

Syed Hamid Ali

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Education

Purdue University <i>Ph.D. in Atmospheric Sciences</i> (expected)	West Lafayette, IN, USA 2026
Savitribai Phule Pune University (SPPU) <i>M.Tech. Atmospheric Sciences</i>	Pune, MH, India 2021
University of Kashmir (KU) <i>B.E. Mechanical</i>	Srinagar, J&K, India 2018

Research experience

Ph.D. Topic	
Tornadoes in Quasilinear Convective Systems <i>NOAA PERiLS Project</i>	Dr. Daniel Dawson (Advisor) 2022–Present
M. Tech Thesis	
Radar Derived Quantitative Precipitation Estimation <i>Indian Institute of Tropical Meteorology (IITM)</i>	Dr. M.C.R. Kalapureddy (Advisor) 2020–2021

Skills

Software Development	
PyScanCf - The library for handling IMD radar data (Link to Library)	
PyMWR - Python Microwave Radiometer library (Link to Library)	
Programming: Python, IPyParallel, Dask Parallel, Parallel netCDF, R, MATLAB, FORTRAN 90/95	
Frequently Using: PyScanCf, Py-ART, Xarray, Wradlib, Scipy, Pandas, Sklearn, PyTorch, Tensorflow, Geopandas, Metpy, LaTeX, etc.	
Visualization and Statistics: Python, Ferret, Climate Data Operators (CDO), Origin	
Super-computing: Purdue's Bell Cluster, IITM's HPC Pratyush and HPC Aditya	
Experience with	
Radar: Volume Scan Datasets (vol, Cf-Radial), Disdrometer, Raingauge, MRR	
Satellite Observations: TRMM, GPM (L2, L3, IMERG), INSAT3D, SRTM	
Reanalysis & Model datasets: MRMS, NCAR Reanalysis, ERA5, ERSST-V5, ERA40, ERA-INTERIM, WRF, GPCP, IMDAA	

Publications

Peer Reviewed.....

1. *in-prep*

Non-Peer Reviewed.....

1. Syed, Hamid Ali. (2023). Critical Need for Doppler Weather Radars in India: Predicting and Mitigating the Impact of Severe..., *Medium*, [LINK](#).
2. Syed, Hamid Ali, Sayyed, Imran, Kalapureddy, Madhu Chandra R, & Grandhi, Kishore Kumar. (2021) PyScanCf – The library for single sweep datasets of IMD weather radars, *Zenodo*, DOI: [10.5281/zenodo.5574160](#)

Conferences

Oral Presentations.....

1. **2023** DSD Characteristics and Evolution of the Leading Stratiform Region of a Tornadic QLCS during PERiLS-2022 IOP#2 (30 March 2022). AMS 40th Radar Conf.
2. **2023** An Overview of Purdue's Mobile Disdrometer Operations in PERiLS 2023, AMS 40th Radar Conf.
3. **2021** INTROMET: Radar-based quantitative precipitation estimation
4. **2020** Seventh WMO International Workshop on Monsoons (IWM-7): PyScanCf Introduction

Poster Presentations.....

1. Dawson, Daniel T., Qin Jiang, Jacob Andrew Bruss, Matthew Graber, Funing Li, Hamid Ali Syed, Faith Vendl, Quinn Wilson, Michael I. Biggerstaff, and Sean M. Waugh (2022): Overview of Purdue's Mobile Disdrometer Operations in PERiLS 2022. In: 30th Conference on Severe Local Storms, Birmingham, AL, 22-26 November 2022. AMS, pp. 1-6.
2. 2021 Seventh WMO International Workshop on Monsoons (IWM-7): [LINK](#) to Poster
3. 2021 ICCP 2021 & 10th International Cloud Modeling Workshop, IITM Pune
4. 2021 Radar-Based Quantitative Precipitation Estimation in Western Ghats, Midwest Student Conference on Atmospheric Research, University of Illinois

Open source Contributions (GitHub)

1. PyDDA: <https://github.com/openradar/PyDDA/>
2. IMD Radar Network Dataset, 2023: <https://doi.org/10.6084/m9.figshare.22704910.v1>
3. Wradlib: <https://github.com/wradlib/wradlib>
4. DRpy: <https://github.com/dopplerchase/DRpy>
5. PyMeso: <https://github.com/jordanbrook/PyMeso>
6. OpenRadar: <https://openradarscience.org/pages/projects/>

Courses/Certifications

Nov 2020: Machine Learning by Stanford University, Coursera
Oct 2020: Understanding and Visualizing Data with Python, Coursera
Sep 2020: Data Analysis with Python, IBM, Coursera
Sep 2020: Python for Data Science, IBM, Coursera
Sep 2020: Python for Everybody by University of Michigan, Coursera
Jul 2017: Course on Computer Concepts, NIELIT
May 2011: Course in C/C++, DOEACC

Comet/MetEd Courses, NCAR/UCAR

Feb 2023: Communicating Probabilistic Forecasts
Mar 2023: Communicating Forecast Uncertainty
Mar 2023: Gridded Forecast Verification and Bias Correction
Apr 2023: Analyzing and Evaluating Risk
Apr 2023: Impact-Based Forecasting: Identifying Hazards and Constructing Impacts Tables
Apr 2023: Met 101: Basic Weather Processes
Apr 2023: Met 101: Introduction to the Atmosphere
Apr 2023: NWP Essentials: NWP and Forecasting

Workshops & Seminars

Dec 2020: Basics of Satellite Meteorology at Space Application Center, ISRO Online
Feb 2020: From the Byte to Service: Trans-disciplinary Climate Research, IITM
Jan 2020: National Information System for Climate and Environment Studies and its Activities, NRSC
ISRO & IITM Pune, IITM
Apr 2020: Seminar on Clouds in Cyclones, SPPU
Nov 2019: Seminar on Photosphere, SPPU
Oct 2019: Seminar on Cyber Security, SPPU
July 2017: Seminar on Autonomous Vehicles, KU

Awards

2014-2017 & 2019-2021: Merit cum means scholarship – Ministry of Minority Affairs, Govt of India

Volunteering

Feb 2020: Volunteered in Annual Monsoon Workshop hosted by Indian Meteorological Society, Pune Chapter, Pune
Since 2014: Regular Career counseling in rural and remote areas of Kashmir Valley

Language Skills

Proficient: Kashmiri, English, Urdu

Intermediate: Arabic (reading and writing)

Basic: Hindi (speaking)