Khurram Shahzad Aslam, PhD

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PROFESSIONAL SUMMARY

- ✓ I am an excellent relationship builder with transferable skills set as demonstrated by participation in 9 projects and 1 year of experience on machine-learning projects (neural networks and random forest methods).
- ✓ I have strong leadership skills and experience of managing research professionals resulting in 3 publications and 2 grant funding of $ 50,000+.
- ✓ I am highly experienced in managing collaborative projects as a team player as evidenced by my performance on testing of LGC Geoscience (GG) applications as a geoscientist resulting in 900+ case reports.
- ✓ I am knowledgeable innovator with expertise in geoscience as shown by my high-rated performance in GG application support for applications like DecesionSpace series, PowerView, PowerCalculator, SeisWorks. StartWokrs, ZMAPPlus, PowerView, SynTool, TDQ, Seismic Balance and G&G data loading.

EXPERIENCE AND ACHEIVEMENTS

Geoscientist **Aug 2007 – Aug 2010**

LMK Resources, Islamabad, Pakistan

- **GG software analyst and onsite GG support provider**
  - Worked as Geological and Geophysical (GG) software analyst in domain testing department for Landmark Graphics products.
  - Onsite GG support provider for GG applications like OpenWorks, Seisworks, PetroWorks, DecisionSpace Geoscience (PowerView, AssetView and Geoprobe), Syntool, ZMAP plus, Stratworks, Depth Team Express, DecisionSpace Geoscience R5000.
  - Other duties included software workflow designing and trainings conduction.

Lecturer **Sep 2010 – Aug 2013**

Department of EarthSciences, COMSATS University, Abbottabad, Pakistan

- **Lecturer in Earthscience department**
- Involved in teaching different geophysics courses (both Theory and Labs).
- Major courses included Earthquake seismology, geophysical data processing, GIS and remote sensing, seismic exploration methods, Signal processing.

Graduate Research Assistant **Sep 2013 – Aug 2018**

University of Memphis, (Center for Earthquake Research and Information), Memphis, TN

- **Successful Collaborated Projects (The details of each project is available on my LinkedIn).**
  - Estimating the seasonal variation in the seismic velocities in New Madrid region using ambient noise correlation technique of passive seismic data.
  - Calculating the Q factor relationship for Bishkeek area using Lg coda waves from earthquake waveforms.
  - Estimating the maximum possible magnitude of an induced earthquake in Oklahoma using neural network approach of Machine-learning.
  - Large scale three-Dimensional Rupture dynamic simulations of California region (article).
  - Modeling spatial-temporal heterogeneous stress on geometrically complex rough fault (article).
  - Modeling the effect of topography on ground motions in Christchurch area New Zealand (abstract).
  - Coupling the physics of short-term (dynamic) and long-term (quasi-static) phase of an earthquake (project repository, abstract).

EDUCATION

PhD in Geophysics (Memphis, TN, USA) Expected **December 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.

SKILLS

Technical skills

- Seismic interpretation tools (Seisworks, PowerView, DecisionSpace Desktop (DSD) series) (3 years).
- Machine Learning tools (Neural Networks, Random Forest, SVM etc.) (2+ years).
- Geographic Mapping tools: ArcGIS (8+ years), GMT (5+ years) and QGIS (1+ years).
- Finite element and Finite difference methods.

Programming skills

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

Miscellaneous Computer skills

- Linux, OSX, Windows, Solaris, SEISAN, GLOBK/GAMIT, Openquake, 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. (Linux and Solaris Platforms), Geographix, Surfer, Adobe Photoshop, Adobe Illustrator, InkScape, SAC, Eclipse, MS office packages, Latex.

Personal skills

- Geophysicist, Geoscientist, GG Quality assurance QA analyst, Geoscience software support, Machine learning, Data scientist, Project management, Team leadership, Resource management, Seismic data processing, signal processing, Seismology, Communication, Team player, Exploration, Production and Development, Seismic data interpretation, Sequence stratigraphy, Compassionate, innovative, Committed.

MEMBERSHIPS AND HONORS

- 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).

Publications

- 3 Journal publications, 2 thesis dissertations, 6 conference presentations (can be provided on demand).

References

- Eric Daub: Associate Professor, University of Memphis, USA. PhD advisor, egdaub@memphis.edu
- Saeed Shahzad: Principal Geoscientist, Halliburton, USA. Previous Manager, saeed.shahzad2@halliburton.com
- Muhammad Rehan: Chief Geoscientist, LMK Resources, USA. Previous Manager, marehan@lmkr.com
- Farhan Naseer: Senior Geophysicist, Schlumberger, USA. Research collaborator, fnaseer@slb.com