Kanan Mammadov

PhD (c). Lecturer

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Education

B.Sc. Petroleum Engineering — Sep 2017–Jun 2022
Baku Higher Oil School

M.Sc. Reservoir Evaluation and Management — Jul 2022–Jun 2024
Baku Higher Oil School

PhD. Oil and Gas Reservoir Exploitation — Oct 2024–Present
Baku Higher Oil School

Employment

Lecturer–Baku Higher Oil School — Oct 2024–Present

Lecturer in Petroleum Engineering Department with teaching responsibilities across undergraduate and graduate programs, delivering courses in Drilling Engineering, Reservoir Engineering, and Fluid Mechanics. Actively supervise master's and bachelor's students on field development projects, diploma theses, and research studies, ensuring rigorous methodological guidance and high academic standards. Engage in curriculum development, mentoring, and fostering research-oriented learning environments within the department

Industrial Training Instructor–Baku Higher Oil School — Sep 2023–Oct 2024

Delivered practical and industry-focused lectures and supervised students during their internships. I guided their field tasks, supported their technical development, and organized hands-on industrial sessions to help them gain real operational experience. My role focused on bridging academic learning with practical skills and preparing students for professional work environments.

Senior Research Assistant–Baku Higher Oil School — Jul 2022–Sep 2023

Served as a Senior Research Assistant, supporting research projects in drilling and reservoir engineering. Responsibilities included data analysis, literature review, experimental design, and assisting in the supervision of student projects and field studies.

Intern–British Petroleum — Jul 2023–Sep 2023

Performed detailed cement composition analysis and contributed to the optimization of cementing programs for ACG wells. Assisted in evaluating slurry designs, assessing zonal isolation requirements, and supporting operational decision-making through laboratory testing and data interpretation. Collaborated with the wells team to enhance the reliability and performance of cementing operations.

Intern–State Oil Company of Azerbaijan Republic — Aug 2021

Worked on flow assurance challenges, with a primary focus on hydrate formation issues in underground gas storage fields operated by Azneft PU. Assisted in reviewing mitigation strategies, analyzing operational data, and contributing to technical discussions on improving flow reliability and system performance.

Intern-State Oil Company of Azerbaijan Republic Jun 2019

Served as a field engineer intern at Neft Dashları PU, actively engaging in Drilling Engineering and Formation Evaluation activities. Gained hands-on exposure to well operations, logging data interpretation, and field development processes while supporting day-to-day engineering tasks.

Achievements

- Honor's degree and 1st rank graduate from BHOS, Petroleum Engineering major. (both B.Sc. and M.Sc.)
- BHOS Team Member, the award of the second place in SPE Petrobowl Regional Qualifiers 2022, qualified to Petrobowl Championship at ATCE, Houston
- Scholarship named after academician Khoshbakht Yusifzade
- BHOS Team Member, the award of the first place in SPE Petrobowl Regional Qualifiers 2021, qualified to Petrobowl Championship at ATCE, Dubai
- 1st Place Winner, 'Bridging the Gap: Youth and Green Jobs Market' Ideathon – Led team to develop innovative solutions addressing youth employment in the green economy.
- Awarded 1st Place for Research at the 3rd International Scientific Conference for Students and Young Researchers.

Languages

Azerbaijani: Native Language **English:** Proficient

Software & Programming

Techlog **Matlab** **Prosper** **Python**

Projects

- Screening Excess Water Control Mechanisms in Multilayered Reservoirs – Conducted detailed research applied to the Bahar Field.
- Cement Composition Optimization Toolkit for ACG wells
- Toolkit for Porosity Prediction from Drilling Parameters
- Solarsage Project – Optimization of solar panel locations; developed during COP29 Ideathon and later implemented at Teknofest.

Publications

- Assessment of the Feasibility of Developing an Oil-Gas-Condensate Reservoir via Horizontal Wells under a Combined Depletion Drive Mechanism and Waterflooding
  https://jesmt.org/index.php/jesmt/article/view/29

- Advanced cement slurry formulation: reducing trial-and-error through machine learning-based optimization
  https://onepetro.org/SPECTCE/proceedings-abstract/25CTC/25CTC/D021S013R005/793993

- Forecasting technological indicators of oil and gas condensate formation development by horizontal wells with critical gas-free production rate
  https://link.springer.com/article/10.1007/s10891-025-03140-z

- Effects of Hydrocarbon Fuel Quality Fluctuations on Energy Generation Efficiency, Economic Viability, and Environmental Footprint
  https://geolog-technical.kz/assets/2026-2/17.%20272-289.pdf

- Prospectivity Assessment of Deep Sediments in Pirsaat, Lower Kura Depression
  https://geolog-technical.kz/assets/202506/20.%20294-310.pdf

- Prediction of technological indicators of gas-condensate field with oil rim under the scheme of simultaneous-joint development
  https://ant.socar.az/pdf_file/1750753033.pdf

- Optimization of technological processes of oil and gas preparation to enhance operational efficiency
  https://neft-gas.kz/f/dobycha_379026.pdf

- Inversion of electromagnetic data for hydraulic fracture diagnostics in open-hole wells
  https://neft-gas.kz/f/razrabotka.pdf

- Novel lean gas purification strategy in on-site oil production fields
  https://ant.socar.az/pdf_file/1750753002.pdf