

Present Position: Director-Birbal Sahni Institute of Palaeosciences

Address: Birbal Sahni Institute of Palaeosciences

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E-mail: mgthakkar@rediffmail.com, mthakkar.geology@gmail.comGoogle scholar ID: <https://scholar.google.co.in/citations?user=LinOOg8AAAAJ&hl=en>Research Gate ID: <https://www.researchgate.net/profile/M-Thakkar>ORCID ID: <https://orcid.org/0000-0003-2911-4784>**Date of Birth:** October 18, 1968**H-INDEX** – 33**i10 index** – 72**Citation** – 3043**Cited papers:** 146**Education**

Passing year	Course	Institution / University
1999	Ph. D (Neotectonics/ Geology)	M. S. University of Baroda, Vadodara
1991	Masters of Science (Geology)	M. S. University of Baroda, Vadodara
1989	Bachelors of Science (Geology)	Gujarat University, Ahmedabad

Professional Fellowships

1. Fellow of Association of Petroleum Geologists
2. Fellow of Geological Society of India, F.N. 2227
3. Fellow of Mining Engineers Association of India, F.N. 2328
4. Fellow of the Indian Planetary Society – M. No. 1914 Life Member
5. Fellow of the Indian Society of Remote Sensing –M. No. L-3024
6. Life member of Indian Society of Earthquake Science (ISES)

Work Experience

Job Title	Organization	Period
Director	Birbal Sahni Institute of Palaeosciences	September 2023 onwards
Director	Wadia Institute of Himalayan Geology, Dehradun	(August 24 to January 25)
Professor (Geology) HOD	Department of Earth and Environmental Science, Kachchh University	(July 2008-September 2023)
Dean (Faculty of Science)	KSKV Kachchh University, Bhuj-Kachchh	(Sept 2006 to Apr 2011, 2014-2017; April 2023 – Sept.2023)
In-charge Registrar	KSKV Kachchh University, Bhuj-Kachchh	(Since Oct 2013 to 31-3-16 & 4-1-19 to 24-11-19)
Principal (GES-I)	Shri R. R. Lalan college, Bhuj, Kachchh	(June 2006 to July 2008)
Lecturer (GES-CI-II)	Shri R. R. Lalan college, Bhuj, Kachchh	(Dec. 1991 to July 2008)

RESEARCH EXPERIENCE

Title of Ph.D. Thesis: “Morphotectonic Evolution of Khari River Basin of Central Kachchh Highland” Mentor: Prof. L. S. Chamyal

Dissertation Title: “Granitoids of Higher Kumaun Himalaya”

Ph. D. Students Guided and registered:

1. Dr. Bhanu Goyal, (2010) **Awarded:** “*Paleoseismic studies in Eastern Kachchh, Western India*”
2. Dr. Anil Gor, (2012) **Awarded:** “*Geotectonic Characterization of Kachchh (E) basin, Western India: Based on Earthquake Geophysics*”
3. Ms. Mamata Ngangom (2013) **Awarded:** “*Late Quaternary Landform evolution: Role of climate and tectonics in the Great Rann of Kachchh, Western India*”
4. Mr. Gaurav Chauhan (2012) (INSPIRE fellowship) **Awarded:** “*Structural and Neotectonic significance of Median High of Kachchh Rift basin, western India*”
5. Mr. Arjav Shukla (2012) (CSIR fellowship) **Awarded:** “*Site Response study and Seismic Hazard Mitigation in Some urban areas of Kachchh intra-plate basin*”

6. Ms. Archana Das (2014) **Awarded:** “*Fluvial Response to Climate, Tectonics and Sea level Changes during Late Quaternary period on the Southern Kachchh Mainland, Western India*”
7. Ms. Zakhana Shukla (2015) **Awarded:** “*Study of extreme climatic events and their hazard potentials in Kashmir valley using RS and GIS*”
8. Mr. Nisarg Makwana (2015) **Awarded:** “*High Resolution Palaeoclimatic Variability Archived by the Great Rann of Kachchh during the Middle to Late Holocene Period*”
9. Mr. Adil Husain Padder (2014) **Awarded:** “*Quaternary climate and tectonic characterization of Great Himalayan Ranges of Kashmir valley*”
10. Mr. Kaustubh Sane (2014) **Awarded:** “*Bedrock gorges of mainland Kachchh, Western India: Hydrodynamics and Palaeoclimatic significance through geological time*”
11. Mr. Yash Shah (2019) **Awarded:** “*Aquifer zonation along the Mundra-Gandhidham belt, Kachchh, Western India Using Hydro-Geological data and Remote Sensing*”
12. Ms. Hemashri Thacker (2019) **Awarded:** “*An appraisal of groundwater quality and quantity across Katrol Hill Fault (KHF), Kachchh, Western India*”
13. Mr. Suraj Bhosle (2019) **Awarded:** “*Taxonomy and Biostratigraphy of Upper Jurassic Ammonoids of Zanskar and Spiti regions of the Indian Himalaya*”
14. Mr. Abhishek Lakhote (2019) **Awarded:** “*Active Fault Mapping and Paleoseismic Investigation along South Wagad Fault Zone of Kachchh Basin: An approach to Seismic Hazard Assessment in Western Continental Margin of India*”
15. Co-Guide: Ms. Suruchi Patel (2019) **Awarded:** *Ichnology and sedimentology of Mesozoic deltaic system, Kachchh basin western India*”
16. Co-Guide: Mr. Darshit Padia (2019) **Awarded:** *Ichnology and Sedimentological Model of Late Holocene Sediments of Great Rann of Kachchh, Gujarat, Western India*
17. Co-Guide: Dr. Ketan Chaskar: (2019) **Awarded:** “*Sedimentology and Paleoenvironment of the Upper Jurassic strata of Spiti and Zanskar Valley of the Indian Himalayas*”
18. Co-Guide: Ms. Nazim Deori (2019) **Awarded:** “*High resolution Biostratigraphy and depositional environment of Cenozoic succession of Kachchh Basin, Western India, Gujarat*”
19. Mr. Babulal Vaghela (2019): **Registered:** “*Delineation of deformational history of Central Mainland of Kachchh using micro-structure and joint pattern studies in various lithounits*”
20. Co-Guide: Ms. Kamna Sharma (2019) **Registered:** Banasthali University: *Nature, Origin and Palaeoclimatic significance of Dunes system along Kachchh Coast: Western India*
21. Co-Guide: Ms. Pooja Chauhan (2020) **Registered:** Banasthali University: *Reconstructing Holocene Land-Sea Interaction at the Interface of the Luni River Mouth and Eastern Great Rann of Kachchh, Western India*
22. Mr. Sanjay Kumar Bhuiyan (2024): **Registered:** “*Advanced Hydrogeospatial Characterization of Banas River Surface and Groundwater Hydrodynamics of Northern Gujarat Alluvial Plain, Western India*” KSKV Kachchh University
23. Mr. Dayesh Parmar (2024): **Registered:** KSKV Kachchh University
24. Mr. Amborish Hazarika (2024): **Registered:** “*Hydrogeological Framework and Groundwater Resources of Wagad Uplift, Eastern Kachchh, Gujarat*” KSKV Kachchh University

Summer and Winter Research Fellowship – mentoring

1. Dr. Anil A. Chavan, Birbal Sahni Research Associate (BSRA): Astrobiology/ Martian study
2. Dr. Jyotsana Dube, BSRA- BSIP: Quaternary Studies of Himalaya
3. Ms. A. M. Gopika, Thiruvananthapuram: IASc – INSA-NASI summer research fellowship, 2019
4. Mr. S. S. Dharani Balan, Pondicherry Uni. Pondicherry, IASc – INSA-NASI summer research fellowship, 2021
5. Ms. Palak Shah, Department of Geology, Xavier’s College, Mumbai, Winter Internship, 2021
6. Mr. Aditya Dharaiya, Department of Geology, Savitribai Phule Pune University, Pune, Summer internship 2023

Expert and Consultant:

1. Expert on behalf of GSDMA – Gujarat Govt. at Smutivan Earthquake Museum a Dream Project of Honorable Prime Minister.
2. Expert and Consultant – Meroform (Noida) and Design Factory – at Smrutivan Earthquake Museum, Bhuj-Kachchh

Editor	: in Special Publication: <i>Journal of Geological Society of India</i> 2016: Springer: Title: Recent Studies on the Geology of Kachchh
Guest Editor	: <i>Springer’s Geoheritage: Special Issue on: Indian Geoheritage from Precambrian to the Present</i>
Academic Editor	: Intech Open Book Series:
Chief Editor	: <i>Journal of Palaeosciences (Publication: BSIP in-house journal)</i>
Chief Editor	: <i>Palaeoscience Today (in – House Journal of BSIP)</i>
Editor	: <i>Journal of Geophytology, (Publication: Palaeontological Society of India)</i>
Editor	: <i>The Neogene Earth, Earth and Environmental Sciences Library, Springer (Editors: Amit K. Ghosh, Vivesh Vir Kapur, Lopamudra Roy, Jahnvi Puneekar and Mahesh G. Thakkar)</i>

Awards Granted/ Projects

RESEARCH PROJECTS (On Hand): NIL

RESEARCH PROJECTS (Completed):

1. **Principal Investigator:** Component-V, **Integrated project on Active Fault Mapping in Kachchh Basin, Western India** (cost: INR 35.5 lakh)
2. **Co-PI:** Component-VII, **Integrated project on Active Fault Mapping in Kachchh Basin, Western India** (cost: INR 20 lakh)
3. **PI:** Assimilation of Remote Sensing and Hydrogeological data for aquifer zonation vis a vis determining structural and lithological control over groundwater quality and quantity in Central –southern Kachchh mainland, Western India, submitted to ISRO-RESPOND (20.64 lakh)
4. **Co-PI** in SERB-DST, New Delhi under Extra Mural Scheme- **Land-sea interactions along coastal wetlands of Gujarat, western India: mangroves response to climate and sea-level changes during the Holocene** – PI-Dr. Shilpa Pandey-BSIP-Lucknow (approx. total cost- 50 lakhs)
5. **Project-Director Restoration of the main wood fossil park & other miscellaneous work near Dholavira, Khadir, Kutch:** A fossil restoration project: funded by Gujarat Tourism (Rs. 21,00,000)
6. **Project Investigator:** Fossil collection project for Dholavira Fossil park museum funded by the Collectorate and Gujarat Tourism. **(Rs.1,10,000)**
7. **Principal Investigator** in a CSIR Research Project (EMR Scheme) on *“Estimation of site response and seismic hazard in the Kachchh seismic zone, Gujarat, India”* No. 23(0019)/11/EMR-II. **(Sanctioned on 8-04-2011)** (Amount: **73,10,000.00 INR**)
8. **Principal Investigator** in a DST Research Project on *“Shallow sub-surface signatures of Neotectonic activity along the transverse fault system of Kachchh, Kachchh Window, western India”* No. DST/ SR/S4/ES- 21/Kachchh Window/P3 (Amount: **7,12,000.00 INR**)
9. **Co-Principal Investigator:** *“Revisiting the source zone of the 1819 Rann of Kachchh earthquake to constrain the deformation characteristics,”* communicated to the MoES (PI: Prof. Kusala Rajendran) (other Co-PIs: Dr. C. P. Rajendran, Prof. L. S. Chamyal, Prof. A. K. Singhvi and Dr. Navin Juyal). **(Sanctioned in 2011)**
10. **Principal Investigator** in a DST Research Project on *“Delineation of Quaternary Tectonic History of Kachchh from the Sediments of Great Rann, Western India”* No. SR/S4/ES-TG/02/2008. (Amount: **14,60,000 INR**)
11. **Principal Investigator** in Students’ SCI-TECH project on *“Correlation of 2001 Bhuj Earthquake deformation features with the existing Geological structures in Epicentral region: A hazard mitigation perspective”* (Amount: **25,000 INR**)
12. **Principal Investigator** in Students’ SCI-TECH project on *“Holocene and Late Pleistocene paleoclimatic study around Dholavira Harappan Settlement”* (Amount: **25,000 INR**) Date of sanction 14-03-2011
13. **Principal Investigator** in a DST Research Project on *“A comparative study between the 1819 Kachchh and 2001 Bhuj Earthquakes based on Deformation Patterns and Ground Liquefaction”* No. DST/23(257) SU/2001
14. **Principal Investigator** in a DST Research Project on *“Preliminary documentation of ground deformation and tsunami effects at Andaman and Nicobar Islands and Eastern Coast of India (in connection to the 26th December, 2004 Sumatra Earthquake)”* No. DST/23(505) SU/2005
15. **Project In-charge:** Dr. James Zollweg's project of *Telemetric Seismic Networking in Kachchh*, a project of Boise State University, Idaho, U.S.A., funded by the NSF (National Science Foundation) and The National Geographic Society, U.S.A.
16. **Co-investigator** in a DST project regarding *“Reconnaissance survey of the ground failure during 2001 Gujarat (Republic Day) Earthquake”* with Dr. C. P. Rajendran and Dr. Kusala Rajendran, scientists, CESS, Trivendrum.
17. **Co-Principal Investigator:** *“Tectonics of Andaman Nicobar Arcs: Constraints from Coral Proxies”*, Communicated to the DST-New Delhi. Jointly proposed from the IISc – Bangalore (Scientists: Prosenjit Ghosh **(Sanctioned in 2010)**)

Invited Talks/ Expert lectures/ Keynote addresses

1. *“Learning from Earth’s Past to secure the sustainable future”*: (11-07-2026): Keynote speech on 12th Foundation Day celebration of Clean and Green Environmental Society, Lucknow
2. *“From Fossils to Future: How Past Environmental Transformations Guide Present Day Sustainability”*: (23-06-2026): UGC-MMTTC 99th Online Refresher Course: Sciences (15-06-2026 to 28-06-2026) UGC - Malaviya Mission Teacher Training Centre, Sardar Patel University, Vallabh Vidyanagar, Gujarat
3. *“Evolution, Environment and Innovation: Crossroads of Palaeosciences and Biotechnology”* (30-05-2026): PRABODH (Promoting Research Awareness in Biotechnology for Development of Human Resources) - Special Lecture Series: At Gujarat Biotechnology Research Centre, Gandhinagar
4. *“Earth’s Archives of Catastrophes: Palaeoscience Insights for Modern Anthropogenic Risks”* (17-04-2026): Science Orientation Program, Department of Forestry, Mizoram University, Mizoram
5. *“Earth’s Memory of Disasters: Lessons from Palaeosciences for Today’s Anthropogenic Challenges”*: (4-6 April 2026): An invited speech at Himalayan Horizons: Tectonics, Sustainability, and Resilience - From the 1905 Kangra Earthquake till Today (HTSR-2026), Department for Geology and Center of Remote sensing and GIS Central University of Himachal Pradesh.
6. *“Gujarat (2001 Bhuj) Earthquake: Lessons from Post-Earthquake Reconstruction Programme”* (4-6 April 2026): An invited speech at Himalayan Horizons: Tectonics, Sustainability, and Resilience - From the 1905 Kangra Earthquake till Today (HTSR-2026), Department for Geology and Center of Remote sensing and GIS

Central University of Himachal Pradesh

7. **"Understanding Environmental Stress and Recovery Through Geological Time: Implications for Modern Life Sciences"** (21-02-2026): A keynote address at: 7th National Conference on "Biological Tools for Sustainable Environment", 21, February 2026: Department of Biosciences, Veer Narmad South Gujarat University, Surat
8. **"From Geological Archives to Human Futures: Learning from Earth's Records of Disasters"** (7-8 February 2026): An invited speech at: 37th Gujarat Science Congress: National Conference on "Science and Technology Through AI", Gujarat University and Gujarat Science Academy, Ahmedabad.
9. **"Earthquakes, Climate, and Humans: Quaternary Perspectives from the Kachchh Basin, Western India"** (21-23 January 2026): An invited talk at: 3rd Indian Quaternary Congress: "Tracing Earth System Dynamics and Human – Environment Interactions through the Quaternary, IITM - Pune
10. **"Palaeosciences: A Guide to Navigating the Challenges of Climate Change, Conservation and Natural Hazards"**: A keynote speech at: 11th India International Science Festival, YOUNG SCIENTIST CONCLAVE (YSC), 6th December 2025, Chandigarh
11. **"From the Depths of Time to the Challenges of Tomorrow: Palaeosciences and the Future of our Planet"**: A keynote speech at: 7th International Conference on Plants and Environmental Pollution (ICPEP-7) 30 November to 02 December, 2025: CSIR-National Botanical Research Institute, Lucknow.
12. **"Kachchh: The Geostrategic Landscape - Lessons from History and Science for National Preparedness"**. (27-29 October 2025): An invited talk at MCF Seminar, Army HQ, Bhuj-Kachchh (Gujarat)
13. **"Earth's Memory of Disasters: Lessons from Palaeosciences for Today's Anthropogenic Challenges"**: Eminent Lecture Series Organized by - Committee for Eminent Lecture Series, Department of Geology, Baba Saheb Bhimrao Ambedkar University - Lucknow - Date: 14th October 2025.
14. **Gujarat (2001 Bhuj) Earthquake: Scientific Facts and Post-Earthquake Reconstruction Programmes: गुजरात (2001 भुज) भूकंप: वैज्ञानिक तथ्य और भूकंपोत्तर पुनर्निर्माण कार्यक्रम: हिंदी पखवाड़ा** – At 2025 का समापन समारोह - On 10th October 2025 National Center for Earth Science Studies - NCESS, Thiruvananthapuram
15. **"Earth's Memory of Disasters: Lessons from Palaeosciences for Today's Anthropogenic Challenges"**: A keynote speech at: International Conference on "Advancing Frontiers in Earth Sciences: Innovations, Challenges, and Future Perspectives" in the School of Earth Sciences, Banasthali Vidyapith, Rajasthan - Date: 21 – 23 September 2025
16. **"Gujarat (2001 Bhuj) Earthquake: Lessons from Post-Earthquake Reconstruction Programme"**: A keynote address at: National Workshop on Capacity Building for Earthquake Risk Mitigation: Experiences and Initiatives, 8 – 10 September 2025, NIDM, New Delhi
17. **"Regulatory Framework and Administrative Processes in Research and Development (R&D) in India"** (27-28 May 2025): Consultative Meeting on "Ease of Doing R&D" on 27th and 28th May, 2025 at Governor House, Lucknow.
18. **"Visionary Document & Concept Development for "Gallery of the Origin of the Universe and Earth"** (6th May 2025): Presented at the BRAINSTORMING SESSION ON: Museum of Origin and Continuum: The Journey of India's Land, Life and Legacy, At Patanjali Research Foundation Trust and Patanjali Vidyapith, Haridwar, Uttarakhand.
19. **"Kachchh basin: A Seismically Active Intra-plate Region"**, (16-01-2025): An expert talk at the refresher's course in Disaster Management, Jammu University (14 - 28 January 2025)
20. **"Review of Martian Analogue sites of Western India"**, (02-01-2025): A review talks at "Vikram Discussion – 2 on Astrobiology and Chemistry at PRL, Ahmedabad
21. **"Rise and fall of Civilization: Consequences of climate change: Case study of IVC - Dholavira, Kachchh"** (16-17-12-2024). A keynote talks at National Seminar on Geosciences and Sustainable Development in Tribal Areas, Nagpur, organized by Gondwana Geological Society.
22. **"The Interconnected Nature of Climate Change, Natural Disasters, and Human Activities"** (12-12-2024): A keynote address at 40th CONVENTION OF INDIAN ASSOCIATION OF SEDIMENTOLOGISTS AND NATIONAL CONFERENCE at BSIP, Lucknow (11-13 December 2024).
23. **"Landscape: The child of Geological and Climatic Processes"** (02-12-2024): An invited talk at, India International Science Festival (IISF) 2024: IIT Guwahati, 30th November to 3rd December 2024.
24. **"The Stones of Heritage: From Sapiens to Civilization and Society"** (04-11-2024), An invited talk at a seminar "IUGS Heritage Stones: Indian Contributions" at Dept. of Geology, Punjab University, Chandigarh.
25. **"Indian Geodiversity and Potential Geoheritage sites of Western India"**: (06-10-2024) A keynote address on International Geodiversity Day Celebration – Conserving the Past - Sustaining the Future at the Department of Geology University of Bangalore
26. **"The Coastal Processes and Geo-Eco-Anthropological Hazards: Potential Research Avenue for NCESS and Active Fault research in Kachchh: Do we use this valuable data?"** (30-07-2024): A keynote address at a Brain Storming Workshop on "Goals for Earth Science Activities of ESSO-NCESS in the coming decade (2024-34)" (29th to 30th July 2024): NCESS, Thiruvananthapuram
27. **"Research in Science is a Continuous, Multidisciplinary & interdisciplinary Process"**: (14-06-204), An expert talk at Ph.D. course work: Faculty of Science, KSKV Kachchh University, Bhuj.
28. **"Climate and Tectonics Perspectives to the Origin of Landscapes"** (01-06-2024), An expert talk at

INTERNATIONAL EARTH SCIENCE OLYMPIAD CAMP – 2024, North Eastern Hilly University, Shillong (Meghalaya)

29. **“Geoheritage sites of Western India: Potential for Geoparks in India”**, (22-04-2024) an invited lecture at the Department of Geology, Banaras Hindu University, Varanasi.
30. **“Climate Change in Geological time: The Causes, Repercussions, Measures and Future”** (15-04-2024) An invited talk at Major Research and Development Program (MRDP) on Hydroclimatic Extremes & Brainstorming session on Climate Change and Hydroclimatic Extremes in India: Science for solutions. IIT Gandhinagar
31. **“Geoheritage and Geotourism: Subset of Geoethics”** (14-03-2023): A keynote address at EXPOSURE VISIT PROGRAM FOR CBSC PRINCIPALS; 14th and 15th December, 2023 at BSIP, Lucknow
32. **“Geodiversity of Kachchh rift-basin qualifies it as A Potential National Geopark”** (21-03-2023): An invited talk in the Refreshers’ course, UGC-HRDC, Kumaon University, Nainital.
33. **“Dholavira: Vestige of Sindhu Saraswati Civilization”** (17-03-2023): An invited talk in the Refreshers’ course, UGC-HRDC, Kumaon University, Nainital.
34. **“Geological Evolution of Kachchh paleo-rift basin”** National level conference/field workshop on **“Kachchh Paleo-rift basin: An Ideal Tectonics and Sedimentary Package for Indian Geoheritage”** at the Dept. of Earth and Environmental Science, KSKV Kachchh University on 11-14 February 2023.
35. **“Climate and Tectonic Perspectives to the Origin of Landscapes: A case study of Kachchh, Western India”** (31-01-2023) A special lecture at the Department of Geology, Goa University, Goa
36. **“Tectonics of Kachchh Paleo-rift basin”** (01-02-2023) A special lecture at the Department of Geology, Goa University, Goa
37. **“Role of Geology in drought management: Kachchh context,”** (06-01-23) Tier – II training of Central Ground water Board, Western Region, Department of Earth and Environmental Science, KSKV Kachchh University, Bhuj-Kachchh (6-7 January 2023)
38. **“Active Fault research in Kachchh: Do we use this valuable data for Disaster Prevention and preparedness?”** (11-12-22) High End Workshop (KARYASHALA) on “Disaster and Climate-Resilient Pathways: Adaptation, Mitigation and Sustainable development” 7-13 December 2022, BSIP, Lucknow
39. **“Risk and Vulnerability Assessment to Tsunami and coastal Hazards in India”** (13-12-22) High End Workshop (KARYASHALA) on “Disaster and Climate-Resilient Pathways: Adaptation, Mitigation and Sustainable development” 7-13 December 2022, BSIP, Lucknow
40. **“Geodiversity of Kachchh basin qualifies it as A Potential National Geopark”** (10-10-2022): An invited talk at the 1st International Geodiversity Day and 6th Int’l Geoethics day Celebration and Group Discussion on Geoheritage Conservation and Geoethics at INSA, 10-11 October, 2022.
41. **“Geodiversity of Kachchh basin: A potential of National Geopark”** (06-10-2022): An invited talk at the Department of Geology, Fergusson College, Pune on the occasion of International Geodiversity Day Celebration.
42. **“Geoheritage of Gujarat: From Precambrian to the Present”** (02-10-2022): An invited talk at the brainstorming session and conference on “Geoheritage of Mehrangarh Ridge” at Mehrangarh Fort. Jodhpur.
43. **“Rann and Deserts: Their origin and Historical Implications”** an invited speech at a workshop/ conference on “Combating Desertification & an appraisal on Desert Economy” (28-09-2022): Govt. of Gujarat Climate Change Department initiative at KSKV Kachchh University.
44. **“Tectonic Geomorphology of Kachchh Basin”** (16-09-2022): Course works-for Research scholars, S. P. Pune University, Pune.
45. **“Earth as a Dynamic Planet”** (30-07-2022) “Orientation Program” Human Resource Development Center, University of Hyderabad, Online lecture.
46. **“Advances in earthquakes and Active Fault Research in Kachchh: Do we use this valuable data?”** An invited talk at the National Symposium on **“Understanding and Combating Earthquake and Landslide Hazards”** with Special Reference to Bhuj Earthquake and Advances in Earthquake Science-2022, organized by ISR and ISES - 21-23 July 2022.
47. **“Dholavira: Vestige of Sindhu Saraswati Civilization”** An online talk organized by “The History Enthusiasts” Hubballi, Karnataka: 7th May 2022: Also available on you tube: <https://www.youtube.com/watch?v=4HwFC7GxxCE>
48. **“Rann-An economic corridor from Harappan to Shri Narendra Modi”** An invited talk at one day brain storming session on: Desert Economics – A step towards making \$ 5 trillion Economy: on 11th April 2022: Department of Economics KSKV Kachchh University: DoE sponsored program.
49. **“Seismic and Active Fault Research in Kachchh: Do we use this valuable data?”** An invited talk at the training cum conference “Disaster Risk Reduction & Resilience: Policies and Management” Organized by: Dept. of Geology, BBAU – Lucknow and NIDM, 7-9 March 2022.
50. **“Climate and Tectonic Perspectives to the Origin of Landscapes of Kachchh, western India?”** An invited talk Govt. Science College, Mandvi, under the program: Sarjanatmak ABhivvyakti Dhara, 22nd February 2022.
51. **“Climate and Tectonic Perspectives to the Origin of Landscapes of Kachchh, western India?”** An invited talk at the University of Helsinki – under the program-course of Climate Change and Global Justice – Global Development Studies (MA): 9th February 2022.
52. **“What Do We Learn from 2001 Bhuj Earthquake?”** An invited talk at NIDM, Delhi-KSKVKU joint awareness

seminar on World Disaster Risk reduction day – 13th October 2021.

53. **"Dholavira: Sindhu Saraswati Sabhyata nu Ek Boltu Nagar"** A Global talk at Gujrati Sahitya Foram: 3rd October 2021: Also available on you tube: http://youtu.be/Z0pn3M3xu_M
54. **"Applications Of Physics In Geosciences"** (14/09/2020) UGC Sponsored 1st Online Refresher Course in Physics from 07/09/2020 to 20/09/2020 for University and College Professors, Gujarat University.
55. **"Earth as a Dynamic Planet"** (27-04-2020) "Anusandhan" a Webinar on "Research Methodology and Frontiers in Science" Department of Physics, Saurashtra University, Rajkot, Gujarat Science Academy
56. **"Geotectonics"** (16-04-2021) Faculty exchange program at Government Science College, Mandvi.
57. **"Tectonics of Kachchh paleo-rift basin"** (18-04-2021) E-lecture series on Structural Geology and Tectonics, organized by the Structural Geology and Tectonic Studies Group India, Rock Deformation and Structures and Central University of Kerala.
58. **"Role of Geology in Drought management-Kachchh Context"** (17-06-2021), "Role of Geosciences In Drought Management: Issues, Challenges and Opportunities", School of Environmental And Earth Sciences, Kavayitri Bahinabai Chaudhari North Maharashtra University Jalgaon & Association of Geologists and Hydrogeologists Geoforum, Aurangabad (MH)

Workshops and Group Discussions

- 1 Participated in a national seminar on "Space Quantum Frontiers" organized by the SAC-ISRO-Ahmedabad and DTDI-ISRO-HQ- Bengaluru – 19th May 2022.
- 2 Participated at an international workshop on **"Tsunami Geology"** organized by the Department of Geology, **Anna University, Chennai**, sponsored by US-IOTWS Program and CPEES, Anna Uni. Chennai from 30th November to 7th December 2006. Title for the presentation **"Coastal Devastation and Geographic Changes at Great Nicobar and Nancowrie group of Islands of Nicobar District of India: in connection to 26th December 2004 Sumatra- Andaman Earthquake and Tsunami"**
- 3 Participated at a DST sponsored National Group Discussion Meet on **"Active Tectonics in Western India"** at the Department of Geology, M. S. University of **Baroda, Vadodara** during 20th to 21st March 2003.
- 4 Participated at an **International workshop on "Earth System Processes Related to Gujarat Earthquake Using Space Technology"** held at IIT, **Kanpur** during 27th to 29th January 2003.

Conferences, Seminars:

1. Presented a paper on **"Mapping of Active Fault related morphotectonic features along the western segment of South Wagad Fault, Kachchh, Western India"**, 34th Convention, Indian Association of Sedimentologists, Amravati University 19-21 December 2017.
2. Presented a paper on **"Geomorphology of Active Intra-plate and passive margin Kachchh basin in western India"** 9th International conference on Geomorphologists, Organized by IIG; 6-11 November, 2017, New Delhi.
3. Presented a paper on **"Neotectonic Behavior of Transverse Faults in Central Mainland Kachchh, Western India: Case Studies of Kodki, Ratiya and University Faults"**, 4th International Conference on Geology and Geoscience, 26-27 July 2017, Dubai.
4. Presented a paper on **"Late Quaternary global climate and Kachchh intra-plate tectonics have engendered a young geological basin: the Ranns of Kachchh, Western India"**; 14th Annual Meeting of the Asia Oceania Geosciences Society, Singapore, 6 to 11 August 2017.
5. Presented a paper on **"Landscape Evolution of Kachchh palaeo-rift basin, Western India: Quaternary Climate and Tectonic Odyssey"**, 35th International Geological Congress, Cape Town, South Africa, 27 Aug to 2 Sept 2016
6. Presented a paper on **"Review of Paleoseismic and active tectonic studies and Earthquake hazard potential in Kachchh paleo-rift basin, Western India"**, 30 May-3 June 2016 7th PATA Days, Crestone, USA
7. Presented a paper on **"Earthquake Hazard Assessment in Kachchh Seismic Zone, Gujarat: Using Ambient Noise Measurement Techniques"** at an international congress on Environmental Research at Aurangabad during 19-21 December, 2013
8. Presented a paper on **"Science of 'Ragas': The Control on Living Beings to the Cosmic Elements"** at an international congress on Environmental Research at Aurangabad during 19-21 December 2013.
9. Presented a paper on **"Recent Development in Quaternary stratigraphy of the Great Rann of Kachchh western India"** on an international conference on 'Recent Developments in Stratigraphy' (ICRDS-13) during 14-16 December 2013
10. Presented a paper on **"Liquefaction characteristics in active intra-plate seismic zone: A case study of 2001 Bhuj earthquake, Kachchh, Western India"** at an International conference (IUGG-GRC) on "Extreme Natural Hazards and their Impacts" at Chapman University, **CALIFORNIA, USA** (8-11 December 2012)
11. Presented at a national conference NCLA-National Conference on Luminescence Application at CGCRI and IACS-Kolkata 19th to 21st February 2009. Presentation: **"Luminescence Dating of Fault Gouge of Kodki Transverse Fault Within The Khari River Basin of Central Mainland Kachchh, Western India"**
12. Presented at a seminar on **"Tectonic Geomorphology Landform Evolution and Quaternary Tectonics"** at Wadia Institute of Himalayan Geology, Dehradun. Title of presentation: **"Morphological Response to Quaternary tectonic activity along various fault system in Kachchh, Western India"** on 10th and 11th November 2006.
13. Presented at a seminar on **"Paleoseismology and Active Faults in Gujarat"** organized by the Institute of Seismological Research: Department of Science and Technology, Govt. of Gujarat, Gandhinagar on 16th September 2006.
14. Presented at an International Conference **"10 Years of Paleoseismology in the ILP: Progress and Prospects."** for

the Poster presentation on my study on 2001 Bhuj Earthquake: Held at **Kaikoura, NEW ZEALAND** during 17- 21 December, 2001

15. Attended a district level seminar on **ICMAM** (Integrated Coastal and Marine Area Management) Plan for Gulf of Kachchh held at **BHUJ** on 7th Sept. 2000.
16. Presented at a seminar on "*Fossil Occurrences in Lignite bearing Tertiary Formations in Gujarat*" held by Mining Engineering Association of India - Ahmedabad Chapter at **Panandhhro**, Kachchh on 13th April 2003.

WORKSHOP/ CONFERENCES COORDINATED:

1. **PRITHVI-2026, Palaeoscience Film Festival of India and National Dialogue on Earth Science Communication** at Birbal Sahni Institute of Palaeosciences, Lucknow (23-25 July 2026), Sponsored by the MoES and DST.
2. Organized a one day "*MuseMeet*" for the archaeologists, geoscientists and historians on 21-02-2023 at the Department of Earth and Environmental Science, KSKV Kachchh University. Main Speaker: Dr. Nandan Shastri, an expert in Museums.
3. Organized a national level conference/field workshop on "*Kachchh Paleo-rift basin: An Ideal Tectonics and Sedimentary Package for Indian Geoheritage*" at the Dept. of Earth and Environmental Science, KSKV Kachchh University on 11-14 February 2023.
4. Organized a workshop/ conference on "*Combating Desertification & an appraisal on Desert Economy*" on **28th September 2022** at KSKV Kachchh University under the umbrella of Panchamrit for Climate Change: Govt. of Gujarat Climate Change Department initiative.
5. Organized Training Programme on "*Karyotyping & FISH, CHNS analysis and Stereozoom microscope operation*" at Department of Earth and Environmental Science, KSKVKU, Bhuj-Kachchh, 1-7 August, 2022: Under the STUTI program of DST-FIST, funded by the DST-STUTI-IIT Gandhinagar.
6. Organized 2nd Task Force MoES Meeting of "Active Fault Mapping – Kachchh Region" at KSKV Kachchh University during 24 – 25 May 2022.
7. Convened "**International Online Meet on 2001 Bhuj Earthquake**", 26 January 2021: Dept. of Earth and Env. Science, KSKV Kachchh University, Bhuj
8. Convened "**Bicentenary Commemoration of 1819 Intra-Plate Allah Band Earthquake of Kachchh Basin: Past Chronicle and Future Opportunities**" during 15 and 16 June 2019 in the Dept. of Earth and Env. Sc. KSKV Kachchh University, Bhuj
9. Convened "**Second National Conference and Field Workshop On 'Recent Studies on the Geology of Kachchh Basin'**" during 30 Dec 2019 to 1 Jan 2019 at the Dept. of Earth and Env. Sc., KSKV Kachchh University, Bhuj-Kachchh
10. Convened 30th Gujarat Science Congress – 2016 theme: **Challenges for Science and Technology Education During coming decades: Preparing for a sustainable Gujarat** (6 and 7 February, 2016)
11. Coordinated MoES sponsored Brain Storming session on "**Quaternary Geology of western India: Present status and future perspectives**" (8th February 2016)
12. Coordinated **DST field workshop** on "**Sedimentation Tectonics and Quaternary Landforms of Zaskar Valley of Ladakh Himalaya**" (25th August to 8th September 2015)
13. Organized seminar on "**Mining and mineral industry in Kachchh district - prospects, opportunity and threats**" on 14.02.2015
14. Organized field work in "**Kachchh of Planetary Sciences and Exploration Programme (PLANEX) Fifteenth Workshop on & Quot Mars and Moon: Remote Sensing and Analogue Studies**" 4 – 10 January 2015.
15. Coordinated the field workshop of the "**9th International Congress on Jurassic System**" organized by the University of Jaipur. (26 December to 4th January, 2014)
16. Coordinated **INSPIRE (DST Programme)** for school Children in July 2012 (**27 to 31 July, 2014**) in the Department of Earth and Environmental Science, Kachchh University
17. Coordinated **National Level Field Workshop and Brainstorming session "Geology of Kachchh basin, western India: Present status and future perspectives"** during **26 to 29 January 2012** in the Department of Earth and Env. Sc. in Kachchh University.
18. Coordinated **INSPIRE (DST Programme)** for school Children in July 2012 (**1 to 5 July, 2012**) in the Department of Earth and Environmental Science, Kachchh University
19. Coordinated **INSPIRE (DST Programme)** for school Children in August 2012 (**5 to 9 August, 2012**) in the Department of Earth and Environmental Science, Kachchh University
20. Coordinated **INSPIRE (DST Programme)** for school Children in August 2012 (**9 to 11 November, 2011**) in the Department of Earth and Environmental Science, Kachchh University
21. Convened a workshop on "**Environmental Protection and Pollution control: A Law persepective**" on 5th April 2010 at KSKV Kachchh University.
22. Coordinated Fourth SERC workshop (Summer-Winter School) on "**Active Tectonics and Paleoseismology**" during 11th to 23rd November 2007 at Department of Geology, R. R. Lalan College, Bhuj (Directors: Prof.L.S.Chamyal and Dr. C. P. Rajendran)
23. Organized an international workshop on "**Geology of Kachchh Basin**" with the Energy and Geoscience Institute, The University of **Utah, USA** during 8th to 12th December 2009.
24. Convened an Industry-University friendly meet "**Sangat**" at KSKV Kachchh University on 10th February 2008.

25. Convened a workshop on Continuous Evaluation Pattern in the faculty of Science KSKV Kachchh University 7th to 8th May 2006 in Bhuj.

Academic and administrative Experience:

- ❖ **Member of the Board of Management** – KSKV Kachchh University (2023-till date)
- ❖ **Executive Council member** in KSKV Kachchh University (2017-2023)
- ❖ **Coordinator:** 12B committee of KSKV Kachchh University during 2017-18
- ❖ **In-charge Registrar of KSKV Kachchh University** during October 2013 to March 2016 and during January 2019 to November 2019.
- ❖ **District Coordinator** – Quality Enhancement Programme in Higher Education, Government of Gujarat-2007
- ❖ **Dean–Faculty of Science**, KSKV Kachchh University, Bhuj-Kachchh from September 2006 to April 2011 and 2014 to 2016; 2023
- ❖ **Chairman** – Board of studies – Geology since 2006
- ❖ **Member** – Academic Council, Board of University Teaching and Research, Senate and Syndicate - KSKV Kachchh University
- ❖ **Member** – BOS, Geology in Banasthali University, Rajasthan; HNG University, Patan
- ❖ **Member** – BOS, Geology in M S University of Baroda
- ❖ **Member** – BOS, Geology in Gujarat University, Ahmedabad
- ❖ **Member in Advisory committee:** New course in B.Sc. Geophysics, DKV College of Science and Arts, Saurashtra University.
- ❖ **Coordinator:** Workshop on Continuous Evaluation System in the Science Faculty of Kachchh University, Bhuj on 7th and 8th May 2006.
- ❖ **Principal** in Shri R. R. Lalan College, Bhuj from June 2006 to July 2008 (**achieved NAAC** accreditation during the tenure).
- ❖ **Core Faculty** in Career Oriented courses in the Department of Geology, R. R. Lalan College, Bhuj (for courses: Disaster Management, Basics of Earthquake Science and Applied Mineralogy) (2005-2008)
- ❖ **Visiting lecturer** in Mining Geology in Govt. Polytechnic, Bhuj for two years.
- ❖ **Visiting faculty:** Virayatan Engineering College, Govt. Science College, Marine Science course.
- ❖ Participated a UGC sponsored **Refresher course** in "**Applied Quaternary Geology**" held at the Department of Geology, M. S. University of Baroda, **Vadodara** during Jan-Feb. 1996.
- ❖ Participated a UGC sponsored **Refresher course** in "**Landscapes and Processes**" held at the Department of Geology, M. S. University of Baroda, **Vadodara** during Nov.-Dec. 2000.
- ❖ Participated a DST sponsored **short-term course** on "**Paleoseismicity and Active Tectonics in Northeast India**" held at Department of Earth Sciences. Manipur University, **Imphal** during 15th to 20th November 1999.
- ❖ Participated a DST sponsored **contact program cum field workshop** on "**Structure, Tectonics and Mesozoic Stratigraphy of Kachchh**". Organized at Department of Geology, M. S. University of Baroda, Vadodara and held at **Bhuj** during 14th to 20th January 2002.
- ❖ Participated a UGC sponsored **Orientation Programme** at C. R. Gardi Academic Staff College, Rajkot during 28/02/05 to 27/03/05.
- ❖ Examiner in Mining Geology in Govt. Polytechnic Bhuj for four years.

Research Publications

Books:

Year – 2017

1. **Thakkar, M.G.** (2017) Geomorphological Field Guide Book on Kachchh Peninsula (Edited by Amal Kar). *Indian Institute of Geomorphologists, Allahabad.*

Year – 2015

2. S. K. Parcha, **M. G. Thakkar**, V. C. Thakur and Navin Juyal (2015) Field Excursion Guide: Sedimentation, Tectonics and Quaternary Landforms of Zanskar Valley. DST Field workshop, *Organized and published by KSKV Kachchh University, Bhuj.*

RESEARCH PAPERS:

Year-2026

1. Aditya Kumar Verma, Tejpal Singh, **Mahesh G Thakkar** (2026) The Missing Large-scale Dextral-shear and Rotation within the "Kashmir Seismic Gap": Geomorphological Inferences, *Frontiers in Earth Science - Sec. Structural Geology and Tectonics*, 14, p.1786831, Frontiers.
2. Pooja Chauhan, Mamata Ngangom, **M. G. Thakkar** (2026) Hydro-Ecological Linkages in the Arid Landscapes of Kachchh, Gujarat: A Multivariate Geospatial Analysis, Book Chapter in *Sustainable Development in Water Scarcity Areas of Semi-arid Region*. Springer – Editors: Kanak Moharir, Khundrakpam Moirangleima and Mamata Ngangom.
3. Sheikh Nawaz Ali, Shubhajit Ghosh, Anshuman Bhardwaj, Pratima Pandey, Lydia Sam, Mitra Rajak, Tara Tripura Mantha, **Mahesh G Thakkar** (2026) USV-derived bathymetry of vulnerable glacial lakes and a critical semi-arid ecosystem lake in the Himalaya, *Scientific Data*, Springer Nature. <https://doi.org/10.1038/s41597-026-07828-6>
4. A Trivedi, A Nag, **MG Thakkar** (2026) Tracing palaeoecological footprints of Late Holocene monsoon variability and vegetation dynamics in the tropical sal forest of India's Core Monsoon Zone, *Quaternary Research*, 1-17, Cambridge

University Press. <https://doi.org/10.1017/qua.2026.10093>

5. P Chauhan, M Ngangom, **MG Thakkar** (2026) Decoding the sedimentary dynamics of Nada Bet at Eastern Great Rann of Kachchh, India: a grain size analysis approach, *Arabian Journal of Geosciences* 19 (7), 129. <https://doi.org/10.1007/s12517-026-12532-1>
6. Aditya Dharaiya, Satyajit Gaikwad, Satish Sangode, Ramdayal Singh, **Mahesh Thakkar** (2026), A Rigorous Comparative Geological Evaluation of a Potential Martian Terrestrial Analog Site from Kachchh Sedimentary Basin of NW India: A Geoheritage Significance, *Journal of the Indian Society of Remote Sensing*. 54/1, pp. 325-339. <https://doi.org/10.1007/s12524-025-02279-9>
7. Ketan Chaskar, Ramanand Sagar, Darshit J Padia, Amal MS, Gaurav Chauhan, Prasanna K, Vivesh V Kapur, Pranav J Pandya, Kamlesh Kumar, **MG Thakkar** (2026) New record of selachian (shark) fauna from the early Miocene (Aquitania) of Kachchh region (western India): palaeoecological and palaeobiogeographic significance, *Historical Biology* T & F 38 (5), 1337-1361. <https://doi.org/10.1080/08912963.2025.2540449>
8. **MG Thakkar** (2026) From Devastation to Resilience: Policy Lessons from the Post-Earthquake Reconstruction Programme Following the 2001 Bhuj (Gujarat) Earthquake, *Journal of Institute of Town Planners India* 23 (1), 88-100.
9. Falguni Bhattacharya, Gaurav Chauhan, Kaustubh Sane, Chirag Jani, Suraj Bhosale, Abhishek Lakhote, Anil Chavan, Durga Prasad Adapa, **MG Thakkar**, Subhash Bhandari (2026), Understanding landform evolution in dryland fluvial systems by examining relict paleochannels in the Kachchh mainland, western India. *Journal of Quaternary Science*, 41-2, pp 219-236. <https://doi.org/10.1002/jqs.70038>
10. A Trivedi, S Gaikwad, A Nag, MG Thakkar (2026) Palynological Characterization of Traditional Medicinal Plant Species from the Northern Western Ghats, India, *Palynology*, 2619447, <https://doi.org/10.1080/01916122.2026.2619447>
11. Babulal Vaghela, Chirag Jani, Gaurav Chauhan, Chirag Parmar, Ishaan Parmar, Mahesh Thakkar, Darshit Padia (2026), Fault Segmentation, Fracture Networks and Fold Development in the Western Katrol Hill Fault, Central Mainland Kachchh. *Open Journal of Geology*, 16-3, pp. 139-156. [10.4236/ojg.2026.163008](https://doi.org/10.4236/ojg.2026.163008)

Year-2025

12. Priya Agnihotri, Vikram Partap Singh, Hukam Singh, David Grimaldi, **Mahesh G Thakkar**, Tanu Priya, KA Subramanian, Suryendu Dutta, Shreya Mishra (2025), Eocene amber fossils reveal how complex trophic interactions shaped tropical rainforest biodiversity, *iScience*, 28, 9, 113430, September 19, 2025, 1-17; <https://doi.org/10.1016/j.isci.2025.113430>
13. Aditya Dharaiya, Satyajit Gaikwad, Satish Sangode, Ramdayal Singh, **Mahesh Thakkar** (2025) A Rigorous Comparative Geological Evaluation of a Potential Martian Terrestrial Analog Site from Kachchh Sedimentary Basin of NW India: A Geoheritage Significance. *Journal of the Indian Society of Remote Sensing*, <https://doi.org/10.1007/s12524-025-02279-9>
14. Amritpal Singh Chaddha, Sunil Kumar Shukla, Kamlesh Kumar, Anupam Sharma, **Mahesh G Thakkar**, Devendra Kumar Patel, GNV Satyanarayana (2025) Tracing Biosignatures from a Martian Analogue site of Puga Hot Spring Ladakh, India: Insights from Crystallography and Biomarkers. *Goldschmidt 2025 Conference, Prague. GOLDSCHMIDT*
15. Amritpal Singh Chaddha, Sunil Kumar Shukla, Anupam Sharma, Kamlesh Kumar, **MG Thakkar**, Devendra Kumar Patel, GNV Satyanarayana (2025), Calcium Carbonate as a Potential Template for the Origin of Life: Coupled Inorganic–Organic Geochemistry of Travertine Deposit from Puga Hot Spring. *ACS Earth and Space Chemistry, American Chemical Society*, June 12 2025, <https://pubs.acs.org/doi/10.1021/acsearthspacechem.5c00127?goto=supporting-info>
16. Ketan Chaskar, Ramanand Sagar, Darshit J Padia, Amal MS, Gaurav Chauhan, Prasanna K, Vivesh V Kapur, Pranav J Pandya, Kamlesh Kumar, **MG Thakkar** (2025), New record of selachian (shark) fauna from the early Miocene (Aquitania) of Kachchh region (western India): palaeoecological and palaeobiogeographic significance, *Historical Biology*, 1-25, T & F, <https://doi.org/10.1080/08912963.2025.2540449>
17. Sunil Kumar Shukla, Kamlesh Kumar, Anupam Sharma, **MG Thakkar**, Devendra kumar Patel, GNV Satyanarayana (2025) Biomarkers of Puga Hot Spring, Ladakh, India: Tracing plausible Prebiotic Pathways and Biogenic Metabolites, *ChemRxiv*, Mar 18, 2025 Version 1, [D O I: 10.26434/chemrxiv-2025-qm684](https://doi.org/10.26434/chemrxiv-2025-qm684) [opens in a new tab]
18. Aditya N Dharaiya, Satyajit K Gaikwad, Satish J Sangode, **Mahesh G Thakkar**, Ramdayal Singh (2025), Petrogenesis of Palaeocene Jarosite at Matanomadh, Kachchh, Western India: Analog for Martian Environments, *Journal of the Geological Society of India*, 108 (8). pp 1213-1223. <https://doi.org/10.17491/jgsi/2025/174227>
19. Pooja Chauhan, Mamata Ngangom, **M. G. Thakkar**, (2025) Hydroclimate dynamics and their impact on vegetation health in the Luni River Basin, Western India: a multi-index assessment using remote sensing. *Modeling Earth Systems and Environment*, 11, 162, <https://doi.org/10.1007/s40808-025-02339-6>
20. Nazim Deori, Poonam Verma, Shailesh Agrawal, **M.G. Thakkar**, J.M. Patel (2025), Response of tropical rainforest to warming during Middle Eocene Climate Optimum (MECO): Evidence from palynological record from the Bartonian deposits of Kutch Basin, Western India. *Evolving Earth*, 4 April 2025, 100065. <https://doi.org/10.1016/j.eve.2025.100065>
21. Suraj Bhosale, Nibedita Rakshit, Abhishek Natarajan, Gaurav Chauhan and **Mahesh Thakkar** (2025) The oldest Gondwanan record of durophagous shark *Strophodus* Agassiz, 1838 (Hybodontiformes) from the Kachchh Basin, western India. *Historical Biology*, Vol. 37, Issue, 3 pp. 650-662 online: 19 Mar 2024, <https://doi.org/10.1080/08912963.2024.2324430>

22. Jaymeet Solanki, Gaurav Chauhan, Bhavyata Chavada, Chirag Jani, Avinash Goswami, Manjari Pathak, Subhash Bhandari, **MG Thakkar** (2025) Geochemistry, Mineralogy, and Genesis of Kaolin Deposits of Kachchh, Western India and Its Possible Industrial Application, *Lithology and Mineral Resources*, 60 (4), Pleiades Publishing, pp-457-475. <https://doi.org/10.1134/S0024490225700087>
23. Rupak Dey, Seema B. Sharma, **Mahesh G. Thakkar**, Ranjit Kumar Sarangi, Abhiroop Chowdhury and Aliya Naz (2025) Phosphorus transitions driven by cyclone Biparjoy linked middle east North Africa (MENA) and Indian Thar Desert dust storm pathways in Asia's largest grassland. *Scientific Reports* 15, 4321 (2025). <https://doi.org/10.1038/s41598-024-84634-3>
24. A Bhatnagar, A.D Shukla, M Ngangom, M. G Thakkar, G. Chauhan (2025), Temporal Changes in Land-Sea Configuration Inferred from Post-Glacial Sedimentation Pattern in the Western Great Rann of Kachchh, India. *Journal of Geosciences Research*, Volume, 10, Issue 1, p. 1-6: Gondwana Geological Society.
25. Hemashri Thacker, Yash Shah, Akshay Jyoti Borah, Yogendrasinh Jadeja, **Mahesh Thakkar**, Gaurav Chauhan, Sazina Bhimani (2024), multi-criteria prioritization of watersheds across Katrol Hill Fault (KHF) for groundwater potential, based on geomorphology and morphometric analysis using RS and GIS techniques (*Communicated to Remote Sensing Applications*)
26. Rupak Dey; Seema B Sharma; **Mahesh G. Thakkar** (2024) Decisive role of tectonic driven edaphic factors in minor nutrients distribution pattern ipso facto vegetation in the tropical Asiatic grasslands" (Communicated to Scientific Reports- Springer Nature).

Year-2024

27. Raj Sunil Kandregula, Girish Ch Kothiyari, Gaurav Chauhan, **MG Thakkar** (2024) Tectono-geomorphic records of neotectonic activity along the Kachchh Mainland fault in a seismically active intraplate setting, Kachchh paleo-rift basin, western India, *Journal of Asian Earth Sciences*, *Volume 276*, December 2024, 106302: <https://doi.org/10.1016/j.jseaes.2024.106302>
28. Ketan Chaskar, Ramanand Sagar, Darshit J Padia, Gaurav Chauhan, Vivesh V Kapur, Pranav J Pandya, **M. G. Thakkar** (2024) New Record of Selachian (shark) fauna from the early Miocene (Aquitania) of Kachchh Region (western India): Palaeoecological and Palaeobiogeographic significance, <https://doi.org/10.21203/rs.3.rs-5597731/v1>
29. Gaurav Chauhan, Aditya Udayraj Joshi, Manoj Limaye, J M Patel, Hemashri Thacker, Yash Shah, Bhavyata Chavada, Suraj Bhosale, Abhishek Lakhote, Chirag Jani, Suruchi Patel, Girish Ch. Kothiyari, **M. G. Thakkar** (2024) Geoheritage values of Ambaji region, Gujarat: Western India, *Geoheritage*, (16) 3, p.82; <https://doi.org/10.1007/s12371-024-00985-3>
30. Rupak Dey; Seema B Sharma; Mahesh G. Thakkar (2024) Maximizing ecological value and assessing land suitability for sustainable grassland management in Asia's largest tropical grassland, Western India. *Nature Scientific Reports* 14, 13658, pp1-20. <https://doi.org/10.1038/s41598-024-62775-9>
31. Dey, R., Sharma, S.B., **Thakkar, M.G.** and Abhiroop Chowdhury (2024) Banni Grassland, a Geoheritage Landscape of Western India: Endless Possibilities for Geo-Eco-Socio Tourism. *Geoheritage* 16, 52 (2024). <https://doi.org/10.1007/s12371-024-00945-x>
32. Ramanand Sagar, Vivesh V. Kapur, Kamlesh Kumar, P. Morthekai, Anupam Sharma, Sunil K. Shukla, Amit K. Ghosh, Gaurav Chauhan, **M.G. Thakkar** (2024) First record of Chelonian coprolites from the Early-Middle Miocene Kutch Basin, western India, and their palaeodietary and palaeobiological implications, *Geobios*, 26 April, in Press <https://doi.org/10.1016/j.geobios.2023.12.004>
33. Ayushi Bhatnagar, Anil D Shukla, Mamata Ngangom, **MG Thakkar**, Jyotsna Dubey, Ravi Bhushan (2024) Analysis of sediment provenance using geochemical and isotopic data for a post-LGM sediment core from the western Great Rann of Kachchh, India: Implications for climate control on source regions; Palaeogeography, Palaeoclimatology, Palaeoecology, Volume 644, 15 June 2024, 112185, <https://doi.org/10.1016/j.palaeo.2024.112185>
34. Suraj Bhosale, Dharendra Pandey, Matthias Alberti, Franz Fürsich, Ketan Chaskar, **Mahesh Thakkar** (2024) Upper Jurassic (Oxfordian–Tithonian) ammonites and biostratigraphy of the Spiti Shale Formation of the Spiti and Zaskar regions in the Indian Himalayas. *Palaeontographica Abteilung A* 2024/3/21; Publisher: Schweizerbart'sche Verlagsbuchhandlung, DOI: 10.1127/pala/2024/0145
35. Rupak Dey; Seema B sharma; **Mahesh G. Thakkar** (2024) Livestock Movement driven Phosphorus transitions as core drivers of Grassland Vegetation Dynamics, *Catena* *Volume 235*, February 2024, 107694: <https://doi.org/10.1016/j.catena.2023.107694>
36. Gaurav Chauhan, Chirag Jani, Girish Ch Kothiyari, Siddharth Prizomwala, Chintan Vedpathak, Abhishek Lakhote, Raj Sunil Kandregula, Jaymeet Solanki, Chirag Parmar, Subhash Bhandari, **M.G. Thakkar** (2024) Structural analysis and neotectonic evidences of the dip-slip transverse fault system in the central Mainland Kachchh region, Western India. *Quaternary Science Advances* *Volume 13*, January 2024, 100168, <https://doi.org/10.1016/j.qsa.2024.100168>
37. Suraj Bhosale, Nibedita Rakshit, Abhishek Natarajan, Gaurav Chauhan and **Mahesh Thakkar** (2024) The oldest Gondwanan record of durophagous shark *Strophodus* Agassiz, 1838 (Hybodontiformes) from the Kachchh Basin, western India; Online: 19 Mar 2024: <https://doi.org/10.1080/08912963.2024.2324430>
38. Girish Kothiyari, Chirag Jani, Sudhanshu Bajpai, Abhishek Lakhote, Gaurav Chauhan, Kamal Agrawal, Rakesh Dumka, Abhishek Shukla, Raj Sunil Kandregula, B Sairam, **Mahesh Thakkar** (2024) Bed parallel slip and paleostress analysis of the Kodki fault zone, Kachchh, Western India, *Quaternary Science Advances*, 13, 100137.

<https://doi.org/10.1016/j.qsa.2023.100137>

39. Mamata Ngangom, **MG Thakkar** (2024) Decline of Dholavira Urban Settlement of Harappan Civilization in Kachchh was Associated with Global Climate Change Rather than the Decline of any Major Fluvial System, Book Chapter: Rivers of India: Past, Present and Future 2024/3/2. 197-216: Springer International Publishing.

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4. Rajendran, C.P., Rajendran, K. and **Thakkar, M.,** Field investigations in the epicentral area of January 26, 2001 earthquake, Final Technical Report, Department of Science and Technology, New Delhi, 2002, 49pp.
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6. **Dr. M. G. Thakkar** (2003) Report on participation in an international workshop "Earth System Processes Related to Gujarat Earthquake Using Space Technology" held at IIT Kanpur during 27th to 29th January, 2003 submitted in the DST and Education Department, Gandhinagar, Gujarat.
7. **M. G. Thakkar,** Bhanu Goyal and M. M. Sodha (2003): Fossils: The best tool for Geological Awareness in Academic Institutions and Society, A Report/ general article presented at a state level seminar on "Fossil occurrences in Lignite bearing Tertiary formations in Gujarat" held by MEAI, GMDC, Panandhro, Kachchh.
8. **M. G. Thakkar** (2005): Project Completion Report of the DST Research Project on "Preliminary documentation of ground deformation and tsunami effects at Andaman and Nicobar Islands and Eastern Coast of India (in connection to the 26th December, 2004 Sumatra Earthquake)" No. DST/23(505) SU/2005, Submitted to the Seismology Division Deptt. Of Science and Technology, N. Delhi.

RESEARCH NOTES

- 1 **Thakkar, M. G.** (2002) Ten Years of Palaeoseismology in ILP, *Jour. Geol. Soc. India*, Vol. 60, No.3, pp 341- 343.

- 2 **M. G. Thakkar** and Bhanu Goyal (2004) New Observations: Kachchh Paleoseismology, DST Newsletter, Vol.1, No.2 pp3.

GENERAL PUBLICATIONS

- 1 **M. G. Thakkar** and Anil Gor (2022) Role of Physics in unfolding the mysteries of Geoscience, *Pragami Tarang-2022*, ISSN-2347 2782, Vol: XIV. Pp. 26-30. (article in Gujarati)
- 2 Translation of the “Geology Terminology in Gujarati and Hindi” Total Seven books translated published by Gujarat Granth Nirman Board.
- 3 A chapter on “Kachchh nu Bhustar” in a Book on Kachchh by Kachchh Development Council, Mumbai.
- 4 Edited and compiled a book: Kutch Guide.
- 5 Given a series of articles on Earthquakes, its mechanism, general awareness, prediction, recent research and on the latest studies regarding 2001 Bhuj and 1819 Allah Bund Earthquake in a local daily, "Kutch Mitra".
- 6 A general article for scientific awareness, "*Kutchman Bhukamp vignyanni Avganana nahi palve* (Apathy to Earthquake science in Kachchh is not a good sign)" published in "KutchMitra" Deepotsavi Volume, Nov. 2001
- 7 A general article for scientific awareness, "*Ateet, Vartmaan ane Bhavishyaman Kutchnu Bhoostar* (Geological Past, Present and Future of Kachchh)" published in "KutchMitra" Earthquake Special Volume, Feb.2002, on completion of one year of the earthquake.

Field Experience

- ❖ Geological mapping, surveying and extensive trekking on highly rugged terrain of Kumaun, Sikkim, Garhwal, Kashmir, NE Himalaya and Pre-Cambrian areas of Gujarat and Rajasthan.
- ❖ Exploring Kachchh for **Neotectonics and paleoseismic study**.
- ❖ Acquired field training in neotectonics by some of the national and international scientists (**Dr. L.S.Chamyal, Prof. K.S. Valdiya, Prof. S. K. Tandon, Dr. Kanchan Pandey, Dr. S. K. Biswas**).
- ❖ During 2001 Gujarat Earthquake I have worked in the field with well-known Indian paleoseismologists **Dr.C.P.Rajendran** and **Dr.Kusala Rajendran** of CESS (Center for Earth Science Studies), Trivendrum.
- ❖ Worked with Memphis (USA) scientist, **Ms. Martitia P.Tuttle** in Kachchh for the identification and documentation of various **liquefaction features** during 2001 Gujarat Earthquake.
- ❖ Have also working experience with well-known US seismologists **Dr.Arch Johnston** (Director, Mid-American Earthquake Center MAEC), **Dr.Paul Bodin**, scientist, CERI, Memphis (USA), **Dr. Gary Patterson, Dr. T. K. Rockwell** (Sr. Proj. Geologist, Earth Consultant International, California), **Leonardo Seeber**, seismologist, Lamont Doherty Geological Observatory, Columbia University (N.Y.), **Steven Wesnouskey**, Director, Center for Neotectonic studies and Professor Uni. Of Nevada; **Dr. Ms. Rebecca Bendick** and **Dr. Grant Kier**, geologists, Colorado State Uni. and **Dr. James McCalpin** a renowned paleoseismologist.
- ❖ I have also worked with **Dr. James Zollweg** of the D/o Geosciences, Boise State Uni. Idaho, USA under the NSF (National Science Foundation) and **National Geographic Society** project of Kachchh Seismicity by **Telemetric Seismic Network** in Kachchh. I also acquired field training for **GPS installation** and data collection in Kachchh as a part of Roger Bilham's geodetic study in Kachchh.
- ❖ Have got **Field Training in Paleoseismology**: Trenching at **Hope Fault-a Pacific and Indo-Australian plate boundary**, South Island, **New Zealand** and morphotectonic study at raised Marine Terraces at **Conway Coast, New Zealand**.
- ❖ I have also got field training in **Tsunami and paleo-tsunami Geology** by **Dr. Brian F. Atwater – (USGS scientist)** at South Indian and Kachchh coast.
- ❖ Extensive field work on Andaman and Nicobar Coast for the post tsunami surface deformation and tsunami destruction studies.

General Experience

- ❖ Script Writer in a Documentary (Discovery) Lost Millionaire City: Lakhpat's Untold Story by Maniesh Paul: History Hunter [#mystery #lakhpat](https://www.youtube.com/shorts/2_wT0ednRhE) : https://www.youtube.com/shorts/2_wT0ednRhE, <https://www.youtube.com/watch?v=WLRUuH--wnk>
- ❖ Script Writer in a Documentary on “**Geological Marvels of Kutch**” – A Geoheritage and Geo-Tourism Documentary. <https://www.youtube.com/watch?v=Bv5IDSF3F84>
- ❖ Script Writer in a Documentary on “**Kadiya Dhro: Grand Canyon of India**” – A Geoheritage and Geo-Tourism Documentary.
- ❖ Worked as a **script writer** in a documentary on “**Kachchh a land of variation**” to be aired in the UK, by **EYE TV** network.
- ❖ Given many **radio talks** on various science subjects on All India Radio, Bhuj
- ❖ Worked as a presiding and counting officer in assembly, parliamentary and Nagarpalika elections for seven times.
- ❖ **Founder member** in "**Kachchh Tourism and Handicrafts Development Federation**" Bhuj, Kachchh.
- ❖ **General Secretary: Kachchh Fossil Park**: An organization for research, restoration and protection of fossils and also for geological and scientific awareness in the society.
- ❖ Resource person in UGC sponsored orientation program at C. R. Gardi Academic Staff College, Rajkot.