Hamid Ali Syed

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Education

Purdue University — **West Lafayette, IN, USA**
Ph.D. in Atmospheric Sciences — *2026*
(expected)

Savitribai Phule Pune University — **Pune, MH, India**
M.Tech. Atmospheric Sciences — *2021*

University of Kashmir — **Srinagar, J&K, India**
B.E. Mechanical — *2018*

Research experience

Ph.D. Topic

Title: Tornadoes in Quasilinear Convective Systems

Supervisor: Dr. Daniel Dawson

Funding: NOAA PERiLS Project

M. Tech Thesis

Title: Characterization of hourly derived radar-based quantitative precipitation estimation of extreme rainfall events

Employer: Indian Institute of Tropical Meteorology (IITM)

Supervisor: Dr. M.C.R. Kalapureddy

Skills

Software Development: PyScanCf - The library for handling IMD radar data (Link to Library)

Programming: Python, IPyParallel, Dask Parallel, Parallel netCDF, MATLAB, FORTRAN 90/95

Frequently Using: PyScanCf, Py-ART, Xarray, Wradlib, Scipy, Pandas, Sklearn, PyTorch, Tensorflow, Geopandas, Metpy, etc.

Visualization and Statistics: 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

Oral Presentations

1. 2021 INTROMET: Radar-based quantitative precipitation estimation

2. 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 PyScanCf Poster

3. 2021 ICCP 2021 & 10th International Cloud Modeling Workshop: LINK to Poster, IITM Pune

4. 2021 Radar-Based Quantitative Precipitation Estimation in Western Ghats, Midwest Student Conference on Atmospheric Research: LINK to Poster, University of Illinois

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

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)