

## SAAD KHAN

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### Personal Profile

I am faculty member and Head of Department of Geology at Bacha Khan University Charsadda (BKUC). I received PhD from Faculty of Geo-Information and Earth Observation (ITC), University of Twente, Netherlands in 2018. My research interest is adaptation of informatics in the field of geology and allied disciplines.

### Career Summary/Objective

After completing my BS in geology, I started working at National Center of Excellence in Geology (NCEG), University of Peshawar where I was appointed as Research Assistant and then Research Associate. After serving 3 years fulltime, I shifted my career to Abdul Wali Khan University Mardan (AWKUM). Nowadays I am serving at Dep't of Geology, Bacha Khan University Charsadda (Formerly Palosa Campus, AWKUM).

During my entire academic and professional career, I have been involved in multidisciplinary research. I aim to continue this approach and use my knowledge and skill in a multidisciplinary geoscience research. I am also looking forward to work in collaboration with a multidisciplinary team in geosciences.

### Education

- |             |            |   |
|-------------|------------|---|
| <b>2018</b> | <b>PhD</b> | <b>Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente, Netherlands</b>  |
|             |            | ▪ Project Title: <i>Is there a Safe Spot? Modeling Seismic Amplification with Spectral Element Method and DEM based Topography</i>              |
| <b>2012</b> | <b>MS</b>  | <b>Institute of Space Technology, Islamabad</b>   |
|             |            | ▪ Thesis Title: <i>Detection of Hydrocarbon Seepages using Hyperspectral Remote Sensing</i>   |
| <b>2008</b> | <b>BS</b>  | <b>University of Peshawar</b>   |
|             |            | ▪ Thesis Title: <i>Structure and Stratigraphy of Sarra Range and Adjacent Khanpur Valley, District Haripur, Southern Hazara, NWFP, Pakistan</i> |

### Work Experience

- |                                |                           |   |
|--------------------------------|---------------------------|---|
| <b>15-08-2011 to date</b>      | <b>Lecturer</b>           | <b>Bacha Khan University Charsadda</b>        |
| <b>30-04-2009 – 15-08-2011</b> | <b>Research Associate</b> | <b>NCE in Geology, University of Peshawar</b> |
| <b>01-02-2009 – 30-04-2009</b> | <b>Research Assistant</b> | <b>NCE in Geology, University of Peshawar</b> |
| <b>01-08-2008 – 31-01-2009</b> | <b>Trainee</b>            | <b>NCE in Geology, University of Peshawar</b> |

### Administrative/ Managerial Experience

- |                             |                           |  |
|-----------------------------|---------------------------|--|
| <b>28-02-2018 – to date</b> | <b>Head of Department</b> | <b>Department of Geology<br/>Bacha Khan University<br/>Charsadda</b> |
|-----------------------------|---------------------------|--|

<b>01-01-2014 – 31-12-2014</b>	<b>Member/Vice-Chairman</b>	<b>Faculty Council (ITC),</b> University of Twente
<b>16-10-2014 – 15-10-2015</b>	<b>President</b>	<b>Pakistan Student</b> <b>Associate (PSA)</b> University of Twente
<b>15-03-2014 – 15-10-2014</b>	<b>ITC Manager</b>	<b>Pakistan Student</b> <b>Associate (PSA)</b> University of Twente
<b>2007 – 2008</b>	<b>Member</b>	<b>Blood Donor Society</b> University of Peshawar
<b>2006 – 2007</b> <b>Rifles</b>	<b>Member</b>	<b>Peshawar University</b> <b>Association (PURA)</b> University of Peshawar

## Skills and Achievements

### Achievements:

- Advisor of a MSc Student at ITC, University of Twente in 2017
- Worked in research collaboration with leading research group involving scientists from Italy, France, Germany and Netherlands during PhD.
- Got Master degree with distinction.
- Brought academia, industry and government on board for Hydrocarbon exploration in FATA, Pakistan at NCEG.
- Successfully managed activities on different administrative and managerial positions.

### Skills:

- Earthquake Simulator: SPECFEM3D 3.0
- FEM: Cubit 13.0
- RS & GIS: ERDAS Imagine 9.2, ENVI 4.7, ArcGIS 10, QGIS, Global Mapper 8, MapInfo 7, Generic Mapping Tool (GMT)
- Computer Skills: MS Office 2010 (Word, Excel, Power Point, Access, Visio, Front Page, Expression Web, Publisher, Outlook), SQL Server 2005, Corel Draw X4, Matlab, Operating (DOS, Linux, Windows), Google Earth (Plus and Pro), Flash CS5, Hardware (Installation and Maintenance), Networking, Computer Languages (C/C++, VB.Net, HTML, Introduction to JAVA), Web Designing, E Commerce, Endnote®.
- Management: Excellent skill in project, office, field and event management.
- Field Experience: Field experience in Italy, Netherlands, Germany and Pakistan (including Thatta, Badin for Agriculture studies and field check for Remote Sensing studies; Field trip to Manora, Karachi for Mangroves studies and field check for Remote Sensing studies of Mangroves; Geological field trips to various parts of the country including, Gilgit, Jaglot, Chilas, Batgram, Mansehra, Abbottabad, Haripur, Nizampur, Kohat, Khyber Agency, FR Kohat, FR Peshawar, Kohat, Nowshera, Swabi, Karak, Mianwali, FR Dera Ismail Khan, Zhob).
- Languages: English, Urdu, Pashto, Dutch
- **Khan, S., van der Meijde, M., van der Werff, H., & Shafique, M., 2020. Scenario based seismic hazard analysis using spectral element method in northeastern Pakistan, Natural Hazard, <https://doi.org/10.1007/s11069-020-04074-w>.**

## Peer Review Publications

- Van der Meijde, M., Ashrafuzzaman, M., Kerle, N., **Khan, S.**, & van der Werff, H. (2020). The Influence of Surface Topography on the Weak Ground Shaking in Kathmandu Valley during the 2015 Gorkha Earthquake, Nepal. *Sensors*, 20(3), 678.
- **Khan, S.**, van der Meijde, M., van der Werff, H., & Shafique, M., 2020. The impact of topography on seismic amplification during the 2005 Kashmir earthquake, *Natural Hazards and Earth System Sciences*, 20, 399–411.
- **Khan, S.**, van der Meijde, M., van der Werff, H., & Shafique, M., 2017. Impact of Mesh and DEM Resolutions in SEM Simulation of 3D Seismic Response, *Bulletin Seismological Society of America*, 107 (5), doi:10.1785/0120160213.

**Khan, S.**, Rahman, S., Haq, M., & Munir, S., 2016. Hyperspectral Remote Sensing for Detection of Natural Hydrocarbon Seeps. *Asian Journal of Multidisciplinary Studies*, 4 (2), 1–10.

## Conference Presentations

- **Khan, S.**, van der Meijde, M., van der Werff, H., & Shafique, M., 2016. Impact of Topography on Seismic Amplification during the 2005 Kashmir Earthquake. In AGU Fall Meeting Abstracts.
- **Khan, S.**, van der Meijde, M., van der Werff, H.M.A., 2015. The Impact of DEM and Mesh Resolution in a 3D Simulation of Seismic Response. EGU General Assembly 2015.
- **Khan, S.**, van der Meijde, M., van der Werff, H.M.A. and Shafique, M., 2014. Simulating 3D Seismic response: The Impact of Topography Resolution. NAC12, Netherlands.
- **Khan, S.**, Rahman, S., Haq, M. and Munir, S., 2012. Detection of Hydrocarbon Seepages using Hyperspectral Remote Sensing in FR DI Khan, Pakistan: A case study. *Earth Sciences Pakistan 2012*.
- **Khan, S.**, Haq, M., Umar, M., Alam, N., Khan, M.U. and Masud. S., 2012. 2010 Floods in Pakistan: Damage Assessment along Kabul River. *Earth Sciences Pakistan 2012*.
- **Khan, S.**, Rahman, S., Haq, M. and Munir, S., 2012. Detection of Hydrocarbon Seepages using Hyperspectral Remote Sensing. International Conference on Climate Change: Opportunities and Challenges.

## Invited Talks

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|--|---|
| ▪ <b>Seismic Amplification Modeling</b>            | <b>Symposium on Earthquake Studies-2019</b>       |
| ▪ Organizer: National Center for Physics           | National Centre for Physics                       |
| ▪ <b>Seismic Amplification Modeling</b>            | <b>Symposium on Earthquake Studies-2018</b>       |
| ▪ Organizer: National Center for Physics           | National Centre for Physics                       |
| ▪ <b>Geological Applications of Remote Sensing</b> | <b>World Space Week-2017</b>                      |
| ▪ Organizer: SUPARCO                               | University of Engineering and Technology Peshawar |
| ▪ <b>Hyperspectral Remote Sensing</b>              | <b>Geography Week &amp; GIS Day-2017</b>          |
| ▪ Organizer: University of Peshawar                | University of Engineering and Technology Peshawar |

## Other Key Conferences/ Seminars/ Symposia/ Workshops/ Meetings

- **Focal Person** International Conference on, "CPEC: Collaboration in Higher Education and Sustainable Development" at the University of Peshawar. 19th - 21st February 2019
- **Attended** workshop on "Research Methodologies (Social and Behavioral Modeling: An Outsider's Account)" at National Center for Remote Sensing and Geoinformatics, SUPARCO HQs, Karachi. 16th June, 2010.
- **Attended** workshop on "Research Methodologies (Gemstone Research Program at University of Maryland, USA)" at National Center for Remote Sensing and Geoinformatics, SUPARCO HQs, Karachi. 16th June, 2010.
- **Meeting** with Hon'ble Governor Khyber Pakhtunkhwa regarding progress in project "Source Rock Mapping and Investigation for Hydrocarbon Potential in FATA" at Governor's House, Peshawar, 15th April, 2010.

- **Attended** Four Days Workshop on "Image Processing Algorithms in Remote Sensing" at National Center for Remote Sensing and Geoinformatics, SUPARCO HQs, Karachi, 23-26th Feb, 2010.
- **Meeting** with Hon'ble Governor Khyber Pukhtunkhwa regarding progress in project "Source Rock Mapping and Investigation for Hydrocarbon Potential in FATA" at Governor's House, Peshawar, 17th June, 2009.
- **Attended** One Day Workshop on "Managing References and Citations Using Endnote®" held under Quaid-e-Azam College of Commerce Research Initiative Program, at Quaid-e-Azam College of Commerce, University of Peshawar 13th June, 2009.
- **Student Organizer** for Petroleum Geology Symposium 2008 "Cross Section Balancing and its implications in Hydrocarbon Exploration" held at Bara Gali Campus, University of Peshawar, from August 27th to September 1st, 2008.
- **Attended** Petroleum Geology Symposium II "NWFP, a new oil province in the country" held at NCE in Geology, University of Peshawar in collaboration with Pakistan Association of Petroleum Geoscientist (PAPG) affiliated with American Association of Petroleum Geoscientists (AAPG), sponsored by POL, OGDCL, PPL, PPI, MOL, Zaver Petroleum etc, May 24-25th, 2003.
- **Attended** Petroleum Geology Symposium I "NWFP, a new oil province in the country" held at NCE in Geology, University of Peshawar in collaboration with Orient Petroleum, International Paleontological Association, POL, OGDCL, PPL, PPI, MOL and Zaver Petroleum etc, May 6-7th, 2000.

## Short Trainings

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|---|---------------|---------------------------------|
| ▪ <b>Nazionale di Geofisica e Vulcanologia (INGV)</b>   | Training      | Feb, 2016,<br><b>Italy</b>      |
| ▪ <b>5th Munich ESS (Seismic Simulation)</b>  | Workshop      | Feb, 2015,<br><b>Germany</b>    |
| ▪ <b>TGS Course: Advance Science Communication</b>  | Short Course  | Sep 2014<br><b>Netherlands</b>  |
| ▪ <b>SENSE Writing Week</b>   | Short Course  | Oct 2013<br><b>Netherlands</b>  |
| ▪ <b>TGS Introductory &amp; Research Management</b>   | Workshop      | Oct 2013<br><b>Netherlands</b>  |
| ▪ <b>Natural Hazard and Disaster Management</b>   | Short Course  | Mar 2013<br><b>Netherlands</b>  |
| ▪ <b>Introduction to</b>  | Short Courses | 2009-2010<br><b>Pakistan</b>    |
| <ul style="list-style-type: none"> <li>-Remote Sensing &amp; Digital Image Processing</li> <li>-Geographic Information Science</li> <li>-Database and Programming</li> <li>-RS/GIS Multidisciplinary</li> <li>-Math and Stats (For RS/GIS)</li> </ul> |               |                                 |
| ▪ <b>Geological Applications of Remote Sensing</b>  | Workshop      | Sep-Oct 2010<br><b>Pakistan</b> |
| ▪ <b>A+</b>   | Short Course  | Aug-Sep 2004<br><b>Pakistan</b> |
| ▪ <b>C/C++</b>  | Short Course  | Jun-Aug 2003<br><b>Pakistan</b> |
| ▪ <b>Introduction to</b>  | Short Course  | Apr-Jun 2002<br><b>Pakistan</b> |

- Programming (Visual Basic)
- e-Commerce
- MS Windows, Office Internet

**Hobbies  
and Interests**

My hobbies and interest list is very long. Some long terms hobbies I adopted include cricket, cycling, running / jogging, badminton, table tennis, travelling, socializing and volunteering while I also love to participate occasionally in archery, fencing, board games, bodybuilding, car restoration, chess, cub leadership, cooking, football, tennis, gardening, hiking, hunting, languages, marathon running, martial arts, skiing, skating, squash, swimming, tennis, video games