

# Shahriyar Alkhasli

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## Education

- Khazar University;** Baku, Azerbaijan Jan 2016 - Jan 2019  
PhD candidate  
Modeling of sub-seismic rock features and fluid flow simulations
- The University of Tulsa;** Tulsa, OK, USA Aug 2013 - Aug 2015  
Master of Science in Petroleum Engineering  
*Research:* Investigation of nonlinear/linear solvers and discretization methods in reservoir simulation
- Azerbaijan State University of Oil and Industry;** Baku, Azerbaijan Sep 2009 - Jul 2013  
Bachelor of Science in Petroleum Engineering  
*Thesis:* Gas-lift injection rate dependent well interference analysis

## Work Experience

- Nov 2020 – Present: **eiLink Research & Development Center – Director**  
Ensure to provide high quality Products & Services  
Ready to partner and collaborate for bringing R&D solutions  
Initiate startups including joint co-ownership  
Develop intellectual potential of the younger generation
- Dec 2015 – Present: **eiLink Research & Development Center – Lead Researcher**  
Application of Machine/Deep Learning methods in Energy and Resources industry problems  
Remote Sensing for Environmental Science problems  
Web Development for Engineering solutions  
Computational Fluid Dynamics (e.g., Pore Scale Modeling of two-phase flow using Lattice Boltzmann methods)
- Feb 2016 – Present: **Khazar University – Lecturer** at the Department of Petroleum Engineering  
Petroleum Production Engineering
- Jan 2017 – Jan 2019: **Baku Higher Oil School – Lecturer** at the Department of Petroleum Engineering  
Reservoir Engineering  
Numerical Reservoir Simulation
- Aug 2013 – August 2015: **The University of Tulsa – Teaching/Research Assistant**  
Training production lab class - metering, separation and multiphase flow experiments
- May – Aug 2013: **STATOIL – Drilling Engineering Intern**  
Pore pressure analysis and prediction  
Designed well schedule, interventions plan and performed cost analysis for directional drilling  
Prediction of gas production for Shah Deniz field using GAP and ECLIPSE models
- Jul – Sep 2012: **BP AGT – Reservoir Engineering Intern**  
History matching and forecasting  
Investigated reservoir vertical and lateral connectivity using integrated analysis of surveillance data Built Material Balance model (via MBAL and VBA) for Azeri-Chirag-Guneshli field

## **Technical projects (2016 – 2022)**

PBU KH prediction via ML techniques using seismic, log, and dynamic data  
Creation of web-application for ResDev optimization and pattern detection via AI  
Sand production prediction using filed data and AI techniques  
Real-time sand production detection from sensor data using ML algorithms  
Methane leaks detection and quantification using satellite data  
Wellbore Instability prediction via data science approaches  
Rock property characterization and fluid flow through deformation band networks  
Development of reservoir proxy modelling for pressure and saturation prediction with time

## **Activities**

**SPE Azerbaijan:** research in Practice program lead  
**SPE Paper Contest (PhD division):** 3<sup>rd</sup> place  
**SPE ASOA Student Chapter:** public relations officer  
**SPE Azerbaijan Academy:** petroleum geology, basics of petroleum and reservoir engineering  
**SPE Azerbaijan Symposium:** PetroBowl winner team  
**Memberships:** Society of Petroleum Engineers (SPE)

## **Publications**

**Alkhasli S., Zeynalov G., and Shahtakhtinskiy A., 2022.** *Quantifying occurrence of deformation bands in sandstone as a function of structural and petrophysical factors and their impact on reservoir quality: an example from outcrop analog of Productive Series (Pliocene), South Caspian Basin.* Journal of Petroleum Exploration and Production Technology.

Zeynalov G., **Alkhasli S.,** 2019. *Evaluation of petrophysical properties of deformed sandstone layers and their impact to fluid flow (in example of outcrops of Absheron Peninsula).* Azerbaijan Oil Industry, 2019, No11, 3-8 pages (in Russian).

**Alkhasli S., Zeynalov G.,** 2019. *Prediction of deformation bands in Pliocene sandstones and their impact to petrophysical properties (in example of outcrops of Absheron Peninsula).* Azerbaijan Oil Industry, 2019, No 6. 4-9 pages (in Russian).

**Alkhasli S.** 2019. *Simulation of fluid flow in layers with deformation bands for estimation of recovery factor and its relationship with topological parameters of Yasamal Valley deformation bands network.* ANAS Transactions, Earth Sciences Issue 2, 2019 (in Russian).

Zeynalov G., **Alkhasli S.** 2018. *Structural Deformation and its Impact to Sandstone Reservoirs in Eastern Azerbaijan.* 80th EAGE Conference and Exhibition 2018.

**Alkhasli S., Zeynalov G., Shahtakhtinskiy A.** 2018. *Evaluation of the Rock Properties in Structurally Deformed Areas Based on Outcrop Analogues for Offshore Fields in Azerbaijan.* AAPG International Conference and Exhibition, London, England, October 15-18, 2017.

Zeynalov G., **Alkhasli S., Shahtakhtinskiy A.** 2017. *Outcrop Analogue Study of Deformation Bands and Their Impact on Rock Properties of the Productive Series in South Caspian Basin.* SPE Annual Caspian Technical Conference and Exhibition, 1-3 November 2017, Baku, Azerbaijan.

## **Skills**

**Programming Languages:** C/C++, C#, Python, Matlab, VBA  
**Softwares:** Eclipse, IMEX, CMOST, Techlog, PVTsim, PIPESIM, Petroleum Experts (MBAL, GAP, PROSPER)  
**Languages:** Azerbaijani, English, Russian, Turkish