



Dr. Naresh Kumar

Scientist & Hon-Associate professor (AcSIR)

In-Charge Activity-2B (Seismology)

Geophysics Group,

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Google Scholar Page: <https://scholar.google.com/citations?user=vj9TI6MAAAAJ>

ResearchGate: <https://www.researchgate.net/profile/Naresh-Kumar-131>

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 Sciences, 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 & In-Charge Activity-2B (Seismology Division), 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. in 2017 by Indian Institute of Technology Roorkee, Roorkee, India

Dr. Rohit Singh Sajwan awarded Ph.D. in 2022 by H.N.B. Garhwal University, Srinagar, Uttarakhand, India

Dr. Richa Kumari awarded Ph.D. in 2023 by Baranasi Hindu University, Varanasi, India

Dr. Vaishali Shukla awarded Ph.D. in 2023 by Kumaon University, Nainital, Uttarakhand, India

Mr. Dharendra Kumar Yadav submitted Ph.D. Thesis at Indian Institute of Technology (ISM), Dhanbad, India

Ms. Nongmeithem Menaka Chanu submitted Ph.D. Thesis at Indian Institute of Technology Roorkee, India

Mr. Sanjay Kumar Verma submitted Ph.D. Thesis at Indian Institute of Technology (ISM), Dhanbad, India

Mr. Vivek G. Babu registered at Indian Institute of Technology (ISM), Dhanbad, India

b. Training:

c. Teaching:

d. Membership:

1. **Executive member** of the Indian Society of Earthquake Science (ISES) for 2023-2026.
2. **Fellow** of the Geological Society of India starting from July 2022.
3. **Member** of Indian Geophysical Union (IGU) since 2009
4. **Member** of the Himalayan Geology since 2008

- e. Editorial Board:** (1) Editorial Board Member of “Discover Geoscience” since 2023
(2) Associate Editor of “Himalayan Geology” since 2020
(3) 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:

1. Organization/

2023: Coordinator for conducting International Earth Science Olympiad (IESO-2023) test at **Dehradun Centre, India.**

2022: Member organization committee of Federation of Indian Geosciences Association-2022 (FIGA-2022) held at **Dehradun, India** during November 16-18, 2022.

2022: Resource person (moderator of Technical session and field trip Leh-Sumdo section) of the “6th National Geo-Research Scholars Meet” held during June 7-10, 2022 at University of **Ladakh, Leh Campus, Leh, India.**

2021: Session moderator in the “5th National Geo-Research Scholars Meet: Webinar” held at WIHG, **Dehradun, India** during July 22-23, 2021.

2020: Coordinator for conducting International Earth Science Olympiad (IESO-2020) test at **Dehradun Centre, India.**

2019: Coordinator for conducting International Earth Science Olympiad (IESO-2019) test at **Dehradun Centre, India.**

- 2015: Leading Convenor of a “Special session on M 7.8 Nepal Earthquake of 2015” in the 30th Himalaya-Karakoram-Tibet workshop held at **Dehradun, India** during 6-8 October 2015.
- 2014: Faculty and organizing committee member of “Workshop on Geophysical Monitoring and Modeling for Sustainable Energy and Geohazard Solution” held at **Kigali, Rwanda** during 16-25 September 2014.
- 2013: Faculty and organizing committee member of “Winter School in Geomathematics” organized by Wadia Institute of Himalayan Geology, **Dehradun, India** and sponsored by DST New Delhi under SERC programme.
- 2009: Leading Convenor of National conference on “*Seismogenesis to PREDiction of Earthquakes: Himalayan and Indian Perspective [SPRED-2009]*”, held at WIHG **Dehradun, India**, 22-24 October 2009.
- 2007: Member LOC of National conference on “*Collision Zone Geodynamics Conference*” held at WIHG, **Dehradun, India** during 20-21, September 2007
- 2006: Member LOC of National conference on “*Himalaya Earthquakes: A Fresh Appraisal*”, at WIHG **Dehradun, India**, October 7-8, 2006

2. Participation/Paper Presentation

- 2023: Delivered Keynote Lecture on “Geophysical Tools and Techniques: Study of Geodynamics and natural Hazards in the Himalayan Region” 7th National Geo-Research Scholar’s Meet-2023, 12-14 September 2023, WIHG, Dehradun, India
- 2023: Delivered oral presentation on “Identification of earthquake precursors during moderate magnitude earthquakes in the Garhwal Himalaya” 7th Annual convention on “Advances in Earthquake Science (AES-2023)”, Srinagar Jammu & Kashmir (UT), India, May 25-27, 2023.
- 2023: Delivered oral presentation on “Imaging the crustal architecture of NW Himalaya using ambient noise cross-correlation array dispersions” 7th Annual convention on “Advances in Earthquake Science (AES-2023)”, Srinagar Jammu & Kashmir (UT), India, May 25-27, 2023.
- 2022: Delivered Invited talk on “Multi-parametric observations for earthquake precursory studies: examples from Garwal Himalaya, India”, in the online India-Russia Scientific webinar on “Seismology Monitoring and Forecasting, 30 June, 2022
- 2022: Delivered oral/Poster presentation on “Shear wave crustal velocity structure in the Northwest Himalaya based on noise cross-correlation of Rayleigh wave” in Federation of Indian Geosciences Associations (FIGA), 15-19 November, 2022, WIHG Dehradun. Authored by N. Kumar*, S.K. Verma, D. Hazarika, A. Paul, and D.K. Yadav
- 2021: Delivered Invited talk on December 2, 2021 on “Earthquake Precursory Research through MPMGO” in “*India-Russia Scientific webinar on Disaster Management Technologies*” 1-2 December, 2021.
- 2021: Delivered Key note on December 2, 2021 on “Status of earthquake precursory study in India with special reference to Multi-Parametric Geophysical observation”. In *42nd Annual Convection and Seminar on Exploration Geophysics* (online) organized during 1-3 December by Association of Exploration Geophysicists Hyderabad & Wadia Institute of Himalayan Geology, Dehradun, India.
- 2021: Delivered Invited talk on “Multi-Parametric Geophysical Observatory, Ghuttu, Garhwal Himalaya for Earthquake precursory research” at “*Webinar on Earthquake Precursor Study and Earthquake Early Warning System*” organized by NDMA and NCS New Delhi on September 1, 2021.
- 2021: Delivered oral presentation on “Redefining the rupture geometry of Mw 7.8 Kangra 1905 earthquake based on shear wave velocity structure and recent seismicity” in *the 37th General Assembly of the European Seismological Commission*, held virtually during 19-24 September 2021

- 2021: Delivered oral presentation on “Decadal continuous geophysical data observations at MPMGO Ghuttu in the Garhwal Himalaya” in the 37th General Assembly of the European Seismological Commission, held virtually during 19-24 September 2021,
- 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 MPGO 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 (SERC), 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 MPGO 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 MPGO 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-Norweian 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 MPGO, Ghuttu, Garhwal Himalaya” in the **IGU 46nd 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. High-resolution mapping of crust and upper mantle structure across the northwest Himalaya and Ladakh-Karakoram zone with special emphasis on seismotectonics of the Shyok suture zone and adjoining zone. **PI: Dr. Devajit Hazarika, Co-PI: Dr. Naresh Kumar** – Sponsored by MoES, New Delhi. Duration: 17/05/2023-16/05/2026 Budget: Rs. 85,30,480/-
2. 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: 2016-2022 Budget: 228.8 Lakhs
3. 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
4. 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
 5. 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
 6. 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)
 7. 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)

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. 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. Das, A., Hazarika, D., Kundu, A., **Kumar Naresh**, & D.K. Yadav (2024). Sedimentary structures of the western part of the Indo-Gangetic Plain and Siwalik Himalaya inferred from receiver function inversion. **Geophysical Journal International**, .
2. Verma. S.K., **Kumar Naresh**, & S.K. Pal (2023). Noise analysis of the observatory superconducting gravimeter in the normal mode frequency range using gravity data of Ghuttu, Garhwal Himalaya, India. **Journal of Earth System Sciences Journal of Earth System Sciences: X**, 10, 100165: 1-15.
3. Chanu, N.M., **Kumar Naresh**, Babu, V.G., Kumar, A., Mukhopadhyay, S., & A. Kumar (2023). Shear-Wave velocity Models in and around North-East India by modelling Rayleigh wave Group velocity Dispersion Data. **Journal Earth System Science**, 132, 170(1-16). <https://doi.org/10.1007/s12040-023-02193-z>.
4. Verma, S.K., **Kumar Naresh**, Hazarika, D., Paul, A., Yadav, D.K., & S.K. Pal (2023). Shear wave crustal velocity structure in the Garhwal-Kumaon Himalaya based on noise cross-correlation of Rayleigh wave. **Tectonophysics**, 866, 230047, 1-18. <https://doi.org/10.1016/j.tecto.2023.230047>.
5. Babu, V.G., **Kumar Naresh**, Verma, S.K., & S.K. Pal (2023). An updated earthquake catalogue and seismic regimes in the Northwest Himalaya: seismic periodicity associated with strong earthquakes. **Journal Earth System Science**, 132, 173(1-20). <https://doi.org/10.1007/s12040-023-02180-4>
6. Yadav, A., **Kumar Naresh**, Verma, S.K., Shukla, V., & V. Chuahan (2023). Imprints of Diurnal and semidiurnal cyclicity in Radon time series of MPMGO, Ghuttu Garhwal Himalaya: Evidence based on singular spectrum analysis. **Pure and Applied Geophysics**, 180, 1081-1097, <https://doi.org/10.1007/s00024-023-0321-z>.

7. Sajwan, R.S., Joshi, V., & **Kumar Naresh**, (2023). Assessment of Thoron exhalation from the soil samples of tectonically active Ghuttu window region: Radiation health hazard perspective. **Himalayan Geology**, 44(1), 1-11.
8. Chanu, N.M., **Kumar Naresh**, Kumar, A., Mukhopadhyay, S., & V.G. Babu (2022). Along-strike variation in the shear wave crustal structure of the NE Himalaya and Indo-Burmese arc: Evidence based on surface wave dispersion analysis. **Geological Journal**, 57(12), 5161-5175. <https://doi.org/10.1002/gj.4465>.
9. Wadhwan, M., Hazarika, D., Paul, A., **Kumar Naresh**, Gupta, V., & M. Aggarwal (2022). Seismic anisotropy and crustal deformation in the Satluj valley and adjoining region of northwest Himalaya revealed by the splitting analysis of Moho converted Ps phases. **Journal of Asian Earth Sciences**, 238, 105377, 1-12.
10. Tiwari, A., Sain, K., Kumar, A., Tiwari, J., Paul, A., **Kumar Naresh**, Haldar, C., Kumar, S., & Pandey, C.P. (2022). Potential seismic precursors and surficial dynamics of a deadly Himalayan disaster: an early warning approach. **Scientific Reports**, 12(1), 3733, 1-13.
11. Yadav, D.N., **Kumar Naresh**, Babu, G.B., Kumari, R., Pal, S.K. (2022). Crustal velocity structure and seismotectonics of the Kinnaur region of northwest Himalaya: New constraints based on recent micro-earthquake data. **Journal of Asian Earth Sciences**, 224, 105005, 1-16.
12. Kumar, A., **Kumar Naresh**, Mukhopadhyay, S., Klemperer, S.L. (2021). Tomographic image of shear wave structure of NE India based on analysis of Rayleigh wave data. **Frontiers of Earth Sciences**, 9, 179-196, 680361. <https://doi.org/10.3389/feart.2021.680361>.
13. Sajwan, R.S., Joshi, V., **Kumar Naresh**, Dutt, S., Rawat, K., Prasad, M., Ramola, R.C. (2021). Study of radiation exposure due to indoor radon, thoron and progeny in Ghuttu, Tehri Garhwal, India. **Journal Radioanalytical and Nuclear Chemistry**, 330, 1497-1507. doi.org/10.1007/s10967-021-07937-7.
14. Yadav, D., Hazarika, D., **Kumar Naresh**, Singh, A.K. (2021). Microseismicity study in the Siang valley of Arunachal Himalaya: Tectonic Implication of the 2019 Mw 5.9 Mechuka Earthquake. **Himalayan Geology**, 42(2), 290-298.
15. Hajra, S., Hazarika, D., **Kumar Naresh**, Pal, S.K., Roy, P.N.S. (2021). Seismotectonics and stress perspective of the Kumaon Himalaya: A geophysical evidence of a Lesser Himalayan duplex. **Tectonophysics**, 806, 228801, 1-17.
16. Chauhan, V., **Kumar Naresh**, Shukla, V., Verma, S.K. (2021). Multiple Linear regression analysis to estimate hydrological effects in Soil Rn-222 at Ghuttu, Garhwal Himalaya: A prerequisite to identify earthquake precursors. **Current Science**, 120(12), 1905-1911.
17. Paul, A., Hazarika, D., Wadhawan M and **Kumar Naresh** (2021). Upper mantle anisotropy in the northwest Himalaya and Ladakh-Karakoram zone based on SKS splitting analysis. **Journal of Geodynamics**, 144, 101817.
18. Kumari, R., Kumar, P., **Kumar Naresh**, & Sandeep (2021). Implications of site effects and attenuation properties for estimation of earthquake source characteristic in Kinnaur Himalaya, India. **Pure and Applied Geophysics**, 178, 4345-4366.
19. Hazarika, D., Hajra, S., Kundu, A., Bankhwal, M., **Kumar Naresh**, Pant CC (2021). Imaging the Moho and Main Himalayan Thrust beneath the Kumaon Himalaya: Constraints from receiver function analysis. **Geophysical Journal International**, 224, 858–870.
0956-540X IF: 3.352
20. 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>.
21. 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.
22. 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.

23. 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>.
24. 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>.
25. **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.
26. 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>.
27. 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>
28. 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>
29. **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>.
30. 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. Geophy.** 7(2), 237-246. DOI: <https://doi.org/10.1016/j.nrjag.2018.05.009>.
31. 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.
32. 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.
33. 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>
34. 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>
35. 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>
 36. **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
 37. 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>
 38. 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>
 39. 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>
 40. 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>
 41. **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 MPMO, Ghuttu for M_w 7.8 Nepal Earthquake. **Current Science**, 112(5), 907-909.
 42. 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.
 43. 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.
 44. 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>

45. 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>
46. 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.
47. **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
48. **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.
49. 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>
50. 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
51. **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.
52. Kamra, L., Choubey, V.M., **Kumar Naresh**, Rawat, G., & D.D. Khandelwal (2013). Radon Variability in borehole from Multi-parametric Geophysical Observatory of NW Himalaya in relation to Meteorological parameters. **Applied Radiation and Isotopes**, 72, 137-144. DOI: <https://doi.org/10.1016/j.apradiso.2012.10.019>.
53. **Kumar Naresh**, Arora B.R., Mukhopadhyay, S., & D.K. Yadav (2013). Seismogenesis of Clustered Seismicity beneath the Kangra–Chamba Sector of Northwest Himalaya: Constraints from 3D Local Earthquake Tomography. **Journal of the Asian Earth Sciences**, 62, 638-646 doi.org/10.1016/j.jseaes.2012.11.012.
54. Hazarika, D., **Naresh Kumar**, & D. K. Yadav (2013). Crustal thickness and Poisson's ratio variations across northwest Himalaya and Eastern Ladakh and its tectonic implications. **Acta Geophysica**, 61(4), 905-922. DOI: 10.2478/s11600-013-0128-y.
55. **Kumar Naresh**, Yadav, D.K., Mondal, S.K., & P.N.S. Roy (2013). Stress drop and its relation to tectonic and structural elements for the meizoseismal region of great 1905 Kangra earthquake of the NW Himalaya. **Natural Hazards**, 69(3), 2021-2038, doi: 10.1007/s11069-013-0793-9.

56. Arora, B.R., Gahalaut, V.K., & **Kumar Naresh** (2012). Structural control on along-strike variation in the seismicity of the Northwest Himalaya. **Journal of the Asian Earth Sciences**, 57, 15-24.
DOI: <https://doi.org/10.1016/j.jseaes.2012.06.001>
57. Arora, B.R., Rawat, G., **Kumar Naresh**, & V.M. Choubey (2012). Multi-Parametric Geophysical observatory: gateway to integrated earthquake precursory research. **Current Science**, 103(11), 1286-1299.
58. **Kumar Naresh**, Paul, A., Mahajan, A.K., Yadav, D.K., & C. Bora (2012). Mw 5.0 Kharsali, Garhwal Himalaya Earthquake of July 23, 2007: Source Characterization and tectonic implication. **Current Science**, 102(12), 1674-1682.
59. Choubey, V.M., Arora, B R., Barbosa, S.M., **Kumar Naresh**, & L. Kamra (2011). Seasonal and daily variation of Radon at 10 m depth in borehole, Lesser Garhwal Himalaya, India. **Applied Radiation and Isotopes**, 69(7), 1070-1078. DOI: <https://doi.org/10.1016/j.apradiso.2011.03.027>
60. Mukhopadhyay, S., Sharma, J., Del-Pezzo, E., & **Kumar Naresh** (2010). Study of attenuation mechanism for Garhwal-Kumaon Himalayas from analysis of coda of local earthquakes. **Physics of the Earth Planetary Interiors**, 180, 7-15. DOI:10.1016/j.pepi.2010.03.07.
61. Paul, A., & **Kumar Naresh** (2010). Estimates of source parameters of M4.9 Kharsali earthquake using waveform modeling. **Journal of Earth System Science**, 119(5), 731-743. DOI: <https://doi.org/10.1007/s12040-010-0050-5>
62. Lyubushin, A.A., Arora, B.R., & **Kumar Naresh** (2010). Investigation of seismicity in western Himalaya. **Russ. J. Geophysical Research**, 11(1), 27-34.
63. Shashidhar, D., **Kumar Naresh**, Mallika, K., & H.K. Gupta (2010). Characteristics of Seismicity Pattern prior to the M ~ 5 Earthquakes in the Koyna Region, Western India – Application of the RTL Algorithm. **Episodes**, 33(2), 83-90. DOI: [10.18814/epiiugs/2010/v33i2/002](https://doi.org/10.18814/epiiugs/2010/v33i2/002)
64. Lyubushin, A.A., Arora, B.R., & **Kumar Naresh** (2010). Method for classifying three-component seismic record based on wavelet analysis. **Russ. J. Geophysical Research**, 11(4), 29-34.
65. **Kumar Naresh**, Sharma, J., Arora, B.R., & S. Mukhopadhyay (2009). Seismotectonic model of the Kangra-Chamba sector of NW Himalaya: Constraints from joint hypocenter determination and focal mechanism. **Bulletin of the Seismological Society of America** 99(1), 95-109. DOI: <https://doi.org/10.1785/0120080220>
66. Choubey V.M., **Kumar Naresh**, & B.R. Arora (2009). Precursory signatures in the radon and geohydrological borehole data for M4.9 Kharsali earthquake of Garhwal Himalaya. **Science of the Total Environment**, 407, 5877-5883. DOI:10.1016/j.scitotenv.2009.08.010
67. Yadav, D.K., **Kumar Naresh**, & A. Paul (2009). Recent Seismicity and Stress pattern in NW Himalaya. **Himalayan Geology**, 30(2), 139-145.

68. Arora, B.R., Kamal, Kumar, A., Rawat, G., **Kumar Naresh**, & V.M. Choubey (2008). First Observations of Free Oscillations of the Earth (FOE) from Indian Superconducting Gravimeter in Himalaya. **Current Science**, **95**(11), 1611-1617.
69. Gitis, V., Yurkov, E., Arora, B., Chabak, S., **Kumar Naresh**, & P. Baidya (2008). Analysis of seismicity in North India. **Russian J. of Earth Sciences**, 2008 (10), ES5002, doi:10.2205/2008ES000303.
70. Mahajan, A.K., **Kumar Naresh**, & B.R. Arora (2006). Quick look isoseismal map of 8 October 2005 Kashmir earthquake. **Current Science**, **91**(3), 356-361.
71. **Kumar Naresh**, Imtiyaz, A., & H.S. Virk (2005). Estimation of coda wave attenuation for NW Himalaya region using local earthquakes. **Physics of the Earth Planetary Interiors**, **151**, 243-258. DOI: 10.1016/j.pepi.2005.03.010
72. Virk, H.S., Walia, V., & **Kumar Naresh** (2001). Helium/Radon Precursory anomalies of Chamoli Earthquake, Garhwal Himalaya, India. **Journal of Geodynamics**, **31**, 201-210. DOI: [https://doi.org/10.1016/S0264-3707\(00\)00022-3](https://doi.org/10.1016/S0264-3707(00)00022-3)
73. Virk, H.S., Walia, V., Sharma, A.K., & **Kumar Naresh** (2000). Correlation of radon anomalies with microseismic events in kangra and Chamba valleys of N-W Himalaya. **Geofisica International**, **39**(3), 221-227.
74. Virk, H.S., **Kumar Naresh**, Sharma, N., & B.S. Bajwa (1998). Alpha-Guard radon survey in soil gas and dwellings of some uranium-rich areas of Himachal Pradesh, India. **Current Science**, **75**(5), 430-431.
75. Virk, H.S., **Kumar Naresh**, & A.K. Sharma (1998). Radon/Helium survey of thermal springs of Parbati, Beas and Sutluj valleys in Himachal, Himalaya. **Journal Geological Society of India**, **52**, 523-528.

(b) Non-SCI Articles

1. Gahalaut, V.K., Arora, B.R., & **Kumar Naresh** (2012). [Spatial variation in seismicity of the Himalayan arc: possible sources and causes](#). **Deep Continental Studies News Letter** **22**(2), 8-12. DOP: 01/2012
2. Arora, B.R., **Kumar Naresh**, Rawat G., & A. Paul (2008). A peep into the Himalayan seismicity. **Mem. Geol. Soc. Ind.**, **72**, 29-46. DOP: 01/2008
3. **Kumar Naresh**, Sharma, J., Arora, B.R., & S. Mukhopadhyay (2006). Imaging deep structures through the inversion of earthquake data: an example from Kangra-Chamba region of Himachal Himalaya. **DST, DCS Newsletter**, **16**(1), 7-10. DOP: 01/2006

(c) Chapter in Books

1. **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>.

(d) Books-authored/Edited volume:

Edited volume on “Earthquake and active tectonics of the Himalayan convergent boundary” Quaternary international Volume 462, December 30, 2017

(e) Abstract volume:

(f) Reports/Other Documents:

(g) Articles in Proceeding Volumes

Yadav, D.K., **Kumar Naresh**, & D. Hazarika (2015). Stress pattern of NW Himalaya: Stress coupling between higher Himalaya and south Tibetan Plateau. In: Proceedings Int. Conference on *GEO-HAZARDS: Recent Research* Edited by *R.C. Ramola and G.S. Gusain*, pp. 111-119.

2. Arora, B.R., Choubey, V.M., **Kumar Naresh**, & G. Rawat (2011). Multi-parameter geophysical observatory: initiative for integrated earthquake precursory research. In: Pre-workshop Proceedings on “*Geosciences and Water Resources for Sustainable Development*”, Departt. Geophy. Andhra Univ., Feb. 11–12, 6–16.

3. Virk, H.S., Walia, V., Sharma, A.K., & **Kumar Naresh** (1999). [Radon anomalies on their correlation with microseismic events in Kangra and Chamba valleys of N-W Himalaya.](#) Proc. 5th Int. Conf. Rare Gas Geochemistry, Debrecen, 43-53