

Curriculum Vitae

Shailendra Pratap, M.Phil.

Ph.D. candidate

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Research interests

- Hydrological cycle (intensification & extremes), Paleo-hydroclimatology, Ocean-Continent linked hydroclimate response, Hydroclimate regime shift, Climate oscillations, Weather Research & Forecasting

Education

- 2019 – present **Ph.D. Environmental Modelling**
Faculty of Environmental Sciences, Czech University of Life Sciences, Prague, Czech Republic.
Thesis title: *Investigation of paleoclimatic hydroclimatic variability with emphasis on the role of oceanic circulation.*
- 2015 – 2016 **M.Phil. Environmental Sciences**
Institute of Environment & Sustainable Development, Banaras Hindu University, Varanasi, India.
Thesis title: *Study of driving factors for flash flood using Optical/Microwave satellites and global reanalysis datasets..*
- 2012 – 2014 **M.Sc. Environmental Sciences**
Centre for Environmental science, University of Allahabad, Allahabad, India.
Thesis title: *Temporal changes in the limnological parameter of a fish pond at Central Inland Fisheries Research Institute, Allahabad, India.*
- 2009 – 2012 **B.Sc. Bioscience**
Ewing Christian College, University of Allahabad, Allahabad, India.

Research experience

- 2016 – 2019 **Junior Research Fellow.** Worked on the topic entitled "Study of Weather Research and Forecasting (WRF) for hydro-meteorological applications"; with funding availed from the University Grant Commission, Government of India.

Publications

Journal Articles

- 1 S. Pratap and Y. Markonis, "Investigation of changes in precipitation and temperature patterns related to the atlantic ocean circulation during the medieval climate anomaly," *Climate of the past*, vol. submitted, no. -, pp. -, 2023.

- 2 S. Pratap and Y. Markonis, "The response of the hydrological cycle to temperature changes in recent and distant climatic history," *Progress in Earth and Planetary Science*, vol. 9, no. 1, pp. 1–37, 2022.
- 3 S. Pratap, P. K. Srivastava, A. Routray, T. Islam, and R. K. Mall, "Appraisal of hydro-meteorological factors during extreme precipitation event: Case study of kedarnath cloudburst, uttarakhand, india," *Natural Hazards*, vol. 100, no. 2, pp. 635–654, 2020.

Conference Proceedings

- 1 S. Pratap, P. K. Srivastava, A. Routray, and P. Kumar, "Spatio-temporal variability assessment of rainfall over the koshi, mahi, and pahuj river basins through WRF dynamical downscaling,," in *International (SAARC.) Youth Scientific Conference (IYSC) proceeding*, 2019, pp. 137–141.

Manuscript under preparation

- The manuscript "Investigation of changes in precipitation and temperature patterns related to the Atlantic Ocean circulation during the Medieval Climate Anomaly" is under preparation.

Skills

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| Computing & Programming | ■ R language, GrADS, Linux, ArcGIS, ENVI, Panoply. |
| Databases | ■ NOAA-NCEI, PAGES, PaleoClim, NCEP-NCAR. |
| Data wrangling | ■ Large data, Statistical analysis, Mesoscale Modelling: Weather Research and Forecasting Model. |

Awards & Achievements

- 2023 ■ **Helmholtz Visiting Researcher Grant (App. No 15650)**. Awarded by the Helmholtz Information & Data Science Academy, Helmholtz Association, Germany
- **Early Career Scientist's Travel Support (EGU23-129)**. Awarded by the EGU General Assembly, Vienna.
- 2016 ■ **ICAR-NET Award**, Indian Council of Agricultural Research National Eligibility Test (ICAR-NET) in Environmental Science. Awarded by Agricultural Scientists Recruitment Board, India with Award certificate number NET(I)-2016/03009.
- 2015 ■ **Rajiv Gandhi National Fellowship (RGNF)**. Awarded and funded by the University Grants Commission (UGC), Government of India. Award certificate number is 201516-RGNF-2015-17-SC-UTT-18285.

Project experience & Research grants

- 2022 ■ **ITHACA**. Presently, working on data preparation and pre-processing under the project 'Investigation of Terrestrial Hydrological Cycle Acceleration (ITHACA).'
- **CZU-IGA project: 2022Boo39**. Presently, finishing the IGA project-2022 with grant number 2022Boo39, funded by the Faculty of Environmental Sciences, CZU, Prague. The project title is "Assessment of intensification in regional hydrological cycle inferred from paleolake records in central Europe".
- 2021 ■ **CZU-IGA project: 2021Boo06**. Completed the IGA project-2021 with grant number 2021Boo06, funded by the Faculty of Environmental Sciences, CZU, Prague. The project title was "Investigation of precipitation variability in response to multi-decadal fluctuations in temperature and oceanic circulation".

Project experience & Research grants (continued)

- 2020 **■ CZU-IGA project: 2020Boo39.** Completed the IGA project-2020 with grant number:2020Boo39, funded by the Faculty of Environmental Sciences, CZU, Prague. The project title was "Investigation of extreme states in Earth's global hydrological cycle".
- 2016 **■ RGNF-UGC.** Funded by the UGC, Government of India, with award number- 201516-RGNF-2015-17-SC-UTT-18285. The project title was "Study of Weather Research and Forecasting (WRF) for Hydrometeorological applications".

Teaching experience

- 2023 **■ Teaching,** Earth System Science, Faculty of Environmental Sciences, Czech University of Life Sciences Prague, Czech Republic.
- 2021 **■ Teaching,** Earth System Science, Faculty of Environmental Sciences, Czech University of Life Sciences Prague, Czech Republic.

Conferences

- 2023 **■ AGU 2023; San Francisco, CA, US.** Poster presentation (ID:1262088) on "*Understanding precipitation and temperature variability related to the Atlantic Ocean circulation during the warm climate.*"
- 2022 **■ EGU General Assembly, Vienna.** Oral presentation (EGU22-1157ECS) on "*Evaluation of hydrological cycle intensification in response to temperature variability.*"
- PAGES-YSM.** Oral presentation in 4th Young Scientists Meeting (YSM) from 9-13 May 2022, organized by Past Global Changes (PAGES). The presentation title was "*Understanding the hypothesis "a warmer climate is a wetter climate; the spatio-temporal evaluation"*".
- PAGES-OSM.** Participated in 6th Open Science Meeting (OSM), from 16-20 May 2022.
- 2019 **■ EGU General Assembly.** Poster presentation (EGU2019-9968) with the title "Performance assessment of temporal variability in Evapotranspiration over Koshi River Basin".
- Kostelecké inspirování.** Poster presentation on "Assessment of heavy precipitation event using satellite data: a case study in the Uttarakhand, India" in Kostelecké inspirování on 14 November, 2019, at the Faculty of environmental sciences of Czech University of life sciences, Prague, Czech Republic.
- SAARC-IYSC.** Oral presentation on "Spatio-temporal variability assessment of rainfall over the Koshi, Mahi, and Pahuj river basins through WRF dynamical downscaling" in International Youth Scientific Conference (SAARC-IYSC) on Science and Technology for Prosperity: "Connecting Life with Land, Water, and the Environment." 5-6 June 2019, organized by Tribhuvan University, Kathmandu, Nepal.
- 2018 **■ TROPMET.** Poster presentation on "Assessment of hydro-meteorological variable over the Pahuj River basin using WRF model" in TROPMET-2018 "National Symposium on Understanding Weather and Climate Variability: Research for Society." From 24 to 27 October, 2018, at Banaras Hindu University, Varanasi, Uttar Pradesh, Organised by the Indian Meteorological Society New Delhi, India.
- 2016 **■ TROPMET** Poster presentation on "Performance assessment of ERA-interim solar radiation downscaled using the Weather Research and Forecasting model" in TROPMET-2016 "National Symposium on Tropical Meteorology: Climate Change and Coastal Vulnerability." From 18 - 21 December 2016 at Siksha 'O' Anusandhan (SOA.) University, Bhubaneswar, Odisha, India.

Training & Workshop

- 2023 **CVAS/2k Network/TSM PAGES Meeting, Potsdam (Germany).** Participated in meeting, organized by PAGES, from 06 to 11 March. The topic of meeting was on "Centennial climate variability at regional scale in models and reconstructions."
- 2022 **CLIVAR CDP Annual Workshop.** Participated in workshop on 'External versus Internal Variability on Decadal and Longer Time Scales', organized by PAGES, from September 14 to October 21, 2022.
- 2020 **PAGES:CVAS seminar series.** Participated in an online CVAS seminar series from November 2020 to March 2021 organized by Past Global Changes (PAGES) on "Climate variability across scales: from the butterfly's wings to the age of the Earth".
- 2019 **MAPEX.** Presented a poster on "Bias correction of Weather Research and Forecasting model downscaled meteorological variables" in international Workshop on 'Modeling Atmospheric - Oceanic Processes for Weather and Climate Extremes (MAPEX 2019)', March 28-29, 2019, at Indian Institute of Technology Delhi, Hauz Khas, New Delhi-110016, India.
- SERB School.** Participated in "SERB School on Numerical Modeling & Forecasting of Desert Storms and Cloudburst (NUMCLOUDS)" from 11 to 23 February 2019, Sponsored by Science and Engineering Research Board (SERB), India, held at the Department of Atmospheric Science, Central University of Rajasthan, Kishangarh, Ajmer, India.
- 2017 **SERB School.** Participated in "SERB School on Computational Meteorology" from 23 October to 15 November, 2017, Sponsored by Science and Engineering Research Board, India, held at KL University, Vaddeswaram, Guntur District-522502, A.P, India.
- Dynamic Data Assimilation.** Participated in "A Short Course on Dynamic Data Assimilation: Theory and Applications" held at the Indian Institute of Tropical Meteorology, Pune, India, from 26 June- 7 July 2017.
- INSAT-3DR.** Participated in a training program on INSAT-3DR: Observations to Applications during 07-10 March 2017 at Space Applications Centre, a center of the Indian Space Research Organisation (ISRO), Bopal campus, Ahmedabad.
- 2016 **GIAN:Extreme Weather and Climate Variability.** Participated in Global Initiative of Academic Networks (GIAN) Training Workshop on "Extreme Weather and Climate Variability: Observation, Understanding and Prediction," December 22-31, 2016, at Indian Institute of Technology Bhubaneswar, Odisha, India.
- WRF model training.** Participated in training on the WRF model and data assimilation during 12-18 Sept. 2016 under Dr. Krishna Kishore Osuri, Asst. Professor, Department of Earth and Atmospheric Sciences, NIT Rourkela, India.