


CURRICULUM VITAE

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Purushottam Kumar Garg Centre for Glaciology, Wadia Institute of Himalayan Geology, 33 – GMS Road, Dehradun – 248001. Email: garg.glacio@gmail.com gargpk@wihg.res.in Ph. +91 135 2525320 Mobile: +91 9536757423	Purushottam Kumar Garg Village & Post – Majhgawan Via – Jaitwara, District – Satna Madhya Pradesh – 485221 Mobile: +91 9752558393	

Personal details:

Name: Purushottam Kumar Garg

Father's Name: Shri Pradeep Kumar Garg

Date of Birth: 4th May 1987

Sex: Male

Nationality: Indian

Language proficiency: Hindi, English (Speak, Read and Write)

Specialization/Research Interests:

Glaciology, Digital image processing, Geographical information system, Remote sensing applications

Educational Qualifications:

Examination/ Degree	Subject/ Specialization	Year	Division	% Marks	University/ College/ Board	Distinctions/ Scholarships
High Scholl (10 th)	Mathematics, Science, Social Science, English, Hindi, Sanskrit	2002	First	81.00	M.P. Board Bhopal	Second position in class
Higher Secondary School (12 th)	Physics, Chemistry, Biology	2004	First	66.00	M.P. Board Bhopal	
Graduation (B.Sc.)	Geology, Chemistry, Botany	2007	Second	58.66	A.P.S. University Rewa	
Post Graduation (M.Sc.)	Remote Sensing and GIS	2009	First	80.00	M.G.C.G.V Chitrakoot, Satna	Gold Medalist
Ph.D.	Remote Sensing Glaciology	2019	-	Not applicable	University of Jammu, Jammu	Secured highest marks in course work examination

Ph.D. Research:

Title: Assessment of variable response of Himalayan glaciers to climate change using geospatial techniques

Department and Institute: Post Graduate Department of Remote Sensing and GIS, University of Jammu, Jammu-180006, India.

Supervisors: (1) Dr. Aparna Shukla, Scientist E, Ministry of Earth Sciences, New Delhi & Scientist-D, Wadia Institute of Himalayan Geology, Dehradun.
(2) Prof. Avtar Singh Jasrotia, Professor, Post Graduate Department of Remote Sensing and GIS, University of Jammu, Jammu-180006, India.

Experience:

Name of Organization	Post held	From	To	Nature of duties
Centre for Glaciology, Wadia Institute of Himalayan Geology, Dehradun	Jr. Technical Officer	06.09.2013	Till date	Research in the field of Glaciology using remote sensing and GIS, Glaciological field work, Laboratory management
Forest Survey of India, Shimla	Deputy Ranger	17.12.2012	05.06.2013	Forest inventory, Forest cover mapping using remote sensing, Forest field survey
Forest Survey of India, Dehradun	Junior research fellow	09.04.2010	15.12.2012	Forest cover mapping using remote sensing, Forest field survey
RMSI Private Limited	Assistant GIS Engineer	01.12.2009	08.04.2010	Team lead, Geodatabase generation and management

Achievements/Awards:

- Secured Gold Medal in Post-Graduation (M.Sc. Remote Sensing and GIS) by acquiring 8.0 grade out of 10.
- Glacier expeditions to 6 glaciers in the Central and Western Himalaya between 2014 and 2019.
- Team leader for glacial mass balance expedition program on Panchhi Nala glacier, Bhaga valley, Western Himalaya during October 2016.
- Received Roland Schlich Travel award to attend an international conference at Vienna, Austria dated December 20, 2019.
- Received IEEE Geoscience and Remote Sensing Society travel award to attend an international conference at Fort Worth, Texas, USA dated April 18, 2017.
- Received India Science and Engineering Research Board (SERB) International travel support to attend an international conference at Fort Worth, Texas, USA dated June 21, 2017.

Computational Skills:

Image processing and Remote Sensing Software: ERDAS Imagine version 2014
ENVI version 5.1

GIS Software: ArcGIS 10.7, QGIS

Application Software: MS Office 2013 and earlier versions; Adobe Photoshop, CorelDRAW version 13, Grapher, Statistical software R and SPSS.

Special course/Training:

- Participated in two weeks special training program on ‘Geoinformatics for meteorology and climatology applications’ held at Indian Institute of Remote Sensing, Dehradun during November 18–29, 2013.
- Participated in three months dedicated glaciological training ‘Indo-Swiss capacity building program in Himalayan glaciology’ held at School of Environmental Sciences, Jawaharlal Nehru University, New Delhi during 2014–2015. The training was organized jointly by India and Switzerland under the auspices of Indian Himalayas Climate Adaptation Program. The training was organized in two levels. Level-I was comprised of one month rigorous class-room training (August 18–September 15, 2014). The level-II was comprised of field work at Chhota Shigri glacier of about 21 days (September 17–October 8, 2014) followed by one and half month class room training (January 5–February 13, 2017).
- Completed full time Professional training (May 2010) on ‘Mastering GOOGLE EARTH PRO Basics & Advance Applications’ held at NFDMC division, Forest Survey of India, Dehradun in May 2010.

Membership/Fellowship of Professional:

- Member of European Geosciences Union (EGU) vide membership number 531913.
- Member of IEEE Geoscience and Remote Sensing Society vide membership number 94164375.
- Member of Indian Society of Remote Sensing vide membership number A-31/2016

Publications:

Papers in peer reviewed journals:

1. Shukla, A and **Garg, P.K.**, 2019. Spatio-temporal trends in the surface ice velocities of the central Himalayan glaciers, India. **Global and Planetary Change (Under review). Impact Factor: 4.10.**
2. **Garg, P.K.**, Shukla, A. and Jasrotia, A.S., 2019. On the strongly imbalanced state of glaciers in the Sikkim, eastern Himalaya, India. **Science of the Total Environment**, 691, 16-35. Doi: <https://doi.org/10.1016/j.scitotenv.2019.07.086>. **(Impact Factor: 5.589).**

3. **Garg, P.K.**, Shukla, A. and Jasrotia, A.S., 2019. Dynamics of the four major central Himalayan glaciers: spatio-temporal trends, influencing factors and glacier health. **Himalayan Geology**, 40 (1), 46-53. (**Impact Factor: 0.41**)
4. Shukla, A. and **Garg, P.K.**, 2019. Evolution of a debris-covered glacier in the western Himalaya during the last four decades (1971–2016): a multiparametric assessment using remote sensing and field observations. **Geomorphology**, 341, 1-14. <https://doi.org/10.1016/j.geomorph.2019.05.009>. (**Impact Factor: 3.681**).
5. Taloor, A.K., Kotlia, B.S., Jasrotia, A.S., Kumar, A., Alam, A., Ali, S., Kouser, B., **Garg, P.K.**, Kumar, R., Singh, A.K. and Singh, B., 2018. Tectono-climatic response to landscape changes in the glaciated Durung Drung basin, Zaskar Himalaya, India: A geospatial approach. **Quaternary International**, 507, 262-273. DOI: <http://dx.doi.org/10.1016/j.quaint.2018.09.030>. (**Impact Factor: 1.952**)
6. Shukla, A., **Garg, P.K.** and Srivastava, S., 2018. Evolution of glacial and high-altitude lakes in the Sikkim, Eastern Himalaya over the past four decades (1975-2017). **Frontiers in Environmental Science**, 6 (81), 1-19. DOI: <http://dx.doi.org/10.3389/fenvs.2018.00081>. (**Cite Score 5.6**)
7. **Garg, P.K.**, Shukla, A. and Jasrotia, A.S., 2017. Influence of topography on glacier changes in the central Himalaya, India. **Global and Planetary Change**, 155, 196-212. DOI: <http://dx.doi.org/10.1016/j.gloplacha.2017.07.007>. (**Impact Factor: 4.100**).
8. **Garg, P.K.**, Shukla, A., Tiwari, R.K. and Jasrotia, A.S., 2017. Assessing the status of glaciers in part of the Chandra basin, Himachal Himalaya: A multiparametric approach. **Geomorphology**, 284, 99-114. DOI: <http://dx.doi.org/10.1016/j.geomorph.2016.10.022>. (**Impact Factor: 3.681**).
9. Ahluwalia, R.S., Rai, S.P., Gupta, A.K., Dobhal, D.P., Tiwari, R.K., **Garg, P.K.** and Kesharwani, K., 2016. Towards the understanding of the flash flood through isotope approach in Kedarnath valley in June 2013, Central Himalaya, India. **Natural Hazards**, 82 (1), 321-332. DOI: <http://dx.doi.org/10.1007/s11069-016-2203-6>. (**Impact Factor: 2.319**).
10. Sahni, S., Singhal, M., **Garg, P.K.** and Tiwari, R.K., 2015. A Sneak Peek into Ground Penetrating Radar. **Everyman's Science**, XLIX (5), pp. 301–306.

Papers in preparation:

1. **Garg, P.K.**, Yadav, J.R., Shukla, A., Mehta, M. and Mitkari, K., 2020. 21st century mass budget and morphological evolution of the Dokriani glacier, central Himalaya, India. **Journal of Glaciology** (*To be submitted*). (**Impact Factor: 3.261**).
2. **Garg, P.K.**, Shukla, A., Kumar, V., Mehta, M., 2020. Stagnation of the Pensilungpa glacier, western Himalaya, India: causes and implications. **Cold Regions Science and Technology** (*To be submitted*). (**Impact Factor: 2.767**).
3. **Garg, P.K.**, Shukla, A., 2020. Assessing the climate trends in the glaciated region of the Indian Himalaya. **Journal of Mountain Science** (*To be submitted*). (**Impact Factor: 1.423**).

Full paper in conference proceedings:

1. **Garg, P.K.**, Shukla, A. and Jasrotia, A.S., 2017. An Integrated Field And Remote Sensing Based Approach For Estimating Influence Of Debris Thickness On Glacier Surface Elevation Changes. **IEEE International Geoscience and Remote Sensing Symposium**, Fort Worth, Texas, USA, July 23–28, 2017, pp 2840–2843. DOI: <http://dx.doi.org/10.1109/IGARSS.2017.8127590>.
2. Shukla, A., **Garg, P.K.**, Mehta, M. and Kumar, V., 2017. Changes in dynamics of Pensilungpa glacier, western Himalaya, over the past two Decades. **38th Asian Conference on Remote Sensing (ACRS 2017)**, New Delhi, October 23-27, 2017, pp 1198-1204.
3. Tiwari, R.K., **Garg P.K.**, Saini, V. and Shukla, A., 2016. Comparisons of different methods for debris covered glacier classification. **SPIE Asia-Pacific Remote Sensing**, New Delhi, April 4-7, 2016, 9877(98771K-1–98771K-7). DOI: <http://dx.doi.org/10.1117/12.2227115>.
4. Tiwari, R.K., **Garg, P.K.**, Shukla, A., Ahluwalia, R.S., Singh, N., Chauhan, P., 2016. A Geomorphic and morphometric analysis of surface ice velocity variation of different valley type glaciers. **SPIE Asia-Pacific Remote Sensing**, New Delhi, April 4-7, 2016 (98771I-1-98771I-9). DOI: <http://dx.doi.org/10.1117/12.2227108>.

Abstracts in Conferences/Symposia:

1. **Garg, P.K.**, Shukla, A., Kumar, V., Mehta, M., 2020. Debris cover growth, ensuing changes in morphology and impact on glacier processes at Pensilungpa Glacier, western Himalaya, India. EGU General Assembly, Vienna, Austria, May 3-8, 2020. (Accepted).
2. **Garg, P.K.**, Shukla, A., 2020. Climate and glacier variability in the western Himalaya, India. 36th International Geological Congress, India Expo Centre, New Delhi, March 2-8, 2020. (Accepted).
3. **Garg, P.K.**, Shukla, A., 2019. Understanding control on diverse behavior of the Bara Shigri and Samudra Tapu glaciers, western Himalaya. National Geo-Research Scholars Meet-2015. Wadia Institute of Himalayan Geology Dehradun, Uttarakhand, June 6-8, 2019.
4. **Garg, P.K.**, Yousuf, B., Shukla, A., 2019. Dynamics of Bhagirath Kharak Glacier, Central Himalaya in Relation to Changing Facies. International Workshop on Climate Change and Extreme Events in the Himalayan Region, IIT Mandi, April 18-20, 2019.
5. **Garg, P.K.**, Shukla, A., Srivastava, S., 2018. Changes in spatiotemporal pattern of high-mountain lakes of Sikkim, Eastern Himalaya from 1975 to 2017. National Conference on Earth System Science Iwith Special Reference to Himalaya: Advancement and Challenges, Wadia Institute of Himalayan Geology, May 16-18, 2018.
6. **Garg, P.K.**, Yousuf, B., Shukla, A. and Jasrotia, A.S., 2017. Topographic influence on dimensional changes of glaciers in the central Himalaya, India. National Geo-Research Scholars Meet-2016, Wadia Institute of Himalayan Geology, Dehradun, Uttarakhand, May 17–20, 2017, pp. 212.
7. **Garg P.K.**, and Shukla. A., 2016. Topographic control on glacier changes in central Himalaya using remote sensing techniques. National Symposium on Recent Advances in Remote Sensing and GIS with Special Emphasis on Mountain Ecosystems. Indian

- Society of Remote Sensing, Dehradun, Uttarakhand, December 7–9, 2016, pp. 450.
- Srivastava, S., Shukla, A.,
8. Tiwari R.K. and **Garg P.K.**, 2016. Glacier Health and Dynamics: A Case Study of Samudra Tapu Glacier, Himachal Himalayas, India. National Symposium on Recent Advances in Remote Sensing and GIS with Special Emphasis on Mountain Ecosystems. Indian Society of Remote Sensing, Dehradun, Uttarakhand, December 7–9, 2016, pp. 541
 9. **Garg, P.K.**, and Shukla, A., 2016. Debris cover variations and dimensional changes in the glaciers of Western Himalaya using geospatial techniques. National Geo-Research Scholars Meet-2015. Wadia Institute of Himalayan Geology Dehradun, Uttarakhand, June 1–4, 2016, pp. 141-142.
 10. Shukla, A., Rawat, P. and **Garg, P.K.**, 2016. Using remote sensing derived ELA estimates for retrieval of the mass balance of the Chhota Shigri glacier from 2002-2013. National Conference on Himalayan Cryosphere. Divecha Centre for Climate Change, Indian Institute of Science, Bengaluru, January 23–24, 2017, pp. 11–13.
 11. **Garg P.K.**, Tiwari, R.K., and Shukla, A. (2015). 3-D monitoring of glaciers in the part of Chandra basin, Himachal Pradesh, India. Himalaya-Karakoram-Tibet workshop. Wadia Institute of Himalayan Geology Dehradun, Uttarakhand, October 6–8, 2015, pp. 161-162.

References:

- i. Dr. Aparna Shukla
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Date: 01-31-2019

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