

NAME, First Name: FADNAVIS, Suvarna

Affiliation: Indian Institute of tropical meteorology, Pune, India

Role in the project: Global and regional climate model expertise and representation of the observational needs of a modelers perspective (Task 1,2 and 4)

Current position: Scientist-F

Former Position(s): Scientist-E

Education: B.E., Bachelor of Engineering --- 2nd rank in university, 1992, M. Tech. (Atmospheric Physics) – Outstanding grade, 2005, Ph. D (Atmospheric sciences), 2009

Services in National and/or International Committees (most recent nominations):

- Steering Committee member of Stratospheric Sulfur and its Role in Climate, a SPARC program
- Steering Committee member of Chemistry climate modelling Initiative (CCMI) a WCRP program
- Editor: Atmospheric Chemistry and Physics (ACP), Frontiers in Environmental Science
- Lead Author of Chapter-5 of India's National report titled "Assessment of climate change over the Indian region." springer publication, 2020.
- The reviewer of International panel for climate Change (IPCC) AR6 chapter-11.

Honors: WMO's International Nobert-Gerbier Mumm Award for 2005 for the co-authored paper titled "Review of Mesospheric Temperature Trends" by G. Beig et al.

Selected Publications:

Fadnavis S., Müller R., Chakraborty T., Sabin T.P., Laakso A., Rap A., Griessbach S., Vernier J.V., Tilmes S. The role of tropical volcanic eruptions in exacerbating Indian droughts, Scientific Reports, 11: 2714, February 2021, DOI:10.1038/s41598-021-81566-0, 1-13

Fadnavis S., Chavan P., Joshi A., Sonbawne S.M., Acharya A., Devara P.C.S., Rap A., Ploeger F., Müller R., Tropospheric warming over the northern Indian Ocean caused by South Asian anthropogenic aerosols: possible impact on the upper troposphere and lower stratosphere, Atmospheric Chemistry and Physics, 22, June 2022, DOI:10.5194/acp-22-7179-2022, 7179-7191

Fadnavis S. et al. A rising trend of double tropopauses over South Asia in a warming environment: Implications for moistening of the lower stratosphere, Int., J. Climatol., 2020, <https://doi.org/10.1002/joc.6677>

Fadnavis S., Müller R., Kalita G., Rowlinson M., Rap A., Li J-L.F., Gasparini B., Laakso A., Impact of recent changes in Asian anthropogenic emissions of SO₂ on sulfate loading in the upper troposphere and lower stratosphere and the associated radiative changes, Atmospheric Chemistry and Physics, 19, 2019, DOI:10.5194/acp-19-9989-2019, 9989-10008.

Fadnavis S., Sabin T.P., Roy C., Rowlinson M., Rap A., Vernier J.-P., Sioris C.E., Elevated aerosol layer over South Asia worsens the Indian droughts, Scientific Reports, 9:10268, July 2019, DOI:10.1038/s41598-019-46704-9, 1-11

Fadnavis S., Kalita G., Ravi kumar K., Gasparini B., Frank Li J-L., Potential impact of carbonaceous aerosol on the upper troposphere and lower stratosphere (UTLS) and precipitation during Asian summer monsoon in a global model simulation, Atmospheric Chemistry and Physics, 17, 2017, DOI:10.5194/acp-17-11637-2017, 11637-11654.

Fadnavis S., Semeniuk K., Schultz M.G., Kiefer M., Mahajan A., Pozzoli L., Sonbawane S., Transport pathways of peroxyacetyl nitrate in the upper troposphere and lower stratosphere from different monsoon systems during the summer monsoon season, Atmospheric Chemistry and Physics, 15, DOI:10.5194/acp-15-11477-2015, 11477-11499, 2015.

Fadnavis S., Semeniuk K., Pozzoli L., Schultz M.G., Ghude S.D., Das S., Kakatkar R., Transport of aerosols into the UTLS and their impact on the Asian monsoon region as seen in a global model simulation, Atmospheric Chemistry and Physics, 13, 2013, DOI:10.5194/acp-13-8771-2013, 8771-8786