Khurram Aslam, PhD

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PROFESSIONAL SUMMARY

- ✓ Three years of experience in the Oil Industry as a Geoscientist and Five years of experience as an Earth Science researcher.
- ✓ Collaborated with multiple institutions, industry professionals and researchers to build relationships to complete 7 projects of which also included a Machine-learning project.
- ✓ Experienced research professional with 3 peer referred publications and 2 funded grant totaling $50,000.
- ✓ Managed collaborative projects conducting Quality Assurance testing as a Geoscientist using Landmark Graphics Corporation (LGC) applications resulting in 900 case reports.
- ✓ Provided Geological and Geophysical (G&G) application software support for LGC applications.

EDUCATION

PhD in Geophysics (Memphis, TN, USA)   Expected **April 2018**
University of Memphis, Center for Earthquake Research and Information, Memphis, TN   GPA 3.94/4.0
Dissertation Title: Modeling spatial-temporal pattern of heterogeneous stress and strain accumulation due to earthquake rupture on geometrically complex faults.

Pre-PhD in Earth System physics (Trieste, Italy)   **August 2012**
International Center for Theoretical Physics. Trieste Italy   GPA 3.94/4.0
Dissertation Title: Modeling the effect of recurrence interval of an earthquake on pre-seismic phase of an earthquake.

Master of Science in Geophysics (Islamabad, Pakistan)   **August 2009**
Quaid- E- Azam university, Islamabad, Pakistan.   GPA 3.88/4.0
Dissertation Title: Structural and Sequence Stratigraphical Interpretation of Indus Offshore Area.

RELEVANT EXPERIENCE

Geoscientist   **Aug 2007 – Aug 2010**
LMK Resources, Islamabad, Pakistan

- Provided software support (Seismic data import export, workflow support, data loading).
- Conducted quality assurance for software tools (geophysical domain testing).
- Developed software workflow designs.
- Conducted training to users.
  - ❖ Software Tools included: OpenWorks, Seisworks, PetroWorks, DecisionSpace Geoscience, PowerView, AssetView, Geoprobe, Syntool, ZMAP plus, Stratworks, and Depth Team Express.

Graduate Researcher   **Sep 2013 – Aug 2018**
University of Memphis, (Center for Earthquake Research and Information), Memphis, TN

- Explained the major cause of seasonal seismic velocity variation in Mississippi embayment area using seismic ambient noise correlations.
- Defined the quality factor (Q) and frequency relationship for Bishkeek region using Lg coda waves of earthquake waveforms from the same region.
- Estimated the maximum possible magnitude of an induced earthquake in Oklahoma using neural network approach of Machine-learning.
- Discovered the reason of aftershocks in stress shadows by modeling the earthquake rupture propagation.

- Explained the reason of fault damage zone growth during inter-seismic phase of an earthquake by modeling the earthquake seismic cycle of a complex fault using tectonic modeling approach.
  - ❖ Selected links of projects and publications: publication1, publication2, abstract1, abstract2, project repository.

SKILLS

Technical
- Seismic interpretation tools (Seisworks, PowerView, DecisionSpace Desktop (DSD) series) (3 years).
- Machine Learning tools (Neural Networks, Random Forest, SVM etc.) (2+ years).
- Geographic Mapping: ArcGIS (8+ years), GMT (5+ years) and QGIS (1+ years).
- Finite element and Finite difference methods.
- Geophysicist, Geoscientist, GG Quality assurance QA analyst, Geoscience software support, Machine learning scientist, Data scientist, Seismic data processing, signal processing, Seismology, Exploration, Production and Development, Seismic data interpretation, Sequence stratigraphy.

Programming Languages
- C, C++ (3+ years), Fortran (5+ years) and Java (1 year).
- MATLAB (5+ years), Python (3+ years) and R (1 year).
- Unix shell scripting (5+ years) and experience with High performance Computing.

Computer Tools

Linux, OSX, Windows, Solaris, Corel Draw, AutoCad, Docker, OpenWorks, SeisWorks, PetroWorks, Decision Space Geoscience (Power View, Asset View and Geo Probe), Syn Tool, Z-MAP Plus, StratWorks, Depth Team Express, Geographix, Surfer, Kingdom, Geosoft Oasis Montaj, Adobe Photoshop, Adobe Illustrator, InkScape, SAC, Eclipse, MS office packages, Latex.

Soft
- Project management, Team leadership, Resource management, Communication, Team player, Compassionate, innovative, Committed.

ACTIVITIES

- Student Member: Society of Exploration Geophysicist, American Geophysical Union, Seismological society of America and AAPG.
- Student Representative in academic program committee, Department of Earth Sciences, University of Memphis.
- Student Representative, ICTP, Italy (news archive).

AWARDS

- One of the top students of my class throughout my educational carrier.
- United nations (UN) scholarship winner to study masters degree from ICTP, Italy.
- Scholarship winner to study in University of Memphis, USA.

SELECTED RESEARCH PUBLICATION

- 3 peer-reviewed Journal publications (Seismological Research Letter, Journal of Geophysical Research).
- 2 thesis dissertations (University of Memphis, USA, PhD. ICTP Italy: Masters).
- 8 conference presentations (American Geophysical Union, Southern California earthquake center).
- 2 articles under preparation for submission (Journal of Geophysical Research).
  - ❖ Full details of my research are available at my webpage and LinkedIn page. The copies of my publications can also be obtained from my webpage (http://www.ceri.memphis.edu/people/ksaslam/index.html).