

PARVEEN KUMAR, WIHG, DEHRADUN, INDIA



Google Scholar Page:<https://scholar.google.com/citations?user=Udjg4JIAAAAJ>

RESEARCH GROUP:

GEOPHYSICS

FIELD OF SPECIALIZATION:

STRONG MOTION SEISMOLOGY; GEO HAZARD/EARTHQUAKE HAZARD EVALUATION

EDUCATION:

2014 Ph.D. from Department of Earth Sciences, IIT Roorkee

2009 M.Tech. Applied Geophysics from Kurukshetra University, Kurukshetra (KUK)

2006 B.Sc. from Govt. P.G. College, Karnal affiliated to KUK

PROFESSIONAL EXPERIENCE:

24/08/2018 – Till date Scientist-‘C’, WIHG, Dehradun

24/08/2015 – 23/08/2018 Scientist-‘B’, WIHG, Dehradun

VISITING POSITIONS: -NA-

TEACHING EXPERIENCE: -NA-

SERVICES:

a. Supervision/Guidance to Ph.D. Students:

Two pursuing

b. Training:

Five Dissertations to the students of various Indian Universities/Institute

Six students of various Indian Universities/Institute are trained under summer/winter training program

c. Teaching: -NA-

d. Membership: -NA-

e. Editorial Board: -NA-

f. International/National Seminars/Workshop:

Five

g. External Research Fund received & Project Handled:

External funded project entitled “Three Dimensional Attenuation tomography from strong ground motion data for Garhwal region, India” is received as principal investigator (PI) through funding agency ‘Science and Engineering Research Board’, Department of Science and Technology, Govt. of India (Budget Rs. 19.6 Lakh)

h. Member of important Committees: -NA-

AWARDS/FELLOWSHIPS/HONORS/MEMORIAL LECTURES:

a. Awards/Medals/Prizes:

b. Fellowships:

Post-Doctoral Fellowship (PDF) (UGC Sponsored:- Dr. D.S. Kothari Post-Doc Fellowship)- in 2015

c. Memorial Lectures: -NA-

d. Recognition/Honors: -NA-

COUNTRIES VISITED:

Germany, Leibniz institute for Applied Geophysics, Hannover, Germany

NATIONAL/INTERNATIONAL (outside CSIR-NGRI) COLLABORATION: -NA-

Inside WIHG Collaborator: Colleague Scientists/technical staff of WIHG

PATENT -NA-

SCHOLARSHIPS AWARDED, GATE -NA-

PH.D. ADVISOR: -NA-

LIST OF PUBLICATIONS

(a) SCI Papers

- 1) Monika, **Parveen Kumar**^c, Sandeep, Sushil Kumar, A. Joshi, Sonia Devi (2020) Spatial variability studies of attenuation characteristics of Q_α and Q_β in Kumaon and Garhwal region of NW Himalaya, Natural Hazards, doi.org/10.1007/s11069-020-04031-7.

^c corresponding author

- 2) Sandeep, A. Joshi, S. K. Sah, **Parveen Kumar**^c, Sohan lal, Sonia Devi, Monika (2019) Modeling of 2011 Indo Nepal Earthquake and Scenario Earthquakes in the Kumaon Region and Comparative Attenuation Study Using PGA Distribution with the Garhwal Region. *Pure and Applied Geophysics*, 176 (11): 4687 - 4700.
^c corresponding author
- 3) Rajinder Parshad, **Parveen Kumar**^c, Snehmani, P. K. Srivastva (2019) Seismically induced snow avalanches at Nubra–Shyok region of Western Himalaya, India. *Natural Hazards*, 99: 843-855.
^c corresponding author
- 4) **Parveen Kumar**, Sonia Devi, Monika, Abhyuday Srivastava, Sandeep, A. Joshi, Richa Kumari (2019) Site response study based on H/V method using S-wave: A case study in the Kumaon Himalaya, India. *Himalayan Geology*, 40(2), 213-219.
- 5) Sandeep, A. Joshi, Sonia Devi, **Parveen Kumar**^c, S K Sah, Sohan Lal and Kamal (2019) Strong motion generation area modelling of the 2008 Iwate earthquake, Japan using modified semi-empirical technique. *Journal of Earth System Science*, 128:202, 1-16.
^c corresponding author
- 6) Sandeep, A. Joshi, S K Sah, **Parveen Kumar**^c, Sohan Lal and Kamal (2019) Modelling of strong motion generation areas for a great earthquake in central seismic gap region of Himalayas using the modified semi-empirical approach. *Journal of Earth System Science*, 128:100, 1-12.
^c corresponding author
- 7) Sohan Lal, A. Joshi, Sandeep, Monu Tomer, **Parveen Kumar**, Chun-Hsiang Kuo, Che-Min Lin, Kuo-Liang Wen, M. L. Sharma (2018) Modeling of the strong ground motion of 25th April 2015 Nepal earthquake using modified semi-empirical technique. *Acta Geophysica Vol. 66(4)*, 461–477.
- 8) Rakesh Singh, Ajay Paul, Arjun Kumar, **Parveen Kumar**, Y.P. Sundriyal (2018) Estimation and applicability of attenuation characteristics for source parameters and scaling relations in the Garhwal Kumaun Himalaya region, India. *Journal of Asian Earth Sciences*, vol. 159, 42–59.
- 9) **Parveen Kumar**, A. Joshi, Sushil Kumar, Sandeep, Sohan Lal (2018), Determination of site effect and anelastic attenuation at Kathmandu, Nepal Himalaya region and its use in estimation of source parameters of 25 April 2015 Nepal earthquake $M_w = 7.8$ and its aftershocks including the 12 May 2015 $M_w = 7.3$ event. *Natural Hazards*, vol. 91, 1003–1023.
- 10) Sandeep, A. Joshi, Sohan Lal, **Parveen Kumar**, S. K. Sah, Vandana, Kamal (2017), Simulation of Strong Ground Motion of the 2009 Bhutan Earthquake Using Modified Semi-Empirical Technique. *Pure and Applied Geophysics*, vol. 174, 4343–4356.

- 11) Sandeep, A. Joshi, S.K. Sah, **Parveen Kumar**, Sohan Lal, Vandana, Kamal, R.S. Singh (2017), Source model estimation of the 2005 Kyushu Earthquake, Japan using Modified Semi Empirical Technique. *Journal of Asian Earth Sciences*, vol. 147, 240–253.
- 12) Sandeep, A. Joshi, P. Kumari, S. Lal, Vandana, **Parveen Kumar** and Kamal (2017), Emergence of the Semi-Empirical Technique of Strong Ground Motion Simulation: A Review. *Journal of the Geological Society of India* vol. 89(6), 719-722.
- 13) Rajinder Parshad, Snehamani, **Parveen Kumar**, P.K.Srivastva and A.Ganju, (2017), Attenuation of coda waves in the Nubra-Siachen region, Himalaya, India. *Journal of the Geological Society of India*, vol. 89(5), 497-502.
- 14) Naresh Kumar, **Parveen Kumar**^c, Vishal Chauhan, Devajit Hazarika (2017) Variable anelastic attenuation and site effect in estimating source parameters of various major earthquakes including *M*_w 7.8 Nepal and *M*_w 7.5 Hindu kush earthquake by using far-field strong-motion data. *International Journal of Earth Sciences*, 106:2371–2386.
^c corresponding author
- 15) **Parveen Kumar**, A. Joshi, Sandeep, Ashvini Kumar and R. K. Chadha (2015), Detailed attenuation characteristics of shear waves in Kumaon Himalaya, India using the inversion of strong motion data. *Bulletin of the Seismological Society of America*, vol. 105(4), 1836–1851.
- 16) Sandeep, A. Joshi, Kamal, **Parveen Kumar**, Ashvini Kumar and Piu Dhibar, (2015), Modeling of strong motion generation areas of the Niigata, Japan, earthquake of 2007 using modified semi-empirical technique. *Natural Hazards*, vol. 77, 933–957.
- 17) Ashvini Kumar, A Sinvhal, A Joshi, D. Kumar, Sandeep and **Parveen Kumar** (2015), Coda wave attenuation characteristics for Kumaon and Garhwal Himalaya, India. *Natural Hazards*, vol. 75:1057–1074.
- 18) **Parveen Kumar** and A. Joshi, Sandeep and Ashvini Kumar (2015), Three-dimensional attenuation structure in the region of Kumaon Himalaya, India based on inversion of strong motion data. *Pure and applied Geophysics*, 172(2), 333-358.
- 19) A. Joshi, **Parveen Kumar**^c and S. Arora, (2014), Use of site amplification, anelastic attenuation for determination of source parameters of the Sikkim earthquake of 18 September, 2011 using far field strong motion data. *Natural Hazards*, 70, 217-235.
^c corresponding author
- 20) Sandeep, A. Joshi, Kamal, **Parveen Kumar**, Ashvini Kumar (2014), Effect of frequency-dependent radiation pattern in the strong motion simulation of the 2011 Tohoku, Japan earthquake using modified semi-empirical method. *Natural Hazards*, vol. 73, 1499–1521.
- 21) Sandeep, A. Joshi, Kamal, **Parveen Kumar**, Pushpa Kumari (2014), Modeling of strong motion generation area of the Uttarkashi earthquake using modified semi-empirical approach. *Natural Hazards*, vol. 73, 2041–2066.

- 22) **Parveen Kumar**, A. Joshi and O. P. Verma, (2013), Attenuation tomography based on strong motion data: Case study of central Honshu region, Japan. Pure and applied Geophysics, vol. 170, 2087-2106.
- 23) A. Joshi, **P. Kumar**, M. Mohanty, A. R. Bansal, V. P. Dimri, and R. K. Chadha, (2012), Determination of $Q_{\beta}(f)$ in different parts of Kumaon Himalaya from the inversion of spectral acceleration data. Pure and applied Geophysics, vol. 169, 1821-1845.

(b) Non-SCI Articles –NA-

(c) Chapter in Books –NA-

(d) Books-authored/Edited volume: -NA-

(e) Abstract volume:

- 1) Monika, **Parveen Kumar**, Sushil Kumar, Sandeep, Richa Kumari (2019) Use of site effect for the determination of source parameters of local earthquakes in Garhwal Himalaya, India. 3rd National Geo-Research Scholars meet, WIHG, Dehradun 6-8 June 2019, Page No. 147.
- 2) Sonia Devi, Sandeep, **Parveen Kumar**, Monika (2019) Estimation of Site response by H/V method for the 2016 Kumamoto earthquake. 3rd National Geo-Research Scholars meet, WIHG, Dehradun 6-8 June 2019, Page No. 123.
- 3) Richa Kumari, **Parveen Kumar**, Naresh Kumar, Sandeep (2019) Role of Site Effect for the assessment of Attenuation characteristics in Kinnaur, NW Himalaya India, 3rd National Geo-Research Scholars meet, WIHG, Dehradun 6-8 June 2019, Page No. 132.
- 4) Richa Kumari, **Parveen Kumar**, Naresh Kumar, Sandeep, Monika (2018) Attenuation characteristics of Coda wave of local earthquakes in Kinnaur region of North-West Himalaya, India. 55th annual convention of India Geophysical Union on Changing water cycle & water resources 5-7 December at Bhopal, 75.
- 5) Monika, **Parveen Kumar**, Sandeep, Sushil Kumar, A. Joshi, Richa Kumari (2018) Estimation of Q_{α} and Q_{β} of Garhwal and Kumaun Himalaya, India: A comparative study. 55th annual convention of India Geophysical Union on Changing water cycle & water resources 5-7 December at Bhopal, 10.
- 6) Ankush, Vishal Singh Rawat, S.S. Teotia, **Parveen Kumar**, A. Joshi (2018) Crustal anisotropy in Kumaon region, Uttarakhand: Shear wave splitting using local earthquake events. 55th annual convention of India Geophysical Union on Changing water cycle & water resources 5-7 December at Bhopal, 37.

- 7) **Parveen Kumar**, Sandeep, Abhyuday Srivastava, A. Joshi (2018) Site response study based on H/V method using strong motion data: Case study of Kumaon Himalaya, India. National Conference on Earth System Science with special reference to Himalaya: Advancement and Challenges, WIHG, Dehradun 16-18 May 2018, 145.
- 8) Sohan Lal, Anand Joshi, Sandeep, **Parveen Kumar**, (2017) Shallow Subsurface Velocity Structure using the Ambient Noise for the Garhwal and Kumaon Himalaya. AGU 11-15 December 2017, New Orleans, USA
- 9) Sandeep, A.Joshi, S.K. Sah, **Parveen Kumar**, Sohan Lal, R.S. Singh, (2017) Modelling of SGMAs of the 2005 Kyushu earthquake, Japan using modified semi empirical technique. 2nd National Geo-Research Scholars meet, WIHG, Dehradun 17-20 May 2017.
- 10) Rakesh Singh, Ajay Paul, Arjun Kumar, **Parveen Kumar**, Y.P. Sundriyal, (2017) Investigating of source parameters and radiated energy of local earthquakes in Garhwal-Kumaon region, NW Himalaya. 2nd National Geo-Research Scholars meet, WIHG, Dehradun 17-20 May 2017.
- 11) Sohan Lal, A. Joshi, **Parveen Kumar**, Deepak Kumar, (2016) Source Parameters of the Aftershock ($M_w = 6.9$) of Nepal earthquake. National Geo-Research Scholars meet, WIHG, Dehradun 1-4 June 2016.
- 12) Sandeep, S. K. Sah, A. Joshi, Sohan Lal, **Parveen Kumar**, Kamal (2016) Estimation of source model of the 2009 Bhutan earthquake using modified semi empirical technique. National conference and 33rd convention of Indian association of sedimentologists with emphasis on energy resources and climate change, Department of Geology, BHU, Varanasi 12-14 November 2016, 139
- 13) Sandeep, **Parveen Kumar**, Koushik Salui, Abhishek Sharma, S.K.Sah (2016) Site Amplification effects at Surface and Borewell Recording Sites of Japan using H/V Method. 1st Triennial Congress of FIGA, 53rd Annual Convention of IGU & 34th Annual Convention of AHI on Geosciences for sustainability, IIT (ISM), Dhanbad 8-10 November 2016, 25
- 14) Sandeep, Abhishek Sharma, **Parveen Kumar**, Koushik Salui, Sohan Lal (2016) Estimation of Site Amplification During the 1991 Uttarkashi Earthquake using H/V Method. 1st Triennial Congress of FIGA, 53rd Annual Convention of IGU & 34th Annual Convention of AHI on Geosciences for sustainability, IIT (ISM), Dhanbad 8-10 November 2016, 102
- 15) Ashvini Kumar, A. Joshi, Sandeep, **Parveen Kumar**, Azad Kumar (2014) Estimation of attenuation characteristics using frequency dependent coda wave quality factor of the Niigata prefecture region, Japan. 51st Annual Convention of Indian Geophysical Union on Earth Sciences and Society, India 19-21 November 2014, 142.

- 16) Sandeep, A. Joshi, Kamal, **Parveen Kumar**, Ashvini Kumar (2014) Strong Motion Generation Area modeling of the 2011 Tohoku earthquake using modified semi-empirical technique, 51st annual convention of Indian Geophysical Union on Earth Sciences and Society, India.
- 17) **Parveen Kumar**, A. Joshi, Dinesh Kumar, S. S. Teotia, Ashvini Kumar, Sandeep (2014), Characterization of shear wave attenuation in the Central Honshu region, Japan from the inversion of strong motion records, 51st annual convention of Indian Geophysical Union.
- 18) **Parveen Kumar** and A. Joshi, (2013), Regional velocity model in Kumaon Himalaya from localization of strong motion events, National conference on Earth Sciences in India: challenges and emerging trends.
- 19) **Parveen Kumar** and A. Joshi, (2013), Stability of algorithm for determination of three-dimensional attenuation structures, International conference on Challenges in Disaster mitigation and Management.
- 20) **Parveen Kumar** and A. Joshi, (2012), Attenuation tomography of Kumaon Himalaya in Pithoragarh region using strong motion data, Nation conference on Engineering Geophysics for Civil Engineering and Geo-Hazards 22-23 November.

(f) Reports/Other Documents: -NA-

(g) Articles in Proceeding Volumes:

- 1) Sandeep, A. Joshi, **P. Kumar**, S. Lal, Kamal and S. K. Sah (2018) Modelling of Strong Motion Generation Areas of the 2005 Kyushu Earthquake using Modified Semi Empirical Technique, 16th Symposium on Earthquake Engineering December 20-22, IIT Roorkee, India Paper No. 326.