Dr. Dip Kumar Singha

Assistant Professor
Department of Geophysics
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Academic Qualifications:
Phd (Applied Geophysics), 2015, (IIT) Indian School of Mines, Dhanbad
MSc (Tech) (Applied Geophysics), 2011, (IIT) Indian School of Mines, Dhanbad
BSc (H) (Physics), 2008, University of Calcutta

Position:
Current: Assistant Professor, Geophysics (exploration), Department of Geophysics since 2016.
Previous: INSPIRE Faculty at CSIR-NGRI, Hyderabad from 2015-2016.

Teaching:

Well logging interpretation and Reservoir Geophysics, Seismic and petroleum Stratigraphy, AVO analysis, 4D seismic, Magnetic method, Computing programming, mathematical and numerical analysis and Marine Geophysics

Research Interest:
(1) Interpretation of well logging data and seismic data
(2) Petrophysics and Rockphysics Analysis
(3) Pore Pressure Prediction
(4) Reservoir Geomechanics
(5) Reservoir characterization (AVO analysis and seismic inversion)

Distinctions and Awards
INSPIRE Faculty Awardee-2015
Prof D. Lal Best paper award-2018

Project:
Title of Project: "**Integration of Geomechanics and Rock Physics Modeling of Reservoirs in Sedimentary Basin of Eastern India"** Funded by DST-INSPIRE faculty award under DST, New Delhi

PhD supervising: 04 and Master thesis supervising: 20

Research Publication:
International Journal: 09 and National Journal: 02

For more information: https://scholar.google.co.in/citations?user=51D0gOsAAAAJ&hl=en

Full list of Research Papers:

International Journal

Rai, N, **Singha, D.K**., Shukla, P.K. and Sain, K., 2020, Delineation of discontinuity using multi-channel seismic attributes: An implication for identifying fractures in gas hydrate sediments in offshore Mahanadi basin, Result in Geophysical Science, 1-4, 100007.

Shankar, U, Srivastava, S, **Singha, D.K**. and Pratap, B., 2019, Prediction of pore pressure and fracture pressure from well log data in a gas hydrate reservoir of the Krishna-Godavari basin, Journal of Indian Geophysical Union, 23, 376-386. (I.F:0.313)

Singha, D. K, Shukla, P.K., Chatterjee, R. and Sain, K., 2019, Multi-channel 2D seismic constraints on pore pressure- and vertical stress-related gas hydrate in deep offshore of the Mahanadi basin, India, Journal of Asian Earth Science, 180, 103882. (I.F: 3.059)

Chatterjee, R. And **Singha, D. K**., 2018, Stress Orientation from Image log and Estimation of Shear Wave Velocity using Multiple Regression Model: A Case Study from Krishna-Godavari basin, India, Journal of Indian Geophysical Union, 22, 128-137. (I.F:0.313)

Kumar, M., Dasgupta, R., **Singha, D. K.** and Singh, N. P., 2018, Petrophysical evaluation of well log data and rock physics modeling for characterization of Eocene reservoir in Chandmari oil field of Assam-Arakan basin, India, J Petrol Explor Prod Technol, 8, 323–340.

Singha, D. K. and Chatterjee, R., 2017, Rock Physics Modeling in Sand Reservoir, Krishna-Godavari basin, India, Geomechanics and Engineering, An International Journal, 13, 99-117. (I.F:2.594)

Das. B., Chatterjee, R., **Singha, D. K.** and. Kumar, R., 2017, Post-stack Seismic Inversion and Attribute Analysis in Shallow Offshore of Krishna-Godavari basin, India, Journal of Geological Society of India, 90, 32-40. I.F:0.994

Chatterjee.R., **Singha, D.K**., Ojha, M., Sen, M.K. and Sain, K., 2016, Porosity estimation from pre-stack seismic data in gas-hydrate bearing sediments, Krishna-Godavari basin, India, Journal of Natural Gas Science and Engineering, 33, 562-572. I.F: 3.859

Singha, D.K. and Chatterjee.R., 2015,Geomechanical Modeling using Finite Element Method for Prediction of In-situ Stress in Krishna-Godavari basin, India, International Journal of Rock Mechanics and Mining Sciences, 73 (2015), 15-27. I.F:1.424

Singha, D.K., Chatterjee.R., Sen, M.K. and Sain, K., 2014, Pore Pressure Prediction in Gas-Hydrate bearing Sediments of Krishna-Godavari Basin, India, Marine Geology, 357 (2014) 1–11.I.F:2.464

Singha, D. K. and Chatterjee, R., 2014, Detection of Overpressure zones and a Statistical Model for Pore Pressure Estimation from Well Logs in the Krishna-Godavari Basin, India, Geochemistry, Geophysics, Geosystems, 15(4), 1009-1020.I.F:3.07

Chapter: Rima Chatterjee, Suman Paul, **Dip Kumar Singha**, Manoj Mukhopadhyay, Overpressure Zones In Relation To In Situ Stress for The Krishna-Godavari Basin, Eastern Continental Margin Of India: Implications for Hydrocarbon Prospectivity, Petroleum Geosciences: Indian Contexts, Springer Geology 2015, pp 127-142, DOI: http://dx.doi.org/10.1007/978-3-319-03119-4_5

International Conferences

Singha, D.K, Shukla,P.K., and Sain, K., 2019, Analysis of Anisotropy Using Well Data in Gas Hydrate Bearing Sediments: A Case Study in Mahanadi Offshore Basin, (NGHP)-01, India, 16th Annual meeting, Asia Oceania Geosciences Society (AOGS), Singapore, 28th July to 02nd August, 2019.

Singha, D. K. and Chatterjee, R., 2015, **Fracture and Breakout Analysis From Image Log in Krishna Godavari Basin, India,**3rd South Asian Geosciences Conference and Exhibition, GEOINDIA, January 11-14.

Chatterjee, R. and **Singha, D. K.**, 2015, **Geomechanical and Rock Properties Analysis: An Implication for Reservoir Development in Krishna-Godavari basin, India,**3rd South Asian Geosciences Conference and Exhibition, GEOINDIA, January 11-14.

Das. B., **Singha, D. K.** and Chatterjee,R., 2015, **Lithofacies Identification and Porosity Prediction Through Acoustic Impedance Inversion,**3rd South Asian Geosciences Conference and Exhibition, GEOINDIA, January 11-14.

Chatterjee,R. And **Singha,D.K.** and Sain, K., 2014, Porosity Inversion of Pre-stack Seismic data: A Case Study from Krishna-Godavari Basin, India, **India Oil & Gas Review Summit & International Exhibition**, IORS, Mumbai, Sept. 10-11.

Singha,D.K, Chatterjee, R. and Sain, K., 2014, Application of Multilayer Feed Forward Neural Network: Porosity Mapping in Gas Hydrate Sediment of Krishna-Godavari Basin, India, Annual meeting EAGE, June 16-19, Amsterdam. PID: 20945.

Singha,D.K., Chatterjee.R.,Ojha.M. and Sain, K., 2013, Pore Pressure Prediction from Seismic Data using Neural Network, Extended Abstract, 10th Biennial Int. Conf. & Exp. Organised by SPG India, Nov. 23-25, Kochi. **PID-372.**

Singha, D. K., 2013**,** Stress magnitude and Orientation Determination in the Geohazard Region of Krishna-Godavari Basin, India, International Symposium,Advances in Earthquake Science (AES), Jan. 29-31, Gandhinagar, Gujarat.

National Conferences

Rai,N., **Singha, D.K** and Chatterjee, R., 2019, 3D post-stack seismic inversion for identifying reservoirs in the formation and the basement of upper Assam Basin, 2nd Triennial FIGA Congress, 13 – 16 October, CSIR-NGRI Hyderabad.

Singha, D.K, Shukla,P.K., and Sain, K, 2018, Pore Pressure Prediction from Post Stack Seismic Data in Deep Offshore of Mahanadi Basin, India, 55th IGU Annual Convention, Bhopal, December 5-7, 2018

Shukla,P.K., **Singha, D.K** and Sain, K., 2017, Estimation of pore pressure and vertical stress in gas hydrate Bering sediments using well log data of Mahanadi basin, India, 54th IGU Annual Convention, 3-7th December, 2017, CSIR-NGRI, Hyderabad

Singha,D.K, Chatterjee, R., Sain, K. and Singh, N.P., 2016, Estimation of Pore Pressure and Stress Magnitude from Pre-Stack Seismic Data in Gas Hydrate Bearing Sediments, Krishna-Godavari (K-G) Basin, India, Indian Geophysical Union, IIT(ISM), Dhanbad, Nov. 8-10.

Singha, D.K and Chatterjee, R., 2015, Rock Physics Template of Sandstone Reservoir using Well Log Data: A Case Study of Krishna-Godavari basin, India, Indian Geophysical Union, NCAOR, Goa, Nov. 2-5.

Singha, D.K and Chatterjee, R., 2014, Multiple Regression Model: A New Approach for Estimation of Pore Pressure, Extended Abstract, 50th Annual Convention Indian Geophysical Union, Jan. 8-12, Hyderabad.

Singha, D.K and Chatterjee,R., 2012, Prediction of Overpressure zone in the Krishna-Godavari basin, India, Indian Geophysical Union, Gandhinagar, Gujarat, Oct. 29-31