

Dr. SAURABH VIJAY

Personal Information

Name	Saurabh Vijay
Gender	Male
Date of Birth	08 July 1986
Place of Birth	Alwar, India
Nationality	Indian
Office Address	F-3/4, Geomatics Building, Department of Civil Engineering, IIT Roorkee, Roorkee, Uttarakhand-247667, India
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Education Details

Degree	Subject	University	Year
PhD	Remote Sensing of Glaciers (Geography)	Supervisor: Prof. Matthias Braun University of Erlangen-Nuremberg (FAU), Germany	2017
M.Tech	Geomatics, Civil Engineering	IIT Roorkee	2012
B.E	Electronics and Communication Engineering	University of Rajasthan	2008

Professional Background

From (YYYY-MM-DD)	Period (YYYY-MM-DD)	Position	Organization
2020-12-07	-----	Assistant Professor	IIT Roorkee, India
2019-09-01	2020-12-03	Principal Investigator	Byrd Polar & Climate Research Center, USA
2019-06-01	2020-12-03	Research Associate	Byrd Polar & Climate Research Center, USA
2017-04-01	2019-05-31	Post-doc	DTU Space, Technical University of Denmark, Denmark
2013-08-01	2013-08-30	Visiting Researcher	AWI Bremerhaven, Germany
2008-08-01	2010-07-30	Lecturer	Jaipur Engineering College, Rajasthan, India

Institutional Responsibilities

Teaching, Supervision and Research, Administration (CED Safety Coordinator, DFSC Convener)

Projects

Title	Role	Funding Agency	Duration	Amount (INR)
Classification of glacier changes in the Indian state of Uttarakhand	Indian PI	Bavarian Indian Center, Germany	S-D, 2021	2.16 lacs
Interlinked seasonal evolution of supraglacial lakes and ice velocity changes of glaciers in Greenland	PI	ISRO, India	2022-2025	24.19 lacs
High-resolution observation of glacier ice velocity, topography, terminus and surface features of an Indian Himalayan Glacier	PI	IIT Roorkee (FIG)	2022-2024	20 lacs
Citizen Service Applications for Roorkee Citizens: 175 Years of Celebration of IIT Roorkee	PI	IIT Roorkee	2022	24.2 lacs

Supervision

Duration	Degree	Name	Title	Role
2016	M.Sc	Stefan Lippl	Generating glacier outlines from InSAR coherence-method development, testing of influencing factors, and application for different regions	Co-supervisor
2021-22	M.Tech	Deepesh Goyal	Monitoring of land subsidence in northern India using time-series InSAR technique	Supervisor
2021-25	PhD	Pawan Singh	Glacier monitoring using observation and modeling	Supervisor
2021-25	PhD	Ravindra Kumar	Monitoring of glacial lakes and glacial lake outburst disasters using observation and modeling	Supervisor
2021-25	PhD	Sarvesh Kumar Verma	Improving observations of small glaciers in the Himalayas using in-situ and remote sensing techniques	Supervisor
2021-25	PhD	Hempushpa Sahu	Multisource remote sensing data for drought mapping, monitoring and management	Co-supervisor

Teaching

Subject	Institute
Introduction to GIS	University of Erlangen (FAU), Germany
Geographic Information Systems	Technical University of Denmark
Advanced Digital Image Processing	IIT Roorkee
Geodesy and GPS Surveying	IIT Roorkee
Theory and Applications of GIS	IIT Roorkee

Scientific Service and Memberships

- **Reviewer:** 10+ International Journals, 2 Technical Reports on Cryosphere
- **Member:** International Glaciological Society, Council Member of Indian Polar Research Network (APECS India)

Honors and Awards

Award	Institute/Agency	Year
IIT Roorkee Faculty Fellowships	IIT Roorkee	2020
Outstanding Student Presentation Award	EGU General Assembly, Austria	2015
IIT Master Sandwich Scholarship	DAAD, Germany	2011
MHRD Fellowship	Govt. of India	2010

Refereed Journal Papers

2022

Khan, SA., Bamber, JL., Rignot, E., Helm, V., Aschwanden, A., Holland, DM., van den Broeke, M., King, M., Noël, B., Truffer, M., Humbert, A., Colgan, W., **Vijay, S.**, Munneke, PK. Greenland mass trends from airborne and satellite altimetry during 2011-2020. *JGR Earth Surface*, 127 (4), e2021JF006505, doi: [10.1029/2021JF006065](https://doi.org/10.1029/2021JF006065)

2021

Vijay, S., King, M., Howat, I. M., Solgaard, A. M., Khan, S. A. & Noël, B. Greenland ice-sheet wide classification of glaciers based on two distinct seasonal ice velocity behaviors. *Journal of Glaciology*, 1-8, [10.1017/jog.2021.89](https://doi.org/10.1017/jog.2021.89)

Müller, L., Horwath, M., Scheinert, M., Mayer, C., Ebermann, B., Floricioiu, D., Krieger, L., Rosenau, R. & **Vijay, S.** Surges of Harald Moltke Bræ, north-western Greenland: seasonal modulation and initiation at the terminus. *The Cryosphere*, 15, 3355-3375, doi: [10.5194/tc-15-3355-2021](https://doi.org/10.5194/tc-15-3355-2021).

2020

Fariás-Barahona, D., Ayala, Á., Bravo, C., Vivero, S., Seehaus, T., **Vijay, S.**; Schaefer, M., Buglio, F., Casassa, G., and Braun, M.H. 60 Years of Glacier Elevation and Mass Changes in the Maipo River Basin, Central Andes of Chile. *Remote Sensing*, 12, 1658. doi:[10.3390/rs12101658](https://doi.org/10.3390/rs12101658)

Dai, C., Howat, I. M., Freymueller, J. T., **Vijay, S.** and Jia, Y. Characterization of the 2008 phreatomagmatic eruption of Okmok from ArcticDEM and InSAR: deposition, erosion, and deformation. *Journal of Geophysical Research: Solid Earth*, 125(6), e2019JB018977, doi:[10.1029/2019JB018977](https://doi.org/10.1029/2019JB018977)

2019

Vijay, S., Khan, S. A., Kusk, A., Solgaard, A. M., Moon, T. and Bjørk, A. A. Resolving Seasonal Ice Velocity of 45 Greenlandic Glaciers with very high temporal details, *Geophysical Research Letters*, 46(3), 1484-1495, doi:[10.1029/2018GL081503](https://doi.org/10.1029/2018GL081503)

Gomez, R., Arigony-Neto, J., Santis, A. D., **Vijay, S.**, Jana, R. and Rivera A. Ice dynamics of Union Glacier from SAR offset tracking, *Global and Planetary Change*, 174, 1-15, doi:[10.1016/j.gloplacha.2018.12.012](https://doi.org/10.1016/j.gloplacha.2018.12.012)

2018

Lipl, S., **Vijay, S.**, Braun, M., Automatic delineation of debris-covered glaciers using InSAR coherence derived from X-, C- and L-band radar data: a case study of Yazgyl Glacier, *Journal of Glaciology*, 64 (247), 811-821, doi:[10.1017/jog.2018.70](https://doi.org/10.1017/jog.2018.70)

Vijay, S. and Braun, M., Early 21st century spatially detailed elevation changes of Jammu and Kashmir glaciers (Karakoram-Himalaya), *Global and Planetary Change*, 165, 137-146, doi:[10.1016/j.gloplacha.2018.03.014](https://doi.org/10.1016/j.gloplacha.2018.03.014).

2017

Vijay, S. and Braun, M., Seasonal and interannual variability of Columbia Glacier, Alaska (2011-2016): ice velocity, mass flux, surface elevation and front position, *Remote Sensing*, 9(6), doi:[10.3390/rs9060635](https://doi.org/10.3390/rs9060635).

Khare, S., Ghosh, S.K., Latifi, H., **Vijay, S.** and Dahms, T., Seasonal based analysis of vegetation response to environmental variables in the mountainous forests of Western Himalaya using Landsat 8 data, *International Journal of Remote Sensing*, 38(15), 4418-4442, doi:[10.1080/01431161.2017.1320450](https://doi.org/10.1080/01431161.2017.1320450).

2016

Vijay, S. and Braun, M., Elevation change rates of glaciers in the Lahaul-Spiti (Western Himalaya, India) during 2000-2012 and 2012-2013, *Remote Sensing*, 8(12), 1038, doi:[10.3390/rs8121038](https://doi.org/10.3390/rs8121038).