Biodata

Dr. SUMER CHOPRA
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PROFESSIONAL QUALIFICATION:

- M.Tech in Applied Geophysics from University of Roorkee (1990), presently Indian Institute of Technology (IIT), Roorkee in **First Division with Honours**.
- PhD in Geophysics from Kurukshetra University (2010) on "Estimation of Attenuation Characteristic, Site Response Functions and Ground Motions for Evaluation of Seismic Hazard in Gujarat Region, India."

PERSONAL INFORMATION

Date of Birth	16th Sep, 1967
Nationality	Indian
Marital Status	Married
Health	Excellent
Sex	Male
e-mail	sumer.isr@yahoo.com; sumer.chopra@gmail.com
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Thrust Areas of Research:

- Modelling of strong ground motions
- Probabilistic and Deterministic seismic hazard analysis
- Site-specific response studies and seismic microzonation
- Site characterization
- Shallow crustal structure
- Shallow and deep geophysical surveys for microzonation, site-specific studies for dams, power houses and faults.
- Planning, coordination and execution of all seismological, geophysical and geotechnical research and consultancy projects.

h-index: 28
i10-index: 76
Citations:2455
Total publications in peer-reviewed SCI Journals: 115
https://scholar.google.co.in/citations?user=id7_LEQAAAAJ&hl=en

No. of students supervised/supervising for PhD:

6 (completed), 2 (ongoing)

Honours and Awards:

- Awarded CSIR-NET in 1990.
- Awarded Certificate of Merit by Ministry of Earth Sciences, Govt. of India for outstanding contribution in Geosciences in 2015.
- Member of Research Advisory Committee of National Centre for Seismology, Ministry of Earth Sciences, Govt. of India.
- Member, Technical Committee for ground motion propagation and site amplification studies for Nuclear Power Plant Site at Gorakhpur, Haryana for AERB, BARC, Govt. of India.
- Member, Technical Committee for characterization of seismogenic zones around the site and evaluation of response of soil strata to vibratory ground motion AERB, BARC, Govt. of India.
- Member, BIS CED-39 committee for preparation of Probabilistic Seismic Hazard map of India.
- Member, Board of Studies, Changa University of Science and Technology, Anand.
- Member, Technical Committee to review research activities of Borehole Geophysics Laboratory established by Ministry of Earth Sciences, Govt. of India.
- Member to review scientific cadres at Wadia Institute of Himalayan Geology, Dehradun.
- Nominated by National Green Tribunal (NGT) as an expert in seismology to review Lakhwar and Bageshwar hydro-electric projects.

Summary of Professional Experience

Designation	Organization	Duration	
		From	To
Senior Scientific Assistant (Geophysics)	Sardar Sarovar Narmada Nigam Limited	1990	2006
Scientist-D	Institute of Seismological Research	2006	2010
Scientist-E	Ministry of Earth Sciences, Govt. of India	2010	2015
Director/Scientist-G	Institute of Seismological Research	2015	2025
Director General (I/C)	Institute of Seismological Research	2020	2025

Position held prior to superannuation

(September 2015 to September 2025)

Designation : Director and Director General (In-charge)

Organization : Institute of Seismological Research
Department of Science and Technology
Government of Gujarat

Responsibilities as Director General (I/C):

- As the Chief Executive Officer of ISR, was responsible for administration of all affairs of the Institute.
- Exercised overall supervision, direction and control over all officers, staff and operations under the oversight of the Governing Council / Executive Committee.
- Oversees recruitment and appointment of staff (including temporary staff) to meet project needs and deadlines.
- Represented ISR in collaborations with national and international organizations in seismology, geophysics and related fields.
- Guided strategic direction and priorities of the Institute in alignment with its mission: earthquake monitoring, hazard assessment, seismic-hazard mitigation, research, public awareness, etc.
- Ensured smooth coordination between different divisions/groups (observational seismology, hazard assessment, tectonic/geophysical research, public outreach/training) for efficient functioning of ISR.
- Delivered keynote address, lectures at various national and international workshops/symposiums.
- Preparation of Annual Reports of the institute.

Responsibilities as Director:

- Provided leadership and oversight of all basic and applied research at ISR and headed the scientific part of the Institute.
- Managed and coordinated the work of the heads of various scientific groups and ensured research integrity, quality and timely execution.
- Reported to the Director General and assisted in routine scientific matters and research-related administration.
- Ensured continuous monitoring, data collection, analysis and reporting of seismic data (seismic network, strong-motion instruments, multi-parametric geophysical observations), and guided research output such as seismic hazard studies, site-specific assessments, tectonic/geophysical investigations aligned with ISR's mandate.
- Helped in planning, executing and supervising geophysical surveys, seismic monitoring, microzonation studies, site-characterization, earthquake-hazard and vulnerability assessment projects.
- Facilitated scientific collaborations, publications, training/internships, research visits, dissemination of research findings.
- Identified newer research issues and guided students and scientists for PhD.
- Delivered keynote address, lectures at various national and international workshops/symposiums.

Previous Positions

1. **December 2010 onwards to August 2015**
   Designation : Scientist-E
   Organization : Ministry of Earth Sciences
   Government of India

Nature of Work :

- Head of Earthquake Hazard and Risk Assessment division of National Centre for Seismology (NCS), New Delhi.
- Looking after extramural funding in Geosciences and Member-Secretary for PAMC Geosciences.
- Overall coordinator from MoES for establishment of Centre for Geochronology and Centre for Geotechnology.
- Processing, analysis and interpretation of various geophysical time series collected from multi-parametric geophysical observatories.
- Seismic Microzonation of 30 cities in India.
- Establishment of Volcanological observatory at Barren Island
- Overall coordinator from MoES for Koyna deep borehole project.
- Overall coordinator from MoES for National Centre for Earth Sciences Studies (NCESS), Thiruvananthapuram, Kerala.

2. **February 2006 onwards to December 2010**

Designation : Scientist-D
Organization : Institute of Seismological Research
Department of Science and Technology
Government of Gujarat

Nature of Work :

- Seismological Research and Applications in Gujarat
- Seismological monitoring of the Gujarat and adjoining states.
- Strong motion seismology and assessment of risk in Gujarat from future earthquakes.
- Involved in GPS network planning and installations for the study of crustal deformations in the Kutch and Saurashtra peninsula.
- Probabilistic and Deterministic Seismic Hazard Estimation for microzonation.
- Site Specific Response Studies for microzonation.

3. **August 1990 to January 2006**

Designation: Senior Scientific Assistant (Geophysics)
Organization: Sardar Sarovar Narmada Nigam Limited
(A Wholly Owned Govt. of Gujarat Undertaking)

Nature of Work :

- Seismological Monitoring of Asia's biggest River Valley Project.
- Computation of source parameters for all the micro-earthquakes recorded on the network.
- Monitor the variation of the seismicity pattern.
- Prepared Seismological Bulletins from 1990 to 2005.

- Prepared special report on "Bhuj earthquake of Jan 26, 2001 and its aftershock" for Govt. of Gujarat. The source parameters of more than 1000 aftershocks of magnitudes between 3.5 and 6.2 were calculated.

Projects Completed/Ongoing:

- Joint Into-Taiwanese project entitled "Scenario Strong Motion Estimation for Gujarat, India" sponsored by DST, Govt. of India and National Science Council, Taiwan.
- DST/MoES, Govt. of India sponsored project entitled "Seismological Research and Applications in Gujarat."
- DST/MoES, Govt. of India sponsored project entitled "Crustal Deformation Studies in Kachchh and West Narmada Region of Gujarat."
- BARC, Govt. of India sponsored project entitled "Generation of Attenuation Correlation for ground motion based on the shear wave velocity study in Gujarat region."
- Gujarat Infrastructure Development Board, Govt. of Gujarat sponsored project entitled "Seismic Microzonation of Dholera Special Investment Region (SIR)."
- Gujarat State Petroleum Corporation Limited, Govt. of Gujarat sponsored project entitled "Seismotectonic study of LNG-GSPC terminal site at Mundra, Gujarat."
- MoES, Govt. of India sponsored project entitled "Seismic Microzonation of Ahmedebed, Gujarat."
- Site-Specific Seismic Hazard Analysis for site selection for statue of unity (180 m high), highest monument in the world for Sardar Sarovar Narmada Nigam Limited, a Govt. of Gujarat Undertaking.
- Site-Specific Seismic Hazard Assessment at Kakrapar Nuclear Power Plant.
- Site-Specific Seismic Hazard Assessment at Devni Mori near Shamlaji for Gujarat Pavitra Yatra Dham Board.
- Site-Specific Seismic Hazard Assessment of Zydus Corporate House, Ahmedabad for Zydus.
- Site-Specific Seismic Hazard Assessment of Dwarka Jagat Mandir for Gujarat Pavitra Yatra Dham Board.
- Site-Specific Seismic Hazard Assessment of Sant Nagri, Sabarkantha for Gujarat Pavitra Yatra Dham Board.
- MoES, Govt. of India sponsored project entitled "Seismic Microzonation of Bhuj City, Kachchh."
- Site specific study of LPG Terminal at Dhamra, Orissa for M/S Adani.
- Site Specific Seismic study to develop site specific Response spectrum for Cable stayed Bridge at Zuari River, Goa.
- Site-specific investigations using Multi-channel Analysis of Seismic Waves Survey (MASW) for Museum Building, Smriti Van, Bhuj for Gujarat State Disaster Management Authority (GSDMA).
- Site-specific investigations using by MASW technique for proposed 2.5m Telescopic facility site at PRL premises, Gurushikhar, Mount Abu for Physical Research Laboratory, Ahmedabad.
- Seismic Hazard Assessment of LNG Terminal at Dhamra, Orissa for M/S Adani.
- Site specific spectral analysis for LPG terminal Mundra, Kachchh for M/S Adani.
- Seismic Hazard Assessment of Dadra & Nagar Haveli for UT Administration.
- Site-specific response study for Indian Oil Corporation new facility at Bogaigaon, Assam.

- Seismic Hazard Assessment and salinity ingression monitoring of Bhadbhut project.
- Seismic Hazard Assessment of M/S Adani solar power and windmill project in Rann of Kachchh.
- Geophysical surveys for delineation of fresh water aquifer in Dang district Gujarat for GWRDC.
- Salinity ingression monitoring for the proposed Barrage across River Narmada near Bhadbhut, Distt. Bharuch.
- Low frequency passive seismic surveys in Linch, Mansa and Jotana for ONGC.
- Low frequency passive seismic surveys in Dholka and Digas for GSPC.
- Seismic microzonation of Amritsar, Meerut, Lucknow, Kanpur, Agra, Varanasi, Patna and Dhanbad in India.
- Site-specific seismic hazard assessment of PVC and Naptha plants at Mundra for M/S Adani.
- Site-specific seismic hazard assessment for LNG tanks at Dahej for M/S L & T.
- Site-specific seismic hazard assessment for IOCL-Barauni PPU Plant at Barauni, Bihar.
- Site-specific hazard assessment of Sardar Sarovar, Indira Sagar, Seti, Dharoi, Kadana, Sipu, Ukai, Machhundri, Hiren, Tapi barrage, and Shetrunji dams.
- Site-specific seismological study for National Maritime Heritage Complex, Lothal, Gujarat.
- Site-specific hazard assessment of PSP projects at Vijaynagar, Narihalla, Pane, Kandaura, Teesta, Bilaspur, Anantpur, Patgaon and Musakhand.

Research Papers Published in Scientific Citation Index Journals

1. **Sumer Chopra**, K. Madhusudhan Rao, B. Sairam, Santosh Kumar, A.K. Gupta, Hardik Patel, M.S. Gadhavi and B.K.Rastogi (2008). Earthquake Swarm Activities after Rains in Peninsular India and a Case Study from Jamnagar, *Journal of Geological Society of India*, Vol.72, 245-252.

2. **Sumer Chopra**, R.B.S.Yadav, Patel, Hardik, Kumar, Santosh, Rao, K.M., Rastogi, B.K., Hameed, Abdul & Srivastava, Sanjay (2008). The Gujarat (India) seismic network, *Seismological Research Letters*, Vol.79, 799-808.

3. R.B.S.Yadav, J.N.Tripathi, B.K.Rastogi, **Sumer Chopra** (2008). Probabilistic Assessment of Earthquake Hazard in Gujarat and Adjoining Regions of India, *Pure and Applied Geophysics*, Vol.165, 1813-1833.

4. R.B.S.Yadav, B.K.Rastogi, M.C.Das and **Sumer Chopra** (2009). A homogeneous and complete earthquake catalogue of north east India and adjoining region, *Seismological Research Letters*, Vol.80, 609-627.
5. **Sumer Chopra** (2009). Institute of Seismological Research, Gujarat, News and Notes, *Journal of Geological Society of India* 74(4), 537-537.

6. **Sumer Chopra**, K.M.Rao and B.K.Rastogi (2010). Estimation of Sedimentary Thickness in Kachchh Region by S_P Converted Phase, *Pure and Applied Geophysics*, Vol.167, 1247-1257.

7. **Sumer Chopra**, Dinesh Kumar and B.K.Rastogi (2010). Estimation of Strong Ground Motions for 2001 Bhuj (Mw 7.6), India Earthquake, *Pure and Applied Geophysics*, Vol.167, 1317-1330.

8. **Sumer Chopra**, Dinesh Kumar and B.K.Rastogi (2010). Attenuation of high frequency P and S waves in the Gujarat Region, India, *Pure and Applied Geophysics*, Vol.168, 797-813.

9. R.B.S.Yadav, D.Shankar, **Sumer Chopra** and A.P.Singh (2010). An application of regional time and magnitude predictable model for long-term earthquake prediction in the vicinity of October 8, 2005 Kashmir Himalaya earthquake, *Natural Hazards*, Vol.54, 985-1014.

10. R.B.S.Yadav, J.N.Tripathi, B.K.Rastogi, M.C.Das and **Sumer Chopra** (2010). Probabilistic assessment of earthquake recurrence in north east India and adjoining regions, *Pure and Applied Geophysics*, Vol.167, 1331-1342.

11. R.B.S.Yadav, E.E.Papadimitriou, V.G.Karakostas, B.K.Rastogi, **Sumer Chopra**, D.Shankar, A.P.Singh and Santosh Kumar (2011). The 2007 Talala, Saurashtra, Western India earthquake sequence:Tectonic implications and seismicity triggering, *Journal of Asian Earth Sciences*, Vol.40, 303-314.

12. **Sumer Chopra** and Pallabee Choudhury (2011), A Study of Response Spectra for Different Geological Conditions in Gujarat, India, *Soil Dynamics and Earthquake Engineering*, Vol.31(11), 1551-1564.

13. R.B.S. Yadav, Yusuf Bayrak, J. N. Tripathi, **Sumer Chopra**, A.P. Singh and Erdem Bayrak (2012), A Probabilistic Assessment of Seismic Hazard Parameters in NW Himalaya and the Adjoining Regions, *Pure and Applied Geophysics*, Vol.169, 1619-1639.

14. R.B.S. Yadav, V.K. Gahalaut, **Sumer Chopra** and Bin Shan (2012), Tectonic Implications and Seismicity Triggering During the 2008 Baluchistan, Pakistan Earthquake Sequence, *Journal of Asian Earth Science*, Vol.45, 167-178.

15. **Sumer Chopra**, Dinesh Kumar, B.K.Rastogi, Pallabee Choudhury and R.B.S.Yadav (2012), Deterministic seismic scenario in Gujarat region, India, *Natural Hazards*, Vol.60, 517-540.

16. Arun K Gupta, Anup K Sutar, **Sumer Chopra**, Santosh Kumar and B.K. Rastogi (2012), Attenuation Characteristics of Coda Waves in Mainland Gujarat (India) *Tectonophysics*, Vol.530-531, 264-271.

17. **Sumer Chopra**, Dinesh Kumar, Pallabee Choudhury and R.B.S.Yadav (2012), Stochastic Finite Fault Modeling of Mw 4.8 Earthquake in Kachchh, Gujarat, India, *Journal of Seismology*, Vol.16, 435-449.

18. Santosh Kumar, **Sumer Chopra**, Pallabee Choudhury, A.P.Singh and R.B.S.Yadav (2012). Ambient noise levels in Gujarat State (India) Seismic Network, *Geomatics, Natural Hazards and Risks*, Vol.3, 342-354.

19. R.B.S. Yadav, Yusuf Bayrak, J. N. Tripathi and **Sumer Chopra** and E Bayrak (2012), Regional Variation of the ω-Upper Bound Magnitude of GIII Distribution in Hindukush-Pamir Himalaya and the Adjoining Regions: A Perspective on Earthquake Hazard, *Tectonophysics*, Vol.544-545, 1-12.

20. **Sumer Chopra**, Vikas Kumar, Anup Suthar and Pankaj Kumar (2012), Modeling of strong ground motions for 1991 Uttarkashi, 1999 Chamoli earthquakes and a hypothetical great earthquake in Garhwal-Kumaun Himalaya, *Natural Hazards*, Vol.64, 1141-1159.

21. **Sumer Chopra**, Dinesh Kumar, B.K.Rastogi, Pallabee Choudhury and R.B.S.Yadav (2013), Estimation of site amplification functions in Gujarat region, India, *Natural Hazards*, Vol.65, 1135-1155.

22. **Sumer Chopra**, Dinesh Kumar, B.K.Rastogi, Pallabee Choudhury and R.B.S.Yadav (2013), Estimation of seismic hazard in Gujarat region, India, *Natural Hazards,* Vol.65, 1157-1178.

23. Pallabee Choudhury, J.K.Catherine, V.K.Gahalaut, **Sumer Chopra**, Rakesh Dumka and Ketan Singha Roy (2013), Post-seismic deformation associated with the 2001 Bhuj Earthquake, *Natural Hazards*, Vol.65, 1109-1118.

24. Babita Sharma, **Sumer Chopra**, Anup Kumar Sutar and B.K.Bansal (2013), Estimation of Strong Ground Motion from a Great Earthquake in Central Seismic Gap Region using Empirical Green's Function Technique, *Pure and Applied Geophysics*, Vol.170, 2127-2138.

25. R.B.S. Yadav, T.M. Tsapanos, J.N. Tripathi and **Sumer Chopra** (2013), An Evaluation of Tsunami Hazard Using Bayesian Approach in the Indian Ocean, *Tectonophysics*, Vol.593, 172-182.

26. Arun K. Gupta, **Sumer Chopra**, Sanjay K. Prajapati, Anup K. Sutar and B.K. Bansal (2013), Intensity distribution of M 4.9 Haryana-Delhi border earthquake, *Natural Hazards*, Vol.68, 405-417.

27. Rashmi Pradhan, Sanjay K Prajapati, **Sumer Chopra**, Brijesh K Bansal, Ashok Kumar and C D Reddy (2013), Causative source of Mw 6.9 Sikkim-Nepal border earthquake of September 2011: GPS baseline observations and strain analysis, *Journal of Asian Earth Science*, Vol.70-71, 179-192.

28. Sanjay K. Prajapati, Ashok Kumar, **Sumer Chopra**, and B.K. Bansal (2013), Intensity map of Mw 6.9 2011 Sikkim-Nepal border earthquake and its relationships with PGA, Distance and Magnitude, *Natural Hazards*, Vol.69, 1781-1801.

29. Jyoti Sharma, **Sumer Chopra** and Ketan Singha Roy (2013), Estimation of Source parameters, Quality factor (Qs) and Site characteristics using accelerograms: Uttarakhand Himalaya region, *Bulletin of Seismological Society of America*, Vol.104, 360-380.

30. **Sumer Chopra**, Jyoti Sharma, Anup Suthar and B K Bansal (2014), Estimation of Source Parameters of Mw 6.9 Sikkim Earthquake and modeling of ground motions to determine causative fault, *Pure and Applied Geophysics*, Vol.171, 1311-1328.

31. Pallabee Choudhury, **Sumer Chopra**, Ketan Singha Roy and B K Rastogi (2014), A review of strong motion studies in Gujarat state of western India, *Natural Hazards*, Vol.71, 1241-1257.

32. P. Chingtham, **Sumer Chopra**, Baskoutas and B.K.Bansal (2014), An assessment of seismicity parameters in NW Himalaya and adjoining regions, *Natural Hazards*, Vol.71, 1599-1616.

33. **Sumer Chopra**, Tao-Ming Chang, Sowrav Saikia, R.B.S. Yadav, Pallabee Choudhury and Ketan Singha Roy (2014), Crustal structure of the Gujarat region, India: New constraints from the analysis of teleseismic receiver functions, *Journal of Asian Earth Sciences* Vol.96, 237-254.

34. Babita Sharma, P. Chingtham, Anup K. Sutar, **Sumer Chopra** and H.P.Shukla (2015), Frequency dependent attenuation of seismic waves for Delhi and surrounding area, India, *Annals of Geophysics*, 58, 2, 2015, S0216; doi:10.4401/ag-6636.

35. Sowrav Saikia, **Sumer Chopra**, P R Baidya, Santanu Baruah (2016) Crustal imaging of the Northwest Himalaya and its foredeep region from teleseismic events, *Geomatics, Natural Hazards and Risk*, Vol.7, 1265-1286.

36. Babita Sharma, **Sumer Chopra** and Vikas Kumar (2016), Simulation of Strong Ground Motion for 1905 Kangra Earthquake and a possible mega thrust earthquake (Mw 8.5) in Western Himalaya (India) using Empirical Green's Function Technique, *Natural Hazards*, Vol.80, 487-503.

37. P.Chingtham, R.B.S.Yadav, **Sumer Chopra**, A.Yadav, A.K.Gupta and P.N.S.Roy (2016), Time-Dependent Seismicity Analysis in the Northwest Himalaya and its Adjoining Regions, *Natural Hazards*, Vol.80, 1783-1800.

38. Pallabee Choudhury, **Sumer Chopra**, Ketan Singha Roy, and Jyoti Sharma (2016), Ground motion modelling in the Gujarat region of western India using Empirical Green's Function approach, *Tectonophysics*, Vol.675, 7-22.

39. Pallabee Choudhury, **Sumer Chopra** and Ketan Singha Roy (2016), Site classification for strong motion stations in Gujarat, India using response spectral ratio, *Soil Dynamics and Earthquake Engineering*, Vol.87, 138-150.

40. A. Joshi, Monu Tomer, Sohan Lal, **Sumer Chopra**, Sandeep Singh, Sanjay Prajapati, M. L. Sharma, Sandeep (2016), Estimation of the source parameters of the Nepal earthquake from strong motion data, *Natural Hazards*, Vol.83, 867-883.

41. Vikas Kumar, Dinesh Kumar, **Sumer Chopra** (2016), Estimation of source parameters and scaling relations for moderate size earthquakes in North-West Himalaya, *Journal of Asian Earth Sciences* Vol.128, 79–89.

42. Babita Sharma, **Sumer Chopra**, P. Chingtham, Vikas Kumar, (2016) A study of characteristics of ground motion response spectra from earthquakes recorded in NE Himalayan region: an active plate boundary, *Natural Hazards*, Vol.84, 2195-2210.

43. Prasanta Chingtham, Babita Sharma, **Sumer Chopra**, Pareshnath SinghaRoy (2016), Statistical analysis of aftershock sequences related with two major Nepal earthquakes: April 25, 2015, M_W 7.8, and May 12, 2015, M_W 7.2, *Annals of Geophysics*, Vol.59, 5, S0540.

44. Sanjay K. Prajapati, Harendra K. Dadhich, **Sumer Chopra** (2017), Isoseismal map of the 2015 Nepal earthquake and its relationships with ground-motion parameters, distance and magnitude, *Journal of Asian Earth Sciences*, Vol.133, 24-37.

45. Sowrav Saikia, **Sumer Chopra**, Santanu Baruah, Upendra K. Singh (2017), Shallow sedimentary structure of the Brahmaputra valley constraint from receiver functions analysis, *Pure and Applied Geophysics*, Vol.174, 229-247.

46. Pallabee Choudhury, **Sumer Chopra**, Ketan Singha Roy, Jyoti Sharma and B K Rastogi (2017), Revisiting the 1956 Anjar earthquake in western India: Empirical Green's function approach, *Bulletin of Seismological Society of America*, 107(2), 592-602.

47. Vishwa Joshi, **Sumer Chopra**, P. Mahesh, and Santosh Kumar (2017), Joint modeling of velocity structure and hypocentral locations in the seismically active Kachchh, Saurashtra, and Narmada regions of Western India: An active intraplate region, *Seismological Research Letters,* Vol.88 (5), 1390-1402.

48. A. P. Singh, Abhijitsinh Parmar, **Sumer Chopra** (2017), Microtremor study for evaluating the site response characteristics in the Surat City of western India, *Natural Hazards* Vol.89, 1145-1166.

49. Girish Ch. Kothyari, **Sumer Chopra** and M. Ravi Kumar (2017), A report on the International workshop on 'Shallow Subsurface Investigations for Resource Exploration and Hazard Estimation' organized by the ISR and the DST, Government of Gujarat, collaboration with the NHPC, during 19–20 January 2017, at ISR, Gandhinagar, *Current Science*, 113(3), 379-380.

50. Prasanta Chingtham, Sanjay K. Prajapati, Vineet K. Gahalaut, **Sumer Chopra**, Pareshnath Singha (2017), Roy Forecasting seismicity rate in the north-west Himalaya using rate and state dependent friction law, *Geomatics, Natural Hazards and Risk,* Vol8, 2017, 1643-1661.

51. Sowrav Saikia, Santanu Baruah, **Sumer Chopra**, Upendra K. Singh, Bibhuti Gogoi, Himanata B. Gohain (2018), Study of crustal structure and geological implications of south western margin of Northeast India*, Journal of Seismology*, Vol.22, 229-249.

52. **Sumer Chopra**, Vikas Kumar, Pallabee Choudhury and R B S Yadav (2018). Site classification of Indian strong motion network using response spectra ratios, *Journal of Seismology*, Vol.22, 419-438.

53. Kapil Mohan, Peush Chaudhary, Pruthul Patel, B.S. Chaudhary, **Sumer Chopra** (2018), Magnetotelluric study to characterize Kachchh Mainland Fault (KMF) and

Katrol Hill Fault (KHF) in the western part of Kachchh region of Gujarat, India, *Tectonophysics*, 726, 43-61.

54. B Sairam, A P Singh, Vandana Patel, Vasu Pancholi, **Sumer Chopra**, V K Dwivedi and M Ravi Kumar (2018), Influence of local site-effect in the Ahmedabad mega-city on the damage due to past earthquakes in Northwest India, *Bulletin of Seismological Society of India*, Vol.108(4), 2170-2182.

55. Pallabee Choudhury, **Sumer Chopra**, M. Ravi Kumar (2018), A review of seismic hazard assessment of Gujarat: A highly active intra-plate region, *Earth-Science Reviews*, Vol.187, 205-218.

56. G Pavan Kumar, Indu Chaudhary, Mehul Nagar, Avinash Chouhan, SP Prizomwala, P Mahesh, **Sumer Chopra** (2018), Transient Electromagnetic investigations in a tectonic domain of the Kachchh intraplate region, western India: A morphotectonic study of the Kachchh Mainland Fault, *Tectonics*, Vol.37, 4239-4260.

57. Jayaprakash Vemuri, Subramaniam Kolluru and **Sumer Chopra** (2018), Surface Level Synthetic Ground Motions for M7.6 2001 Gujarat Earthquake, *Geosciences*, Vol.8(12), 429.

58. Vishwa Joshi, **Sumer Chopra** and Santosh Kumar (2019), A Local Magnitude Scale ML for the Kachchh rift basin: an active intraplate region, Gujarat, India, *Bulletin of Seismological Society of India*, Vol.109(1), 34-42.

59. Vikas Kumar, Dinesh Kumar and **Sumer Chopra** (2019), Source parameters and Scaling relations for Moderate size earthquakes in North-East India region, *Pure and Applied Geophysics*, Vol.176, 45-64.

60. Nisarg Bhatt, Vasu Pancholi, **Sumer Chopra**, Madam Mohan Rout, R D Shah and G C Kothyari (2019), Rapid seismic hazard assessment of the Sabarmati river basin in Gujarat state using GIS techniques, *Bulletin of Engineering Geology and Environment*, Vol.78, 3927-3942.

61. Rakesh K. Dumka, **Sumer Chopra**, Sandip Prajapati (2019), GPS derived crustal deformation analysis of Kachchh, zone of 2001(M7.7) earthquake, Western India, *Quaternary International*, Vol.507, 295-301.

62. Shreyasvi C, Katta Venkataramana, **Sumer Chopra** and Madan Mohan Rout (2019), Probabilistic seismic hazard assessment of Mangalore and its adjoining

regions, a part of Indian peninsula- An intraplate region, *Pure and Applied Geophysics*, Vol.176, 2263-2297.

63. C. Shreyasvi, Katta Venkataramana, **Sumer Chopra** (2019), Local site effect incorporation in probabilistic seismic hazard analysis – A case study from southern peninsular India, an intraplate region, *Soil Dynamics and Earthquake Engineering*, 123, 381-398.

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