

# Syed Hamid Ali

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## Education

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

## Research experience

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**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

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**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, etc.  
**Visualization and Statistics:** LaTeX, 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

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### 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](https://doi.org/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

## Open source Contributions (GitHub)

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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/>

## Courses/Certifications

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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**

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**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**

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**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**

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

## **Volunteering**

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**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**

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**Proficient:** Kashmiri, English, Urdu  
**Intermediate:** Arabic (reading and writing)  
**Basic:** Hindi (speaking)