Syed Hamid Ali

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Education

Purdue University	**West Lafayette, IN, USA**
Ph.D. in Atmospheric Sciences	*2026 (expected)*
Savitribai Phule Pune University (SPPU)	**Pune, MH, India**
M.Tech. Atmospheric Sciences, Jointly with the Indian Institute of Tropical Meteorology (IITM)	*2021*
University of Kashmir (KU)	**Srinagar, J&K, India**
B.E. Mechanical	*2018*

Research experience

Ph.D. Topic ....

Tornadoes in Quasilinear Convective Systems	**Dr. Daniel Dawson (Advisor)**
NOAA PERiLS Project	*2022–Present*

M. Tech Thesis ....

Radar Derived Quantitative Precipitation Estimation	**Dr. M.C.R. Kalapureddy (Advisor)**
Indian Institute of Tropical Meteorology (IITM)	*2020–2021*

Skills

Software Development ....

PyScanCf: The library for handling IMD radar data ([Link to Library](#))

Xradar: Xarray based radar toolkit ([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:

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. Ghosh, R., D. Mudiar, S. D. Pawar, M. A. Domkawale, **H. A. Syed**, A. Hazra, and V. Gopalakrishnan, 2024: Observation of a dramatic increase in the positive cloud-to-ground lightning in the Indian summer monsoon season. Atmospheric Research, 298, 107119, doi:10.1016/j.atmosres.2023.107119.

Non-Peer Reviewed . . . .

1. **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

Talks . . . .

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. **2022** Seventh WMO International Workshop on Monsoons (IWM-7): PyScanCf Introduction

4. **2021** INTROMET: Hourly radar-based quantitative precipitation estimation LINK to abstract P. 456

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. 2022 Seventh WMO International Workshop on Monsoons (IWM-7): LINK to Poster

3. 2021 Radar-Based Quantitative Precipitation Estimation in Western Ghats, International Conference on Clouds and Precipitation, IITM Pune

4. 2021 Characterization of Hourly Radar-Based Quantitative Precipitation Estimation, Midwest Student Conference on Atmospheric Research, University of Illinois LINK to Poster

Open source Contributions (GitHub)

Xradar: https://github.com/openradar/xradar

Py-ART: https://github.com/ARM-DOE/pyart

PyDDA: https://github.com/openradar/PyDDA/

IMD Radar Network Dataset, 2023: https://doi.org/10.6084/m9.figshare.22704910.v1

Wradlib: https://github.com/wradlib/wradlib

DRpy: https://github.com/dopplerchase/DRpy

PyMeso: https://github.com/jordanbrook/PyMeso

OpenRadar: https://openradarscience.org/pages/projects/

Professional Services

Member: American Meteorological Society (2022-present)

Member: Open Radar Science (2022-present)

Reviewer: Journal of Open Source Software (2023-present)

Mentoring (*undergrads*) ....

Aug 2022 – May 2023: Vendl Faith

Aug 2023 – Dec 2023: Sand Cole

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)