# CURRICULUM VITAE

**BAHRUZ  AHADOV**

Date of birth:   29.11.1987

Nationality:     Azerbaijani

## EXPERIENCE SUMMARY

With a robust background in Geosciences, my expertise is in the practical implementation of Remote Sensing-InSAR and the Global Navigation Satellite System (GNSS). Data analysis, interpretation of complex datasets, and making informed decisions based on these interpretations in various sectors such as geosciences, agriculture, urban planning, environmental monitoring, and natural resource management. A significant part of my recent work involves monitoring climate change using remote sensing techniques. I've played critical roles in several impactful research projects: The Seismic Monitoring of the Sangachal Oil Terminal and the Baku-Tbilisi-Ceyhan Oil Pipeline, the development of the Baku City Microseismic Zoning Map, and an Agricultural Field Monitoring project using Remote Sensing under the Ministry of Agriculture of the Republic of Azerbaijan. Additionally, I've contributed actively to the creation and maintenance of the Azerbaijan GPS network, a collaborative initiative between the Institute of Geology and Geophysics (Baku, Azerbaijan) and the Massachusetts Institute of Technology (Boston, USA). The successful delivery of these projects certifies my strong scientific capabilities, motivation, effective teamwork, and excellent communication skills. As I move forward, apply my expertise to address the pressing issue of climate change and contribute to the sustainable management of our environment.

## WORK EXPERIENCE:

**Positions:**

- **NASA Jet Propulsion Laboratory**

*2024 August-present- Visiting Postdoctoral Researcher*

- **Digital Umbrella LLC**

*2022 July- 2023 May-* ***Head of Remote Sensing and GIS division***

*Google Earth Engine · Environmental Monitoring · Change Detection · Remote Sensing Applications · Crustal deformation · Precision Agriculture · Ecological problems · Image Processing · Earth Science · Geographic Information Systems (GIS) · Environmental Impact Assessment · Remote Sensing · Sustainable Agriculture*

- **Oil and Gas Institute, Ministry of Science and Education Republic of Azerbaijan**

*2022 June-present-* ***Leading research scientist***

*Google Earth Engine · Environmental Monitoring · Ecology · Remote Sensing*

- **Ministry of Agriculture of the Republic of Azerbaijan, Centre for Agrarian Research**

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*2021 August-2022 October- **Senior Specialist in Remote Sensing***

*Remote Sensing · Sustainable Agriculture, Image Processing, Drought, Crop monitoring, Yield predication,*

- ***Chinese Academy of Sciences, Shanghai Astronomical Observatory***

*2015-2019- **Research Assistant***

- ✓ *Satellite Navigation & Space Geodesy*
- ✓ *Tectonics Modelling and Geodynamics*

- **GFZ German Research Centre for Geosciences, Potsdam, Germany**

20 June to 20 August 2015- **Visiting Researcher**

- **Geology and Geophysics Institute, Ministry of Science and Education Republic of Azerbaijan**

*2021-2024- **Leading research scientist***

*2012 - 2017 - **Research Scientist***

*2008 - 2012 - **Chief Laboratory Worker***

| | |
|---|---|
| **National Projects:** | • Seismic monitoring of the Sangachal Oil Terminal (Client SOCAR) <br><br> • Seismic monitoring Projects of the Baku-Tbilisi-Ceyhan Oil Pipeline (Client BP) <br><br> • Baku city Microseismic Zoning Map preparation <br><br> • Exploration of hydrocarbon deposits and resource assessment at great depths of the earth's crust in the territory of Azerbaijan and the South Caspian water area using modern scientific methods |
| **International Projects:** | • Present day kinematics and dynamics of the Eastern Mediterranean/Caucasus. (R. Reilinger-Massachusetts Institute of Technology, Geology Institute of Azerbaijan National Academy of Sciences). NSF Grant EAR-0337497 to MIT. <br><br> • The research project: «Modern kinematics and dynamics of East Mediterranean / Caucasus». (MIT USA) <br><br> • Geodynamic monitoring along the BTC pipeline and surrounding area in Azerbaijan. (Project financed by BP). Contract N Blank-11-BPCS-274921 (01.10.2011-31.09.2012) |
| **Scientific** | • Tectonic Kinematics and modelling <br><br> • Satellite Navigation and Space Geodesy |

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**interests:**
- Earthquake and Volcano Monitoring
- Crustal deformation
- Remote Sensing applications
- Interpreting and analyzing InSAR data
- Landslide and Subsidence
- Environmental/Ecological Monitoring and Climate Changes
- Agriculture Monitoring using Remote Sensing
- Spatial-temporal characterization of seismicity and seismic hazard assessment.
- Coulomb stress modeling

## EDUCATION:

- **2005 - 2009 Bachelor's Degree-Baku State University**

  - *Geophysics*

- **2011 - 2014 Master's Degree-Baku State University** *(With honour)*

  - *Geophysics, Seismology and Seismometry*

- **2015 - 2019 Doctor of Philosophy degree (Ph.D)-Shanghai Astronomical Observatory, University of Chinese Academy of Sciences**
  *(Grade A)*
  - *Space Geodesy /Tectonics. Remote Sensing/Geodynamics*

## Conferences

1. **AGU American Geophysical Union** 2024, Washington DC, USA, 9-13 December 2024
2. **EGU General Assembly** 2024, Vienna, Austria, 14-19 Apr 2024
3. **International Symposium on Satellite Navigation (ISSN 2023)- Advances, Opportunities and Challenges**. November 20-22, 2023, Jiaozuo, Henan, China
4. **Science and Technology 2023 Conference (SnT2023)**, 19-23 June, 2023, Vienna, Austria & Online
5. **Water Innovation Forum**. 30 May 2023, Baku, Azerbaijan
6. **EGU General Assembly** 2023, Vienna, Austria, 24-28 Apr 2023
7. **An international conference on "Biodiversity, land and water resources of Shusha and adjacent territories: a look into the future"**. Baku, Azerbaijan, 2022

# CURRICULUM VITAE

8. **4th International Conference on Continental Earthquakes (ICCE2018)**, May 12-14, 2018, Chengdu, China

9. **1st International Conference on GNSS+ (ICG+2016)**, July 27-30, 2016, Shanghai, China

10. **The 5th International Scientific Conference of young scientists and students**, November 14-15, 2013, Baku, Azerbaijan

## Journal Papers:

1. **Ahadov B**., and Kadirov FA. InSAR Analysis of the Ayazakhtarma Mud Volcano and its Response to the 2021 Shamakhi $Mw5$ Earthquake: Understanding Seismo-Volcanic Interactions. ANAS Transactions Earth Sciences. 2023 DOI: 1055

2. **Ahadov B**., and Jin, S. THE IMPACT OF COULOMB STRESS CHANGES OF THE 2018 $M_w 7.5$ PALU EARTHQUAKE, INDONESIA. ANAS Transactions Earth Sciences. 2023 DOI: 10.33677/ggianas20230200099

3. Kadirov FA, **Ahadov B**, Gadirov AH, Babayev GR, Mammadov SG, Safarov RT (2015) Microtremor survey and spectral analyses of H/V ratio for Baku city (Azerbaijan). In: Proceedings of Azerbaijan national academy of sciences, the sciences of earth, No 3.

4. **Ahadov B**., and S.G. Jin (2017) Present-day kinematics in the Eastern Mediterranean and Caucasus from dense GPS observations, *Physics of the Earth Planet. Inter.*, 268, 54-64, doi: 10.1016/j.pepi.2017.05.003

5. **Ahadov, B**., and S.G. Jin (2019) Effects of coulomb stress change on Mw>6 earthquakes in the Caucasus region, *Physics of the Earth Planet. Inter.*, 297, 106326, doi: 10.1016/j.pepi.2019.106326

6. **Bahruz Ahadov** Co- and early Post-seismic Displacement of the Mw6.8 Elaziğ Earthquake, Turkey, Constrained by Sentinel-1 InSAR Observations. Technical Report, April 2020

7. **Ahadov, B.,** Jin, S. Slip Rates and Seismic Potential Along Main Faults in the Eastern Mediterranean and Caucasus from dense GPS Observations and Seismic Data. *Pure Appl. Geophys.* 178, 39–54 (2021). https://doi.org/10.1007/s00024-020-02643-5

8. **Ahadov, B**., Ozturk, S. Spatial variations of fundamental seismotectonic parameters for the earthquake occurrences in the Eastern Mediterranean and Caucasus. *Nat Hazards* (2022). https://doi.org/10.1007/s11069-021-05170-1

## Conference papers:

1. **Bahruz Ahadov,** Eric Jameson Fielding and Fakhraddin Kadirov. InSAR Analyses of Crustal Deformation and Mud Volcano Activity in Azerbaijan. Washington DC, USA, 9-13 December 2024

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2. **Bahruz Ahadov,** Fakhraddin Kadirov and Eric Jameson Fielding: Caspian Sea Level Changes and Coastal Dynamics: A Case Study of the Gizil-Aghaj State Reserve Using Multi-Sensor Satellite Data**.** EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-14488

3. **Bahruz Ahadov** and Narmin Alisoy. Relationship between land surface temperature and moisture of soils in Shamakhi District. INTERNATIONAL SOIL SCIENCE SYMPOSIUM on SOIL SCIENCE & PLANT NUTRITION. December 2022

4. Gadirov (Kadirov), F. and **Ahadov, B**.: The Relationship Between Moderate Earthquakes and Ayazakhtarma Mud Volcano Using the InSAR Technique in Azerbaijan, EGU General Assembly 2023, Vienna, Austria, 24–28 Apr 2023, EGU23-6906, https://doi.org/10.5194/egusphere-egu23-6906, 2023.

5. **Ahadov, B.** and Karimli, N.: Analyzing Land Use/Land Cover Changes and its Dynamics Using Remote Sensing Data: A case study of Gabala, Azerbaijan, EGU General Assembly 2023, Vienna, Austria, 24–28 Apr 2023, EGU23-3777, https://doi.org/10.5194/egusphere-egu23-3777, 2023.

6. Fakhraddin Kadirov, **Bahruz Ahadov**, Nilufar Karimli. APPLICATION OF ADVANCED PROCESSING OF THE REMOTE SENSING DATA ON LAND USE/LANDCOVER CHANGES IN ZANGILAN, EAST ZANGAZUR. An international conference on "Biodiversity, land and water resources of Shusha and adjacent territories: a look into the future". Baku, Azerbaijan

7. **Bahruz Ahadov**, Konul Mammadova, Narmin Alisoy. APPLICATION OF MONITORING AGRICULTURALLY SUITABLE AREAS USING REMOTE SENSING TECHNIQUE IN AGHDAM. An international conference on "Biodiversity, land and water resources of Shusha and adjacent territories: a look into the future" Baku, Azerbaijan

8. **Ahadov, B.**, and S.G. Jin, Crustal deformation and block kinematics in the Eastern Mediterranean and Caucasus from space geodesy, 4th International Conference on Continental Earthquakes (ICCE2018), May 12-14, 2018, Chengdu, China

9. **Ahadov, B.**, and S.G. Jin, Crustal deformation and tectonic activities in East Mediterranean and Caucasus from GPS observations, 1st International Conference on GNSS+ (ICG+2016), July 27-30, 2016, Shanghai, China

10. **Ahadov, B.**, Analysis of horizontal to vertical spectra of microseisms for Old city of Baku, The 5th International Scientific Conference of young scientists and students, November 14-15, 2013, Baku, Azerbaijan.


## International Training Courses and Schools:

- **Seismology, Seismic Data Analysis, Hazard Assessment, and Risk Mitigation,**

  *August 12 – September 6, 2013, GFZ, Potsdam, Germany*

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E-mail: ahadovshao@gmail.com

- **Third Country International Training Seminar "Earthquake Engineer and Disaster Management".**

  *Istanbul, Turkey. 2014*

- **Joint Institute of Nuclear Research, LIT, "GRID System"**

  *Russia, Dubna. June-August 2014*

- **High Precision GAMIT/GLOBK GPS Data Processing for Crustal Dynamics**

  *Baku, Azerbaijan, 8-12 September 2014*

- **The Comprehensive Nuclear-Test-Ban Treaty Organization, NDC Capacity Building: Access and Analysis of Waveform IMS Data and IDC Products**

  *Vienna, Austria. 9 to 19 June 2015*

- **GFZ German Research Centre for Geosciences, Short-term Research**

  *Potsdam, Germany 20 June to 20 August 2015*

- **2017 Winter School on Frontier and Interdisciplinary Sciences for the Oversea Students in IC-UCAS**

  *Sanya, China 14-20 January 2018*

## Languages:

English, Chinese (poor).

## Specific Softwares:

*GMT, TDEFNODE, ZMAP, Coulomb, GMTSAR, LICSBAS, SNAP, ISCE2, MintPy, GEE, QGIS*

## Membership:

*American Geophysical Union (AGU)*

*European Geosciences Union (EGU)*

*Geological Society of America (GSA)*

## Researchgate:

https://www.researchgate.net/profile/Bahruz-Ahadov

**LinkedIn:**
**https://www.linkedin.com/in/dr-bahruz-ahadov-%F0%9F%9B%B0%F0%9F%8C%8D-98ba2162/**