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RESEARCH GROUP: GEOPHYSICS GROUP

FIELD OF SPECIALIZATION:

SEISMOLOGY, SEISMIC TOMOGRAPHY, EARTHQUAKE PRECURSORY RESEARCH AND SEISMIC HAZARD

EDUCATION:

- **Post Doctorate** in seismology, 2015, Marie Curie Postdoc under the TALENT-UP fellowship of Europe from International Centre for Theoretical Physics (ICTP), Trieste, Italy
- **Ph.D.** in seismology, 2010, from Department of earth Science, Indian Institute of Technology, Roorkee, India.
- **P.G.D., Computer Application**, December 1995, Himachal Pradesh University, India.
- **M.Sc.**, Applied Geophysics, 1994, Guru Nanak Dev University, India.
- **B.Sc.**, Govt. College Hamirpur (H.P), 1992 Himachal Pradesh University, India.

PROFESSIONAL EXPERIENCE:

Employment

2021 - Present	Scientist – E, Wadia Institute of Himalayan Geology, Dehradun, India
2016 - 2020	Scientist – D, Wadia Institute of Himalayan Geology, Dehradun, India
2012 - 2016	Scientist – C, Wadia Institute of Himalayan Geology, Dehradun, India
2007 - 2012	Scientist – B, Wadia Institute of Himalayan Geology, Dehradun, India
2005 - 2007	Project Scientist – B, Wadia Institute of Himalayan Geology, Dehradun, India
2004 - 2005	Research Associate, CMMACS-CSIR, NAL Belur campus, Bangalore, India
1999 - 2004	Project Assistant, Geo-Scientific Instrument Division, CSIO-CSIR, Chandigarh, India
1996 - 1999	STA, Geophysics Department, Guru Nanak Dev University, Amritsar, India

VISITING POSITIONS:

TEACHING EXPERIENCE:

SERVICES:

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

Dr. Amit Kumar awarded Ph.D. 2017 by Indian Institute of Technology Roorkee, Roorkee, India

Mr. Dharendra Kumar Yadav registered at Indian Institute of Technology (ISM), Dhanbad, India
Mr. Vivek G. Babu registered at Indian Institute of Technology (ISM), Dhanbad, India
Ms. Vaishali Shukla registered at Kumaon University, Nainital, India
Mr. Sanjay Kumar Verma registered at Indian Institute of Technology (ISM), Dhanbad, India
Ms. Richa Kumar registered at Baranasi Hindu University, Varanasi, India
Ms. Nongmeithem Menaka Chanu registered at Indian Institute of Technology Roorkee, India

b. Training:

c. Teaching:

d. Membership:

e. Editorial Board: (1) Associate Editor of “Himalayan Geology”
(2) Guest Editor of “Quaternary International” Volume 462, December 30, 2017 for
“Earthquake and Active tectonics of the Himalayan convergent boundary”

f. International/National Seminars/Workshop:

2019: Delivered invited talk delivered on “Quantification of seismic regimes of the Himachal Himalaya” in the “*National Workshop on Disaster management to mark 1905 Kangra earthquake*” at Dharamshala Himachal Pradesh during 3-4 April, 2019.

2018: Delivered invited talk on “The status of earthquake precursory research based on the Multi-Parametric Geophysical Observatory, Ghuttu Garhwal Himalaya” at *Indian Institute of Remote Sensing (IIRS)*, Dehradun, India on October 26, 2018.

2018: Invited talk on “Seismicity and sub-surface lithosphere structure of the Himalaya and India-Eurasia collision zone” at *International Centre for Theoretical Physics (ICTP)*, Trieste, Italy on October 5, 2018 in the weekly seminar.

2017: Oral presentation on “Assessment of seismic hazard and applicability of earthquake prediction for the Himalayan regions”. *2nd Himachal Pradesh Science Congress*, November 20-21, 2017.

2017: delivered oral presentation on “Monitoring of current seismicity in the gap areas to understand the strain partitioning and earthquake fault segmentation studies” at *Indian Institute of Remote Sensing (IIRS)* on October 12, 2017 under IIRS-WIHG collaboration project.

2016: delivered two Expert Lectures on “Seismic wave tomography and Earth structure” in *Expert Lecture on Geophysical Software Practices for subsurface Imaging* at Indian Institute of Technology (ISM), Dhanbad on December 13, 2016.

2016: provided hands on/Practical (Two Sessions): 1. Earthquake Source parameter determinations using SEISAN and HypoDD software. 2. Surface wave dispersion analysis using FTAN (Frequency Time Analysis) in “*Expert Lecture on Geophysical Software Practices for subsurface Imaging*” at IIT(ISM), Dhanbad on December 13, 2016.

2015: Delivered invited talk on “Crustal velocity structure and seismotectonic of Kinnaur region of NW Himalaya: new constraints based on micro-earthquake activity” in *18th International Conference of International Academy of Physical Sciences (CONIAPS XVIII)* on Recent Trends in Physical Sciences held at University of Allahabad, Allahabad, 22-24 December, 2015.

- 2015: Oral presentation on “Pre-cursory signatures observed at MPMO Ghuttu associated with Mw 7.8 Nepal earthquake of 2015” in *30th Himalaya-Karakoram-Tibet workshop* held at WIHG, Dehradun, 6-8 October, 2015.
- 2015: Poster presentation on “Sub-surface structure investigation and characterization of Moho geometry under the Himalaya-Karakoram-Tibet collision using surface wave Seismic tomography” in *30th Himalaya-Karakoram-Tibet workshop* held at WIHG, Dehradun, 6-8 October, 2015.
- 2014: Oral Presentation on “High resolution mapping of the crustal architecture by ambient noise tomography in the North Western Himalaya” in *2014 AGU Fall meeting*, 7, S22B, held at San Francisco during 15 -19 December, 2014.
- 2014: Oral Presentation on “Investigation of sub-surface structure in the western part of Himalaya-Tibet collision using Seismic tomography” in “*Advanced school on Megathrust Earthquakes and Tsunami*” held at Trieste during 13-24 October, 2014.
- 2014: Lectures delivered on “Frequency Time Analysis (FTAN) software” in *Workshop on Geophysical Monitoring and Modeling for Sustainable Energy and Geohazard Solution* held at Kigali Rwanda during 15-25 September, 2014.
- 2014: Chaired Geophysics Session and delivered oral presentation on “Investigation of sub-surface structure and anisotropy in the Himalaya-Karakoram-Tibet collision using seismic tomography” in Montomoli C., et al., eds., proceedings for *the 29th Himalaya-Karakoram-Tibet Workshop*, Lucca, Italy.
- 2013: Lecture delivered on 24th December, 2013 on “Time Series Analysis” in *WIHG Winter School in Geomathematics* sponsored by Science & Engineering Research Board (SERB), DST New Delhi and held at WIHG, Dehradun during 16-30, December, 2013.
- 2013: Delivered invited talk on “Tectonics, Seismicity and sub-surface structure of the Western Himalaya” in the *Joint China-India Workshop on Earthquake Disaster Mitigation* during September 15-21, 2013, Shanghai, China.
- 2013: Delivered invited talk “Significant results of earthquake precursors from multi-parameter geophysical data of Ghuttu, Garhwal Himalaya” in the *Joint China-India Workshop on Earthquake Disaster Mitigation* during September 15-21, 2013, Shanghai, China (Invited Talk).
- 2012: Oral presentation “Earthquake precursory research in NW Himalaya based on the MPMO data” in the *Third International Geo-Hazards Research Symposium*, Nw Tehri, India, June 10-14, 2012.
- 2011: oral presentation on “Tectonic linkage with along-strike variation of the seismicity in the Northwest Himalaya” in International workshop on *Indian Monsoon and Himalayan Geodynamics*, Dehradun, India, 2-5 November, 2011.
- 2011: Invited talk on “The status of earthquake precursory research in Garhwal Himalaya based on MPMO data at Ghuttu” in the *Indo-Iceland Workshop*, Dehradun, India, 20-21 October, 2011.
- 2010: Invited talk on “Depth analysis and active tectonics in Garhwal-Kumaon Himalaya region of North-West Himalaya” in Indo-Norwegian workshop on Geohazards held at New Delhi, India during September, 12-14, 2011.
- 2010: invited talk on “Application of RTL algorithm for Indian continent seismological data to Earthquake Precursory study” in the International workshop on *Earthquake precursor studies-scenarios and future directions*, Hyderabad, India 25-27 November, 2010.

- 2010: Oral presentation on “Subsurface crustal structure investigation in the Kangra-Chamba region of NW Himalaya through tomography” in the 8th General Assembly of Asian Seismological Commission (ASC2010), Hanoi, Vietnam, 8-10 November, 2010.
- 2010: oral presentation on “Spatial and Depth Variation of Tectonic Stress Pattern obtained in the Kangra-Chamba Seismic Regime of NW Himalaya” in the 7th Annual Meeting of Asia Oceania Geosciences Society (AOGS), Hyderabad, India, 5-9, July, AOGS, 2010.
- 2010: Oral presentation on “Strong Hydrological Effects on Superconducting Gravimeter Observations in Garhwal Himalaya” in the 7th Annual Meeting of Asia Oceania Geosciences Society (AOGS), Hyderabad, India, 5-9, July, 2010.
- 2009: Oral presentation on “Quantification of Seismic Regimes of NW Himalaya” in *Seismogenesis to PREDiction of Earthquakes: Himalayan and Indian Prospective [SPRED-2009]*, Dehradun, India, 22-24 Oct., 2009.
- 2009: Oral presentation on “Multi-Parameter Geophysical Observation at Ghuttu: Superconducting Gravimeter Component” in the *Seismogenesis to PREDiction of Earthquakes: Himalayan and Indian Prospective [SPRED-2009]*, Dehradun, India, 22-24 October, 2009.
- 2009: Oral presentation on “Observation of Coseismic change and Identification of Hydrological effects in gravity using Superconducting gravimeter at MPMGO, Ghuttu, Garhwal Himalaya” in the **IGU 46th Annual Convention and Meeting** at Dehradun, India, 5-7 October, 2009
- 2008: oral presentation on “Subsurface structure and tectonic deformation in NW Himalaya using local earthquake data” in the 9th Workshop on 3D Modelling of Seismic waves Generation, Propagation and their Inversion, **ICTP, Trieste, ITALY**. Sept. 22 – Oct. 4, 2008.
- 2007: Lecture delivered on 8th February, 2007 on “Basics of seismology and Tomographic investigation of subsurface crustal structure – Practical” in 3rd Module of SERC School on Crustal deformation and Tectonic Geomorphology: Modern structural geology and Tectonics at WIHG, Dehradun during February 06-20, 2007.
- 2006: oral presentation on “Seismotectonic model for Kangra-Chamba region, Himachal Himalaya” in the **Himalaya Earthquakes: A Fresh Appraisal, Dehradun, India**, October 7-8, 2006, pp. 52-53.
- 2005: oral presentation on “Multiple Geophysical Investigations around Eastern Syntaxis” in the *Fifth International Workshop on Seismic Analysis in the South Asia Region* at **Xian, China**. Nov. 13-16, 2005, pp. 26-26.
- 2004: Oral presentation on “Estimation of Coda Wave Attenuation for NW Himalayan Region using Local Earthquakes” in the 7th Workshop on 3D Modelling of Seismic waves Generation, Propagation and their Inversion: **ICTP, Trieste, ITALY**. October 25 – November 5, 2004.

g. External Research Fund received & Project Handled:

1. Multi-Parametric Geophysical Observatory for earthquake precursory research (MPGO-EPR) at Ghuttu Garhwal Himalaya. **Principal Investigator: Dr. Naresh Kumar** – Sponsored by MoES, New Delhi. Duration: 2016-2020 Budget: 228.8 Lakhs
2. Geodynamics and Seismicity Investigation in the Western Himalaya. **Co-PI: Dr. Naresh Kumar** – Sponsored by IIRS (ISRO), Dehradun and WIHG, Dehradun. Duration: 2015-2019, Budget: 91.6 Lakhs

3. Present day subsurface configuration and Geodynamics of the Kumaon Himalaya: An Integrated Geophysical and Geological Investigation. **Co-PI: Dr. Naresh Kumar** – Sponsored by MoES, New Delhi. Duration: 2016-2018, Budget: 38.85
4. Multi-Parametric Geophysical Observatory for earthquake precursory research (MPGO-EPR) at Ghuttu Garhwal Himalaya. Principal Investigator: Director, WIHG, **Co-ordinator: Dr. Naresh Kumar** – Sponsored by MoES, New Delhi. (2010-2015), Budget: 1099 Lakhs
5. Indo-Iceland Collaborative Project for earthquake prediction research, Principal Investigator: Dr. Shushil Kumar, **Co-PI: Dr. Naresh Kumar** – Sponsored by DST, New Delhi and Govt. of Iceland. (2012-2015)
6. Multi-Parametric Geophysical Observatory for earthquake precursory research (MPGO-EPR) at Ghuttu Garhwal Himalaya. Principal Investigator: Director, WIHG, **Co-PI: Dr. Naresh Kumar** – Sponsored by MoES, New Delhi. (2005-2010)
- 7.

h. Member of important Committees:

AWARDS/FELLOWSHIPS/HONORS/MEMORIAL LECTURES:

a. Awards/Medals/Prizes:

- 2010: Received *best paper award* for the “BBSA” paper of 2009 by Wadia Institute of Himalayan Geology (WIHG), Dehradun, India.
- 2009: **Best team worker Award** by Wadia Institute of Himalayan Geology (WIHG), Dehradun, India.
- 1994: Awarded the **Medal** by Guru Nanak Dev University (GNDU), Amritsar for obtaining **First (Merit) position** in M.Sc. (Applied Geophysics).

b. Fellowships:

1. **Marie Curie Post Doctorate fellowship** within the European Programme “Talents up for an International House (TALENTS UP)” cofounded by AREA Science Park Consortium of Italy for research project “Himalaya vs European Alps constrained by seismic Tomography (HEAT)” at ICTP, Trieste, Italy.
2. **Regular Associate** of the Abdus Salam International Centre of Theoretical Physics (ICTP), Trieste, Italy starting from January 01, 2014.
3. **Junior Associate** of the Abdus Salam International Centre of Theoretical Physics (ICTP), Trieste, Italy (2006-2013).
4. **Research Associate** at Centre for Mathematical Modelling and Computer Simulation (CMMACS), Bangalore, India.

c. Memorial Lectures:

d. Recognition/Honors:

COUNTRIES VISITED:

- 2018: **Italy** - ICTP Trieste, Italy for one month (13 September – 14 October, 2018) in the capacity of Regular Associate of ICTP.
- 2018: **Switzerland** - Lausanne University, Lausanne Switzerland during 9-12 September, 2018 to attend “the 33rd Himalaya-Karakoram-Tibet (HKT-2018) workshop”.
- 2014: **USA** - San Francisco, United States America to attend “2014 AGU Fall meeting” during 15 -19 December, 2014.
- 2014: **Rwanda** - Kigali, Rwanda during 16-25 September, 2014 to organise “Workshop on Geophysical Monitoring and Modeling for Sustainable Energy and Geohazard Solution”.
- 2014: **Italy** - Lucca, Italy during 2-4 September, 2014 to attend “the 29th Himalaya-Karakoram-Tibet (HKT) Workshop”.
- 2014: **Italy** - ICTP, Trieste, Italy for one year to pursue **Marie Curie Post Doctorate Fellowship** in the frame work of the Talents Up for an International House (TALENTS UP).
- 2013: **Iceland** - Reykjavik, Iceland during 06-14 October, 2013 to work on Indo-Iceland Collaborative Project for earthquake prediction research”.
- 2013: **China** - Shanghai and Chengdu, China to attend “Joint China-India workshop on Earthquake Disaster Mitigation” during 15-21 September, 2013.
- 2013: **Italy** - ICTP, Trieste, Italy 48 days (14 May – 30 June, 2013) as Junior Associate and attended “Earthquake tectonics and Hazards on the Continents (SMR2464)” during 17-28 June, 2013.
- 2012: **Nepal** - Kathmandu, Nepal to attend “Workshop on Quantification of Seismic Hazards in the Indo/Asian Collision Zone” during 15-22 November 2012.
- 2011: **Italy** - ICTP, Trieste, Italy for three months (01 May - 28 July, 2011) as Junior Associate and to attend “Advanced School on Scaling Laws in Geophysics: Mechanical and Thermal Processes in Geodynamics”. (23 May – 03 June, 2011).
- 2010: **Vietnam** - Hanoi, Vietnam to attend “8th General Assembly of Asian Seismological Commission (ASC2010)” during 8-10 November, 2010.
- 2010: **Italy** - ICTP, Trieste, Italy for three months (12 July- 10 October, 2010) as Junior Associate and to attend “Advance school on Direct and Inverse Problems of Seismology” during 27 September – 09 October, 2010.
- 2008: **Italy** - ICTP, Trieste, Italy as Junior Associate (25 September – 10 November) and to attend “9th workshop on 3-D Modelling of Seismic Waves Generation, Propagation and their Inversion” (SMR196, 22 September – 04 October, 2008).
- 2008: **USA** - Sant Louise Univercity, Sant Louise and GWR Instruments, San Deigo USA during 11th – 30th August, 2008 for geting “Training on Super Conducting Gravimeter (SG) operation, maintenance, data collection and data analysis”.
- 2006: **Russia** - Moscow, Russia under Integrated Long Term Programme (ILTP) during 20th June – 10th July, 2006.
- 2005: **China** - Xian, China to attend “5th International Workshop on Seismic Analysis in the South Asia Region”, during 13-16, November, 2005.
- 2004: **Italy** - ICTP, Trieste, Italy to attend “7th workshop on 3-D Modelling of Seismic Waves Generation, Propagation and their Inversion” during 25 October – 5 November 2004.

NATIONAL/INTERNATIONAL (outside CSIR-NGRI) COLLABORATION:

NAME	AFFILIATION
DR. ABDELKRIM AUODIA	EARTH SYSTEM PHYSICS, INTERNATIONAL CENTRE FOR THEORETICAL PHYSICS (ICTP, TRIESTE, ITALY)
DR. A.A. LYUBUSHIN	Schmidt Institute of Physics of the Earth, Russian Academy of Sciences, Moscow Russia
DR. SURYA PACHHAI	Department of Geology and Geophysics, University of Utah, USA
PROF. SAGARIKA MUKHOPADHYAY	DEPARTMENT OF EARTH SCIENCES, INDIAN INSTITUTE OF TECHNOLOGY ROORKEE, INDIA
PROF. P.N.S. ROY	INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR, INDIA
PROF. SANJIT K. PAL	INDIAN INSTITUTE OF TECHNOLOGY (ISM), DHANBAD, INDIA

Inside WIHG Collaborator:

Dr. Devajit Hazarika
Dr. D.K. Yadav
Dr. Ajay Paul
Dr. Gautam Rawat
Dr. P.K.R. Gautam
Dr. Parveen Kumar
Dr. A.K. Singh

PATENT -

SCHOLARSHIPS AWARDED, GATE

PH.D. ADVISOR:

LIST OF PUBLICATIONS

(a) SCI Papers

1. Paul, A., Hazarika, D., Wadhwan, M & Naresh Kumar (2021). Upper mantle anisotropy in the northwest Himalaya and Ladakh-Karakoram zone based on SKS splitting analysis. **J. Geodynamics**, <https://doi.org/10.1016/j.jog.2021.101817>.
2. **Kumar Naresh**, Hazarika, D. & K. Sain (2021). Earthquakes: Basics of seismology and computational techniques Book chapter in *Basics of COMPUTATIONAL GEOPHYSICS* Edited by P. Samui, B. Dixon and D.T.Bui, 47-80. <https://doi.org/10.1016/B978-0-12-820513-6.00023-0>.
DOP: 01/2021
3. Hazarika, D., Hajra, S., **Kumar Naresh** (2021). Imaging the Moho and Main Himalayan Thrust beneath the Kumaon Himalaya: constraints from receiver functions. **Geophy. J. int.**, 224(2), 858-870.
DOP: 02/2021
4. Gautam, P.K., Rajesh, S., **Kumar Naresh** & C.P. Dabral (2020). GPS measurements on pre-, co- and post-seismic surface deformation at first multi-parametric geophysical observatory, Ghuttu in garhwal Himalaya, India. **J. Geod. Sci.**, 10, 136-144.
DOP: 12/2020

5. Kumari, R., Kumar, P., **Kumar Naresh** & Sandeep (2020). Role of site effect for the evaluation of Attenuation Characteristics of P, S and coda waves in Kinnaur region, NW Himalaya. **Journal of Earth System Science**, <https://doi.org/10.1007/s12040-020-01454-5>. DOP: 12/2020
6. Shukla, V., Chauhan, V., **Kumar Naresh** & D. Hazarika (2020), Assessment of Rn-222 continuous time series for the identification of anomalous changes during moderate earthquakes of the Garhwal Himalaya. **Applied Radiation and Isotope**, 166, <https://doi.org/10.1016/j.apradiso.2020.109327>. DOP: 12/2020
7. **Kumar Naresh**, Aoudia, A., Guidarelli, M., Babu, V.G., Hazarika, D. & D.K. Yadav (2019). Delineation of lithosphere structure and characterization of the Moho geometry under the Himalaya-Karakoram-Tibet collision zone using surface wave tomography. **Geological Society of London Spec. Pub.** SP481, 19-40. DOI: 10.1144/SP481-2017-172. DOP: 10/2019
8. Khandelwal, D.D., **Kumar Naresh** & V. Chauhan (2019). Diurnal pressure variation in the Garhwal Himalaya: Atmospheric fluctuations associated with the solid Earth tide. **Weather**, 74(10), 340-343 DOI: <https://doi.org/10.1002/wea.3265>. DOP: 10/2019
9. Gautam, P.K., Sathyaseelan, R., Pappachen, J.P., **Kumar Naresh**, Biswas, A., Philip, G., Dabral, C.P. & S.K. Rai (2019). GPS measured static and kinematic offsets at near and the far field of the 2011 Mw 9.0 Tohoku-Oki earthquake. **Geodesy and Geodynamics**, 10(3), 213-227. DOI: <https://doi.org/10.1016/j.geog.2019.03.003> DOP: 05/2019
10. Hazra, S., Hazarika, D., Bankhwal, M., Kundu, A & **Kumar Naresh** (2019). Average crustal thickness and Poisson's ratio beneath the Kali River Valley, Kumaon Himalaya. **Journal of the Asian Earth Sciences**, 173, 176-188. DOI:<https://doi.org/10.1016/j.jseaes.2019.01.010> DOP: 15/04/2019
11. **Kumar Naresh** & D.K. Yadav (2019). Coda Q estimation for Kinnaur region and surrounding part of NW Himalaya. **Journal of Seismology**, 23(2), 271-285. DOI:<https://doi.org/10.1007/s10950-018-9805-2>. DOP:03/2019
12. Gautam, P.K., Chauhan, V., Sathyaseelan, R. **Kumar Naresh** & J.P. Pappachen (2018). Co-seismic ionospheric GPS-TEC disturbances from different source characteristic earthquakes in the Himalaya and the adjoining regions. **NRIAG J. Astron. Geophys.** 7(2), 237-246. DOI: <https://doi.org/10.1016/j.nrjag.2018.05.009>. DOP: 12/2018
13. Hazarika, D., Hajra, S., Bankhwal, M., Verma, S.K., Yadav, D.K. & **Kumar Naresh** (2018). Crustal structure beneath Multi-Parametric Geophysical Observatory at Ghuttu, Garhwal Himalaya. **Himalayan Geology**, 39(2), 62-70. DOP: 07/2018
14. Kumar, A., **Kumar Naresh** & S. Mukhopadhyay (2018). Investigation of azimuthal variation in seismic surface waves group velocity in the western part of Himalaya-Tibet and Indo-Gangetic plains region. **Himalayan Geology**, 39 (1), 33-46. DOP: 01/2018
15. Kumar, A., Mukhopadhyay, S., **Kumar Naresh** & P.R. Baidya (2018). Lateral variation in crustal and mantle structure in Bay of Bengal based on surface wave data. **Journal of Geodynamics**, 113, 32-42. DOI:<https://doi.org/10.1016/j.jog.2017.11.006> DOP: 01/2018
16. Singh, R., Prasath, R.A., Paul, A. & **Kumar Naresh** (2018). Earthquake swarm of Himachal Pradesh in Northwest Himalaya and its Seismotectonic implications. **Physics of the Earth**

- Planetary Interiors**, 275, 44-55. DOI: <https://doi.org/10.1016/j.pepi.2018.01.002>
DOP: 02/2018
17. Jayangondaperumal, R., Niemi, T.M., & **Kumar Naresh** (2017). Earthquakes and active tectonics of the Himalayan convergent boundary. **Quaternary International**, 462, 1-2. DOI: <https://doi.org/10.1016/j.quaint.2017.10.008>
DOP:12/2017
 18. **Kumar Naresh**, Kumar, P., Chuahan, V., & Hazarika D. (2017). Role of 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 Hindukush earthquake by using far field strong motion data. **International Journal Earth Sciences**, 106, 2371–2386. DOI: 10.1007/s00531-016-1432-y
DOP: 10/2017
 19. Gautam, P. K., Gahalaut, V.K., Prajapati, S. K., **Kumar Naresh**, Yadav, R. K., Rana, N., & C. P. Dabral (2017). Continuous GPS measurements of crustal deformation in Garhwal-Kumaun Himalaya. **Quaternary International**, 462, 124-129. DOI: <https://doi.org/10.1016/j.quaint.2017.05.043>
DOP: 12/2017
 20. Sathyaseelan, R., Mundepi, A.K., & **Kumar Naresh** (2017). Quantifying seismic vulnerability, dynamical shear strain and liquefaction of the Quaternary deposits in the Doon valley near the Main Boundary Thrust in the Northwest Himalaya, India. **Quaternary International**, 462, 162-175. DOI: <https://doi.org/10.1016/j.quaint.2017.05.018>
DOP: 12/2017
 21. Hazarika, D., Wadhawan, M., Paul, A., **Kumar Naresh**, & K. Borah (2017). Geometry of the Main Himalayan Thrust and Moho beneath Satluj valley, Northwest Himalaya: constraints from receiver function analysis. **JGR - Solid Earth**, 122(4), 2929-2945. DOI: <https://doi.org/10.1002/2016JB013783>
DOP: 04/2017
 22. Kumar, A., **Kumar Naresh**, Mukhopadhyay, S., & P. Vaidya (2017). Crustal and uppermost mantle structures in the frontal Himalaya and Indo-Gangetic basin using surface wave: Tectonic implications. **Quaternary International**, 462, 34-49. DOI: <https://doi.org/10.1016/j.quaint.2017.02.035>
DOP: 12/2017
 23. **Kumar Naresh**, Chauhan, V., Dhamodharan, S., Rawat, G., Hazarika, D., & P.K.R. Gautam (2017). Prominent pre-cursory signatures observed in soil and water radon data at MPMGO, Ghuttu for M_w 7.8 Nepal Earthquake. **Current Science**, 112(5), 907-909.
DOP: 10/03/2017
 24. Yadav, D.K., **Kumar Naresh**, Hazarika, D., Yadav, D.N., & M. Wadhawan (2017). Seismicity and tectonics of Kinnaur Himalaya and adjoining region inferred from focal mechanism solutions and stress tensor inversion. **Himalayan Geology**, 38(1), 49-55.
DOP: 01/2017
 25. Wadhawan, M., Hazarika, D., Paul, A., **Kumar Naresh**, Thakur, S.S., & V. Gupta (2017). Crustal thickness and Poissons's ratio variation in the Satluj Valley, Northwest Himalaya. **Himalayan Geology**, 38(1), 38-48.
DOP: 01/2017
 26. Hazarika, D. Paul, A., Wadhawan, M., **Kumar Naresh**, Sen, K., & C.C. Pant (2017). Seismotectonics of the trans-Himalaya, Eastern Ladakh, India: constraints from Moment Tensor Solutions of local earthquake data. **Tectonophysics**, 698, 38-46. DOI: <https://doi.org/10.1016/j.tecto.2017.01.001>
DOP:15/02/2017

27. Chauhan, V., Khandelwal, D.D., & **Kumar Naresh** (2016). A comparative study of gravity and crustal deformation data through Superconducting Gravimeter and GPS in the North-West Himalayan region. **Episodes**, 39(4), 599-603. DOI: <https://doi.org/10.18814/epiiugs/2016/v39i4/103892> DOP: 12/2016
28. Yadav, D.K., Hazarika, D., & **Kumar Naresh** (2016). Seismicity and stress inversion study in the Kangra-Chamba region of Northwest Himalaya. **Natural Hazards**, 82(2), 1393-1409. DOI 10.1007/s11069-016-2251-y. DOP: 06/2016
29. **Kumar Naresh**, & D.D. Khandelwal (2015). Strong motion data analysis of the 4 April 2011 Western Nepal earthquake (M 5.7) and its implications to the seismic hazard in the Central Himalaya. **Current Science**, 109(10), 1822-1830. DOI: doi: 10.18520/v109/i10/1822-1830 DOP: 25/11/2015
30. **Kumar Naresh**, Mate, S., & S. Mukhopadhyay (2014). Estimation of Q_p and Q_s of Kinnaur Himalaya. **Jour of Seismology**, 18(1), 47-59. DOI:10.1007/s10950-013-9399-7. DOP: 01/2014
31. Hazarika, D., Sen, K., & **Naresh Kumar** (2014). Characterizing the intracrustal low velocity zone beneath northwest India-Asia collision zone. **Geophysical Journal International**, 199, 1338-1353. DOI: <https://doi.org/10.1093/gji/ggu328> DOP: 12/2014
32. Khandelwal, D.D., Gahaluat, V.K., **Naresh Kumar**, Kundu, B., & R. K. Yadav (2014). Seasonal variation in the deformation rate in NW Himalayan region. **Natural Hazards**, 74(3), 1853-1861. DOI: 10.1007/s11069-014-1269-2 DOP: 12/2014
33. **Kumar Naresh**, Rawat, G., Choubey, V.M., & D. Hazarika (2013). Earthquake precursory research in western Himalaya based on the MPOGO data. **Acta Geophysica**, 61(4), 977-999. DOI: 10.2478/s11600-013-0133-1. DOP: 08/2013
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