b>Qualifications</b>	M.Sc. (Physics), NET, Ph. D.	
<b>Teaching experience</b>	16 Years	
<b>Industry experience</b>	04 Months	
<b>Total experience</b>	16.4 years	
<b>Area of interest</b>	Acoustics, Atmospheric Physics	

## **Achievements:-**

- Recognition from Savitribai Phule Pune University as **Ph.D. guide in Physics** valid till Oct 2044.
- Working as **Peer Reviewer in Springer Nature's Journals**.
- Under SPPU working in the **Syllabus design committee, Paper setter and Moderator** of Engineering Physics subject.
- Invited as **Judge at CBSE Regional Science Exhibition 2022-23, Pune**.
- **Chhatrapati Shivaji Maharaj Ratriya Gaurav Purskar 2022** on 1st Nov 2022
- Dr. Babasaheb Ambedkar **Samajbhushan National Award** by Shabdganadh Group on 16th December 2020.
- Certificate of appreciation in **Teachers Innovation Award** by Zero Investment Innovation for Education Initiative on 30<sup>th</sup> September 2019.
- **Qualified NET** exam conducted by CSIR held on 19<sup>th</sup> June 2011 with **National Rank 04** for lectureship.
- **Doctor in Medicine** completed correspondence degree of Alternative Medical Practitioner (AMP) from Indian Board of Alternative Medicines, Kolkata.
- Completed **Diploma in Computer Systems**.
- **IRAJ Appreciation Award** for the category **Best Content** for research paper at **35<sup>th</sup> IRF International Conference**, Pune on 16<sup>th</sup> Aug 2015
- **Best Paper Award** for the Science Track at International Conference on Recent Trends in Computing, Communication and Science (ICRTCCS'16) on 8<sup>th</sup>– 9<sup>th</sup> January, 2016 held at Pune.
- **Excellent Paper Award** for the category Best Presentation at National Conference on Recent Innovations in Science Engineering and Technology, Pune Aug 2015.
- As a **Resource person** delivered a lecture on the topic "**Study Tips and Strategies to Prepare for FE Examinations**" on Friday, 3rd of March 2023, at Dr. D. Y. Patil College of Engineering and Innovation, Talegaon, Pune.
- As a **Resource person** delivered guidance lecture in workshop for **CSIR NET and SET Examination** Preparation in Physical Sciences (Physics) conducted for teaching faculties working in various Engineering Colleges, at Vishwakarma Institute of Information Technology, Kondhwa (Bk.), Pune on 10<sup>th</sup> Oct 2015.

- As a **Resource person** delivered a lecture on the topic **Advances in Non Destructive Testing for Engineering Students**, at All India Shri Shivaji Memorial Society's College of Engineering, Pune 01 on 13<sup>th</sup> March 2022.
- As a **Resource person** delivered a lecture on the topic **Different Tools in online teaching for Faculty**, at Shri Jain Vidya Prasarak Mandal Sangavi Keshri Arts And Commerce College, Chinchwad, Pune on 07<sup>th</sup> July 2020.

### **Publications: In Refereed and Peer Reviewed Journals:**

1. **Varpe, S. R.**, Mahajan. M., Kolhe, A. R., Kotal, G. C., Budhavant, K. B., Singh, P. R., Aher, G. R., Aerosol-Cloud Interaction over South-Central India and Adjoining Coastal Areas, Aerosol Science and Engineering, 2022, <https://doi.org/10.1007/s41810021-00123-4>
2. **Varpe, S. R.**, Kolhe, A. R., Singh, P., Mahajan, C. M., Kotal, G. C., Patil, R. S., Prasad, P., and Aher, G. R., Annual and Inter-annual Variability Coupled with Comparison of MODIS-AERONET Retrieved Aerosol Optical Depth over a Rural Site in the Central Indo-Gangetic Basin, Aerosol Science and Engineering, 2022 <https://doi.org/10.1007/s41810022-00135-8>
3. Kotal, G., Kolhe, A., **Varpe, S.**, Mahajan, C., Singh, P., and Aher, G. R., : UV Erythema Radiation and Its Sensitivity to Changes in Total Column Ozone and Aerosols, Aerosol Science and Engineering, 2022, <https://doi.org/10.1007/s41810-022-00132-x>
4. Kotal, G., Kolhe, A., Mahajan, C., **Varpe, S.**, Patil R., Singh, P., and Aher, G. R.: "Characteristics of surface ozone levels at climatologically and topographically distinct metropolitan cities in India", Asian Journal of Atmospheric Environment, 2022.
5. **Sandeep R. Varpe**, Amol R. Kolhe, Ganesh C. Kotal, Ganesh V. Pawar, Swagata Payra, Krishnakant B. Budhavant, Gajanan R. Aher & Panuganti C. S. Devara (2018): Heterogeneity in aerosol characteristics at the semi-arid and island AERONET observing sites in India and Maldives, International **Journal of Remote Sensing**, DOI: 10.1080/01431161.2018.1454622.
6. Amol R. Kolhe Ganesh V. Pawar, **Sandeep R. Varpe**, Pallath Pradeep Kumar, Panuganti C. S. Devara, Gajanan R. Aher, Multi-Year Analysis of Aerosol Properties Retrieved from the Ångström Parameters for Different Spectral Ranges over Pune **Aerosol and Air Quality Research**, 16: 3266–3280, 2016, ISSN: 1680-8584 print / 2071-1409 online, doi: 10.4209/aaqr.2016.06.0268.
7. **S. R. Varpe**, G. R. Aher, G. C. Kotal and A. R. Kolhe, Classification of Aerosol Types over Pune, International Journal of Recent Advances in Engineering & Technology (IJRAET), ISSN (Online): 2347 - 2812, Volume-4, Issue -7, 2016.

8. **S. R. Varpe**, G. R. Aher, G. V. Pawar, G. C. Kotal, Variability of Aerosol Optical, Physical and Radiative Properties at Seven Asian AERONET Stations during March 2012 Dust Event, International Journal of Advances in Science Engineering and Technology, ISSN: 2321-9009, Spl. Issue-3, 40-44 Oct.-2015.
9. G. C. Kotal, A. R. Kolhe, **S. R. Varpe** and G. R. Aher (2017) An investigation of temporal variability of the total column ozone over tropical urban, high altitude, and coastal stations in Western Maharashtra, India, **International Journal of Remote Sensing**, 38:5, 1197-1223, DOI: 10.1080/01431161.2017.1283073.
10. **Sandeep Varpe**, Mahesh Waghmare, Swati Kolet, Amit Kasar, Rupali Varpe, SuvarnaBhagwat, Rupali Yeole, and MandarDatar, Temporal Variability of Aerosol Parameters over a Metropolitan AERONET Observing Site at Pune, **Journal of Applied Science and Computations**, ISSN NO: 0076-5131, Volume 5, Issue 7, July /2018, pp. 408 – 412.
11. **Sandeep R. Varpe**, Radiative Properties of Aerosol Mixtures Observed Over Arid And Island Aeronet Station, **Pramana Research Journal**, 2019. ISSN NO: 2249-2976, Volume 9, Issue 5, May 2019, PP. 279 – 284.
12. **Sandeep Varpe**, Identifying Different Aerosol Types over a metropolitan City - Pune, **Edu World**, Volume 12, Issue 12, April 2018, pp 228- 232.
13. Amit B. Kasar, **Sandeep R. Varpe**, et. al., Design and Analysis of High Voltage Capacitor By Metalized Polypropylene Film, **International Journal of Current Research**, Volume 8, Issue 5, April 16, pp 30435 – 30439.
14. **Sandeep Varpe**, Mahesh Waghmare, Swati Kolet, Rupali Varpe, and MandarDatar, Temporal Variability of Aerosols Parameters over a Metropolitan AERONET Observing Site at Gandhi College, **Global Journal Of Engineering Science And Researches**, ISSN 2348–8034, 5(10): October 2018.
15. Swati P. Kolet, and **Sandeep Varpe**, Exploring Calcium Alginate Entrapped Fungal Mycelia for Progesterone Transformation, International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 6, Issue I, January 2018, pp. 335 – 338.
16. Sandeep Varpe et.al. (2024), Investigating Human Responses to Sinusoidal Tones in the Auditory Channel with Emphasis on Individual Resonance Characteristics, *J.ElectricalSystems20-9s(2024):2419-2425*.
17. Sandeep Varpe et.al. (2024), Simulating Vehicle Driving Using CARLA, *J. Electrical Systems 20-10s(2024): 44 -52*.

### **Publications: Peer Reviewed and Non-Refereed Journals**

1. **S. R. Varpe**, A. R. Kolhe, G. C. Kotal, G. R. Aher, Radiative properties of aerosol mixtures observed over Arid and Island AERONET station. *Bulletin of Indian Aerosol Science and Technology Association (IASTA), Special Issue, Vol. 22 (1 & 2)*, pp 683 – 686, 2016. (ISSN 0971-4510).
2. **S. R. Varpe**, G. V. Pawar, G. C. Kotal, G. R. Aher, Investigation of dust event induced radiative and heating effects over different AERONET sites, *Bulletin of Indian Aerosol Science and Technology Association (IASTA), Special Issue, Vol. 21 (1 & 2)*, pp 95 -97, 2014. (ISSN 0971-4510).
3. A. R. Kolhe, **S. R. Varpe**, G. C. Kotal, P. C. S. Devara, G. R. Aher, Estimation of short-wave aerosol direct radiative forcing at high altitude and coastal locations in western Maharashtra. *Bulletin of Indian Aerosol Science and Technology Association (IASTA), Special Issue, Vol. 22 (1 & 2)*, pp 679 – 682, 2016. (ISSN 0971-4510).

### **Book/Book chapter publication:**

1. “**Aerosol-cloud interaction: a case study**”, **Sandeep R. Varpe**, Gajanan R.Aher,Amol R. Kolhe and Sanjay D. More, *In Aerosol-Science and Case Studies (Environmental Engineering)*, Ed. Konstantin Volkov (Kingston University, UK), INTECH: Science, Technology and Medicine open access publisher, UK, Chapter 8, OPEN ACCESS, ISBN 978-958-51-2844-1. Print ISBN 978-953-51-2843-4, DOI: 10.5772/05237, December 2016.
2. “Atmospheric Aerosols: Optical, Physical and Radiative Properties”, Eds. Gajanan R. Aher and **Sandeep R. Varpe**, *Research India Publication (RIP), New Delhi (India)*, ISBN 978-86138-12-5, 162p, 2016.

### **Abstracts: In Int’l and Nat’l Conferences/Workshops**

1. **S. R. Varpe**, A. R. Kolhe, G. R. Aher, Aerosol climatology at Jaipur and Hanimaadhoo AERONET observing sites, Oral-cum-Poster presentation at the 19<sup>th</sup> National Space Science Symposium (NSSS-2016) held at the Vikram Sarabhai Space Centre, Trivandrum during Feb 9-12, 2016.
2. **Varpe S. R.**, Pawar G. V., and Aher G. R.,Climatology of atmospheric turbidity parameters over tropical Urban site, Pune. Pro.18<sup>th</sup> National Space Science Symposium (NSSS-2014) held at Dibrugarh Uni., Dibrugarh, Assam during Jan. 29<sup>th</sup> –Feb.1<sup>st</sup>, 2014, Abstract Bk.,pp 99-100.
3. A.R. Kolhe, **S.R. Varpe**, G. R. Aher, G. C. Kotal, Study of Ground-based Solar UV Erythema irradiance and its comparison with Satellite retrieved UV Erythema irradiance, Proc. Of the 19<sup>th</sup> National Space Science Symposium (NSSS-2016) held at the Vikram Sarabhai Space Centre, Trivandrum during Feb 9-12, 2016.

4. Climatology of atmospheric turbidity parameters over tropical Urban site, Pune. **Varpe S. R.**, Pawar G. V., and Aher G. R. Pro. 18<sup>th</sup> National Space Science Symposium (NSSS-2014) held at Dibrugarh Uni., Dibrugarh, Assam during Jan. 29<sup>th</sup> –Feb.1<sup>st</sup>, 2014, Abstract Bk., pp 99-100.
5. A.R. Kolhe, G. R. Aher, **S. R. Varpe**, G.V. Pawar, Temporal characteristics of aerosol extinction coefficient at environmentally different observing sites in Western Maharashtra, In Proceeding of 11<sup>th</sup> International Conference on Microwaves, Antenna, Propagation & Remote Sensing, Published by International Center for Radio Science (Jodhpur, Rajasthan), pp 183-189, 2015. (ISBN: 9788192607139).