

Dr. ARJUN PANDEY**Wadia Institute of Himalayan Geology**

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DOB-July 16, 1992.

FIELD OF SPECIALIZATION:

- Active Tectonics, Neo-tectonics, Paleoseismology, Structural Geology, Geomorphology, Quaternary Geology, Remote Sensing, Sedimentology.

ACADEMIC DETAILS:

- **Ph. D.** (Awarded, 1st June, 2021)
Department of Geology, Institute of Science, Banaras Hindu University. *Thesis title:* Active tectonics and pattern of strain release along the northeastern Himalayan Frontal Thrust between Saralbhanga and Subansiri valleys.
- **M.Sc. Geology** (September, 2014)
Department of Geology, HNB Central University, Garhwal, Uttarakhand India.
- **B.Sc. Geology** (May, 2012)
Department of Geology, Lucknow University, India.
- **Intermediate (+2)** (2009)
Central Board of Secondary Education (CBSE- Board)
- **High school** (2007)
Central Board of Secondary Education (CBSE- Board)

EMPLOYMENT HISTORY

- **September, 2021 to present:** Post-doctoral Research Associate, at Wadia Institute of Himalayan Geology, Dehradun

ACADEMIC ACHIEVEMENTS/AWARDS

- **International Travel grant (ITS)** for attending 34th HKT workshop at Bozeman in USA. File Number: ITS/2019/001276 from Science and Education Research Board (SERB)-2019.
- Awarded **DST-INSPIRE fellowship issued by government of India** (2016).
- **Best paper award** of the year 2016 for the paper "Paleoseismic evidence of a giant medieval earthquake in the eastern Himalaya published in Geophysical Research Letters

(GRL), Vol: 43, 5707–5715, doi: 10.1002/2016GL068739, authored by R. L. Mishra, Ishwar Singh, Arjun Pandey, P. S. Rao, H. K. Sahoo, R. Jayangondaperumal.

- **Qualified Graduate Aptitude Test for Engineering (GATE)**-2015.
- **First Rank holder** in the University in Geology, during 2012-14 Batch from HNB central University.
- **Best poster award** in the year 2010 from the 'Indian Society of Remote Sensing' Lucknow chapter.
- **Topper of the school** in the Intermediate (+2) and High School levels.

PROJECTS/INTERNSHIP/SHORT COURSES

- Dissertation from **Wadia Institute of Himalayan Geology in OSL (optically stimulated luminescence) dating**.

PROJECTS

- Worked under a project entitled “**Quaternary landform evolution along the Himalayan Frontal Thrust (HFT) of India: Insight to the patterns of strain release along a continental convergent plate boundary**” at the eastern Himalayan frontal thrust (HFT).

INSTRUMENTATION

- **Field instrument/Modern monitoring**
Real Time Kinematic-Global Positioning System (RTK-GPS), Robotics Total Station (RTS), Drone mapping and photography.
- **Lab instrumentation**
Riso: TL/OSL Instruments ; X-ray fluorescence spectroscopy (XRF); X-Ray Diffraction (XRD); Laser particle size analyser (LPSA); Scanning Electron Microscope (SEM).

SOFTWARE SKILLS

- Statistical software: *RISO-TL/OSL software*.
- Scientific programs: SOCET-GXP (anaglyph preparation, DEM generation, Stereo pairs 3-D mapping), *Surfer* (3D contour plot), *Arc GIS* (geomorphological mapping of the area using Satellite imageries (SRTM, CARTOSAT, ALOSS))
- Image editing software: *Adobe Photoshop*, *Adobe illustrator*, *Corel Draw*
- Basic programs: *MS-office*, *Excel*, *Power point*, *Grapher*, etc.

INVITED/GUEST TALK

- Given **oral presentation** in **34th HKT organized in Montana State University, Bozeman, USA** from 3rd of June to 8th of June, 2019.
- Given **oral presentation** in **33rd HKT organized in University of Lausanne, Switzerland** from 10th of September to 12th of September, 2018.
- **Presented Poster** in **30th Himalayan Karakorum Tibet (HKT)** workshop held in Wadia Institute in November, 2015 title “Preliminary palaeoseismic investigations along the Mishmi Thrust at Roing, Arunachal Pradesh, NE Himalaya, India”.

PROFESSIONAL CONTRIBUTION

- Involved in the **Paleoseismology lab establishment** at Wadia Institute of Himalayan Geology.

PUBLICATIONS

- **Published/accepted:** 06
- **First/Corresponding author:** 02
- **Total Impact factor:** ~20.32 (Highest IF: 4.72)
- **In submitted/review:** 03
- **In preparation:** 04 manuscripts

Papers under review (3)

1. **Arjun Pandey**, R. Jayangondaperumal, Rao Singh Priyanka, Ishwar Singh, Atul Kumar, Atul Brice, Pankaj Kumar, Sundeep Chopra and Hari B. Srivastava. “Recent tectonic deformation outboard of the range front at Indo-Bhutan Border: Implications over the seismic hazard assessment of the region” under review in **Tectonophysics**.
2. Ishwar Singh, Rajeeb Lochan Mishra, **Arjun Pandey**, Rao Singh Priyanka, R. Jayangondaperumal, P. Mortheikai, Pradeep Srivastava, V. Srivastava, Pankaj Kumar and Sundeep Chopra. “Holocene vertical uplift rate along the Mishmi Thrust, Eastern Himalayan Syntaxis strain partitioning in the outer deformation front of Mishmi hills, under review in **Tectonophysics**
3. Daniels, Robyn L, Tina M. Niemi, R. Jayangondaperumal, A. Aravind, Piyoosh Rautela, **Arjun Pandey**, Lauren D. Murphy. “Late Medieval rupture of the Himalayan Frontal Thrust Fault in the Central Seismic Gap at Lal Dhang, Uttarakhand, India under review in **Earth and Planetary Science Letters (EPSL)**.

Peer-reviewed published/Accepted (6)

1. Ishwar Singh, **Arjun Pandey**, Rajeeb Lochan Mishra, Rao Singh Priyanka, Atul Brice, R. Jayangondaperumal, and Vaibhav Srivastava. “Evidence of the 1950 Assam earthquake surface faulting along Mishmi Thrust at Namche Barwa Syntaxis: Implications for seismic hazard”, published in “ **Geophysical Research Letters (2021)**, 48, e2020GL090893. <https://doi.org/10.1029/2020GL090893>.
2. **Arjun Pandey**, R. Jayangondaperumal, György Hetényi, Rao Singh Priyanka, Ishwar Singh, Pradeep Srivastava, Hari B. Srivastava “Establishing primary surface rupture

evidence and magnitude of the 1697 CE Sadiya earthquake at the Eastern Himalayan Frontal thrust, India” Published in “**Scientific Reports**” (2021), 11:879. <https://doi.org/10.1038/s41598-020-79571-w>.

3. R Jayangondaperumal, Rajeeb Lochan Mishra, Rao Singh Priyanka, Rajeev Kumar Yadav, Durga Prasanna Mohanty, **Arjun Pandey**, Ishwar Singh, Aravind Anil and Sandipta Dash. “Active Tectonics of Himalaya, Rift Basins in Central India and those Related to Crustal Deformation at Different Time Scales”. **Proceedings of Indian National Science Academy** (2019). 86 No. pp. 445-458. <https://doi.org/10.16943/ptinsa/2020/49805>.
4. **Arjun Pandey**, Ishwar Singh, Rajeeb Lochan Mishra, Priyanka Singh Rao, Hari B. Srivastava, and R. Jayangondaperumal. "Active tectonics in the Assam seismic gap between the meizoseismal zone of AD 1934 and 1950 earthquakes along eastern Himalayan front, India." **Journal of Earth System Science** 127, no. 5 (2018): 66. <https://doi.org/10.1007/s12040-018-0967-7>.
5. Priyanka Rao Singh, R. Jayangondaperumal, **Arjun Pandey**, Rajeeb Lochan Mishra, Ishwar Singh, Ravi Bhushan, Pradeep Srivastava et al. "Primary surface rupture of the 1950 Tibet-Assam great earthquake along the eastern Himalayan front, India." **Scientific reports** 7, no. 1 (2017): 1-12. <https://doi.org/10.1038/s41598-017-05644-y>.
6. Rajeeb Lochan Mishra, Ishwar Singh, **Arjun Pandey**, P. S. Rao, H. K. Sahoo, and R. Jayangondaperumal. "Paleoseismic evidence of a giant medieval earthquake in the eastern Himalaya." **Geophysical Research Letters** 43, no. 11 (2016): 5707-5715. <https://doi.org/10.1002/2016GL068739>.

In preparation (4)

1. **Arjun Pandey**, R. Jayangondaperumal, Ishwar Singh. “Long-term shortening rates at HFT at Indo-Bhutan Border: Segmentation and its role over strain partitioning of the region”.
2. R. Jayangondaperumal, **Arjun Pandey**, Ishwar Singh, Atul Brice, Sandipta Dash, Rao Singh Priyanka. “4500 year old surface rupture of latest event in the Sikkim Himalayas: Redefining the recurrence interval of a great event”.
3. Atul Kumar, R. Jayangondaperumal, **Arjun Pandey**. “Paleoseismic evidence of a Giant medieval earthquake in the central seismic gap at Tanakpur, Uttarakhand, India”.
4. Rajeeb Lochan Mishra, R. Jayangondaperumal, Arjun Pandey. “New uplift and convergence rate estimates for the Nameri Thrust, northeastern Himalaya, India”.

Declaration

I declared that the information given above is complete and correct.

(Arjun Pandey)