

# Publication

<https://scholar.google.com/citations?user=-v8O-xEAAAAJ&hl=en>

SL. Authors	Title	Journal	IF(WOS)
39. Das, G., <b>Maiti, S</b>	Ensemble learning-based interpretable method for pore pressure prediction using multivariate well logging data of IODP site U1517	<i>Earth Sci Inform</i> <b>18</b> , 206,2025 <a href="https://doi.org/10.1007/s12145-025-01709-z">https://doi.org/10.1007/s12145-025-01709-z</a>	<b>2.7 Q2</b>
38. <b>Maiti, S.</b> , Gupta, S., and Gupta, P.K.,	Prediction of groundwater quality index and identification of key variables using Bayesian neural network	<i>Water, Air, &amp; Soil Pollution</i> , 2024, <a href="https://doi.org/10.1007/s11270-024-07459-w">https://doi.org/10.1007/s11270-024-07459-w</a>	<b>3.8 Q2</b>
37. Biswas, A., Rao, G.S., <b>Maiti, S.</b> ,	Spatial variations in effective elastic thickness and loading ratio in the Indo-Burma subduction zone based on the joint inversion of Bouguer coherence and admittance	<i>Journal of Asian Earth Sciences</i> , Volume <b>270</b> , 106192, 2024, <a href="https://doi.org/10.1016/j.jseaes.2024.106192">https://doi.org/10.1016/j.jseaes.2024.106192</a> .	<b>2.7 Q2</b>
36. Mondal, S.R., Ghosh, R., Ojha, M. and <b>Maiti, S.</b> ,	Well log evaluation of the gas-bearing reservoirs in the Bombay offshore basin, Gulf of Cambay, western coast of India	<i>Exploration Geophysics</i> ., <b>55 (2)</b> , 191-21 2024 <a href="https://doi.org/10.1080/08123985.2023.2288958">https://doi.org/10.1080/08123985.2023.2288958</a>	<b>0.6 Q4</b>
35. <b>Maiti, S*</b> , Chiluvuru, R.K.,	A deep CNN-LSTM model for predicting interface depth from gravity data over thrust and fold belts of North East India	<i>Journal of Asian Earth Sciences</i> , , Volume <b>259</b> , 105881, 2024 <a href="https://doi.org/10.1016/j.jseaes.2023.105881">https://doi.org/10.1016/j.jseaes.2023.105881</a>	<b>2.7 Q2</b>
34. Das, G., and <b>Maiti, S*</b> ,	A machine learning approach for the prediction of pore pressure using well log data of Hikurangi Tuaheni Zone of IODP Expedition 372, New Zealand.	<i>Energy Geoscience.</i> , <b>5(2)</b> ,100227, 2023 <a href="https://doi.org/10.1016/j.engeos.2023.100227">https://doi.org/10.1016/j.engeos.2023.100227</a>	<b>Cite Score 8.2 (WOS)</b>
33. Karmakar, M., and <b>Maiti, S*</b> ,	Statistical machine learning augmented interpretation of pore pressure of well1344A located at slope setting of sites IODP	<i>Journal of Earth System Science</i> , <b>132</b> , 103 , 2023 <a href="https://doi.org/10.1007/s12040-023-02114-0">https://doi.org/10.1007/s12040-023-02114-0</a>	<b>1.3 Q3</b>
32. Gupta, S., and <b>Maiti, S.</b> ,	Comparison between Self-Organizing Map and Principal Component analysis for water quality assessment and hydro-geochemical characterization in dyke intruded complex geological settings	<i>Water and Environment Journal</i> , <b>37(3)</b> , 512-526 2023 <a href="https://doi.org/10.1111/WEJ.12855">https://doi.org/10.1111/WEJ.12855</a>	<b>1.7 Q3</b>
31. Gupta, P.K., <b>Maiti, S.</b>	Novel Efficient Method for Automatic Inversion of Vertical Electrical Sounding Data: Case Study from Sindhudurg District, Maharashtra, India	<i>Pure Appl. Geophys</i> , <b>180</b> , 243–259. 2023 <a href="https://doi.org/10.1007/s00024-022-03213-7">https://doi.org/10.1007/s00024-022-03213-7</a>	<b>1.9 Q2</b>

30. Sengupta, M., Ghosh, R., Sen, A., and <b>Maiti, S.</b> ,	Capillary pressure equilibrium theory mapping of 4D seismic inversion results to predict saturation in a gas-water system	<i>Geophysics</i> , <b>88</b> (2), M49–M58. 2023 <a href="https://doi.org/10.1190/geo2022-0054.1">https://doi.org/10.1190/geo2022-0054.1</a>	<b>3.0 Q1</b>
29. Gupta, P.K., <b>Maiti, S.</b> ,	Enhancing the prediction of hydraulic parameters using machine learning, integrating multiple attributes of GIS and geophysics.	<i>Hydrogeology Journal</i> , <b>31</b> , pages501–520, 2023 <a href="https://doi.org/10.1007/s10040-022-02567-5">https://doi.org/10.1007/s10040-022-02567-5</a>	<b>2.4 Q2</b>
28. Gupta, P.K., <b>Maiti, S.</b> ,	Enhancing data-driven modelling of fluoride concentration using new data mining algorithms.	<i>Environ Earth Sci</i> <b>81</b> , 89. 2022 <a href="https://doi.org/10.1007/s12665-022-10216-z">https://doi.org/10.1007/s12665-022-10216-z</a>	<b>2.8 Q2</b>
27. Ray, A., Khoudaiberdiev, R., Bennett, C., Bhatnagar, P., Boruah, A., Dandapani, R., <b>Maiti, S.</b> , and Verma,	Attribute assisted interpretation of deltaic system using enhanced 3D seismic data. Offshore Nava Scotia	<i>Journal of Natural Gas Science and Engineering</i> , 2022, <b>99</b> , 104428, <a href="https://doi.org/10.1016/j.jngse.2022.104428">https://doi.org/10.1016/j.jngse.2022.104428</a> )	<b>4.9 Q1</b>
26. Mondal, S.R., Ghosh, R., Ojha, M. and <b>Maiti, S.</b> ,	Predicting Resource Potential of Hydrocarbon in the Gulf of Cambay, West Coast of India, by Integrating Rock Physics and Multi-attribute Linear Regression Transform	<i>Nat Resour Res</i> . 2022, <b>31</b> , 643–661, <a href="https://doi.org/10.1007/s11053-021-09999-y">https://doi.org/10.1007/s11053-021-09999-y</a>	<b>4.45 Q1</b>
25. Chiluvuru, Ravi Kumar., Raj, S., Pathak, B., <b>Maiti, S.</b> , and Kasturi, N.,	High density crustal intrusive bodies beneath Shillong plateau and Indo Burmese Range of northeast India revealed by gravity modeling and earthquake data.	<i>Physics of the Earth and Planetary Interior</i> , 307,106555, 2020 <a href="https://doi.org/10.1016/j.pepi.2020.106555">https://doi.org/10.1016/j.pepi.2020.106555</a>	<b>2.4 Q2</b>
24. Chiluvuru. Ravi Kumar., Kesiezie, N., Pathak, B. <b>Maiti, S*</b> , and Tiwari, R.K	Depth estimation of basement structure beneath the Kohima Synclinorium, North East India via Bouguer gravity data modelling	<i>Journal of Earth System Science</i> 2020, 129:56, <a href="https://doi.org/10.1007/s12040-019-1326-z">https://doi.org/10.1007/s12040-019-1326-z</a>	<b>1.3 Q3</b>
23. Kumar, S., Rawat, G., Dhamadharan, S., Sen, K., and <b>Maiti, S.</b> ,	Dimensionality analysis of MT impedances of Tso-MorariDome:Implication for structural interpretation,	<i>Himalayan Geology</i> , 40 (2), 190–198. 2019	<b>1.1 Q3</b>
22. <b>Maiti, S*</b> , Chiluvuru. R.K., Sarkar, P., and Tiwari, R.K., and Uppala, S.,	Interface depth modelling of gravity data and altitude variations: A Bayesian neural network approach",	<i>Neural Computing and Applications</i> . <b>32</b> , 3183–3202, 2020 <a href="https://doi.org/10.1007/s00521-019-04276-9">https://doi.org/10.1007/s00521-019-04276-9</a>	<b>4.5 (Q2)</b>
21. Karmakar, M., and <b>Maiti, S*</b> , 2019.	Short Term Memory Efficient Pore Pressure Prediction via Bayesian Neural Networks at Bering Sea Slope of IODP Expedition 323	<i>Measurement</i> , <b>135</b> ,pp-852-868, 2019 <a href="https://doi.org/10.1016/j.measurement.2018.12.034">https://doi.org/10.1016/j.measurement.2018.12.034</a>	<b>5.2 Q1</b>
20. Karmakar, M., <b>Maiti, S*</b> , Singh, A., Ojha, M., Maity, B.,	Mapping of rock types using a joint approach by combining the multivariate statistics, self-organizing map and Bayesian neural networks: an example from IODP 323 site	<i>Marine Geophysical Research</i> <b>39</b> (3), pp-407-419, 2018, <a href="http://dx.doi.org/10.1007/s11001-017-9327-2">http://dx.doi.org/10.1007/s11001-017-9327-2</a>	<b>1.6 Q2</b>

19. **Maiti, S\***, Das, A., Shah, R., and Gupta, G.,  
Application of automatic relevance determination model for groundwater quality index prediction by combining hydro-geochemical and geo-electrical data ,  
*Modeling Earth Systems and Environment*, vol. **3**(4), pp. 1371-1382, 2017  
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**2.7 Q3 (Emerging Source; WOS)**
18. Singh, A., **Maiti, S\***, Tiwari, R.K.,  
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*Journal of Indian Geophysical Union*,. Vol **21**(2), pp.153-166, 2017  
**0.1 Q4 (Emerging Source; WOS)**
17. Das, A., **Maiti, S\***, Naidu, S., and Gupta, G  
Estimation of spatial variability of aquifer parameters from geophysical methods: A case study of Sindhudurg district, Maharashtra, India  
*Stochastic Environmental Research and Risk Assessment*, **31**(7), pp-1709-1726, 2017  
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**3.9 Q1**
16. Singh, A., **Maiti, S\***, Tiwari, R.K.,  
Modelling discontinuous well log signal to identify lithological boundaries via wavelet analysis: An example from KTB borehole data.  
*Journal of Earth System Science* vol **125**(4), pp.761-776, 2016,  
<http://link.springer.com/article/10.1007/s12040-016-0701-2>  
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15. Ojha, M., and **Maiti, S.**,  
Sediment classification using neural networks: an example from the site-U1344A of IODP Expedition 323 in the Bering Sea  
*Topical Studies in Oceanography*, vol **125-126**, pp 202-213, 2016  
<http://dx.doi.org/10.1016/j.ds2.2013.03.024>,  
**3.0 Q2**
14. Gupta, G., Patil, J.D., **Maiti, S.**, Erram, V.C., Pawar, N.J., Mahajan, S.H., and Suryawanshi, R.A.,  
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**2.8 Q2**
13. Gupta, G., Erram, V. C., and **Maiti, S.**,  
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*Journal Indian Geophysical Union*, vol. **19**(1), pp.27-38,2015  
**0.1 Q4 (Emerging Source; WOS)**
12. Gupta, G., **Maiti, S.**, and Erram, V.C.,  
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**1.3 Q3**
11. **Maiti, S\***, and Tiwari, R.K.,  
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9. **Maiti, S\***, Gupta, G., Erram,V.C., and Tiwari, R.K., Delineation of shallow resistivity structure around Malvan, Konkan region, Maharashtra by neural network inversion using vertical electrical sounding measurements *Environmental Earth Sciences*, vol. **68(3)**, pp 779-794, 2013, <http://dx.doi.org/10.1007/s12665-012-1779-8> **2.8 Q2**
8. **Maiti, S\***,Erram,V.C., Gupta, G., and Tiwari, R.K., ANN based inversion of DC resistivity data for groundwater exploration in hard rock terrain of western Maharashtra (India) *Journal of Hydrology*, vol. **464-465**, pp.281-293, 2012, <http://dx.doi.org/10.1016/j.jhydrol.2012.07.020>, **5.9 Q1**
7. Tiwari, R.K., and **Maiti, S.**, Bayesian neural network modeling of tree-ring temperature variability record from the Western Himalayas. *Nonlinear Processes in Geophysics*, vol.**18(2)**, pp.515-528, 2011, <http://dx.doi.org/10.5194/npg-18-515-2011>, **1.7 Q2**
6. **Maiti, S\***, Gupta, G., Erram,V.C., and Tiwari, R.K., Inversion of Schlumberger resistivity sounding data from the critically dynamic Koyana region using Hybrid Monte Carlo-based neural network approach. *Nonlinear Processes in Geophysics*, vol.**18(2)**, pp.179-192, 2011, <http://dx.doi.org/10.5194/npg-18-179-2011>, **1.7 Q2**
5. **Maiti, S\***, and Tiwari, R.K., Neural network modeling and an uncertainty analysis in Bayesian framework: A case study from the KTB borehole site, *Journal of Geophysical Research*, vol.**115**, B10208, 2010 <http://dx.doi.org/10.1029/2010JB000864>, **3.9 Q1**
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3. **Maiti, S\***, and Tiwari, R.K., 2009 A Hybrid Monte Carlo method based artificial neural networks approach for rock boundaries identification: A case study from KTB borehole *Pure and Applied Geophysics*, vol.**166(12)**, pp 2059-2090, 2009 <http://dx.doi.org/10.1007/s00024-009-0533-y>, **1.9 Q2**
2. **Maiti, S\***, Tiwari, R.K., and Kuempel Hans-Joachim., Neural network modeling and classification of litho-facies using well log data: A case study from KTB borehole site, *Geophysical Journal International*, vol.**169(2)**, pp733-746, 2007 <http://dx.doi.org/10.1111/j.1365-246X.2007.03342.x> **2.8 Q2**
1. **Maiti, S\***, and Tiwari, R.K., Automatic detection of lithologic boundaries using the Walsh transform: A case study from the KTB borehole. *Computers and Geosciences*, vol., **31(8)**, pp.949-955, 2005 <http://dx.doi.org/10.1016/j.cageo.2005.01.016>, **4.2 Q1**

## Book Chapter

SL	Authors	Chapter Title	Book Title
2.	<b>Maiti, S.</b> , and Gupta, G *	Integrated Geoelectrical and Hydrochemical Investigation of Shallow Aquifers in Konkan Coastal Area, Maharashtra, India: Advanced Artificial Neural Networks based Simulation Approach	<i>Advances in modeling and interpretation for near surface geophysics</i> , (Eds. A. Biswas and SP Sharma), Springer Geophysics, Springer Nature Switzerland AG 2020 <a href="https://doi.org/10.1007/978-3-030-28909-6_3">https://doi.org/10.1007/978-3-030-28909-6_3</a>
1.	Gupta, G., Erram, V. C., and <b>Maiti, S.</b> ,	Application of Electrical Resistivity Tomography in Delineation of Saltwater and Freshwater Transition Zone: A Case Study in the West Coast of Maharashtra, India	<i>GROUNDWATER: ASSESSMENT, MODELING AND MANAGEMENT</i> , (Eds. M. Thangarajan and Vijay P. Singh), CRC Press, (A unit of Taylor & Francis Group, UK), 1 <sup>st</sup> July 2016 <a href="https://www.crcpress.com/Groundwater-Assessment-Modeling-and-Management/Thangarajan-Singh/p/book/9781498742849">https://www.crcpress.com/Groundwater-Assessment-Modeling-and-Management/Thangarajan-Singh/p/book/9781498742849</a>

## Memoir

SL	Authors	Chapter Title	Book Title
	Erram, V. C., Ghodake, V.R., Gupta, G., Sabale, S.M., Narayanpethkar, A.B., <b>Maiti, S.</b> , and Kadamb's	Delineation of groundwater potential zones in the hard rock terrain of Deccan Volcanic Province using electrical resistivity data	<i>Journal of the Geological Society of India</i> , No. 80, pp 51-66, 2012.

## International Conference/Full-Length Paper

SL	Authors	Title	Conference
28.	Dabi, S., Vishwakarma, A., <b>Maiti, S.</b> ,	Joint Implementation of Ensemble and Deep Learning Regression Techniques to Predict Missing Density Logs,	Paper Number: IPTC-22454-MS, Paper presented at the International Petroleum Technology Conference, Riyadh, Saudi Arabia, February 2022. <a href="https://doi.org/10.2523/IPTC-22454-MS">https://doi.org/10.2523/IPTC-22454-MS</a>
27.	Dabi, S., and <b>Maiti, S.</b> ,	Implementation of Machine Learning Ensemble Techniques for 3D Inversion of Gravity Data	AGU Fall Meeting 2021 <a href="https://agu.confex.com/agu/fm21/meetingapp.cgi/Paper/952871">https://agu.confex.com/agu/fm21/meetingapp.cgi/Paper/952871</a>
26.	Dabi, S., Vishwakarma, A., <b>Maiti, S</b>	Prediction of Shear Sonic Time log Using Machine Learning Techniques and Empirical Relations	AGU Fall Meeting 2021 <a href="https://agu.confex.com/agu/fm21/meetingapp.cgi/Paper/948652">https://agu.confex.com/agu/fm21/meetingapp.cgi/Paper/948652</a>
25.	Bhowmick, D., Gupta, D. K., <b>Maiti, S.</b> , and Shankar, U., 2019.	Stacked autoencoders based machine learning for noise reduction and signal reconstruction in geophysical data	arXiv <a href="https://arxiv.org/abs/1907.03278">arXiv:1907.03278</a> ; 2019
24.	Bhowmick, D., Gupta, D. K., <b>Maiti, S.</b> , and Shankar, U.,	Deep Autoassociative Neural Networks for Noise Reduction in Seismic data	arXiv <a href="https://arxiv.org/abs/1907.03278">arXiv:1907.03278</a> ; 2018,
23.	Bhowmick, D., Gupta, D. K., <b>Maiti, S.</b> , and Shankar, U.,	Velocity-porosity super model: A deep neural networks based concept	<a href="https://arxiv.org/abs/1804.07112">arXiv:1804.07112</a> [cs.CE] <a href="https://www.cornell.edu/">https://www.cornell.edu/</a> ; 2018
22.	Shah, R., and <b>Maiti, S.</b> ,	Artificial Neural Networks using Regularized Logistic Regression Cost Function: A Robust Lithofacies Classifier.	Artificial Neural Networks using Regularized Logistic Regression Cost Function: A Robust Lithofacies Classifier. 80 <sup>th</sup> EAGE Conference & Exhibition 2018, 11-14 June 2018,

		Copenhagen, Denmark. <a href="http://dx.doi.org/10.1007/10.3997/2214-4609.201801740">http://dx.doi.org/10.1007/10.3997/2214-4609.201801740</a>
21. Das, A., and <b>Maiti, S.,</b>	Groundwater quality prediction using Bayesian automatic relevance determination modelling.	<i>Society of Petroleum Geophysicists (SPG)</i> , November 17-19, Jaipur, India, Extended Abstract. 180 (on CDROM), pp.1-5, <a href="http://www.spgindia.org/">http://www.spgindia.org/</a>
20. Kumar R. Ch., Kesiezie N., Singh, N., and <b>Maiti, S.,</b>	Seismic site response studies for microzonation and hazard assessment of Kohima, Nagaland, North Eastern Region of India.	<i>Indian Journal of Geosciences</i> , Vol. 71(3), pp. 501-518 ;2016 <a href="https://www.researchgate.net/publication/342588664_Seismic_site_response_studies_for_microzonation_and_hazard_assessment_of_Kohima_Nagaland_North_Eastern_Region_of_India">https://www.researchgate.net/publication/342588664_Seismic_site_response_studies_for_microzonation_and_hazard_assessment_of_Kohima_Nagaland_North_Eastern_Region_of_India</a>
19. Priyadarshi, SK <b>Maiti, S.,</b> Rekapalli, R Tiwari, RK	A hybrid PSO-GSA-based inversion of noise-corrupted seismic data using singular spectrum-based time slice denoising	SEG Technical Program Expanded Abstracts, 4835-4839; 2016 , <a href="https://doi.org/10.1190/segam2016-13871026.1">https://doi.org/10.1190/segam2016-13871026.1</a>
18. Singh, B.B., Srivardhan, V., and <b>Maiti, S.,</b>	Integrated particle swarm optimization based inversion of self potential anomaly for mineral detection	78 <sup>th</sup> EAGE Conference and Exhibition, Vienna, Austria, May 30-02 June 2016 ,Extended Abstract, <a href="http://dx.doi.org/10.3997/2214-4609.201601269">http://dx.doi.org/10.3997/2214-4609.201601269</a>
17. Bhowmick, D., Shankar, U., and <b>Maiti, S.</b>	Revisiting supervised learning in the context of predicting gas hydrate saturation,	78 <sup>th</sup> EAGE Conference and Exhibition, Vienna, Austria, May 30-02 June 2016 ,Extended Abstract, <a href="http://dx.doi.org/10.3997/2214-4609.201600900">http://dx.doi.org/10.3997/2214-4609.201600900</a>
<b>16. Maiti, S.,</b> and Ojha, M.,	Modeling and classification of marine sediment using multivariate statistics and hybrid neural computation.	11 <sup>th</sup> Biennial International Conference & Exposition on Petroleum Geophysics, <i>Society of Petroleum Geophysicists (SPG)</i> , Jaipur, Extended Abstract. 179(on CDROM), pp.1-6, <a href="http://www.spgindia.org/">http://www.spgindia.org/</a>
15. Seth, V., Srivardhan, V., <b>Maiti, S.,</b>	Evaluation of formation shaliness using factor analysis of site –U1344A of IODP expedition 323 in the Bering Sea	77 <sup>th</sup> EAGE Conference and Exhibition 2015, pp.1-3.
14. Erram, V.C., Gupta, G., <b>Maiti, S.,</b> and Anand, S.P.,	Structure and tectonics of Konkan coastal belt of Maharashtra from ground magnetic studies,	<i>In: Proc. 5<sup>th</sup> International Groundwater Conference (IGWC-2012)</i> , pp.570-577.
13. Gupta, G., Sijo, T.P., Erram, V.C., <b>Maiti, S.,</b> and Mahajan, S.H.,	Electrical characterization of groundwater salinization in Konkan coastal aquifers, Maharashtra.	<i>In: Proc. 5<sup>th</sup> International Groundwater Conference (IGWC-2012)</i> , pp.1208-1221,
12. <b>Maiti, S.,</b> Gupta, G., and Erram, V.C.,	Inversion of Schlumberger resistivity sounding data from the Malvan, Konkan region using hybrid Monte Carlo based neural network approach	<i>Proc. of 4<sup>th</sup> International Groundwater Conference (IGWC-2011), Madurai, on Water Resources Assessment, Recharge and Modeling</i> , pp.75-85
11. Erram, V.C., Gupta, G., and <b>Maiti, S.,</b>	Delineation of weathered fractured aquifer in the hard rock terrain of Deccan Volcanic Province using vertical electrical resistivity data	<i>Proc. of 4<sup>th</sup> International Groundwater Conference (IGWC-2011), Madurai, on Water Resources Assessment, Recharge and Modeling</i> , pp.34-38.
<b>10. Maiti, S.,</b> Erram, V.C.,Gupta, G., Nandi., R., and Pal., S.,	Direct Current VES Data Inversion using Singular Value Decomposition Method for Delineating Seawater Intrusion in parts of Konkan, Western Maharashtra	9 <sup>th</sup> Biennial International Conference & Exposition on Petroleum Geophysics, <i>Society of Petroleum Geophysicists (SPG)</i> ,

Hyderabad, Extended Abstract (on CDROM), pp.1-6, <http://www.spgindia.org/>

9. **Maiti, S.,** and Tiwari, R. K., Modeling of Rock Boundary using Walsh Domain Sequence Filtering: An Example from the German Continental Deep Drilling Program (KTB) Borehole Site  
9<sup>th</sup> Biennial International Conference & Exposition on Petroleum Geophysics, *Society of Petroleum Geophysicists (SPG)*, Hyderabad, Extended Abstract (on CDROM), pp.1-6, <http://www.spgindia.org/>
8. **Maiti, S.,** Erram, V.C., Gupta, G., and Tiwari, R.K., Inversion of Schlumberger Vertical Electrical Sounding Data using a Hybrid Monte Carlo Based Bayesian Neural Network Approach  
9<sup>th</sup> Biennial International Conference & Exposition on Petroleum Geophysics, *Society of Petroleum Geophysicists (SPG)*, Hyderabad, Extended Abstract (on CDROM), pp.1-6, <http://www.spgindia.org/>
7. Gupta, G., Erram, V. C. **Maiti, S.,** Kachate, N. R and Patil, S. N., Geoelectrical studies for delineating seawater intrusion in parts of Konkan coast, western Maharashtra  
*International Journal of Environment and Earth Sciences*, vol.1, pp.62-79.
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