

Avradip Ghosh

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Education

University of Houston, Earth and Atmospheric Sciences Department

Houston, USA

PH.D. CANDIDATE, GEOPHYSICS

April-2021

- **Research title:** Influence of Viscosity on Seismic Characteristics- *To understand the role of viscosity of crude oil and rocks in attenuation and dispersion of seismic waves and its contribution to predicting productive and non-productive layers*, Advisor: Dr. Evgeny Chesnokov
- CGPA-3.73/4.0

NISER (National Institute of Science Education and Research)

Bhubaneswar, India

INTEGRATED M.SC IN PHYSICS

May 2016

- **Research title:** Thermometric Effects in Mesoscopic Physics- *Study of Peltier and Seebeck Effects in the Quantum regime and application of these effects to topological insulators and quantum dots and their computational modeling*, Advisor: Dr. Coilin Benjamin

Relevant Courses

- Seismic wave and ray theory
- Rock Physics
- Marine Geophysics
- Geophysical Data processing
- Microseismics
- Machine Learning in Python and Application in Geosciences
- Reservoir Geophysics

Work Experience

Industry Related

University of Houston

AAPG IBA (IMPERIAL BARREL AWARDS-2019)

Jan. 2019- March-2019

- Part of a five-member team to evaluate the hydrocarbon prospectivity of the north Carnarvon basin- NW Australia.
- As a team, we conducted the assessment/creation of the following aspects: synthetic seismogram, 2D/3D seismic data interpretation, fluid substitution, volumetrics, risk assessment, play concepts, play element analysis, composite and surface maps, and well log interpretation.
- Main responsibilities included seismic interpretation of 2D and 3D data in Petrel, identifying the stratigraphic framework in seismic, evaluating reservoirs, sources and seals, creating play and thickness maps, post-drill and dry-hole analysis, and DHI and seismic attribute analysis.

Industry Related Courses

- **Advanced well log Interpretation** by Dr. Matt Boyce and Kiran Gawankar of Southwestern Energy
- **Petrophysics/ well log Interpretation** by Najmud Dowla ex Schlumberger
- **RocDoc Overall Introduction 1-day Workshop** by Ikon Science

NSF funded scientific cruise (Survey of Walvis ridge in the South Atlantic Sea)

University of Houston

Dec 2019-Jan 2020

- Assisted in acquisition and monitoring of magnetic and multibeam data over Walvis ridge oceanic plateau
- Used CARRIS to process multibeam data

Teaching Assistantship

University of Houston

August 2016-Present

- Coordinated a team of 23 students for Geophysics Field Camp as Teaching assistant
- Instructor of Physical Geology lab for four semesters

Laboratory Experience

University of Houston

Jan. 2017-Present

- Investigated rock samples for properties (anisotropy, porosity) in Rock Physics Laboratory-University of Houston
- Experience in handling SEM (Scanning Electron Microscopy)

Software Skills

- **Programming** JAVA, C++, Python
- **Seismic Interpretation** Petrel (Seismic interpretation software by Schlumberger), Kingdom, RokDoc
- **Mathematical Software** Wolfram Mathematica, MATLAB
- **Bathymetry and ocean floor mapping** CARIS

Activities

- Treasurer, SEG Wavelets (Student Chapter SEG-University of Houston) (May 2019-Present)
- Alumni Chair, SEG Wavelets (Student Chapter SEG-University of Houston) (August 2018- May 2019)
- Member, Society of Exploration Geophysicists (SEG)(2018-Present)
- Member, American Association of Petroleum Geologists (AAPG)(2018-Present)

Honors

- Leslie and Alan Wong scholarship: (August-2019)
- Scholarship for Outstanding Graduate Work in Geophysics: (April-2019)
- Scholarship for Outstanding Graduate Work in Geophysics: (April-2018)
- Graduate Tuition Fellowship: (2016-Present)
- KVPY Fellow (Kishore Vaigyanik Protsahan Yojana): (2012-2016) KVPY is a program funded by Department of Science and Technology (DST), Government of India to identify and encourage students with aptitude for research.
- INSPIRE (Innovation in Science Pursuit for Inspired Research):(2011-2012) INSPIRE program is sponsored and managed by Department of Science and Technology (DST), Government of India to attract students at younger age to science.

Publications and Conferences

- Ghosh, A. and Morshed, S. (2021) 'A Green's function approach to the study of effective anisotropic properties of the Barnett Shale', Geophysical Prospecting.
- Ghosh, A., Albeshr, I. and Morshed, S. (2020) 'Green's Function of the Wave Equation for a Fractured Dissipative HTI Medium Taking the Viscoelasticity of the System into Account', J Phys Res App, 4(1). <https://www.scitechnol.com/peer-review/greens-function-of-the-wave-equation-for-a-fractured-dissipative-hti-medium-taking-the-viscoelasticity-of-the-system-into-account-C2Up.pdf>
- Ghosh, A. and Chesnokov, E. (2020) 'Comparison of Zeroth-Order Far-Field Green's Function Between Connected and Isolated Porosities', European Association of Geoscientists & Engineers (Conference paper) <https://doi.org/10.3997/2214-4609.2020603026>