Dr. Shailendra Kumar
Scientist/Engineer-SD
Space Physics Laboratory (SPL)
Vikram Sarabhai Space Centre (ISRO)

Personal Information

DOB	India | 23 June 1985
skype-Id	shkcaos
Phone:	+91-8601771241, 7892552814 +91-9984898689
email:	shailendrak89@gmail.com, sjailendrak89spl@gmail.com
Google research scholar	Shailendra Kumar
Research Gate	Shailendra Kumar

Research Interest

Remote sensing of clouds and Atmosphere, Effect of synoptic conditions of extreme events, Radar retrieval algorithm, Satellite meteorology, Thunderstorms, Mountains influence on precipitating cloud systems, Cloud micro-physics

Teaching

1. Satellite Meteorology: Geophysical Institute of Peru: PG course

2. Introduction to Environmental Science : SRM AP University 240 students

Journal Reviewer

Meteorological Applications
Atmospheric Research
Journal of Earth System Science
International Journal of Remote Sensing
Journal of Atmospheric and Solar-Terrestrial Physics
AAS Open Research 2020
Atmosphere, Remote Sensing, MDPI
Theoretical and Applied Climatology
Journal of Earth Systems Sciences

Work Experience

1. August. 2022 - Scientist/Engineer-SD, Space Physics Laboratory (SPL)
Vikram Sarabhai Space Centre (ISRO)

2. June. 2022 - July 2022 Assistant Professor, SRM University AP.
Environmental Science
I was teaching an introductory course name 'Environmental Science to B.Tech 1st year students'.
Strength: **3 sections, 180**

3. Feb. 2022 - May 2022 Guest Faculty, SRM University AP.
Environmental Science
I was teaching an introductory course name 'Environmental Science to B.Tech 1st year students'.
Strength: **3 sections, 180**

4. July. 2020 - 30 March 2022 Postdoctoral Research Associate, Indian Institute of Science, India.
INCOMPASS project
I was investigating the synoptic conditions, which were affected the extreme rainfall events over Indian continent (specially near Western Ghats) using multiple satellite based observations and numerical models.
Employer: **Dr. GS Bhat**

5. Jan. 2020 - Jun. 2020 Postdoctoral Research Associate, French National Center for Scientific Research (CNRS) in University of Toulouse, France.
Study of deep tropical convection with high spatial-temporal resolution using Meso-NH simulations
I was investigating the deep tropical convection with high spatial-temporal resolution using Meso-NH simulations.
Employer: **Dr. Jean-Pierre Chaboureau, I lost my job due to COVID19**

6. Nov. 2017 - Jan. 2020 Assistant Researcher, Geophysics Institute of Peru
MAGNET-IGP: Strengthening the research line in physics and micro physics of the atmosphere. Atmospheric Physics and Micro-physics in the Mantaro Basin. Peru.
Mantaro Basin is located in the valley of Andes mountain and witnessed severe thunderstorms, which can affect the social and economic life of the local people. The role of wind flow at different pressure levels under the topographic influence is very important to create such intense rainfall events. The main aim of my research work is to investigate these intense rainfall events using satellite and ground based observations. In summary the main aim of my research work was
(a). To investigate the intense precipitation events over the tropics using the satellite based observations.
(b). To understand the rainfall climatology/characteristics using ground based observations, namely ground based radar and disdrometer.
(c). Comparison of drop size distribution parameters using satellite and ground based observations.
(d). To use the numerical model to understand the microphysics and dynamics of severe thunderstorms.
(e).**Field campaign over Huancayo [18 February-13 March 2019]:** An intense field campaign took place over Huancayo to investigate the role of Atmospheric variables/conditions on precipitation. Various instruments such as ground based radar, disdrometer and radiosonde were used to measure the vertical profile of temperature and humidity profiles.
(f). I used the WRF model to investigate the effect of the PBL schemes on the surface rainfall and observed vertical profiles of temperature and humidity.

Employer: **Dr. Yamina Silva**

7. Feb. 2017 - September 2017 Postdoctoral Research Associate, IIT Kanpur, India.
Role of CCN on surface precipitation over IGP (INCOMPASS project)
The WRF-ARW model were used to investigate the relative impact of urban land use and cloud condensation nuclei on the spatial distribution of surface rainfall over Indo-Gangetic plain (IGP).
Employer: **Dr. Sachchida Nand Tripathi**

8. Feb.2016-Jan.2017 Postdoctoral Research Associate at University of Illinois, Urbana-Champaign, USA.
Role of the vertical wind shear on cloud micro-physics (COPE project)
I used cloud numerical model (CM1) for investigating differences in precipitation processes in convective storms observed during the Convective Precipitation Experiment (COPE), which was held in Southwest England in 2013. In particular, we investigated the different roles that warm rain, ice processes and ice multiplication processes may play in storms growing in environments with different amounts of wind shear.
Employer: **Dr. Sonia Lasher Trapp**

9. Jan. 2014-Jan. 2016 Senior Researcher under Continental Tropical Convergence Zone (CTCZ) project, *Govt. of India.*
Focus of CTCZ project was to understand the variability of convection/rainfall over the Indian monsoon zone. CTCZ had three major components, namely, (a) large scale aspects of the Indian monsoon, (b) Land surface processes and hydrology, and (c) clouds and aerosols. I basically worked on the properties of deep as well as shallow convective

clouds over South Asia.
Employer: **Dr. G.S. Bhat**

8. Jan.2009-Dec.2015 Ph.D. from Indian Institute of Science, *India*.
The research work during my PhD includes the information regarding vertical structure of intense convective clouds, life cycle of cloud systems and shallow clouds observed from satellite radar data. I had expertise in handling large data sets. I studied various aspects of clouds, such as cumulonimbus tower and intense convective cloud at their individual length scale over India and tropical regions using TRMM data sets. TRMM snap shot offers a way to study the life cycle of clouds over tropical oceans. Intense and isolated shallow clouds are important near orographic regions and we have studied them extensively. Edward Zipser reviewed my thesis and appreciated our work.
Employer: **Dr. G.S. Bhat**

Other selected position

1. Jan. 2020 - Dec. 2021 Postdoctoral Research Associate, University of Genova , Italy.
To study the spatial and temporal evolution of wind fields in thunderstorms

2. Nov. 2017 - October. 2018 Postdoctoral Research Associate, University of Warsaw , Poland.
Postdoctoral Position in Absorbing Aerosol Optical and Radiative Properties
.

Field experiment and Training courses

2009: Participated in field experiment took over Bay of Bengal, AWS measurements

2009: Attended Training school held on Predictability of weather and climate at Indian institute of Science (India)

2010: Attended summer school held on Fluctuations and Turbulence in the Micro-physics and Dynamics of clouds at Porquerolles (France)

2010: Attended summer school held on Fluctuations and Turbulence in the Micro-physics and Dynamics of clouds at Porquerolles (France)

2011: Solar eclipse experiment in Rameshwaram, India

2018,2019: Atmospheric measurement Field experiment in Huancayo, Peru

2020: Attended Training school held on running the Meso-NH model at Toulouse (France)

2023: Attended Training school held on Dynamic data Assimilation at National Atmospheric Research Laboratory Tirupati, India.

2023: Attended Training school held on NISAR Satellite at Space Application Centre, India.

Education

Jan 2016 6/8 India	Ph.D. in Atmospheric Science, **Indian Institute of Science**, Project: Vertical structure of convective clouds using TRMM PR data Advisor: Dr. G.S. Bhat
July 2008 6.73/10 India	Master of Science in Physics, **Indian Institute of Technology Roorkee**, Project: Investigations on index-guided photonic crystal fiber Advisor: Dr. Vipul Rastogi
July 2005 72.33%	Bachelor Degree in Physics, Mathematics and Statistics **DDU Gorakhpur University**, India

Scholarships and Achievement

1. Mar. 2008 Qualified GATE exam in Physics
2. Sep. 2008 Qualified NET exam in Physics
3. Mar. 2006 Qualified JNU entrance exam in Physics
4. Mar. 2006 Qualified JAM exam in Physics
5. Mar. 2006 Qualified JAM exam in Geo-Physics
6. Apr. 2006 Qualified BHU entrance exam in Physics
7. Jun. 2006 Qualified JEST exam in Physics

Languages

Hindi: Native
English: Good.

Model and Software Skills

MATLAB, GRADS, FERRET, NCL,
Linux, Shell scripts, Fortran,
Cloud model (CM1), Weather Research and Forecasting (WRF)
and Remote sensing
Meso-NH model

Student supervised

1. **Elver Villalobos Puma, M.Sc.**
   Title: Study of convective storms through of observations instrumental and numeric model in the Central Andes of the Peru.

   Abstract: Convective precipitations associated with storms frequently occur in the Central Andes of Peru. To study these events, statistical estimators of three-dimensional reflectivity, rainfall intensity and microphysical parameters were determined using radar information onboard in the TRMM satellites and the GPM core. As a result, it was found that deeper cloud systems occur in the Andes regions than in the Amazon-Andes transition region. Thus, the difference of the vertical average of reflectivity is around 5 dBZ between both regions. The diurnal rainfall cycle is also different, since it rains preferably at the intervals of 13-23 LST and 18-06 LST respectively. The percentages of occurrence of convective and stratiform precipitation in the areas of the Andes are 30% and 70% respectively and their cumulative contributions to rainfall are 63.3% and 36.7% respectively; however, in the Amazon-Andes transition region, the percentages of occurrence are 31% and 69% and their cumulative contributions to rain are equivalent. It is concluded that convective precipitation in the Andes areas is intensified by the orographic forcing mechanism, which strengthens the growth of hydrometeors above the height of the freezing level between 6 and 12km of height and leads to greater cumulative rainfall.
2. **Carlos Del Castillo, B.Sc.**
   Title: **Characteristics if the rainfall and DSDs variation in the Central Andes of Peru using satellite and ground based observations.**

Abstract: The raindrop size distribution (DSD) parameters are the most essential parameters for estimating the precipitation in numerical modeling. Here we assessed the DSD parameters obtained from Global Precipitation Measurement (GPM) dual-frequency precipitation radar (DPR) over Huancayo during Austral summer monsoon seasons, utilizing DSD measurements by an impact-type disdrometer and ground based radar namely MIRA35c. We also checked the consistency of single and double frequency (SF and DF) algorithm to obtain the DSD parameters. Basically specific attenuation, reflectivity and differential frequency reflectivity are estimated at Ku and Ka band and then DSD parameters are derived. We compared the derived DSD with directly observed DSD. The DSD parameters (Dm and Nw) show the difference between the ground and satellite based observations, and depend on the application of SF and DF algorithm. The derived and observed DSD over Huancayo for disdrometer and MIRA35c underestimate (overestimate) the observed Dm (Nw) in disdrometer and vice versa in MIRA35c. Derived Dm underestimates the observed Dm by 0.2 mm in disdrometer, whereas overestimate the observed Dm by 0.1 to 0.5 mm in MIRA35c depends on the rain rate (RR). GPM-DPR shows an overestimation in Dm observations in SF algorithm, for RR less than ‹ 8 mm hr-1 but match with disdrometer observation for RR greater than 8 mm hr-1. GPM-DPR observations always overestimate the Dm when compared to disdrometer in DF algorithm. GPM-DPR underestimates the Dm (except for Dm less than 2 mm hr-1 in SF algorithm) in both SF and DF algorithm compared to MIRA35c. The mean Nw observed from GPM-DPR is underestimated for SF and DF algorithm when compared to disdrometer and MIRA35c. The observed Nw is higher in MIRA35c when compared to disdrometer in SF algorithm, but quite less in DF algorithm. This could be because of small raindrops with less RR discarded from the analysis in DF algorithm. The different features observed in every year GPM-DPR measurements and over different spatial domains could lead to the differences in DSD estimation.

3. **Riya Raju K, B.Sc. Intern (IISER Trivandrum)**
   Title: **Application of remote sensing in the Atmospheric Science**

Citation based on Google Scholar

Total citation : 562
h index: 16
i-10 index: 21

Publications

Published

1. G.S. Bhat, **Shailendra Kumar**:
   Vertical structure of cumulonimbus towers and intense convective clouds over the South Asian region during the summer monsoon season.
   Journal of Geophysical Research: Atmospheres 2015. 120 (5), 1710-1722, **[Citation:46] [IF:4.2]**,
   https://doi.org/10.1002/2014JD022552

2. **Shailendra Kumar**: **Corresponding Author**
   10-year climatology of vertical properties of most active convective clouds over the Indian regions using TRMM PR.
   Theoretical and Applied Climatology. 2017. 127 (1-2), 429-440 **[IF:3.5]**, **[Citation:25]**
   https://doi.org/10.1007/s00704-015-1641-5

3. **Shailendra Kumar**, G.S. Bhat:
   Vertical Profiles of Radar Reflectivity Factor in Intense Convective Clouds in the Tropics.
   Journal of Applied Meteorology and Climatology. 2016. 55 (5), 1277-1286 **[IF:2.9]**, **[Citation:24]**
   https://doi.org/10.1175/JAMC-D-15-0110.1

4. **Shailendra Kumar**: **Corresponding Author**
   Three dimensional characteristics of precipitating cloud systems observed during Indian summer monsoon.
   Advance in space research. 2016. 58, 1017-1032 **[IF:2.2]**, **[Citation:15]**
   https://doi.org/10.1016/j.asr.2016.05.052

5. **Shailendra Kumar**: **Corresponding Author**
   Vertical characteristics of reflectivity in intense convective clouds using TRMM PR data.
   Environment and Natural Resources Research. 2017. 7 (2), 58 **[IF:0.9]**, **[Citation: 10]**
   http://www.ccsenet.org/journal/index.php/enrr/article/view/68256

6. **Shailendra Kumar**, G.S. Bhat: **Corresponding Author**
Vertical structure of orographic precipitating clouds observed over South Asia during the summer monsoon season.
Journal of Earth System Science. 2017. 126 (8), 114 . **[IF:1.8],[Citation:19]**
https://doi.org/10.1007/s12040-017-0897-9

7. **Shailendra Kumar**: **Corresponding Author**
Vertical structure of precipitating shallow echoes observed from TRMM during Indian summer monsoon.
Theoretical and Applied Climatology, 133, 1051-1059, 2238-y. **[IF:3.5], [Citation:14]**
https://doi.org/10.1007/s00704-017-2238-y

8. Chandan Sarangi, S. N. Tripathi, Yun Qian, **Shailendra Kumar**, L. Ruby Leung:
Aerosol and urban land use effect on rainfall around cities in Indo Gangetic Basin from observations and cloud resolving model simulations.
Journal of Geophysical Research: Atmospheres 2018. 123(7), pp.3645-3667 **[IF:4.2], [Citation:14]**
https://doi.org/10.1002/2017JD028004

9. Lasher-Trapp, Sonia, **Shailendra Kumar**, Daniel H. Moser, Alan M. Blyth, Jeffrey R. French, Robert C. Jackson, David C. Leon, and David M. Plummer :
On Different Microphysical Pathways to Convective Rainfall.
Journal of Applied Meteorology and Climatology. 2018 57, 2399-2417. **[IF:2.9], [Citation:11]**
https://doi.org/10.1175/JAMC-D-18-0041.1

10. **Shailendra Kumar**, Aldo S. Moya Alvarez, Daniel Martinez Castro, Yamina Silva :**Corresponding Author**
Effect of the surface wind flow and topography on precipitating systems characteristic over the Center Andes and associated Amazon basin: GPM observations.
Atmospheric Research, Elsevier. 2019, 225 (193-208). **[IF:5.2], [Citation:23]**
https://doi.org/10.1016/j.atmosres.2019.03.027

11. **Shailendra kumar**, G S Bhat: **Corresponding Author**
Frequency of a state of cloud systems over Tropical warm ocean.
Environment Research communication, IOP Science, 2019, 1(6), 061003. **[IF:Sister journal of ERL], [IF:2.1]**,
https://doi.org/10.1088/2515-7620/ab2bc2, **[Citation:4]**

12. Aldo S. Moya-Álvarez , José Gálvez, Andrea Holguín, René Estevan, **Shailendra Kumar**, Elver Villalobos, Daniel Martínez-Castro and Yamina Silva:
Extreme Rainfall Forecast with the WRF-ARW Model in the Central Andes of Peru.
Atmosphere. 2018, 9, 362, **[IF:2.5], [Citation:22]**
https://doi.org/10.3390/atmos9090362

13. Aldo S. Moya-Álvarez, Daniel Martínez-Castro, **Shailendra Kumar** René Estevan, Yamina Silva:
Response of the WRF model to different resolutions in the rainfall forecast over the complex Peruvian orography.
Theoretical and Applied Climatology, 137, 2993–300, 2019 **[IF:3.5], [Citation:21]**
https://doi.org/10.1007/s00704-019-02782-3

14. Elver E. Villalobos Daniel Martinez-Castro **Shailandra Kumar**, Yamina Silva, Octavio Fashe:
Estudio de tormentas convectivas sobre los Andes Centrales del Perú usando los radares PR-TRMM y KuPR-GPM.
Revista Cubana de Meteorología. 2019 **[IF:1.0], [Citation:11]**
http://rcm.insmet.cu/index.php/rcm/article/view/454/606

15. **Shailendra kumar**, Yamina Silva, Aldo Moya, Daniel Martinez Castro: **Corresponding Author**
Seasonal and Regional Differences in Extreme Rainfall Events and Their Contribution to the World's Precipitation: GPM Observationsx.
(Advance in Meteorology, 4631609, 2019 Special Issue, Advances in Remote Sensing to Understand Extreme Hydrological Events. **[IF:1.9], [Citation:14]**
https://doi.org/10.1155/2019/4631609

16. **Shailendra Kumar**, Yamina Silva: **Corresponding Author**
Vertical characteristics of radar reflectivity and DSD parameters in intense convective clouds over South East South Asia during Indian Summer monsoon: GPM observations.
International Journal of Remote Sensing. **[IF:3.2]**, 40(24), 9604-9628, 2019, **[Citation:7]**
https://doi.org/10.1080/01431161.2019.1633705

17. Jose Luis Flores-Rojas; Aldo S. Moya Alvarez, **Shailendra Kumar**, Daniel Martinez Castro, Elver Villalobos Puma, Yamina Silva: **Corresponding Author**
Analysis of possible triggering mechanisms of severe thunderstorms in the tropical central Andes of Peru, Mantaro

valley.
(Atmosphere, 10(6) , 301, 2019). [IF:2.6], [Citation:15]
https://doi.org/10.3390/atmos10060301

18. Daniel Martinez Castro,**Shailendra Kumar**, Jose Luis Flores Rojas, Jairo M. V Aldivia, Elver Puma, Aldo S. Moya Alvarez, Yamina Silva: **Corresponding Author**
The impact of microphysics parameterization in the simulation of two convective rainfall events over the central Andes of Peru using WRF-ARW.
Atmosphere, ,10(8), 442, 2019 . [IF:2.6], [Citation:19]
https://doi.org/10.3390/atmos10080442

19. Aldo Moya, René Estevan Arredondo,**Shailendra Kumar**, Jose Luis Flores-Rojas, Joel J. Ticse, Daniel Martínez-Castro, Yamina Silva:
Influence of PBL parameterization schemes in WRF-ARW model on short - range precipitation's forecasts in the complex orography of Peruvian Central Andes.
Atmospheric Research, 2020, 233, p. 104708 [IF:5.2], [Citation:9]
https://doi.org/10.1016/j.atmosres.2019.104708

20. Jose Luis Flores-Rojas, Joan Cuxart , Manuel Piñas-Laura, Stephany Callañaupa, Luis Suárez-Salas, **Shailendra Kumar**, Aldo S. Moya-Alvarez, Fey Yamina Silva-:
Seasonal and Diurnal Cycles of Surface Boundary Layer and Energy Balance in the Central Andes of Perú, Mantaro Valley.
Atmosphere, 10(12), 779, 2019[IF:2.6], [Citation:8],
https://doi.org/10.3390/atmos10120779

21. **Shailendra Kumar**, Yamina Silva: **Corresponding Author**
Distribution of hydrometeors in intense convective clouds over south America during Austral summer monsoon seasons: GPM observations.
International journal of remote sensing, 41(10), 3677-3707, 2020. [IF:3.2], [Citation:5]
https://doi.org/10.1080/01431161.2019.1707899

22. **Shailendra Kumar**, Carlos del castro; Jairo M. Valdivia Prado; José Luis Flores Rojas; Stephany Magaly Callañaupa Gutierrez; Aldo S. Moya Alvarez; Daniel Martinez Castro; Yamina Silva: **Corresponding Author**
Rainfall Characteristics in the Mantaro Basin over Tropical Andes from a Vertically Pointed Profile Rain Radar and In-Situ Field Campaign.
(Atmosphere, 11(3), p.248). [Citation:6], [IF:2.6]
https://www.mdpi.com/2073-4433/11/3/248

23. **Shailendra Kumar**, Carlos del castro, Aldo S. Moya-Álvarez, Jose Luis Flores-Rojas, Daniel Martínez-Castro, Yamina Silva: **Corresponding Author**
Effect of South American low level flow and Andes mountain on the tropical and mid latitude precipitating cloud systems: GPM observations.
Theoretical and Applied Climatology, 141(1), pp.157-172). [IF:3.5], [Citation:4]
https://link.springer.com/article/10.1007/s00704-020-03155-x

24. Aldo Moya, Daniel Martinez-Castro, **Shailendra Kumar**, Jose luis flores rojas, René Estevan Arredondo, Miguel Saavedra-Huanca, Yamina Silva:
Statistical characterization of vertical meteorological profiles obtained with the WRF-ARW model on the central Andes of Peru and its relationship with the occurrence of precipitation on the region.
Atmospheric Research, 239 (2020): 104915 **[IF:5.2]**,
https://doi.org/10.1016/j.atmosres.2020.104915

25. Jose luis flores rojas, Aldo S. Moya-Álvarez, Jairo M. Valdivia-Prado, Manuel Pinas-Laura, , **Shailendra Kumar**, Hugo Abi Karam, Elver Villalobos-Puma, Daniel Martínez-Castro, Yamina Silva:
On the dynamic mechanisms of intense rainfall events in the central Andes of Peru, Mantaro valley.
Atmospheric Research, 248, p.105188 **[IF:5.2]**
https://doi.org/10.1016/j.atmosres.2020.105188

26. **Shailendra Kumar**, Carlos Del Castro, Jose, Aldo-Moya, Daniel Martinez Castro, Shweta Srivastava, Yamina Silva : **Corresponding Author**
Precipitation structure during various phases the life cycle of precipitating cloud systems using geostationary satellite and space based precipitation radar over Peru.
GIScience Remote Sensing, 57(8), pp.1057-1082 [IF:6.1] [Citation:1]
https://doi.org/10.1080/15481603.2020.1843846

27. S. Flores-Rojas, J.L., Silva, Y., Suárez-Salas, L., Estevan, R., Valdivia-Prado, J., Saavedra, M., Giraldez, L., Piñas-Laura, M., Scipión, D., Milla, M. and Shailendra Kumar, **Daniel Castro**:
Analysis of Extreme Meteorological Events in the Central Andes of Peru Using a Set of Specialized Instruments.
Atmosphere, MDPI, 12(3), p.408. [IF:2.5] 2021
https://doi.org/10.3390/atmos12030408

28. Carlos Del Castillo, Shailendra Kumar, Jairo M. Valdivia Prado, Aldo S. Moya-Álvarez, Jose Luis Flores-Rojas, Yamina Silva :
Evaluation of GPM Dual-Frequency Precipitation Radar algorithms to estimate drop size distribution parameters, using ground-based measurement over the Central Andes of Peru.
Earth Systems and Environment, Springer 2021, 5(3), pp.597-619, **[IF:2.7]**
https://doi.org/10.1007/s41748-021-00242-5

29. Jairo M. V Aldivia, Patrick N. Gatlin, Shailendra Kumar , Danny Scipion, Yamina Silva, and Walter A. Petersen The GPM-DPR blind zone effect on satellite-based radar estimation of precipitation over the Andes from a ground based Ka-band profiler perspective (12S) **Journal of Applied Meteorology and Climatology, 61(4):441-56 [IF:3.0]**
https://doi.org/10.1175/JAMC-D-20-0211.1

30. Shailendra Kumar , Shweta Srivastava: **Corresponding Author**
A Vertical characteristics of precipitating cloud systems during different phases of life cycle of cloud systems using satellite-based radar over tropical oceanic areas **Journal of Applied and Natural Science 14 (4), 1272-1285**
https://doi.org/10.31018/jans.v14i4.3691

31. Shailendra Kumar , Jose Luis Flores, Aldo Moya, Daniel Martinez Castro, Yamina Silva: **Corresponding Author**
Characteristics of cloud properties over South America and over the Andes observed using CloudSat and reanalysis data **TRES-International Journal of Remote Sensing**
10.1080/01431161.2023.2193301

Book Chapter

1. Flores-Rojas JL, Moya-Alvarez AS, **Kumar S**, Martinez-Castro D, Villalobos-Puma E, et al. Analysis of Possible Triggering Mechanisms of Severe Thunderstorms in the Tropical Central Andes of Peru, Mantaro Valley. In: Earth and its Atmosphere. Hyderabad, India: Vide Leaf. 2019.

Conference Publication

1. Shailendr aKumar, GS Bhat: Vertical structure of radar reflectivity in deep intense convective clouds over the tropics. In: EGU General Assembly 2015, held in Vienna, Austria.2302
2. Shailenda Kumar, Yamina Silva, Carlos Del Castillo, Jose Luis, Flores Rojas, Aldo Moya S. Alveraz, and Daniel Martinez Castro: Precipitation structure during the life cycle of cloud systems over Peru using satellite based observations. In: EGU General Assembly 2020 EGU2020-5937
3. amina Silva, Daniel Martínez-Castro, Aldo Moya-Álvarez, René Estevan, José Flores Rojas, Shailendra Kumar: Atmospheric physics and microphysics research project in the Central Peruvian Andes. A multilateral approach. In: EGU General Assembly Conference Abstracts, 6534 10.5194/egusphere-egu2020-6534

Work presentation

1. Online presentation at EGU 2020 : Atmospheric physics and microphysics research project in the Central Peruvian Andes. A multilateral approach
Yamina Silva, Daniel Martínez-Castro, Aldo Moya-Álvarez, René Estevan, José Flores Rojas, and Shailendra Kumar
2. Online presentation at EGU 2020 : Precipitation structure during the life cycle of cloud systems over Peru using satellite based observations. A multilateral approach
Shailenda Kumar, Yamina Silva, Carlos Del Castillo, Jose Luis Flores Rojas, Aldo Moya S. Alveraz, and Daniel Martinez Castro
3. Farewell talk : Satellite retrieval of cloud and precipitation on different length scale
Institute of Geophysics, Lima, Peru
4. Oral presentation : Vertical structure of rain during different stages of development
1st Congreso Peruano de Meteorologia, CONPEMET, Universidad Nacional Agraria La Molina, Peru

5. Poster : Influencia del parámetro de forma en la estimación de la precipitación en los algoritmos del GPM sobre la cuenca del Mantaro:
   1st Congreso Peruano de Meteorologia, CONPEMET, Universidad Nacional Agraria La Molina, Peru
6. Oral Presentation: Characteristics of rain over the Huancayo located in the valley of Andes
   Institute of Geophysics, Lima, Peru
7. Oral Presentation: Measurements of rainfall using satellite from space
   Institute of Geophysics, Lima, Peru.
8. Talk delivered on 'Convective properties over South America', April 2018 at Huancayo geophysical observatory, Huancayo, Peru.
9. Oral Presentation: Effect of surface wind flow and topography on the precipitating cloud systems over tropical and subtropical South America'
   Huancayo geophysical observatory, Huancayo, Peru.
10. Oral Presentation: Impact of cloud micro physical schemes on the evolution of thunderstorms
    Research Institute of Camacho, Lima, Peru.
11. Poster: An investigation of Relationship between Wind Shear and Microphysical Pathways Leading to Convective Rainfall in ICCP conference (2016), Manchester, UK
12. Poster presentation on Vertical profiles of radar reflectivity factor in deep, intense convective clouds in the tropics in NOAA satellite conference (2015), Greenbelt, USA
13. Poster presentation on Vertical profiles of radar reflectivity factor in deep, intense convective clouds in the tropics in EGU fall meeting (2015), Vienna, Austria
14. Poster presentation on Vertical structure of intense convective clouds during Indian regions during Indian summer monsoon in Fluid days (2011) Indian institute of Science, Bangalore
15. Poster presentation on Vertical structure of convective clouds during Indian regions during Indian summer monsoon in conference variability in summer monsoon (2011), Indian institute of Science, Bangalore
16. Poster presentation on Vertical structure of convective clouds during active and break phase over Western Ghats and In do Gangetic plane in summer school "Fluctuations and Turbulence in the Microphysics and Dynamics of clouds" (2010), Porquerolles (France)
17. Oral presentation on the Predictability of weather and climate conference held at Indian institute of Science (2010), Indian institute of Science, Bangalore.
18. Poster on the Convective clouds from TRMM PR at the national seminar on "Doppler Radar and Weather Surveillance (DRaWs 2010), NIOT, Chennai.
19. Poster on Cloud observed from TRMM (2009) on open day in Indian institute of Science.
20. Attended the field experiment during a solar eclipse on August 2011 near Rameshwarm.
21. Attended the atmospheric and oceanic field experiment in July-August 2009, over Bay of Bengal for 45 days

References

1. Dr. G.S. Bhat: bhat@iisc.ac.in, Professor, CAOS, IISc, India
2. Dr. Sonia Lasher Trapp: slasher@illinois.edu, Professor, University of Illinois at Urbana-Champaign, USA, (217) 244-4250
3. Dr. Yamina Silva : fsilva@igp.gob.pe, Professor, PUCP and IGP, Peru
4. Dr. Daniel Martinez Castro: danielmartinezc53@gmail.com, Professor, Jefe del Centro de Física de la Atmósfera. Instituto de Meteorología de Cuba, Cuba

In News

1. http://tiny.cc/t73ajz
2. https://www.gob.pe/institucion/igp/noticias/71440-estudio-sobre-la-estimacion-de-precipitacion-usando-radares-en-los-andes-del-peru-es-analizado-por-tesista-del-igp