

PUBLICATIONS

Published

1. Rasool, Y., **Agrawal, M.***, Shams, R. *et al.* Evaluation of Seismic Hazard for Northeastern Bihar (India): A Deterministic Approach. *Indian Geotech J* (2024). <https://doi.org/10.1007/s40098-024-01126-x>
2. Monika, **Agrawal, M.***, Tilara, C.*, 2024. Seismic Hazard Assessment of Mathura City (India): A Deterministic Approach. *J Earth Syst Sci*, **133**, 209 (2024). <https://doi.org/10.1007/s12040-024-02414-z>
3. Kasaundhan, H., Singh, D.K., **Agrawal, M.***, 2024. Deciphering the crustal anisotropy and mantle flow beneath the Indo-Burma ranges from the harmonic decomposition of the receiver functions. *Physics of the Earth and Planetary Interiors* 107183. <https://doi.org/10.1016/j.pepi.2024.107183> (Impact factor: 2.4, Citations: 0)
4. Shams, R., **Agrawal, M.***, 2024. Nonlinear Seismic Site Response Analysis of Shallow Sites in Dhanbad City, Jharkhand, India. *Geotech Geol Eng.* <https://doi.org/10.1007/s10706-024-02742-3> (Impact factor: 1.7, Citations: 0).
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7. Kumar Das, M., **Agrawal, M.***, Patel, A., 2023. A seismic investigation of lithospheric velocities beneath the Chhotanagpur Plateau (India) using waveform modeling of shear-coupled PL waves and other phases. *Journal of Asian Earth Sciences* 256, 105798. <https://doi.org/10.1016/j.jseaes.2023.105798> (Impact factor: 2.7, Citations: 0)
8. Ghosh S., Joshi D., Kiran R., Agrawal M., Chakraborty S.S., Yadav R., Kumar A., 2023. A review of reservoir oil-water transition zone characterization and potential recovery methods. *Geopersia*, 13 (2), 323-336. [10.22059/geope.2023.350783.648689](https://doi.org/10.22059/geope.2023.350783.648689)
9. Kumar, S., **Agrawal, M.***, Pulliam, J., 2023. Modeling Seismic Anisotropy Beneath the Island of Hispaniola via the Harmonic Decomposition of Receiver Functions. *Geochem Geophys Geosyst* 24, e2022GC010773. <https://doi.org/10.1029/2022GC010773> (Impact factor: 2.9, Citations: 0)
10. Shams, R., **Agrawal, M.***, 2023. Kappa model and Coda-Q for Eastern Chotanagpur Plateau region (India). *Nat Hazards* 117, 519–553. <https://doi.org/10.1007/s11069-023-05871-9> (Impact factor: 3.3, Citations: 01)
11. Shams, R., **Agrawal, M.***, Gupta, R.K., 2022. Probabilistic seismic hazard assessment of Kishanganj, Bihar, India. *J Earth Syst Sci* 131, 257. <https://doi.org/10.1007/s12040-022-01999-7> (Impact factor: 1.3, Citations: 02)
12. Vijayan, A., **Agrawal, M.***, Gupta, R.K., 2022. Seismic Site Characterization Using Ambient Noise and Earthquake HVSr in the Easternmost Part of Shillong Plateau, India. *J Geol Soc India* 98, 471–478. <https://doi.org/10.1007/s12594-022-2004-3> (Impact factor: 1.2, Citations: 3)
13. Bhatia, M., Rajesh, R., Ravi Kumar, **Agrawal, M.**, 2022. Microseismic source distribution inferred from noise recordings at the Gujarat Seismic Network, India. *J Earth Syst Sci* 131, 23. <https://doi.org/10.1007/s12040-021-01779-9> (Impact factor: 1.3, Citations: 02)
14. Gupta, R.K., **Agrawal, M.***, Pal, S.K., Das, M.K., 2021. Seismic site characterization and site response study of Nirsa (India). *Nat Hazards* 108, 2033–2057. <https://doi.org/10.1007/s11069-021-04767-w> (Impact factor: 3.3, Citations: 17)

15. **Agrawal, M.***, Das, M.K., Kumar, S., Pulliam, J., 2021. Mapping lithospheric seismic structure beneath the Shillong plateau (India) and adjoining regions by jointly fitting receiver functions and surface wave dispersion. *Geophysical Journal International* 226, 1645–1675. <https://doi.org/10.1093/gji/ggab146> (Impact factor: 2.8, Citations: 06)
16. Kumar, S., **Agrawal, M.***, Pulliam, J., Rivera, E.P., HuÉrfano, V.A., 2020. Crustal thickness and bulk Poisson ratios in the Dominican Republic from receiver function analysis. *Tectonophysics* 775, 228308. <https://doi.org/10.1016/j.tecto.2019.228308> (Impact factor: 2.7, Citations: 08)
17. Gupta, R.K., **Agrawal, M.***, Pal, S.K., Kumar, R., Srivastava, S., 2019. Site characterization through combined analysis of seismic and electrical resistivity data at a site of Dhanbad, Jharkhand, India. *Environ Earth Sci* 78, 226. <https://doi.org/10.1007/s12665-019-8231-2> (Impact factor: 2.8, Citations: 35)
18. Das, M.K., **Agrawal, M.***, Gupta, R.K., Gautam, J.L., 2019. Lithospheric seismic structure beneath two broadband station sites of the eastern part of Chhotanagpur Plateau: New constraints from receiver functions and dispersion curves. *Physics of the Earth and Planetary Interiors* 287, 51–64. <https://doi.org/10.1016/j.pepi.2019.01.004> (Impact factor: 2.4, Citations: 14)
19. **Agrawal, M.***, Pulliam, J., Sen, M.K., Grand, S.P., 2019. Lithospheric Removal Beneath the Eastern Flank of the Rio Grande Rift From Receiver Function Velocity Analysis. *Geochem Geophys Geosyst* 20, 974–991. <https://doi.org/10.1029/2018GC007911> (Impact factor: 2.9, Citations: 03)
20. **Agrawal, M.***, Pulliam, J., Sen, M.K., Gurrola, H., 2015b. Lithospheric structure of the Texas-Gulf of Mexico passive margin from surface wave dispersion and migrated Ps receiver functions. *Geochem Geophys Geosyst* 16, 2221–2239. <https://doi.org/10.1002/2015GC005803> (Impact factor: 2.4, Citations: 14)
21. **Agrawal, M.***, Pulliam, J., Sen, M.K., Dutta, U., Pasyanos, M.E., Mellors, R., 2015a. Crustal and uppermost mantle structure in the Middle East: assessing constraints provided by jointly modelling Ps and Sp receiver functions and Rayleigh wave group velocity dispersion curves. *Geophysical Journal International* 201, 783–810. <https://doi.org/10.1093/gji/ggv050> (Impact factor: 2.8, Citations: 20)

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2. Gupta, R. K., **M. Agrawal** and S. K. Pal (2021), [Inversion of HVSR Curves using Monte-Carlo Global Optimization Technique for Seismic Site Characterization](#), *3rd Asia Pacific Meeting on Near Surface Geoscience & Engineering at Chiang Mai (Thailand)*, [10.3997/2214-4609.202071043](https://doi.org/10.3997/2214-4609.202071043).
3. **Agrawal, M.**, J. Pulliam, M.K. Sen, U. Dutta, R. Ghosh, F. Sepulveda, R. Mellors, and M. Pasyanos (2012), Joint, non-linear modeling of receiver functions, surface wave dispersion and waveforms with formal assessments of constraints. *Monitoring Research Review, Albuquerque, New Mexico*. https://digital.library.unt.edu/ark:/67531/metadc829526/m2/1/high_res_d/1050499.pdf
4. Gupta, R. K., Saurabh, S. K. Pal*, **M. Agrawal** and M. K. Das (2018), Shear Wave Velocity by Joint Inversion of Horizontal-to-Vertical Spectral Ratios and Dispersion Curves, *Indian Society of Engineering Geology*, 14-1, 13.
5. Mallick, S.*, P.K. Mukhopadhyay, A. Dwivedi, and **M. Agrawal** (2009). A cost-effective monitoring strategy for carbon-sequestrated deep saline aquifer. *Geohorizon*, http://www.spgindia.org/geodec_09/malick.pdf

CONFERENCE PRESENTATIONS AND PUBLISHED ABSTRACTS

1. Hitank Kasaundhan, Dhiraj Kumar Singh, and **Mohit Agrawal** (2023), Seismic Investigation of the Lithospheric Anisotropy beneath the Indo-Burma Ranges from Harmonic Decomposition of Receiver Functions, National Conference on Geophysical Advances-Natural Resource Exploration, Energy Security and Geohazards (CGA 2023), Indian Institute of Technology (Indian School of Mines), Dhanbad, India.
2. Das, M. K., **Agrawal, M.**, & Patel, A. (2023), Crust and upper mantle velocity structure beneath the Chhotanagpur Plateau, India using waveform modeling of Shear-Coupled PL waves and other phases, Seismological Society of America (SSA), San Juan, Puerto Rico, USA.
3. Das, M. K., **Agrawal, M.**, Sachin, K., & Pulliam, J. (2023), A seismic investigation of lithospheric seismic structure beneath the Shillong Plateau and adjoining regions in N-E India by jointly fitting of receiver functions and dispersion curves, Seismological Society of America (SSA), San Juan, Puerto Rico, USA.
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5. Kasaundhan, H. and **M. Agrawal** (2023), Seismic investigation of the Lithospheric Anisotropy beneath the Indo-Burma Ranges from Harmonic Decomposition of Receiver Functions, CGA conference, Indian Institute of Technology (Indian School of Mines), Dhanbad, India.
6. Gupta, R.K., **M. Agrawal** and S.K. Pal (2022), Recent Advances in Earth Sciences with Special Emphasis - Natural Hazard: Joint Modelling of Horizontal-to-Vertical Spectral Ratios and Dispersion Curves for Seismic Site Characterization of Dhanbad City (India), North-Eastern Hill University (NEHU), Shillong.
7. Kumar, S., Pulliam, J., and **Agrawal, M.** (2022), Anisotropic layering beneath Hispaniola Island from harmonic decomposition modeling of receiver functions, American Geophysical Union (AGU) fall meeting 2022, Chicago, IL, USA.
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