

BIODATA

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Scholar Google: <https://scholar.google.co.in/citations?user=XXFIYMIAAAAJ&hl=en>

Research Gate: https://www.researchgate.net/profile/Sagarika_Mukhopadhyay

Web of Science (Publons): Web of Science ResearcherID U-6808-2019

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Present position: Professor, Department of Earth Sciences, IIT Roorkee, Roorkee.

Education:

1. **B.Sc. (Hons.) in Earth Sciences**, 1979, IIT Kharagpur.
2. **M.Sc. in Exploration Geophysics**, 1981, IIT Kharagpur.
3. **M.S. in Geophysics**, 1983, State University of New York at Stony Brook, USA.
4. **Ph.D. in Seismology**, 1990, University of Roorkee, Roorkee.

Job:

1. **Professor:** 9 November 2009 – present
2. **Associate Professor:** 23 October 2003 - 8 November 2009
3. **Assistant Professor:** 9 April 1996 – 22 October 2003
4. **Lecturer:** 21 September 1990 – 8 April 1996

Award/Prize/Certificate etc. won by the candidate:

1. Awarded Cox Visiting Professor's position and Blaustein Fellowship by Stanford University for a period of 6 months (January to June 2018).
2. P.K. Bhattacharyya Memorial award for best student of The Dept. of Geology and Geophysics, I.I.T. Kharagpur for the year 1981.

Research specialization/interests: Seismology (Seismic Travel Time Tomography, Surface Wave Analysis, Receiver Function Analysis, Attenuation and Anisotropic Characteristics of the Earth, Seismotectonics, Seismic Hazard Microzonation, Near Surface Study Using Seismic Waves).

Foreign visits:

1. Visit to Department of Geology, Oklahoma State University, USA from 30th Nov. 2018 to 1st Jan. 2019 related to BSF project.

2. Cox Visiting Professor at Department of Geophysics, Stanford University from January to June 2018.
3. Presented paper in AGU conference in Dec. 2016 in San Francisco, USA.
4. Novosibirsk, Russia visit, 2016 for DST-RFBR project “Three Dimensional Seismic Structure and Seismicity in the Himalaya Region” for a duration of 2 years (2013-2015) extended till July 2016.
5. Presented paper in AGU conference in Dec. 2014 in San Francisco, USA.
6. Selected for visit to Dept. of Meteorology and Geophysics, Univ. of Vienna, Austria for 2 weeks in June 2014 under INSA-Austria exchange of scientists programme.
7. Novosibirsk, Russia visit, 2014 for DST-RFBR project “Three Dimensional Seismic Structure and Seismicity in the Himalaya Region” for a duration of 2 years (2013-2015).
8. Moscow visit, 2012 for DST-RFBR project and to attend ESC-33 conference, Aug. Sep., 2012.
9. Selected for visit to GFZ Potsdam, Germany for 4 weeks in March 2010 under INSA-DFG exchange of scientists programme.
10. Invited by Prof. Dapeng Zhao, Director, Geodynamic Research Center, Ehime University, Matsuyama, Japan for comparison of tomographic analysis of Latur aftershock data using his and Thurber’s technique for a period of about 3 and a half months, Dec. 2003 to Mar. 2004.
11. “International Training Course on Seismology, Seismic Data Analysis, Hazard Assessment and Risk Mitigation” with specialization on “Microzonation, Risk Assessment and Disaster Management” organized and conducted by GeoForschungsZentrum Potsdam (GFZ), Germany, October, 2001.

Visits within country:

1. For taking interview in New Delhi for UPSC for internal promotion from Scientist C to Scientist D, 8 Aug. 2019.
2. For taking interview in Kolkata for selection of Asst. Professor for Institute of Petroleum Engineering in Visakhapatnam, Feb. 2016.
3. For taking interview at ISM Dhanbad for the post of Assistant Professor (Geophysics) on 3rd February, 2016.
4. For taking interview at UPSC, New Delhi for the post of Chief Research Officer (Geophysics) on 30 May, 2013.
5. For taking interview at School of Oceanographic Studies, Jadavpur University, Kolkata for the post of JRF on July 2007.
6. For taking interview at Wadia Institute of Himalayan Geology, Dehradun for the post of Scientist B on April 2006.

Member of professional societies:

1. Life member of Indian Society of Earthquake Technology (LM-909)
2. Life member of Indian Geological Congress (LM-450)
3. Member Society of Exploration Geophysicists (ID-148739)
4. Life member Indian Society of Earthquake Science ISES
5. Member American Geophysical Union AGU

Member of Editorial Board:

Member of the Editorial Board of the “Journal of the Geological Society of India” from Jan. 2011 to Jan. 2019.

Member of panel of experts for determining awardee of Hari Narain Award for Life Time Achievement in the Field of Geophysics Instituted by Geological Society of India

For the year 2019

Member of Project Evaluation Body

1. Member of project evaluation board for The National Center of Scientific and Technical Evaluation (NCSTE) in Kazakhstan.
2. Member of project evaluation board for Research Council of Oman.
3. Member of project evaluation board for Russian Science Foundation (RSF).

Administrative Responsibilities:

1. Member of Departmental Faculty Advisory Committee (DFAC) from 11/2/2020 to 31/12/2020.
2. Member of Departmental Administrative Committee (DAC) from 7/3/2020 for a period of 2 years.
3. Chairperson of Departmental Research Committee (DRC) from 17/3/2020.
4. Member of Faculty Search Committee (FSC) July 2019 for 3 years.
5. Chairperson of Departmental Academic Program Committee (DAPC) from March 2017 to March 2019.
6. Chairperson of Departmental Academic Program Committee (DAPC) from March 2011 to March 2012.

National collaborations:

1. Wadia Institute of Himalayan Geology, Dehradun on study of various seismotectonic aspects of NW Himalayas (Surface wave anisotropy study of NW Himalayas).
2. With IIT KGP on seismological investigations of Kumaun Himalaya (submitted DST Project : Characterization of seismicity in the Kumaun Himalaya for hazard assessment).
3. With India Meteorological Department (IMD) – working on surface wave analysis, receiver function analysis, analysis of broadband and short period data for tomography, attenuation studies (local and Lg), source characteristics, noise tomography and seismic microzonation.

International collaborations:

- a) Collaboration with Department of Geophysics, Stanford University, USA
- b) Collaborative consultancy project with Department of Geology, Oklahoma State University (OSU), USA, also got a MoU between IIT Roorkee and OSU.
- c) Collaboration with Prof. Priyank Jaiswal (got VAJRA fellowship from SERB, India) of Department of Geology, Oklahoma State University (OSU), USA.
- d) DST-RFBR projects with IPE, Moscow:
 1. Indian project PI of DST-RFBR Project titled “Three Dimensional Seismic Structure and Seismicity in the Himalaya Region” in collaboration with Prof. Ivan Koulakov of Siberian Branch of Russian Academy of Sciences, Novosibirsk. Indian delegates: Prof. J. R. Kayal, Dr. N. Kumar, Dr. D.K. Yadav, Dr S. Baruah, Dr. A. Singh, Dr. C. Singh, Ms. S. Roy. Russian delegates: Prof. N. L. Dobretsov, Mr. A. Jakovlev, Ms. N. Bushenkova, Mr. P. Kuznetsov, Mr. P. Bekeshko, Mr. K. Jaxybulatov, Ms. E. Kukarina, Ms. I. Zabelina. (2013-2015 extended till 17 July 2016).
 2. Deep Structure and Seismicity in Southeast Asia: Northeast India and Andaman-Nicobar region within the frame of RFBR project No. 11-05-92694. Indian delegates: Professor J R Kayal, Professor S. Mukhopadhyay, Dr Saurabh Baruah, Dr Manichandra Singh, Dr. Uma Pal, Miss Sohini Roy. Russian delegates: Professor Sergei S Arefiev, Bykova Vera Viacheslavovna, Tatevossian Ruben Eduardovich, Mikhin Alexandr Grigirievich, Aptekman Janna Iakovlevna, Matveev Igor Vladimirovich. Duration: 2 years (2010-2012)

3. ILTP project B-2.7 entitled “Modeling and estimation of strong ground motion parameters aimed at seismic risk reduction”. Indian delegates: Dr. Saurabh Baruah, Mr. R. Duarah, Dr. P K. Borah, Mr. N K. Gogoi, Dr. Sagina Ram, Prof. S. Mukhopadhyay, Dr. Arun Kumar, Mr. J. L. Gautam. Russian delegates: Dr. Olga O. Erteleva, Prof. Alexandr S. Alyoshin, Prof. Felix F. Aptikaev, Dr. Janna Ya. Aptekman, Dr. Sergei G. Molotkov, Dr. Igor V. Ulomov. Project duration 3 years (2008-2011).

Ph.D. (doctorate) thesis supervised: 8 awarded and 3 under supervision.

M.Tech.(Masters) Thesis supervised: 77 awarded, 4 under supervision.

Sponsored research projects: 7

Consultancy project: 2

Citation index:

From scholargoogle

July 2020

	All	Since 2015
<u>Citations</u>	779	474
<u>h-index</u>	17	14
<u>i10-index</u>	25	19

Your publication stats

No. of publications: 113

1. Total full papers: 55

2. Total publications in abstract volumes/ other publications: 58

List of publications:

a) *In referred journals*

55. Das, R., **Mukhopadhyay, S., 2020.** Regional variation of coda wave attenuation in Northeast India: An understanding of the physical state of the medium. *Phy. Earth. Planet Int.*, 299: 1-13. <https://doi.org/10.1016/j.pepi.2019.106404>.
54. **Mukhopadhyay, S., A Kumar, N Kumar, 2019.** Investigation of azimuthal variation in S-wave velocity in the western part of the Himalayas-Tibet Indo-Gangetic plains region using surface waves. *Acta Geologica Sinica-English Edition*, 93: 53-53.
53. Singh, C., Jaiswal, N., **Mukhopadhyay, S., 2019.** PgQ model for Nepal Himalaya. *Phy. Earth. Planet Int.*, 286: 13-20, doi.org/10.1016/j.pepi.2018.10.009.
52. Singh, S., Kanli, A.I. and **Mukhopadhyay, S., 2018.** Full waveform inversion in time and frequency domain of velocity modeling in seismic imaging: FWISIMAT a Matlab code. *Earth Sciences Research Journal* 22(4): 291-300. DOI: <https://doi.org/10.15446/esrj.v22n4.59640>.
51. Das, R., **Mukhopadhyay, S., Singh, R.K., Baidya, P.R., 2018.** Lapse time and frequency-dependent coda wave attenuation for Delhi and its surrounding regions. *Tectonophysics*, 738: 51-63.
50. Kumar, A., Kumar, N., **Mukhopadhyay, S., 2018.** Investigation of azimuthal variation in seismic surface waves group velocity in the western part of Himalaya-Tibet Indo-Gangetic plains region. *Himalayan Geology*, 39: 33-46.

49. Kumar, A., **Mukhopadhyay, S.**, Kumar, N., Baidya, P.R., **2018**. Lateral Variation in Crustal and Mantle Structure in Bay of Bengal Based on Surface Wave Data. *J. Geodynamics*, 113: 32-42, DOI10.1016/j.jog.2017.11.006.
48. Raoof, J., **Mukhopadhyay, S.**, Koulakov, I. and Kayal, J. R., **2017**. 3-D Seismic Tomography of the Lithosphere and its Geodynamic Implications beneath the Northeast India Region. *Tectonics*, 36: 962-980, doi:10.1002/2016TC004375.
47. Naghavi, M., Rahimi, H., Moradi, A., **Mukhopadhyay, S.**, **2017**. Spatial variations of seismic attenuation in the North West of Iranian plateau from analysis of coda waves. *Tectonophysics*. 708: 70-80. <http://dx.doi.org/10.1016/j.tecto.2017.04.026>.
46. Kumar, A., Kumar, N., **Mukhopadhyay, S.**, Baidya, P. R., **2017**. Crustal and Uppermost Mantle Structures in the Frontal Himalaya and Indo-Gangetic Basin Using Surface Wave: Tectonic Implications. *QI*, 462: 34-49. <http://dx.doi.org/10.1016/j.quaint.2017.02.035>
45. Singh, S., Singh, C., Biswas, R., **Mukhopadhyay, S.**, Sahu, H., **2016**. Attenuation characteristics in eastern Himalaya and southern Tibetan Plateau: an understanding of the physical state of the medium. *PEPI*, 257: 48-56.
44. **Mukhopadhyay, S.**, Singh, B. and Mohamed, H., **2016**. Estimation of attenuation characteristics of Aswan reservoir region, Egypt. *J. Seismol*, 20: 79-92, DOI 10.1007/s10950-015-9511-2.
43. Wagh, S.D., Dangwal, D.S., Khattri, N.K., Sharma, R.K. and **Mukhopadhyay, S.**, **2015**. Interpretation of thin beds in spectral domain: A case study. *Geohorizons*, July: 33-35.
42. Koulakov, I., Maksotova, G., **Mukhopadhyay, S.**, Raoof, J., Kayal, J.R., Jakovlev, A. and Vasilevsky, A., **2015**. Variations of the crustal thickness in Nepal Himalayas based on tomographic inversion of regional earthquake data. *Solid Earth*, 6: 207–216, doi:10.5194/se-6-207-2015.
41. Singh, C., **Mukhopadhyay, S.**, Singh, S, Chakraborty, P, Kayal, J.R., **2015**. Study of lapse time dependence coda Q in the Andaman Islands using the aftershocks of the 2002 earthquake (Mw 6.5). *Natural Hazards*, 75: 779–793, DOI 10.1007/s11069-014-1337-7.
40. Kumar, N, Mate, S. and **Mukhopadhyay, S**, **2014**. Estimation of Qp and Qs of Kinnaur Himalaya, *J. Seismology*. 18: 47-59, DOI: 10.1007/s10950-013-9399-7.
39. **Mukhopadhyay, S.**, Kumar, A., Garg, A., Del-Pezzo, E. and Kayal J.R., **2014**. The Attenuation Mechanism of S-Waves in the Source Zone of the 1999 Chamoli Earthquake. *J. Asian Earth Sciences*. 79: 446-454.
38. **Mukhopadhyay, S.**, **2013**. Is the Same Tectonic Model Applicable for the Entire Himalayas? *Insagnia: J. Soc. Petro. Geophysicists Duliajan Chapter*, 5: 4-6.
37. Singh, B., **Mukhopadhyay, S.**, Mohamed, H., **2013**. Qp and Qs Estimation of Aswan Lake Region, Egypt, *Proc. 2nd Annual International Conference on Geological & Earth Sciences (GEOS 2013)*. 28th-29th October 2013, Phuket, Thailand.
36. Kumar. N., Arora, B.R., **Mukhopadhyay.**, S. and Yadav, D. K., **2013**. Seismogenesis of Clustered Seismicity beneath the Kangra–Chamba Sector of Northwest Himalaya: Constraints from 3D Local Earthquake Tomography. *J. Asian Earth Sc.*, 62: 638-646.
35. Singh, C., Singh, A., **Mukhopadhyay, S.**, Shekar, M. and Chadha, R. K., **2011**. *Lg* attenuation characteristics across the Indian Shield, *Bull. Seismol. Soc. Am.*, 101: 2561-2567, doi: 10.178/0120100239.

34. **Mukhopadhyay, S.** and Sharma, J., **2010.** Crustal scale detachment in the Himalayas: a reappraisal, *Geoph. J. Int.*, 183: 850–860, doi: 10.1111/j.1365-246X.2010.04755.x.
33. **Mukhopadhyay, S.,** Sharma, J., Del-Pezzo, E. and Kumar, N., **2010.** Study of attenuation mechanism for Garwhal–Kumaun Himalayas from analysis of coda of local earthquakes. *Phys. Earth Planet. Interior*, 180: 7-15. doi:10.1016/j.pepi.2010.03.007.
32. Rahimi, H., Motaghi, K., **Mukhopadhyay, S.** and Hamzehloo, H., **2010.** Variation of coda wave attenuation in the Alborz region and central Iran. *Geoph. J. Int.*, 181: 1643-1654. doi: 10.1111/j.1365-246X.2010.04574.x.
31. **Mukhopadhyay, S.,** Sharma, J., **2010.** Attenuation characteristics of Garwhal–Kumaun Himalayas from analysis of coda of local earthquakes. *J. Seismol.*, 14: 693–713, DOI 10.1007/s10950-010-9192-9.
30. Mohamed, H.H., **Mukhopadhyay, S.** and Sharma, J., **2010.** Attenuation of coda waves in the Aswan Reservoir area, Egypt. *Tectonophysics*, 492: 88–98, doi:10.1016/j.tecto.2010.05.018
29. **Mukhopadhyay, S.,** Del Pezzo, E., Kayal, J.R., **2010.** Study of Attenuation Mechanism of Chamoli Region Using Aftershock Data of 1999 Chamoli Earthquake, 14th SEE-2010 on Earthquake Engineering, Dec. 17-19: 2010, Dept. of Earthquake Engineering, IIT Roorkee.
28. Kumar, N., Sharma, J., Arora, B.R. and **Mukhopadhyay, S., 2009.** Seismotectonic model of Kangra-Chamba sector of NW Himalaya: constraints from joint hypocenter determination and focal mechanism. *Bull. Seism. Soc. Am.*, 99: 95-109, doi. No. 10.1785/012008/0220.
27. **Mukhopadhyay, S.,** Sharma, J. and Arora, B.R., **2008.** Seismic Tomography of Garwhal-Kumaun Himalayas: Is the basal detachment a wistful thinking? *Himalayan Journal of Sciences* 5 (7), 128-128
26. **Mukhopadhyay, S.,** Sharma, J., Massey, R. and Kayal, J. R., **2008.** Lapse Time Dependence of Coda Q in the Source Region of the 1999 Chamoli Earthquake, *Bull. Seismol. Soc. Am.*, 98 (4): 2080-2086, doi: 10.1785/0120070258.
25. **Mukhopadhyay, S.** and Tyagi, C., **2008.** Variation of intrinsic and scattering attenuation with depth in NW Himalayas, *Geoph. J. Int.* 172(3): 1055-1065. doi: 10.1111/j.1365-246X.2007.03688.x.
24. Bhattacharya, P.M., **Mukhopadhyay, S.,** Majumdar, R.K. and Kayal, J.R., **2008.** 3-D Seismic structure of the Northeast India region and its implications for local and regional tectonics. *J. Asian Earth Sciences*. 33: 25-41.
23. **Mukhopadhyay, S.** and Kayal, J.R., **2008.** The 2001 Bhuj earthquake (Mw 7.7) in western India: 3-D velocity structure and seismotectonic processes. *Acta Geodaetica et Geophysica Hungarica*. 43: 75-92.
22. **Mukhopadhyay, S.** and Kayal, J.R., **2008.** 3D velocity structure with a special reference to shear wave velocity: Bhuj earthquake source area, western India, *DCS-DRS Newsletter*. 18: 2-5.
21. **Mukhopadhyay, S.** and Tyagi, C., **2007.** The lapse time and frequency dependent attenuation characteristics of coda waves in the North Western Himalaya. *J. Seismology*. 11: 149-158.
20. **Mukhopadhyay, S.,** Tyagi, C. and Rai, S.S., **2006.** The attenuation mechanism of seismic waves for NW Himalaya. *Geoph. Jour. Int.*, 167: 354-360.

19. **Mukhopadhyay, S.**, Mishra, O.P., Zhao, D. and Kayal, J.R., **2006**. 3-D seismic structure of the source area of the 1993 Latur, India, earthquake and its implications for rupture nucleations. *Tectonophysics*, 415: 1-16.
18. Khattri, K.N., Kumar, D., Sarkar, I., **Mukhopadhyay, S.** and Sriram, V, **2006**. A Small Step Towards Making the National Capital Region Safer from Seismic Hazard and Risk, *Current Science*, 91: 1600-1601.
17. Kayal, J.R. and **Mukhopadhyay, S.**, **2006**. Seismotectonic of 2001 Bhuj earthquake (Mw 7.7) in western India: constraints from aftershocks. *J. Geoph. Union (Special issue on "Stable Continental Earthquakes")*, 10(1): 45-57.
16. Kumar, N., Sharma, J., Arora, B.R. and **Mukhopadhyay, S.**, **2006**. Imaging deep structures through the inversion of earthquake data: An example from Kangra-Chamba Region of Himachal Himalaya, *DST Newsletter*, 7-10.
15. **Mukhopadhyay, S.** and Bormann, P., **2004**. A low cost seismic microzonation using microtremor data: an example from Delhi, India. *Jour. Asian Earth Sci.* 24: 271-280.
14. **Mukhopadhyay, S.** and Kayal, J.R., **2003**. Seismic tomography structure of the 1999 Chamoli earthquake source area in the Garhwal Himalaya, *Bull. Seis. Soc. Amer.*, 93: 1854-1861.
13. **Mukhopadhyay, S.** and Kayal, J.R., **2003**. Seismogenic structure of the 1999 Chamoli earthquake in the Garhwal Himalaya: imaged by three dimensional seismic velocity. In *Seismic Hazards* Eds. S.K. Srivastav, G.D. Gupta, S.N. Bhattacharyya, A.K. Shukla, R.S. Dattatrayam, and P.R. Baidya, 130-140.
12. **Mukhopadhyay, S.**, Pandey, Y. and Dharmaraju, R., **2003**. Site response analysis using microtremor data in Delhi. In *Seismic Hazards* Eds. S.K. Srivastav, G.D. Gupta, S.N. Bhattacharyya, A.K. Shukla, R.S. Dattatrayam, and P.R. Baidya, 46-55.
11. **Mukhopadhyay, S.**, Pandey, Y. Dharmaraju, R., Chauhan, P.K.S., Singh, P. and Dev, A., **2002**. Seismic microzonation of Delhi for ground shaking site effect. *Current Science*, 82: 877-881.
10. Kayal, J.R. and **Mukhopadhyay, S.**, **2002**. Seismic tomography structure of the 1993 Killari earthquake source area. *Bull Seism. Soc. Am*, 92: 2036-2039.
9. **Mukhopadhyay, S.**, Kayal, J.R., Khattri, K.N. and Pradhan, B.K., **2002**. Simultaneous inversion of the aftershock data of the 1993 Killari earthquake in Peninsular India and its seismotectonic implications. *Proc. Indian Acad. Sci. (Earth Planet Sci.)*, 111: 1-15.
8. **Mukhopadhyay, S.**, Kayal, J.R. and Kumar, A., **2002**. Seismic tomography of Bhuj area using aftershocks of 26 January 2001 Bhuj earthquake. *Proc. Twelfth Symp. On Earthquake Engg.*, Dec. 16-18, 2002, Roorkee, v.1, 12-19.
7. Saini, S., Sharma, M.L. and **Mukhopadhyay, S.**, **2002**. Strong ground motion empirical relationship for seismic hazard estimation in Himalaya region. *Proc. Twelfth Symp. On Earthquake Engg.*, Dec. 16-18, 2002, Roorkee, v.1, 143-150.
6. **Mukhopadhyay, S.**, Kayal, J.R. and Dass, S.K., **2001**. Analysis of Chamoli aftershocks data for simultaneous determination of their location and the velocity structure of the area. *Proc. of Workshop on Recent Earthquakes of Chamoli and Bhuj*, May 24-26, 2001, Roorkee, 291-304.
5. **Mukhopadhyay, S.**, Chander, R. and Khattri, K.N., **1997**. Crustal properties in the epicentral tract of the great 1897 Assam earthquake, north eastern India. *Tectonophysics*, 283:311-330.
4. **Mukhopadhyay, S.**, Khattri, K.N. and Chander, R., **1995**. Seismic velocity and related elastic parameters of the crust in the Shillong massif. *J. of Himalayan Geology*, 6: 1-8.
3. **Mukhopadhyay, S.**, Chander, R. and Khattri, K.N., **1993**. Fine structure of seismotectonics in western Shillong massif, north east India. *Proc. Indian Acad. Sci.*, 102: 2383-2398.

2. Khattri, K.N., Chander, R. **Mukhopadhyay, S.**, Sriram, V. and Khanal, K.N., **1992**. A model of active tectonics in the Shillong massif region, invited paper in the book "Himalayan Orogen and Global Tectonics", ed. A.K. Sinha, Oxford IBH Publ. Co. Pvt. Ltd., 205-222.
1. Khattri, K.N., **Mukhopadhyay, S.**, Subrahmaniam, C. and Rao, A., **1986**. Seismotectonic studies in the western part of Shillong massif region, Proc. 8th Symp. on Earthquake Engg., Roorkee, Dec. 29-31, 1986, 1: 103-110.

b) Abstracts in Conference/seminar

58. Vashishtha, M. and **Mukhopadhyay, S.**, **2020**. Estimation of crust and upper mantle velocity structure of the Himalayas and North-Eastern part of India using surface wave data, JpGU-AGU Joint Meeting 2020, 12-19 July 2020, Makuhari, Chiba, Japan.
57. **Mukhopadhyay, S.**, Kumar, A. and Kumar, N., **2019**. Investigation of azimuthal variation in S-wave velocity in the western part of the Himalayas-Tibet Indo-Gangetic plains region using surface waves. Acta Geologica Sinica-English Edition 93, 53-53.
56. Das, R. and **Mukhopadhyay, S.**, **2019**. Seismic Body Wave Attenuation Characteristics of Northeast India. AGU Fall Meeting, 9-13 Dec. 2019, San Francisco, USA.
55. Chanu, N.M., **Mukhopadhyay, S.**, and Kumar, A., **2019**. Determination of Azimuthal Variation in Love Wave Group Velocity for NE India. AGU Fall Meeting, 9-13 Dec. 2019, San Francisco, USA.
54. **Mukhopadhyay, S.**, Kumar, A., Kumar N. and Klemperer, S.L., **2019**. S-Wave Tomographic Structure of NE India Using Rayleigh Wave Group Velocity. AGU Fall Meeting, 9-13 Dec. 2019, San Francisco, USA.
53. **Mukhopadhyay, S.**, Chanu, N. M., Kumar, N. and Kumar, A., **2019**. Love Wave Group Velocity Tomograms for NE India and Adjoining Region: Geodynamic Implications. Federation of Indian Geosciences Associations 2nd Triennial Congress On Geosciences for sustainable development goals, 13-16 October 2019, Hyderabad, India.
52. Raoof, J., Malik, J. N., **Mukhopadhyay, S.**, **2019**. Seismic Tomography of the Lithosphere beneath the Nepal Himalayas and Geodynamic Implications for 2015 Gorkha Earthquake. Geophysical Research Abstracts, Vol. 21, p1-1. 1p.
51. Kumar, A., **Mukhopadhyay, S.**, Kumar N. and Klemperer, S.L., **2018**. Tomographic Image of S-Wave Structure of NE India Based on Analysis of Rayleigh Wave. AGU Fall Meeting, 10-14 Dec. 2018, Washington DC, USA.
50. Raoof, J., **Mukhopadhyay, S.** and Malik, J.N., **2019**. Seismic Tomography of the Lithosphere beneath the Nepal Himalayas and Geodynamic Implications for 2015 Gorkha Earthquake. EGU General Assembly 2019, 7-12 April 2019, Vienna, Austria, Europe.
49. Raoof, J. and **Mukhopadhyay, S.**, **2018**. 3-D Seismic Tomography of the Indo-Asian Collision Zone from Pamir-Hindu Kush in the West to Indo-Burma Ranges in the East: Geodynamic Implications. AGU Fall Meeting, 10-14 Dec. 2018, Washington DC, USA.
48. Das, R. and **Mukhopadhyay, S.**, **2018**. Regional Variation of Coda Wave Attenuation in North-East India and its Implications. AGU Fall Meeting, 10-14 Dec. 2018, Washington DC, USA.
47. Kumar, A., Kumar, N. and **Mukhopadhyay, S.**, **2018**. Azimuthal variation of group velocity of surface waves in western part of Himalaya-Tibet and Indo-Gangetic plains. Indian Geophysical Union 55th Annual Convention, December 5-7, 2018, Bhopal.
46. **Mukhopadhyay, S.**, Kumar, A. and Kumar N., **2018**. Investigation of azimuthal variation in S-wave velocity in the western part of the Himalayas-Tibet Indo-

- Gangetic plains region using surface waves. International Symposium on Deep Earth Exploration and Practices, 24-26 Oct. 2018, Beijing, China.
45. **Mukhopadhyay, S.** and Raoof, J., **2018**. Tectonic Model of Western Himalayas, Western Himalayan Syntaxis and Pamir-Hindu Kush Region Based on Seismic Tomography. Rock Deformation and Structure (RDSV), 4-6 Oct. 2018, Delhi Univ.
 44. Das, R. and **Mukhopadhyay, S.**, **2018**. Estimation of Coda wave attenuation for Delhi and its surrounding regions using local earthquakes. JpJU, Japan Geoscience Union, May 20-24, 2018, Chiba, Japan.
 43. Singh, N., Ghosh, S., **Mukhopadhyay, S.** and DasGupta, R., **2018**. Delineation of Coal Bed Methane in Upper Assam Shelf Basin. AGU Virtual Poster Session, Spring 2018.
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1. A critical study of a method of estimation of seismic velocity of crust and origin time of earthquakes, 1992. Sandeep Jain.
2. Analysis of microearthquake data from Shillong massif, 1992. Rajesh Kumar.
3. Seismic Tomographic Image of Latur and Its Surroundings, 1999. Basanta Kumar Pradhan.
4. Site response from ambient noise measurement in and around Delhi, 2000. Priyamvada Singh.
5. Site response using microtremors data in Delhi region, 2001. Ashwani Dev.
6. Seismotectonics and 3-D velocity analysis of the epicentral tract of 1999 Chamoli earthquake using Local Earthquake Tomography, 2001. Surendra Kumar Dass.
7. Seismic Tomography of Bhuj area, 2002. Anuj Kumar.
8. Development of strong ground motion attenuation relationship for seismic hazard evaluation of Himalaya, 2002. Satender Saini.
9. Estimates of site response for North East India. 2003. Shipra Malik.
10. Analysis of travel time data of Bhuj aftershocks. 2003. Ashish Gaur.
11. Tomographic analysis of Chamoli aftershock data. 2004. Surabhi Darmora.
12. Site response of some sites in Garhwal region. 2004. Satyabrata Mishra.
13. Amplitude Versus Offset crossplotting: a numerical simulation. 2005. Deepa.
14. Processing of seismic data and subsurface imaging: case studies. 2005. Debi Prasad Das.
15. Estimation of Attenuation Properties of North-Western Himalaya. 2005. Chirag Tyagi.
16. Comparison of Zoeppritz, Aki and Shuey's equation. 2006. Ankit Kumar.
17. Tomography of North East India. 2006. Sanjay Tiwari.
18. Attenuation characteristics of N.W. Himalaya using Lg waves. 2006. Brijesh Kumar Singh.
19. Attenuation characteristics of Chamoli region using coda waves. 2006. Robin Massey.
20. Numerical modelling of epithermal neutron log, 2007. Deboshree Kundu.
21. Post-stack (model based) seismic data inversion, 2008. Mahavir Singh.
22. Determination of optimum offset range for offset split of marine reflection data, 2008. Giriraj Sirohi.
23. Determination of coda wave attenuation mechanism of Garhwal-Kumaun region, 2009. Abhash Kumar.
24. S-wave attenuation characteristics of Chamoli area, 2009. Akhil Garg.

25. Identification of direct hydrocarbon indicators through 3D seismic attributes analysis, 2010. Ashish Chauhan.
26. 3D seismic attributes for stratigraphic interpretation, 2010. Rajiv Ranjan.
27. Study of coda wave attenuation in Kangra-Chamba region of Himachal Himalaya, 2011. Priyabrata Pradhan.
28. Estimation of Q_p and Q_s of Kinnaur Himalaya, Shonkholen Mate, 2012.
29. Pore Pressure Prediction by Integrating Geo-Scientific Data in a Given Field, Sabyasachi Dash, 2013.
30. Q_p and Q_s Estimation of Aswan Lake Region, Egypt, Birinder Singh, 2013.
31. Advances in Reservoir Characterization Using 3-D Seismic Attributes, Ankit Kuchchal, 2013.
32. Estimation and Optimization of Residual Moveout Using Kalman Filter, Shalini Singh, 2013.
33. Q-value Estimation of Kinnaur Region, Abhinav Kumar Singh, 2014.
34. Fault and Fracture Identification in 3-D Seismic Data Using Seismic Attributes, Akhil Prabhakar, 2014.
35. Finding Seismic Velocity Structure of North-West Himalayas Using S-wave Data, Ankit Khaitan, 2014.
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37. Geological and Geophysical Workflow for Characterization of Reservoir in Raghavpuram Shale, Sachin Mangal, 2014.
38. Inversion of Geophysical Data and Reservoir Characterization, Shiv Pratap Singh, 2014.
39. Finding Seismic Velocity Structure of North-West Himalayas Using P-Wave Data, Siddharth Saxena, 2014.
40. Analysis of Geological and Geophysical Data Using Geometrical and Other Special Attributes for the Purpose of Hydrocarbon Prospecting, Yashvardhan Verma, 2014.
41. Travel-time tomography of Delhi region, 2015. Lavika Aggarwal.
42. Receiver function analysis for crustal structure of the Indian shield, 2015. Alkesh Goyal.
43. Attenuation of P and S wave for Delhi region, 2015. Manisha Gupta.
44. Application of post stack and pre stack attributes, and AVO (Amplitude Variation with Offset) in carbonate reservoir, 2015. Pravesh Jain.
45. Estimation of quality factor of coda waves for the Delhi region, 2015. Siddharth Kejriwal.
46. Microzonation of Delhi and surrounding region, 2015. Tanya Kothari.
47. Analysis of surface wave and its inversion for S-wave velocity, 2015. Amit Patra.
48. Interpreting Shale-gas reservoir using seismic and well-log data, 2015. Ojaswita Singh.
49. Enhancing signal to noise ratio in reflection seismic data: a new approach, 2015. Dishant Singla.
50. Source characteristics of earthquakes in and around Delhi, 2015. Tupkar Sagar Vinay Kumar.
51. Resolution enhancement of reflection seismic data: thin bed modeling, 2015. Wagh Saurabh Dilip.
52. Tomographic study of North West Himalaya using body waves, 2016. Areeb Usmani.
53. Attenuation characteristics across North-West Himalayas, 2016. Gargiy Sharma.
54. Full waveform inversion for diffraction energy, 2016. Harpreet Singh Sethi.
55. Surface wave tomography using dispersion and inversion for North-East Himalayas, 2016. Mayank Khirwal.
56. Reservoir characterization using seismic and well logs data, 2016. Poonam Kumari.
57. Seismic Petrophysics and rock properties for reservoir characterization, 2016. Preetika Srivastava.
58. Image reconstruction of 2D velocity models in seismic imaging, 2016. Sagar Singh.

59. Seismic velocity estimation using receiver function analysis, 2016. Vedvrat.
60. Estimation of source characteristics of Himalayan earthquakes, 2016. Vikas.
61. Surface wave dispersion analysis for estimation of S-wave velocity structure, 2016. Kumari Anjali Singh.
62. Estimation of seismic velocities using the surface wave dispersion, 2016. Naresh Kumar.
63. Seismological investigation of North East India, 2016. Nongmaithem Menaka Chanu.
64. Coda wave characteristics of Saudi Arabia, 2017. Aarushi Bagga.
65. Study of P and S wave attenuation in Saudi Arabia, 2017. Aayushi Garg.
66. Seismic Processing and Imaging of Upper Assam Shelf Basin, 2018. Nikhil Singh.
67. Analysis of Data from Passive Seismic Survey at Lancefield (Australia), 2018. Divya Nidhi Srivastava.
68. Lg Wave Attenuation Characteristics of Different Parts of India, 2018. Vipul Panwar. Paper under preparation.
69. Estimation of Thomsen's Anisotropic Parameters Based on AVA Responses, 2019. Nikhil Srivastava
70. Reservoir Characterization and Integrated Analysis of Attributes for Interpretation of 3D Seismic Data of S3 Block, Netherlands, 2019. Ashish Mittal
71. Seismic Interpretation of US East Coast Data, 2019. Sujay Sule
72. Seismic Processing of Umiat Basin, Alaska, 2019. Rachit Rajan Bagade
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76. Surface Wave Analysis Using 2015 Nepal Earthquake Data, 2020. Karukola Bharat.
77. Estimation of Crust and Upper Mantle Velocity Structure of the Himalayas and North-Eastern Part of India Using Surface Wave Data, 2020. Mradula Vashishtha.

Ph.D. (Doctorate) Thesis awarded:

1. Crustal Investigations in Garwhal-Kumaun Himalayas: Velocity tomography and Qc, Jyoti Sharma, 2008.
2. Seismic Response of a Viscoelastic Layer, Sumana Basu, 2009.
3. Quantification of Seismic Regimes in Kangra-Chamba Region of Himachal Himalaya, Naresh Kumar, 2010.
4. Seismic Imaging of the Subduction Structure Beneath the Andaman-Nicobar Islands Using Regional Earthquake Data, Sohini Roy (submitted at Jadavpur University, Kolkata), 2013.
5. Local earthquake tomography and attenuation characteristics of NE Indian Region, Deepika Pandey, 2014.
6. Subsurface velocity structure of NW-NE India and Bay of Bengal using Surface wave, Amit Kumar, started in July 2011, 2017.
7. Geodynamic model of the Himalayas on the basis of earthquake tomography, Javed Raoof, started in July 2011, 2017.
8. Seismic travel time tomography and attenuation studies for Indian region, Rabin Das, started in July 2013, 2020.

Ph.D. (Doctorate) Thesis under supervision:

1. Surface wave tomography of NE India using Love Wave of regional earthquakes, Nongmaithem Maneka Chanu, joined in July 2018
2. Joined inversion of surface wave and Receiver Function using teleseismic arrivals for estimation of crustal and upper mantle characteristics of NE India, Neeharika Shukla, joined in July 2018

3. A generalized study on time imaging workflows for thrust and fold belts, Shubhra Pratim Das, joined in Jan. 2019.

Sponsored research project:

Title of the project	Sponsoring agency	Amount	Duration	Remarks
Three Dimensional Seismic Structure and Seismicity in the Himalaya Region	Department of Science and Technology, New Delhi and RFBR Russian Academy of Sciences, Moscow	Rs. 1227600	2 years 2013-2015 (continued till 17 July 2016)	PI of the project
Deep Structure and Seismicity in Southeast Asia: Northeast India and Andaman-Nicobar region	Department of Science and Technology, New Delhi and Russian Academy of Sciences, Moscow	DST pays for the travel to and stay in Moscow	2 years 2010-2012	Joined as a working member, Project Co-ordinator Prof. J.R. Kayal, emeritus fellow, Jadavpur Univ.
Modelling and estimation of strong ground motion parameters aimed at seismic risk reduction, ILTP-project FPP-32	Department of Science and Technology, New Delhi and Russian Academy of Sciences, Moscow	DST pays for the travel to and stay in Moscow	3 years 2008-2011	Joined as a working member, Project Co-ordinator Dr. S. Baruah, NEIST, Jorhat
Site response from ambient noise measurements in and around Delhi	All India Council for Technical Education	Rs. 3.65 lakhs	2 years 1999-2001	PI of the project
Present seismic status and earthquake process models of Garhwal Himalaya region	Department of Science and Technology	Rs. 58.85 lakhs	3 years 9 months Jun.1992-Mar. 1996	Co-PI (PI Prof. H.R. Wason)
Modelling of earthquake source and earth structure in the Garhwal Kumaun Himalaya region using broad band seismic data	Department of Science and Technology	Rs. 12.30 lakhs	2 years Jun. 1997 – Jun 1999	Co-PI (PI Prof. H.R. Wason)
Estimation of Moho velocity in	Office of Dean	Rs.	1 year	PI of the project

the Shillong massif region, northeastern India	Research & Industrial Liaison, University of Roorkee	5000/-	1992-93	
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Total amount Rs 94.05 lakh excluding two DST-RFBR project amounts.

Consultancy project

Title of the project	Sponsoring agency	Amount	Duration	Remarks
Detecting near-surface voids/tunnels with multicomponent seismic data. Phase – I: A feasibility study	Border Security Force (BSF) Ministry of Home Affairs Government of India	Total (including GST): ₹ 23.37 lakhs	6 months (may be extendable to 9 months), starting Sep.2018	PI-self, Co-PI- Prof. D.K. Mukhopadhyay
Third Party Inspection of CIBMS Projects Patch-I and Patch-II at Jammu	Border Security Force (BSF) Ministry of Home Affairs Government of India	Total (including GST): ₹ 24.12lakhs	1 year starting 27/11/2019 Expected date of completion 31/12/2020	PI-self