

## **Dr Elshan (El) Abdullayev**

Researcher on clay minerals and geochemistry

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**H-index:** 6 (Google Scholar; on 26 April 2022)

## **Education**

- 2011 – 2015 **Dr. rer. nat.**  
Institute for Geophysics and Geology  
Leipzig University, Germany
- 2008 – 2010 **M.Sc.**  
Geological exploration faculty/Sedimentology  
Azerbaijan State Oil Academy, Azerbaijan
- 2001 – 2005 **B.Sc.**  
Geological exploration faculty/Hydrogeology and engineering geology  
Azerbaijan State Oil Academy, Azerbaijan

## **Employment**

- 15 April 2022 –  
current **Lecturer in geoscience,**  
Department of Petroleum Engineering, Khazar University, Azerbaijan
- 2021 (2 months) **DAAD Fellow**  
University of Greifswald, Germany
- 2020-2021 **Visiting lecturer in geoscience**  
Department of Petroleum Engineering, Khazar University, Azerbaijan
- January 2020 –  
current **Adjunct researcher**  
Department of Life Sciences, Khazar University, Azerbaijan
- 2019 (3 months) **Institute of Advanced Study Fellow**  
Durham University, United Kingdom
- April 2019 –  
March 2022 **Geoscience programme coordinator**  
French-Azerbaijani University (UFAZ), Azerbaijan
- Jun./Dec. 2019 **Distant researcher**  
Division for Geology, Tomsk Polytechnical University, Russia
- 2018 (3 months) **DAAD Fellow**  
University of Greifswald, Germany
- 2016 - 2017 **Postdoctoral researcher**  
Mugla Sitki Kochman University, Turkey
- 2016 (a term) **Visiting lecturer in sedimentology**  
Azerbaijan State Oil and Industrial University, Azerbaijan
- July 2015 –  
Aprile 2019 **Researcher**  
Institute of Geography at Azerbaijan National Academy of Science,  
Azerbaijan
- 2006 – 2011 **Geologist**

Department of Geophysics and Geology, State Oil Company of Azerbaijan Republic (SOCAR), Azerbaijan

## Grants/Awards

|                |  |
|----------------|--|
| Jul./Aug. 2021 | German Academic Exchange Service (DAAD fellow), Germany  |
| Oct./Dec. 2019 | Institute of Advanced Study, Durham University (fellow), United Kingdom  |
| Jun./Aug. 2018 | German Academic Exchange Service (DAAD fellow), Germany  |
| 2017           | Institute of Geography, Azerbaijani National Academy of Science (researcher/applicant), Azerbaijan   |
| 2017           | Scientific Research Project (BAP) of Mugla Sitki Kochman University (researcher/co-applicant), Turkey  |
| 2016-2017      | Scientific and Technological Research Council of Turkey (TÜBİTAK), 2216-Research Fellowship Programme for International Researchers, (postdoctoral researcher/applicant), Turkey |
| 2011-2015      | State Scholarship Program on Education of Azerbaijani Youth Abroad (PhD student/applicant), Azerbaijan   |

## Teaching

|                            |  |
|----------------------------|--|
| 2002-current (spring term) | General geology  |
| 2021-2023                  | Co-supervisor of a PhD project   |
| 2021-current               | Supervisor of a master thesis  |
| 2020-current (autumn term) | Petroleum geoscience; Supervisor of two master research projects; co-supervisor of master research projects    |
| 2020-2022 (spring term)    | Supervisor of interdisciplinary bachelor projects  |
| 2019 – 2021                | Induction fieldwork (4 <sup>th</sup> year) in French-Azerbaijani University (UFAZ), Azerbaijan                 |
| 2019                       | Scientific advisor of the contemporary art project on “Art meets Science – Ground evaluation.”                 |
| 2016 (spring term)         | Lecturer in Sedimentology (3 <sup>rd</sup> year) in Azerbaijan State Oil and Industrial University, Azerbaijan |

## Lectures

|                 |   |
|-----------------|---|
| Departmental:   | 2021, Clay minerals and their perspectives. <u>French-Azerbaijani University (UFAZ), Azerbaijan National Academy of Science, Azerbaijan</u> |
| Public lecture: | 2019, Origin of clay minerals and their perspectives. <u>St Cuthbert's Society, Durham University, United Kingdom</u>                       |
| Seminar:        | 2019, What make clays in mud volcanoes antibacterial? Institute of Advanced Study, <u>Durham University, United Kingdom</u>                 |

- Invited: 2017, Characterization of the clay minerals in the Lower Pliocene of the western South Caspian Basin. Ege University, Turkey
- Departmental: 2016, Reconstruction of the palaeoclimate based on clay minerals of the Lower Pliocene sediments from the western South Caspian Basin. Institute of Geography, Azerbaijan National Academy of Science, Azerbaijan
- Departmental: 2015, The origin of clay minerals of the Lower Pliocene sediments from the western South Caspian Basin. Institute of Geography, Azerbaijan National Academy of Science, Azerbaijan
- Invited: 2015, Reconstruction of provenance based on clay minerals from the Pliocene Productive Series, western South Caspian Basin. BP Exploration Caspian Sea, Azerbaijan
- Invited: 2015, Characterization of the clay minerals and their significance in the Pliocene Productive Series, western South Caspian Basin. Azerbaijan Society of Petroleum Geologists, Azerbaijan
- Invited: 2014, Significance of clay minerals in the Lower Pliocene sediments from the western flank of the South Caspian Basin. RWE Dea (Wintershall Dea GmbH), Germany
- Invited: 2014, Climatic signals of clay minerals in the Lower Pliocene sediments from the western flank of the South Caspian Basin. Brunel University London, United Kingdom

## Publications

Baldermann, A., Wasser, O., **Abdullayev, E.**, Bernasconi, S., Löhr, S., Wemmer, K., Piller, W. E., Rudmin, M., Richoz, S. (2021). Palaeo-environmental evolution of Central Asia during the Cenozoic: New insights from the continental sedimentary archive of the Valley of Lakes (Mongolia). *Clim. Past Discuss* 17, <https://doi.org/10.5194/cp-17-1955-2021>

**Abdullayev, E.**, Baldermann, A., Warr, L.N., Grathoff, G., Taghiyeva, Y. (2021). New constraints on the depositional environment of the Eastern Paratethys: Implications from the Miocene Diatom Suite (Azerbaijan). *Sedimentary Geology* 411, <https://doi.org/10.1016/j.sedgeo.2020.105794>

Baldermann, A., Abbasov, O.R., Bayramova, A., **Abdullayev, E.** and Dietzel, M. (2020) New insights into fluid-rock interaction mechanisms at mud volcanoes: Implications for the fluid origin and mud provenance at Bahar and Zenbil (Azerbaijan). *Chemical Geology* 537, <https://doi.org/10.1016/j.chemgeo.2020.119479>

Baldermann, A., **Abdullayev, E.**, Taghiyeva, Y., Alasgarov, A. and Javad-Zada, Z. (2020) Sediment petrography, mineralogy and geochemistry of the Miocene Islam Dağ Section (Eastern Azerbaijan): Implications for the evolution of sediment provenance, palaeo-environment and (post-)depositional alteration patterns. *Sedimentology* 67, <https://doi.org/10.1111/sed.12638>

Rudmin, M., Banerjee, S., **Abdullayev, E.**, Ruban, A., Filimonenko, E., Lyapina, E., Kashapov, R. and Mazurov, A. (2020) Ooidal ironstones in the Meso-Cenozoic sequences in western Siberia: assessment of formation processes and relationship with regional and global earth processes. *Journal of Palaeogeography* 9, <https://doi.org/10.1186/s42501-019-0049-z>

Rudmin, M., Reva, I., Sokol E., **Abdullayev, E.** and Ruban, A. (2020) Minerals of rare Earth elements in high-phosphorus Ooidal ironstones of the Western Siberia and Turgai Depression. *Minerals* 10, <https://doi.org/10.3390/min10010011>

Rudmin, M., **Abdullayev, E.**, Ruban, A., Buyakov, A. and Soktoev, B. (2019) Mechanochemical preparation of slow-release fertilizer based on glauconite–urea complexes. *Minerals* 9, <https://doi.org/10.3390/MIN9090507>

**Abdullayev, E.** and Leroy, S.A.G. (2018) Clay minerals as palaeoclimatic indicators in the Pliocene Productive Series, western Southern Caspian Basin. *Geological Journal* 53, 2427–2436. <https://doi.org/10.1002/gj.3076>

**Abdullayev, E.** and Leroy, S.A.G. (2016) Provenance of clay minerals in the sediments from the Pliocene Productive Series, western South Caspian Basin. *Marine and Petroleum Geology*, 73, <https://doi.org/10.1016/j.marpetgeo.2016.03.002>

## **Other Publications – Research**

Taghiyeva, E.N., Javad-Zada, Z.N. and **Abdullayev, E.A.** (2018) Clay minerals of the Productive Series (Surakhany Suite) and its palaeoclimatic significance. *Geography and Natural Resource*, 2 (8), 3-7, (in Russian)

Taghiyeva, Y. and **Abdullayev, E.** (2016) Biochemical and palaeoenvironmental investigations of the early Pliocene-Productive Series from the western South Caspian Basin. *Stratigraphy and sedimentology of oil-gas basins*, 16, 44-55

## **In preparation**

**Abdullayev, E.**, Poppy Wilson, Daud Hamidi, Papreen Nahar, Chris Greenwell and Gary J. Sharples (in preparation) Characterization of clays with potential healing and antibacterial properties from Azerbaijan, Afghanistan and Bangladesh. *Applied Clay Science/Minerals*. Draft Manuscript

## **Conference Contributions – Refereed**

2017 - Plio-Pleistocene Caspian Basin Environment Based on Multiproxy Records: Micropaleontology, Mineralogy and Geochemistry. 17th National Clay Conference, Mugla/Turkey

2015 - Reconstruction of provenance based on clay minerals from the Pliocene Productive Series, western South Caspian Sea. Baku 2015. Increasing the Knowledge about Oil and Gas Reservoir, Baku/Azerbaijan

2015 - Reconstruction of past climate in the source areas based on clay minerals from the Lower Pliocene, western South Caspian Basin. Baku 2015. Increasing the Knowledge about Oil and Gas Reservoir, Baku/Azerbaijan

2013 - Sedimentation on the western flank of the South Caspian Basin (Absheron Peninsula).  
4th International Geosciences Student Conference; Germany

2012 - Distribution of clay mineral assemblages in Lower Pliocene sediments and their significance, western flank of the South Caspian Sea. The 74th EAGE Conference & Exhibition incorporating SPE EUROPEC, Denmark