

Curriculum Vitae

Dr. Anil Asaram Chavan

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Research Associate

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🌐: https://scholar.google.com/citations?hl=en&user=xlWVinsAAAAJ&view_op=list_works
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Research Interests

My research work focuses on the volcano-tectonic and glacio-fluvial landforms of Mars using remotely sensed datasets. My special interest includes investigation of Geomorphic, Mineralogical, and Astrobiological analogue sites for the Martian studies from the Indian sub-continent to better understand the geological processes that have/had occurred on Mars. I am also dealing with the Quaternary climate and human interaction signatures from Kachchh Basin with the help of multiproxy datasets and archaeological remains.

Major Interests: Martian Geomorphology (Volcanic, Fluvial and Tectonic); Astrobiology; Martian analogues; Impact Cratering; Quaternary geology; Geoarchaeology; Geoheritage

Education

Ph.D. (Geology): **2019-2022**, K.S.K.V. Kachchh University- Bhuj

Thesis title: *Geomorphic set-up of Syria Planum provenance, Mars: Climate vis-à-vis Tectonic*

Master of Science (Geology): **2015-2017**, K.S.K.V. Kachchh University- Bhuj (**79.75 %**)

Dissertation title: *Evolution of epigenetic gorge in central mainland Kachchh: a case study of Khari gorge*

Bachelor of Science: **2012-2015**, Fergusson College, S.P. Pune University- Pune (**75.83 %**)

Subjects: **Geology** Major, Chemistry, Physics, Mathematics

Computer Proficiency: **GIS Package-** ArcGIS, ERDAS Imagine, ENVI, MATLAB, Surfer, Global Mapper. **Graphic Package-** Coral Draw, Photoshop, etc.

Surveying Skill: *Total Station, DGPS Survey and DGPS data Analysis, Drone Survey to create local area Digital Elevation Model (DEM) for land use mapping*

Language Knowledge: *English, Hindi, Marathi and Gujarati*

Professional Experience

Postdoctoral Fellow **December, 2022 – December, 2024**

Physical Research Laboratory (PRL), Ahmedabad (Gujarat)- 380009, INDIA

Project title: *Volcano-tectonic processes and their interaction with fluvial activity in Tharsis region Mars: a terrestrial analogue perspective*

Member of investigation, Kachchh Archaeological Project **Jan, 2021 – Dec, 2025**

Trade, pastoralism and the origins of the Indus Civilization, funded by the Spanish PALARQ Foundation, SPAIN

ShoDH fellow **January, 2020 – December, 2021**

ShoDH fellow at Department of Earth and Environmental Science, K.S.K.V. Kachchh University, Bhuj-37001, INDIA

Doctoral Researcher & Teaching Assistant **July, 2017 – March, 2022**

Department of Earth and Env. Science, K.S.K.V. Kachchh University, Bhuj- 370001, INDIA

Teaching Assistant **July, 2017 – March, 2022**

Department of Archaeology, K.S.K.V Kachchh University, Bhuj- 370001, INDIA

Senior Research Fellow **August, 2019 – November, 2022**

Indian Space Research Organization (ISRO) Funded Project under Mars Orbiter Mission- Announcement of Opportunity (MOM-AO)

Junior Research Fellow **July, 2017 – July, 2019**

Indian Space Research Organization (ISRO) Funded Project under Mars Orbiter Mission- Announcement of Opportunity (MOM-AO)

Awards

December, 2022-2024 *Post-doctoral fellowship in Planetary Science Division, at **Physical Research Laboratory (PRL)**, Ahmedabad*
(2 Years)

**January, 2020-
December, 2021** *Awarded “SHODH-Scheme Of Developing High-quality research” fellowship for the Ph.D. with award letter KCG/SHODH/2020-21/201901500002 by Higher Education Department, Government of Gujarat, INDIA*
(2 Years)

January, 2017 *First prize winner in Minaxi Lalit Science Award given by Gujarat Science Academy (**In Geology**) based on a test conducted by the Department of Botany, Gujrat University Ahmedabad on Sunday, 8th January 2017*

Media Links (Publications covered by national and regional newspapers)

1. Terrestrial Martian analogues from the Indian subcontinent: Implications for hydrological activity on Mars, paper published in **Icarus** Journal covered by Times of India
<https://timesofindia.indiatimes.com/city/rajkot/structures-in-india-resemble-those-on-mars/articleshow/93014784.cms>
2. Terrestrial Martian analogue heritage of Kachchh Basin, western India, Paper published in **Geoheritage** Journal covered by Times of India and local news paper
<http://toi.in/9sNtJa/a31gj>
<https://divya-b.in/S3nx0ITuapb>
3. Mid-late Holocene climatic reconstruction from coastal dunes of the western Kachchh, India, Paper published in **Quaternary International** Journal covered by Times of India
<https://timesofindia.indiatimes.com/city/rajkot/100-rain-less-years-resulted-in-kutch-sand-dunes-5000-yrs-ago/articleshow/87989910.cms?from=mdr>
4. Climatic history from early Weichselian (MIS 5D-C) valley-fill deposits and associated factors for basin sedimentation, mainland Kachchh, western India, Paper published in **Quaternary International** Journal covered by Times of India
<https://timesofindia.indiatimes.com/city/rajkot/46000sq-km-kutch-desert-was-once-a-verdant-landscape-say-geologists/articleshow/88285353.cms?from=mdr>
5. Juna Khatiya Excavation covered by different Newspapers and local media
<https://youtu.be/4GGxuUrTAGs>;
<https://timesofindia.indiatimes.com/city/rajkot/archaeologists-find-remains-of-another-pre-harappan-site-in-kutch/articleshow/67858503.cms>
<https://timesofindia.indiatimes.com/india/experts-discover-harappan-trove/articleshow/68366282.cms>
6. The Luna structure, India: A probable impact crater formed by an iron bolide, Paper published in **Planetary and Space Science** Journal covered by
Times of India: <https://timesofindia.indiatimes.com/india/was-indus-valley-civilization-impacted-by-a-meteorite/articleshow/106002006.cms>
NASA Earth observatory confirms Luna as impact structure: <https://www.bluemarble.nasa.gov/images/152700/deciphering-indias-luna-crater>
The Indian Express: <https://indianexpress.com/article/technology/science/gujarat-luna-crater-7000-years-old-nasa-9290413/>
BBC Sky at Night: <https://www.skyatnightmagazine.com/news/nasa-satellite-india-luna-crater>
India Today: <https://www.indiatoday.in/science/story/luna-crater-india-gujarat-meteor-impact-site-landsat-8-image-2532971-2024-04-29>
NDTV: <https://www.ndtv.com/india-news/nasa-captures-luna-crater-with-signatures-of-meteorite-impact-in-gujarat-5542095>
Business Today: <https://www.businesstoday.in/visualstories/news/6900-years-old-nasa-is-trying-to-decode-the-history-of-gujarats-luna-crater-132242-29-04-2024>
Times of India: <https://www.businesstoday.in/visualstories/news/6900-years-old-nasa-is-trying-to-decode-the-history-of-gujarats-luna-crater-132242-29-04-2024>
India Today: <https://www.indiatoday.in/science/story/gujarats-mysterious-crater-is-not-harappan-something-crashed-from-space-2519849-2024-03-27>
Financial Express: <https://www.financialexpress.com/life/science-the-mystery-behind-gujarats-luna-structure-could-a-giant-meteorite-have-shaped-kutchs-landscape-50000-years-ago-3439713/>

Research Publications

Citations

ResearchGate: **174**; Reads: **13182**

Google Scholar: **175**

(A) Research Papers (*Published*)

21. K.B. Kimi, K.S. Sharini, Harish, S. Tuhi, **Anil Chavan**, S. Vijayan, and R.K.S. Priya (2025) "Recent Tectonic Activity in and Around the Posidonius Crater, Moon" *Journal of Geophysical Research-Planet*, 130, E2024je008446, DOI: <https://doi.org/10.1029/2024JE008446> ISSN: 2169-9100, IF: **4.4**
20. G.K. Indu, S. James, J. Aswathi, V.R. Rani, V.M. Nair, Libiya M. Varghese, K.S. Sajinkumar, Nayan Sharma, Mitthu Dhali, Aryavart Anand, V.J. Rajesh, M.N. Praveen, **Anil Chavan**, Subhash Bhandari, Javed N. Malik (2025) "Revised chronology and expanded insights: Geologic perspective on the Luna impact event and its influence on the Harappan civilization". *Meteoritics & Planetary Science*, 1-20, DOI: <https://doi.org/10.1111/maps.14308> ISSN: 19455100, IF: **2.2**
19. Vijayan S., K.B Kimi, **Anil Chavan**, R. Aditi, U. Thahira, V. Rama Subramanian, Rishitosh K. Sinha, Amitabh, Santosh Vadawale, M Shanmugam, Mithun N.P.S, Arpit R Patel, Amit Basu S, K. V. Iyer, K. Suresh, Ajay Prashar, Rima Ghosh, and Anil Bhardwaj (2025) "Chandrayaan-3 landing site evolution by South Pole-Aitken basin and other impact craters". *Icarus*, 425, 116329:1-14, DOI: <https://doi.org/10.1016/j.icarus.2024.116329>, ISSN: 0019-1035, IF: **3.657**
18. K.B. Kimi, Harish, K.S. Sharini, **Anil Chavan**, and S. Vijayan (2024) "Deformation of the Gruithuisen Region Lava Tube under Compressional Stress on the Moon" *Geology*, 52(8): 625-630, DOI: <https://doi.org/10.1130/G52143.1>, ISSN: 0091-7613, IF: **5.9**
17. K.S. Sajinkumar, S. James, G.K. Indu, Saranya R. Chandran, Devika Padmakumar, J. Aswathi, S. Keerthy, M.N. Praveen, N. Sorcar, J.K. Tomson, **Anil Chavan**, Subhash Bhandari, M. Satyanarayanan, R. Bhushan, A. Dabhi, and Y. Anilkumar (2024) "The Luna structure, India: A probable impact crater formed by an iron bolide" *Planetary and Space Science*, 240, 105826, DOI: <https://doi.org/10.1016/j.pss.2023.105826>, ISSN: 0032-0633, IF: **2.3**
16. Saranya R. Chandran, James S., Aswathi J., Devika P., Sadeeda M., R.B. Binoj Kumar, **Anil Chavan**, Subhash Bhandari, and K.S. Sajinkumar (2022) "A compendium of the best-preserved terrestrial hypervelocity impact crater in a basaltic terrain: The Lonar, India" *Earth-Science Reviews*, 243, 104508, DOI: <https://doi.org/10.1016/j.earscirev.2023.104508>, ISSN: 0012-8252, IF: **12.1**
15. Saranya Chandran, S. James, R.B. Binojkumar, J. Aswathi, Devika Padmakumar, **Anil Chavan**, Vivek Bhore, Krishna Kajale, Subhash Bhandari, and K.S. Sajinkumar (2022) "Lonar impact crater, India: The best-preserved terrestrial hypervelocity impact crater in a basaltic terrain as a potential Global Geopark" *Geoheritage*, 14 (4), 130:1-20 DOI: <https://doi.org/10.1007/s12371-022-00767-9>, ISSN: 1867-2485, IF: **3.413**

14. Adarsh Thakkar, Jaypal Jadeja, Rajesh S. V., **Anil Chavan**, Abhayan G. S., Subhash Bhandari, Gaurav Chauhan, and M.G. Thakkar (2022) "Geoarchaeological heritage of Kachchh region, Gujarat, Western India: Geotourism Potentials" *Geoheritage*, 14 (4), 128:1-19 DOI: <https://doi.org/10.1007/s12371-022-00748-y>, ISSN: 1867-2485, IF: **3.413**
13. Subham Sarkar, H. Moitra, Satadru Bhattacharya, A. Dagar, Dwijesh Ray, Saibal Gupta, **Anil Chavan**, Anil Shukla, and Subhash Bhandari (2022) "Spectroscopic studies on the Puga Hot Spring Deposits, Ladakh a possible astrobiological Martian analog site in India" *Journal of Geophysical Research-Planet*, 127, e2022JE007299 DOI: <https://doi.org/10.1029/2022JE007299>, ISSN: 2169-9100, IF: **4.43**
12. **Anil Chavan***, Subham Sarkar, and Subhash Bhandari (2022) "Episodic and Declining Fluvial Processes in Noctis Fossae, Syria Planum Province, Mars" *Advances in Space Research*, 70 (10), 3205-3219, DOI: <https://doi.org/10.1016/j.asr.2022.07.032>, ISSN: 0273-1177, IF: **2.611**
11. **Anil Chavan***, Vivek Bhore, and Subhash Bhandari (2022) "Terrestrial Martian analogues from the Indian subcontinent: Implications for hydrological activity on Mars" *Icarus*, 385, 115118:1-29 DOI: <https://doi.org/10.1016/j.icarus.2022.115118>, ISSN: 0019-1035, IF: **3.657**
10. **Anil Chavan*** and Subhash Bhandari (2022) "Volcanic craters and cones in central Kachchh mainland, western India: potential analogue for the Martian studies?" *Journal of Earth System Science*, 131(4):1-22 DOI: <https://doi.org/10.1007/s12040-022-01972-4>, ISSN: 0253-4126, IF: **2.045**
9. Sajinkumar KS, M. Santosh, V.R. Rani, Subhash Anand, A.P. Pradeepkumar, **Anil Chavan**, K.P. Thrivikramji, and P.V. Ramachandran (2022) "The Tertiary sequence of Varkala Coastal Cliffs, southwestern India: an ideal site for Global Geopark" *International Journal of Geoheritage and Parks*, 10 (2) 308-321 DOI: <https://doi.org/10.1016/j.ijgeop.2022.05.003> ISSN: 2577-4441, IF: **2.591**
8. **Anil Chavan**, Subham Sarkar, Adarsh Thakkar, Jaymeet Solanki, Chirag Jani, Subhash Bhandari, Satadru Bhattacharya, Bhawanisingh Desai, Dwijesh Ray, Anil Shukla, Sajinkumar K.S., Souvik Mitra, Saibal Gupta, Gaurav Chauhan, and M.G. Thakkar (2022) "Terrestrial Martian analogue heritage of Kachchh Basin, western India" *Geoheritage*, 14(1) 33:1-26 DOI: <https://doi.org/10.1007/s12371-022-00666-z>, ISSN: 1867-2485, IF: **3.413**
7. Madhavi Dabhi, Adarsh Thakkar, **Anil Chavan**, Gaurav Chauhan, Rakesh Bhagora, Naveen Chauhan, Anil Shukla, Subhash Bhandari, and M. G. Thakkar (2022) "Mid-late Holocene climatic reconstruction from coastal dunes of the western Kachchh, India" *Quaternary International*, 642, 29-40. DOI: <https://doi.org/10.1016/j.quaint.2021.09.011>, ISSN: 1040-6182 IF: **2.454**
6. Madhavi Dabhi, **Anil Chavan**, Adarsh Thakkar, Gaurav Chauhan, Rakesh Bhagora, Naveen Chauhan, Anil Shukla, and Subhash Bhandari (2022) "Climatic history from early Weichselian (MIS 5D-C) valley-fill deposits and associated factors for basin sedimentation, mainland Kachchh, western India" *Quaternary International*, 642, 17-28. DOI: <https://doi.org/10.1016/j.quaint.2021.10.019>, ISSN: 1040-6182 IF: **2.454**

5. **Anil Chavan**, Subham Sarkar, Adarsh Thakkar, and Subhash Bhandari (2021) "A New Method of Mosaicking Context Camera (CTX) Images for the Geomorphological Study of Martian Landscape" *Open Journal of Geology*, 11(8), 373-380. DOI: <https://doi.org/10.4236/ojg.2021.118020>, ISSN: 2161-7589, IF: **0.83**
4. Jaypalsinh Jadeja, Rajesh Sasidharan Vasanth, **Anil Chavan**, Abhayan Girija Sasidharan, Subhash Bhandari (2022) "Archaeological Investigation of the Harappan Settlement at Gajod, Bhuj Taluka, Kachchh District, Gujarat" *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 10 (1), 609-626. ISSN: 2347-5463 IF: **NA**
3. Charusmita Surendra Gadekar, Rajesh Sasidharan Vasanth, Abhayan Girija Sasidharan, Bhanu Prakash Sharma, **Anil Chavan**, Subhash Bhandari, and Jaypalsinh Jadeja (2021) "Early Harappan interaction between Sindh and Gujarat, as evidenced by lithic tools" *Journal of Lithic Studies*, 8 (1), 1-17. DOI: <https://doi.org/10.2218/jls.5161>, ISSN: 2055-0472, IF: **1.651**
2. Chirag Jani, Raj Sunil Kundregula, Suraj Bhosale, **Anil Chavan**, Abhishek Lakhote, Subhash Bhandari, Girish Ch Kothiyari, Gaurav Chauhan, Rakesh K Dumka, D Suri Babu, Adarsh Thakkar, Ajay Kumar Taloor, Anil Gor, and MG Thakkar (2021) "Delineation of tectonically active zones in the Island Belt Uplift region, Kachchh Basin, western India: A geomorphic and geodetic approach" *Quaternary Science Advances*, 4, 1-17, 100034. DOI: <https://doi.org/10.1016/j.qsa.2021.100034>, ISSN: 2666-0334, IF: **4.5**
1. Rajesh Sasidharan Vasanth, Abhayan Girija Sasidharan, Vishnu M, Bhanu Prakash Sharma and **Anil Chavan** (2020) "Archaeological Explorations of Sorath Harappan Settlement at Nadapa in Kachchh District, Gujarat" *Man and Environment*, XLV (1), 47-56, ISSN: 0258-0446, IF: **NA**

Research Papers (Under Review)

4. Vijayan S, Bivas Das, Tuhi S, Harish, Kimi KB, **Anil Chavan**, Sharini KS, Thahira U, Aditi R, Rishav Sahoo, Sandeep, Anil Bhardwaj (2024) "Possible Evidence for Recent Boulder Falls and Quakes on Cerberus Fossae, Mars" *Geophysical Research Letter* (**Under Review**)
3. Shania James, Saranya R. Chandran, J. Aswathi, Arun Bhadrn, Drishya Girishbai, M.N. Praveen, Anil Chavan, Subhash Bhandari, M. Satyanarayanan, Ram Mohan, Dwijesh Ray, and K.S. Sajinkumar (2024) "Enhanced understanding of the Cretaceous-Paleogene (K-Pg) Boundary in the Indian Subcontinent: Petrological, mineralogical, and geochemical insights" *Geochimica et Cosmochimica Acta* (**Under Review**) ISSN: 0016-7037, IF: **4.5**
2. **Anil Chavan**, Kimi K.B. and S. Vijayan (2024) "Volcano-tectonic and fluvial processes in Koval'sky crater: Implications for geodynamic evolution of southern Tharsis province" *Icarus* (**Under Review**) ISSN: 0019-1035, IF: **3.657**
1. **Anil Chavan** K.B. Kimi, S Vijayan and Subhash Bhandari (2024) "Characterization of geomorphic landforms in Syria Planum province: Implication for volcano-tectonic and glacio-fluvial interplay on Mars" *Earth and Planetary Science Letter*, (**Under Review, R2**). ISSN: 0012-821X, IF: **5.785**

(B) Book Chapter

1. Jaypalsinh Jadeja, Rajesh Sasidharan Vasantha, Adarsh Thakkar, **Anil Chavan**, Subhash Bhandari, Abhayan Girija Sasidharan (2023) "Archaeological Explorations in the Nagamati River Basin in Kachchh, Western India" *Research in Indus Civilization in the Wake of Hundred Years of Excavation at Harappa*, edited by Rajesh S. V., Abhayan G. S., Preeta Nayar published by the Department of Archaeology, University of Kerala, pp:349-367. ISBN: 978-93-5627-267-5

(C) Abstracts in national and international conferences

42. R Sahoo, KB Kimi, A Chavan, and S Vijayan (2025) "Evidence for Recent Tectonic Activity in an Ice-Filled Impact Crater on Mars" *56th Lunar and Planetary Science Conference*, held 10-14 March 2025 at The Woodlands, Texas. LPI Contributions, 3090, p.2108.
41. KB Kimi, R Sahoo, A Chavan, and S Vijayan (2025) "Investigating Subsurface Faults Through Fault-Crater Interactions" *56th Lunar and Planetary Science Conference*, held 10-14 March 2025 at The Woodlands, Texas. LPI Contributions, 3090, p.2125.
40. **Anil Chavan**, Kimi, K.B., Aditi, R., Thahira, U. and Vijayan, S. (2024) "Geodynamic Evolution of Southern Tharsis Province, Mars: Insights from Geomorphic Landforms in Koval'sky Crater". *55th Lunar and Planetary Science Conference*, held 11-15 March, 2024 at The Woodlands, Texas. LPI Contributions, 3040, p.1104.
39. Das, B., Tuhi, S., Kimi, K.B., **Chavan, A.**, Sharini, K.S., Aditi, R. and Vijayan, S. (2024) "Possible Recent Marsquake-Induced Boulder Falls on Mars". *55th Lunar and Planetary Science Conference*, held 11-15 March, 2024 at The Woodlands, Texas. LPI Contributions, 3040, p.1855.
38. Kimi, K.B., Sharini, K.S., **Chavan, A.** and Vijayan, S. (2024) "Gruithuisen Region, Moon: Structural Transformations of Lava Tube under Compressive Stress". *55th Lunar and Planetary Science Conference*, held 11-15 March, 2024 at The Woodlands, Texas. LPI Contributions, 3040, p.1022.
37. S Vijayan, KS Sharini, KB Kimi, S Tuhi, **A Chavan**, GR Osinski, A Bharadwaj (2024) "Distal Impact Melts on the Moon". *55th Lunar and Planetary Science Conference*, held 11-15 March, 2024 at The Woodlands, Texas. LPI Contributions, 3040, p.1512
36. Aditi, R., Thahira, U., Tuhi, S., Sharini, K.S., Kimi, K.B., **Anil, C.**, Harish, N. and Vijayan, S. (2024). "Huo Hsing Valley, Mars: Evidence for Multiple Floods and Sediment Deposits". *55th Lunar and Planetary Science Conference*, held 11-15 March, 2024 at The Woodlands, Texas. LPI Contributions, 3040, p.1184.
35. Thahira, U., Aditi, R., Tuhi, S., **Anil, C.**, Kimi, K.B., Harish, N., Sharini, K.S. and Vijayan, S (2024) "Southwestern Rim of Chryse Planitia, Mars: Fluvial Sedimentation and Differential Erosion Processes". *55th Lunar and Planetary Science Conference*, held 11-15 March, 2024 at The Woodlands, Texas. LPI Contributions, 3040, p.1185.
34. **Anil Chavan**, K.B. Kimi, S Vijayan and Subhash Bhandari (2024) "Volcano-tectonic and glacio-fluvial interplay on Mars: insights from geomorphic landforms in Syria Planum". *National Space Science Symposium- 2024*, held 25 February – 1 March, 2024 at Goa University

33. Chinmay Shahi, Thahira U., Aditi R, Kimi KB, **Anil Chavan**, S. Vijayan (2024) "Belva Crater, Mars: Coordinated analysis from Perseverance and HiRISE images". *National Space Science Symposium- 2024*, held 25 February – 1 Marc, 2024 at Goa University
32. Thahira U., Aditi R, Kimi KB, **Anil Chavan**, Vijayan S (2024) "Chryse Planitia, South-western rim, Mars: A potential landing site". *National Space Science Symposium- 2024*, held 25 February – 1 Marc, 2024 at Goa University
31. Aditi R, Thahira U., Kimi KB, **Anil Chavan**, Vijayan S (2024) "Huo Hsing Vallis, Mars: Multiple floods and preserved sediments". *National Space Science Symposium- 2024*, held 25 February – 1 Marc, 2024 at Goa University
30. K.B. Kimi, **Anil Chavan**, S. Vijayan (2024) "Insights into Lunar Compressional Features: Wrinkle Ridges and Lobate Scarps". *National Space Science Symposium- 2024*, held 25 February – 1 Marc, 2024 at Goa University
29. Vijayan S, **Anil Chavan**, Thahira U., Aditi R., Kimi KB (2024) "Mars: Catastrophic floods and rapid snow melts". *National Space Science Symposium- 2024*, held 25 February – 1 Marc, 2024 at Goa University
28. Bivas Das Kimi KB, Aditi R, Thahira U., **Anil Chavan**, Vijayan S. (2024) "Recent Marsquakes: Exploring Seismic Patterns with InSight Lander Data". *National Space Science Symposium- 2024*, held 25 February – 1 Marc, 2024 at Goa University
27. Vijayan S., Rishitosh K. Sinha, Santosh V. Vadawale, N. P. S. Mithun, M. Shanmugam, Amit Basu Sarbadhikari, Megha Bhatt, Neeraj Srivastava, Yash Srivastava, Kimi K.B., **Anil Chavan**, Anil D. Shukla, Anil Bhardwaj & Team (2024) "Chandrayaan-3 mission: New insights from Vikram and Pragyan at the lunar high latitude". *National Space Science Symposium- 2024*, held 25 February – 1 Marc, 2024 at Goa University
26. **Anil Chavan**, Kimi KB S. Vijayan, Subhash Bhandari (2024) "Volcano-tectonic and fluvial interplay on Mars: insights from geomorphic landforms in Syria Planum". *International Conference on Planets, Exoplanets and Habitability*, held 5-9 February 2024 at Physical Research Laboratory, Ahmedabad
25. S. Vijayan, **Anil Chavan**, Kimi KB (2024) "Exploring Fan Deposits on Mars and Earth". *International Conference on Planets, Exoplanets and Habitability*, held 5-9 February 2024 at Physical Research Laboratory, Ahmedabad
24. **Anil Chavan**, K.B. Kimi, K.S. Sharini, S. Vijayan, Subhash Bhandari (2023) "Volcanic craters and cones in central Kachchh mainland, western India: potential analogue for the Martian studies?". *4th Indian Planetary Science Conference*, held 22-24 March 2023 at Physical Research Laboratory, Ahmedabad
23. Vijayan S, Kimi KB, Sharini KS, Tuhi S, Harish, **Anil Chavan** (2023) "Exploring Mars, its analogues and future landing sites". *4th Indian Planetary Science Conference*, held 22-24 March 2023 at Physical Research Laboratory, Ahmedabad
22. K.B. Kimi, K.S. Sharini, Harish, S. Tuhi, **Anil Chavan**, S. Vijayan (2023) "Posidonius crater: A potential candidate to investigate the tectonic evolution on Moon". *4th Indian Planetary Science Conference*, held 22-24 March 2023 at Physical Research Laboratory, Ahmedabad
21. Thahira U, Tuhi S, Kimi KB., Sharini KS, Harish, **Anil Chavan**, Vijayan S (2023) "Glacial Lakes in Northwestern Himalayas: Potential analogues to understand Martian history". *4th Indian Planetary Science Conference*, held 22-24 March 2023 at Physical Research Laboratory, Ahmedabad

20. Sarkar S, Moitra H, Bhattacharya S, Ray D, Dagar A, Gupta S, **Chavan Anil**, Shukla AD, Bhandari S. (2023) "Constraining Spectral Signature of Puga Hot Spring Deposit". 54th Lunar and Planetary Science Conference, held 13-17 March, 2023 at The Woodlands, Texas. LPI Contributions. 2806:1464.
19. **Anil Chavan** and Subhash Bhandari (2021) "Theatre headed valleys in Deccan traps: a potential analogue for the Martian studies". *Meteoroids, Meteors and Meteorites: Messengers from Space (MetMeSS-2021)*, held on 29-30 November, 2021 by Physical Research Laboratory, Ahmedabad
18. Subham Sarkar, **Anil Chavan** and Subhash Bhandari (2021) "Characterizing Tapovan Hot Sprig, a Martian Analogue Perspective". *Meteoroids, Meteors and Meteorites: Messengers from Space (MetMeSS-2021)*, held on 29-30 November, 2021 by Physical Research Laboratory, Ahmedabad
17. **Anil Chavan** and Subhash Bhandari (2021) "Volcanic craters and cones in central Kachchh mainland, western India: potential analogue for the Martian studies?". *Mars – a new geological frontier* held on 2-4 November, 2021 by Geological Society of London.
16. **Anil Chavan**, Vivek Bhore and Subhash Bhandari (2021) "Morphometric analysis of Alaldari Valley Western Deccan Traps: Implications for the Martian Analogue Studies". *Workshop on Terrestrial Analogs for Planetary Exploration* held on 16-18 June 2021. Lunar and Planetary Institute, Houston, USA, LPI Contributions, 2595, p.8056.
15. **Anil Chavan**, Subhash Bhandari, Subham Sarkar, Adarsh Thakkar and Satadru Bhattacharya (2020) Geomorphic set-up of Noctis Labyrinthus, Mars and its implication on exotic fluvial processes". 36th IGC on 2-8 March, 2020 at New Delhi, India
14. Adarsh Thakkar, **Anil Chavan** and Subhash Bhandari (2020) "Temporal Variations in Chlorophyll Concentration along the river influenced Indian coastlines". 36th IGC on 2-8 March, 2020 at New Delhi, India
13. **Anil Chavan** and Subhash Bhandari (2019) "Potential Terrestrial Geomorphic Analogues from Kachchh Rift Basin, Western India to Mars" 9th International Conference on Mars held on 22-26 July, 2019 held at California Institute of Technology (Caltech) in Pasadena, California, USA
12. **Anil Chavan**, Subhash Bhandari, Subham Sarkar and Satadru Bhattacharya (2018) "Potential Martian geomorphic analog from Kachchh Basin: Western India" 2nd National Conference and field workshop: "**Recent Studies on Geology of Kachchh**" on 30 December, 2018-1 January 2019 held at Department of Earth and Env. Science, K.S.K.V. Kachchh University- Bhuj (Gujarat)- 370001
11. Subham Sarkar, **Anil Chavan**, Satadru Bhattacharya, and Subhash Bhandari (2018) "Mars Analogue Minerals and their significance with special reference from Kachchh". 2nd National Conference and field workshop: "**Recent Studies on Geology of Kachchh**" on 30 December, 2018-1 January 2019 held at Department of Earth and Env. Science, K.S.K.V. Kachchh University- Bhuj (Gujarat)- 370001

10. Avinesh Kumar, Shubhra Sharma, Gaurav Chauhan, Falguni Bhattacharya, **Anil Chavan**, Romi Nambiar, Nirmal Kumar, Abhishek Lakhote, Anil Shukla, Ravi Bhushan and M.G. Thakkar (2018) "Sedimentological and geochemical study of tidal flat sediments from Kori Creek with emphasis on late Holocene Sea level and climate". *2nd National Conference and field workshop: "Recent Studies on Geology of Kachchh"* on 30 December, 2018-1 January 2019 held at Department of Earth and Env. Science, K.S.K.V. Kachchh University-Bhuj (Gujarat)- 370001
9. Adarsh Thakkar, **Anil Chavan**, Suraj Bhosale, Nazim Deori and Subhash Bhandari (2018) "Increase in frequency of Harmful Algal Blooms and its implication: An Indian Perspective". *2nd National Conference and field workshop: "Recent Studies on Geology of Kachchh"* on 30 December, 2018-1 January 2019 held at Department of Earth and Env. Science, K.S.K.V. Kachchh University- Bhuj (Gujarat)- 370001
8. Chirag Jani, Abhishek Lakhote, Suraj Bhosale, Adarsh Thakkar, Jaymeet Solanki, **Anil Chavan**, Subhash Bhandari, Girish Ch. Kothiyari, Gaurav Chauhan and M.G. Thakkar (2018) "Structural evolution of Chappar Domes along buried Island Belt Fault of Kachchh Basin, Western India: Insight from fracture pattern analysis". *2nd National Conference and field workshop: "Recent Studies on Geology of Kachchh"* on 30 December, 2018-1 January 2019 held at Department of Earth and Env. Science, K.S.K.V. Kachchh University-Bhuj (Gujarat)- 370001
7. Gaurav Chauhan, Chintan Vedpathak, **Anil Chavan**, Abhishek Lakhote, Girish Kothiyari, Siddarth Prizomwala, Anil Gor, Subhash Bhandari and M. G. Thakkar (2018) "Late Quaternary extensional tectonics of Ratiya Fault within the zone of active compressional Regime of Kachchh basin". *2nd National Conference and field workshop: "Recent Studies on Geology of Kachchh"* on 30 December, 2018-1 January 2019 held at Department of Earth and Env. Science, K.S.K.V. Kachchh University- Bhuj (Gujarat)- 370001
6. Jaymeet Solanki, Akshay Raut, Jagdish Jangir, **Anil Chavan**, Abhishek Lakhote, Chirag Jani, Gaurav Chauhan, Subhash Bhandari and M. G. Thakkar (2018) "Geomorphological Mapping using Unmanned Aerial Vehicles (UAVs): A Case Study of Nirona River segment along Kachchh Mainland Fault (KMF), Western India". *2nd National Conference and field workshop: "Recent Studies on Geology of Kachchh"* on 30 December, 2018-1 January 2019 held at Department of Earth and Env. Science, K.S.K.V. Kachchh University- Bhuj (Gujarat)- 370001
5. **Anil Chavan** and Subhash Bhandari (2017) "Fluvio geomorphic set-up of Noctis Fossae in Noctis Labyrinthus of Syria-Planum Provenance, Mars" in *AGU Fall Meeting 2017* held at New Orleans, the USA during 11-15 December 2017.
4. **Anil Chavan**, Subhash Bhandari and Madhavi Dabhi (2017) "Fluvio geomorphic set-up of Syria Planum Provenance in Syria-Thaumasia, Mars". *9th International Conference on Geomorphology*, Organized by International Association of Geomorphologists (IAG); at Vigyan Bhawan, New Delhi during 6-11 November 2017

3. **Anil Chavan**, Gaurav Chauhan, Subhash Bhandari, Mahesh Thakkar and Chintan Vedpathak (2017) "Role of Igneous Bodies in Shaping the Present-Day Landscape of Kachchh Basin-Western India". *9th International Conference on Geomorphology*, Organized by IIG at Vigyan Bhawan, New Delhi during 6-11 November 2017
2. Chintan Vedpathak, **Anil Chavan**, Gaurav Chauhan, Subhash Bhandari and Mahesh Thakkar (2017). "Transverse Fault Systems and Their Significance in Kachchh Rift Basin: Western India". *9th International Conference on Geomorphology*, Organized by IIG at Vigyan Bhawan, New Delhi during 6-11 November 2017
1. **Anil Chavan**, Rakesh Bhagora, Gaurav D. Chauhan, Subhash Bhandari and M.G. Thakkar (2017). "Tectonic Geomorphology of Active Flexuring over Buried Island Belt Fault of Kachchh Rift Basin: Western India". *38th Indian Geographer's Meet, 2017*, and *National Conference on "Sustainable Earth Resource Development"* held at Banasthali Vidhyapith, Newai- Rajasthan.

Professional recognition, Research, Teaching, and Field experiences

(A) Professional Recognition

1. **January, 2021- December, 2025** Member of international team working in the research project Kachchh Archaeological Project: **trade, pastoralism and the origins of the Indus Civilization** in joint collaborative initiative between the University of Kerala, the K.S.K.V. Kachchh University, the Catalan Institute of Classical Archaeology and the Spanish National Research Council for the period of 2021-2025. The project is funded by the Spanish PALARQ Foundation.
2. **21st January - 10th March, 2019** Active-Participant and Surveying expert in Archeological excavation of pre-Harrapan burials of Human Skeleton near Khatiya Village, Lakhpat Taluka of Kachchh Jointly organized by The Department of Archeology, University of Kerala, Department of Archeology and Department of Earth and Environmental Science, K.S.K.V. Kachchh University during 21st January - 10th March, 2019 and second season **5th February – 20th March, 2020**
3. **30th December, 2018-1st January 2019** Worked as conference and field organization committee in "2nd National Conference and field workshop on Recent Studies on Geology of Kachchh" on 30th December, 2018-1st January 2019 held at Department of Earth and Env. Science, K.S. K.V. Kachchh University- Bhuj (Gujarat) -370001.
4. **6th and 7th, February 2016** Worked in the organization committee of XXX Gujarat Science Congress- 2016 on "Challenges for Science and Technology Education during coming Decades: Preparing for a Sustainable Gujarat" on 6th and 7th February 2016. Jointly organized by Gujarat Science Academy and K.S.K.V. Kachchh University Bhuj (Gujarat) -370001.

(B) Guidance for Ph.D. Students

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|----|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Mahor Vinamrata
Ongoing (2025)
Co-guide | Title " <i>Fluvial System on the Equatorial Region of Mars</i> " registered at the Department of Geoscience, K.S.K.V. Kachchh University, Bhuj, Gujarat- 370001 (INDIA) |
| 2. | Manish Rajpurohit
Ongoing (2025)
Co-guide | Title " <i>Geomorphic Evolution of Sirenum Tholus Region, Mars</i> " registered at the Department of Geoscience, K.S.K.V. Kachchh University, Bhuj, Gujarat- 370001 (INDIA) |

(C) Research Experience

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|----|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | January, 2020-
December, 2021 | SHODH fellow at Department of Earth and Environmental Science, K.S.K.V. Kachchh University, Bhuj-37001 |
| 2. | 1st August-
4th October, 2019 | Senior Research Fellow (SRF) in Indian Space Research Organization (ISRO) Funded Project under Mars Orbiter Mission-Announcement of Opportunity (MOM-AO) Scheme, title "An appraisal of Fluvio-tectonic geomorphic set-up of Syria-Planum and Solis Planum Provenance in Syria-Thaumasia, Mars" Implemented at Department of Earth and Environmental Science, K.S.K.V. Kachchh University, Bhuj-370001 on October 2016. |
| 3. | 20th July, 2017 -
31st July, 2019 | Junior Research Fellow (JRF) in the same project mentioned above, the work includes analysis of satellite images of Mars for the characterization of volcano-tectonic and glacio-fluvial landforms in the Syria Planum region of the Mars and finding terrestrial analogue for Mars from the Indian Subcontinent with similar geological settings. |

(D) Teaching Experience

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|----|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Teaching
Assistant
(Geology)
July, 2017 -
March, 2022 | Worked in the Department of Earth and Environmental Science, K.S.K.V Kachchh University-Bhuj, as a teaching assistant to take lectures and practicals on various topics (Structural Geology, Remote Sensing and GIS, Igneous Petrology, Environmental Geology, Sedimentology, Quaternary Climate and Tectonics, Surveying, Paleoseismology, and Field Geology of Kachchh and Rajasthan) related to the syllabus of M.Sc. Geology . |
| 2. | Teaching
Assistant
(Archaeology)
July, 2017 -
March, 2022 | Worked in the Department of Archaeology, K.S.K.V Kachchh University-Bhuj, as a teaching assistant to take lectures and practical's on various topics (Environmental Archaeology, Surveying, Remote Sensing and GIS, Quaternary Climate, Ancient cities of Indus Valley Civilization and also taught students during Archaeological excavation at Juna Khatiya, Gajod, Nadapa, and Cher. |

(E) Guidance to Master's students (M.Sc.)

1. **Vivek Bhore**
(June-2020) (Presently, Ph.D. Student at SP Pune University, Pune) Master's dissertation entitled '*Terrestrial Martian analogues from Kachchh and Deccan traps*'.
2. **Dr. Rupak Dey**
(May-2018) (Presently, Project Scientist at Gujarat Institute of Desert Ecology, Bhuj) Master's dissertation entitled '*Cratering chronology and evolution of Noctis Fossae, Mars*'.

(F) Field Experience

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|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Guide
July, 2017 -
March, 2022 | Worked as a field guide for several universities PG students during their field visit to Kachchh like - University of Madras Chennai (Tamilnadu); Christ College Kerala, Irinjalakuda (Kerala); Fergusson College Pune (Maharashtra); Poona College, Pune (Maharashtra); RTM Nagpur University, Nagpur (Maharashtra); SGB Amravati University, Amravati (Maharashtra); Jai Narain Vyas University, Jodhpur (Rajasthan); University of Rajasthan, Jaipur (Rajasthan); University of Jammu, (Jammu and Kashmir); Banasthali University (Rajasthan); Lucknow University (UP); University of Kerala, Karyavattom Campus (Kerala) etc. |
| July, 2015 -
March, 2022 | Extensive field work experience in metamorphic basements of Aravallis and Dharwar, Deccan traps, and Kachchh Basin. |

Field Training, Workshop, and Webinar attended

1. Attended a webinar on "Martian Geology: Enigmas and Recent Insights" Organized by Department of Geology, Asutosh College, 92, S. P. Mukherjee Road Kolkata - 700 026 (India) on 6th September, 2020
2. Attended a national webinar on "Landslide Disaster in Kerala" conducted by School of Earth Science, University of Kerala on 13th August, 2020
3. Attended workshop on "Quantitative Geomorphology" at Indian Institute of Technology Gandhinagar (IITGN), Palaj, Gandhinagar-382355 held between 7th - 21st February 2020 sponsored by INSA-Oil India
4. Participated in National Field Workshop in Bicentenary Commemoration of 1819 Intra-Plate Allah Band Earthquake of Kachchh Basin: Past Cornices and Future Opportunities Jointly organized by Department of Earth and Env. Science, K.S. K.V. Kachchh University-Bhuj and ISR Gandhinagar on 15th and 16th June 2019
5. Participated in Eco Media Lab and Eco NEXT CONNECT – Mission Eco-NEXT, Organized by K.S.K.V. Kachchh University, Bhuj, 28th -29th November, 2018 held at Department of Earth and Env. Science, K.S. K.V. Kachchh University- Bhuj (Gujarat)

6. Attended a course on “Remote Sensing and Digital Image Analysis” Conducted by the Indian Institute of Remote Sensing (IIRS), Indian Space Research Organization (ISRO), Department of Space, Dehradun from 4th – 14th September 2018
 7. Attended a webinar on “Remote Sensing Technology” conducted by Space Education and Research Foundation (SERF), Ahmedabad, India from 20th – 30th August, 2018
 8. Attended MWRRDGR, Central Groundwater of Board, Government of India sponsored National Level Workshop on “Sustainable Development and Management of Ground Water Resources” Held at Bhuj during 7th - 11th Feb 2017
 9. Participated in Advocacy workshop for Participatory Groundwater Management (PGWM) jointly organized by ACT, Bhuj, and K.S.K.V. Kachchh University, Bhuj on 19th - 20th January 2017
 10. Attended Brain Storming Session (BSS) on Quaternary Geology of western India: Present Status and future prospective coordinated by Dr. M.G. Thakkar and Chair by Dr. S.K. Biswas and Prof. L. S. Chamyal on 8th February 2016
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