

# SOLMAZ MOHADJER

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## CURRENT POSITIONS

- Assistant Professor, University of Central Asia, Khorog, Tajikistan, since Aug 2020
- Visiting Assistant Professor, University of Tübingen, Tübingen, Germany, since Oct 2020

## EDUCATION

- Ph.D., Geosciences, University of Tübingen, Germany, 2019
- M.S., Geosciences, University of Montana, Missoula, MT, 2008
- B.S., Geological Sciences, University of Washington, Seattle, WA, 2004

## AWARDS AND HONORS

- European Geosciences Union's Higher Education Teaching Grant, 2020
- European Geosciences Union's Science-Policy Pairing Scheme Award, 2019
- International Symposium on Geo-Disaster Reduction (Kyrgyzstan) Best Presentation Award, 2019
- European Geosciences Union's Public Engagement Grant, 2016
- Innovation Fund Sustainable Development, University of Tübingen, 2016
- PARSA Community Foundation Grant (Earthquake Education in Central Asia), 2011
- Bertha Morton Scholarship, University of Montana, 2008-2009 academic year
- Space Grant Undergraduate Research Program, University of Washington, 2004
- Zesbaugh Scholarship, University of Washington, 2003-2004 academic year
- Lindenberg Mobility Grant for International Studies, University of Washington, 2003
- Mary Gates Leadership Grant, University of Washington, 2002-2003 academic year
- Society of Exploration Geophysics Foundation, 2001

## RESEARCH & OTHER POSITIONS

- Postdoctoral Associate, Geosciences, University of Tübingen, Germany, (2017-2020)
- Geosciences Curriculum Developer, Geosciences, University of Tübingen, Germany, (2016 – 2017)
- Ph.D. Researcher, Geosciences, University of Tübingen, Germany, (2013 – 2016)
- Natural Hazard Risk Model Consultant, Focus Humanitarian Assistance, Kabul, Afghanistan (2012/2013)
- Natural Hazard Scientist, Aga Khan Development Network (AKDN), Dushanbe, Tajikistan, (2012)
- Program Director, Teachers Without Borders, Seattle, WA, U.S.A, 2009 – 2011
- Graduate Research Assistant, University of Montana, Missoula, MT, U.S.A. (2006 – 2008)
- Research Geologist, United States Geological Survey, Anchorage, Alaska, U.S.A., (2004 – 2006)
- Project Coordinator, University of Washington's Pipeline Project, Seattle, WA, U.S.A., (2001 – 2004)

## SERVICES

- University of Central Asia, Academic Integrity Committee, 2020 – present

- University of Central Asia, Faculty Lecture Series, 2020 – present (organizer)
- European Geosciences Union Outreach Committee, 2020 – present
- European Geosciences Union Higher Education Focus Group, 2020 – present
- University of Tübingen's Geosciences PhD/Postdoc Representative, 2020 – present
- European Union Parliament, Brussels, Belgium, Nov 2019 (science adviser)
- United Nations Forum on Science, Technology and Innovation, NY, May 2019 (delegate)
- Planet Press, European Geosciences Union, 2015-2019 (reviewer)

### **Conference Session convener/panelist**

European Geosciences Union, Vienna, Austria:

- Science for Policy, Apr 2020
- Debunking myths and fake news: how geoscientists fight misinformation and false claims, Apr 2018
- Geoscience and the Sustainable Development Goals: Strategies for Eradicating Global Poverty, Apr 2016
- Natural Hazards Education, Communication and Science-Policy-Practice Interface, Apr 2015 & 2016
- Natural Hazard Teaching Demonstrations, Apr 2015

### **Workshops organized**

Climatic and Tectonic Natural Hazards in Central Asia (final workshop), Online, Sep 2020

Climatic and Tectonic Natural Hazards in Central Asia (annual meeting), Tübingen, Germany, May 2019

Remote Sensing, GFZ Potsdam, Germany, Apr 2014

## **PRESENTATIONS** (*\*invited*)

### ***Conference Presentations***

1. American Geophysical Union, Online, Dec. 2020, "Along-strike variations in cosmogenic derived denudation rates in the Western Tian Shan, Tajikistan"\*
2. European Geosciences Union, Online, Apr. 2020, "How can natural hazard scientists enhance their contribution to building sustainable and resilient societies?"
3. EU Parliament, Brussels, Belgium, Nov. 2019, "Impact of sea-level rise on coastal communities of the Baltic Sea"
4. 17<sup>th</sup> International Symposium on Geo-Disaster Reduction, Issyk Kul, Kyrgyzstan, Aug 2019, "Geohazards Database for Central Asia"\*
5. European Geosciences Union, Vienna, Austria, Apr. 2019, "Central Asia geohazards database"
6. European Geosciences Union, Vienna, Austria, Apr. 2018, "Sensitivity of rockfall frequency-magnitude and wall retreat rates to observation"
7. European Geosciences Union, Vienna, Austria, Apr 2016, "Comparison of fault slip rates: Insights from a Quaternary fault database for Central Asia"
8. American Geophysical Union, Fort Lauderdale, FL, May 2008, "Preliminary geodetic results from a sparse Central Asian geodetic network"

### ***Departmental Seminars and Colloquium***

9. UCA Public Lecture Series, Online, Oct 2020, "Sensitivity of Rockfall frequency-magnitude and wall retreat rates to observation duration from TLS measurements"
10. Institute of Geology, Earthquake Engineering and Seismology Lectures, Dushanbe, Tajikistan, Oct 2018, "Central Asia Quaternary fault database"
11. University of Liège, Geo-risk and Environment Colloquium, Liège, Belgium, Jun 2018, "Under pressure: Continental Collision and Earthquake Awareness"\*
12. University of Freiburg, Soil-Water-Rock, Earth and Environmental Sciences Colloquium, Freiburg, Germany, May 2016, "Comparison of fault slip rates from a Central Asia fault database"\*

## ***Education & Public Outreach Talks***

13. European Geosciences Union, Online, Apr. 2020, "Paired teaching approach to earthquake education: a cross-country comparison between Dushanbe, Tajikistan and London, United Kingdom"
14. University of Oxford's Grand Challenges Seminar, May 2019, "Natural hazards: Preparing today to protect tomorrow"\*
15. United Nation's Forum on Science, Technology and Innovation, New York, May 2019. "Earth Sciences Education for Resilient Communities in Central Asia"\*
16. European Geosciences Union, Vienna, Austria, Apr. 2019, "Overcoming challenges in earthquake education: a case study from Tajikistan"
17. 17<sup>th</sup> International Symposium on Geo-Disaster Reduction, Issyk Kul, Kyrgyzstan, Aug 2019, "From research to action: Linking geohazards science and preparedness in schools"
18. European Geosciences Union, Vienna, Austria, Apr 2018, "Using paired-teaching for earthquake education in schools"
19. TEDx Stuttgart, Germany, Sep 2016, "How to disarm earthquakes"\*
20. Geology for Global Development, London, UK, Oct 2016, "Translating geohazards research into potentially life-saving practices in Central Asia"\*
21. Himalayan Karakorum Tibet Workshop and International Symposium on Tibetan Plateau, University of Tübingen, Germany, Aug 2013, "Lessons Learned: From advancements in Earth sciences to practical geohazards awareness"\*
22. University of Cambridge, Sedgwick Club, Cambridge, UK, Nov 2011, "Earthquake Education in Central Asia"\*
23. Harvard Graduate School of Education Seminar Series, Cambridge, MA, Oct 2010, "The rise and role of NGOs in International Development"\*
24. European Science Education Research Association Conference, Istanbul, Turkey, Sep 2009, "Learning Science through Emergency Education"
25. American Geophysical Union, San Francisco, CA, Dec 2008, "Earthquake Education in Tajikistan: An assessment of perceptions, preparedness, and a pilot science-based curriculum"

## **TEACHING**

### **University courses**

- University of Central Asia: "*Environmental Impact & Risk Assessment*" (Spring 2021); "*Geodynamics & Structural Geology*" (Fall 2020); "*Sediments, Stratigraphy, and Hydrocarbon*" (Fall 2020)
- University of Tübingen: "*Applied Tectonics and Surface Processes*" (Fall 2016, co-developed course curriculum)
- University of Montana: "*Introduction to Geology Lab*" (academic year 2006-2007)
- University of Washington: "*Inner Pipeline Education Seminars*" (2001-2004, EDUC 401 seminars including: General Issues in K-12 Education; Refugee and Immigrant Communities; Math and Science in K-12 Education)

### **K-12 Professional Development Workshops**

- Aga Khan Development Network: *Earthquake Education* teacher training in 2 schools in Gujarat, India (2012)
- Teachers Without Borders: *Earthquake Education and Science Inquiry* teacher training workshops in Sichuan, China (3 multi-day workshops with >100 participants, 2009-2011), Port-au-Prince, Haiti (2011), Dushanbe/Khorog in Tajikistan (2011) and Shughnan in Afghanistan (2011)

## PUBLICATIONS

### *In review or preparation*

- **Mohadjer, S.**, Mutz, S.G., Kemp, M., Gill, S., Ischuk, A., and Ehlers, T.A., 2020 (*in review*). Using paired teaching for earthquake education in schools. *Geoscience Communication*
- **Mohadjer, S.**, Ratschbacher, L., Ehlers, T.A., Abdulov, S., Gadoev, M., Oimahmadov, M., Schaller, M., 2020 (*in prep*). Along-strike variations in cosmogenic derived denudation rates in the Western Tian Shan, Tajikistan. *Geomorphology*

### *Peer-reviewed*

1. Gill, J.C., Taylor, F.E., Duncan, M., **Mohadjer, S.**, Budimir, M., and Mdala, H., 2020 (*in press*). How can natural hazard scientists enhance their contribution to building sustainable and resilient societies? *Natural Hazards and Earth System Sciences*
2. **Mohadjer, S.**, Ehlers, T.A., Nettesheim, M., Ott, M.B., Glotzbach, C., and Drews, R., 2020. Temporal variations in rockfall and rockwall retreat rates in a deglaciated valley over the last 11 ka. *Geology*, v. 48(6), pp. 594-598
3. Perry, M., Kakar, N., Ischuk, A., Metzger, S., Bendick, R., Molnar, P., and **Mohadjer, S.**, 2018. Little Geodetic Evidence for Localized Indian Subduction in the Pamir-Hindu Kush of Central Asia, *Geophysical Research Letters*, v. 46, pp. 109-11
4. **Mohadjer, S.**, Ehlers, T.A., Bendick, R., Mutz, S.G., 2017. Review of GPS and Quaternary fault slip rates in the Himalaya-Tibet Orogen, *Earth-Science Reviews*, 174, pp. 39-52
5. Dietze, M., **Mohadjer, S.**, Turowski, J. M., Ehlers, T. A., and Hovius, N., 2017. Seismic monitoring of small alpine rockfalls - validity, precision and limitations, *Earth Surf. Dynam.* 5, 653-668
6. **Mohadjer, S.**, Ehlers, T. A., Bendick, R., Stübner, K., and Strube, T., A Quaternary fault database for central Asia, 2016, *Natural Hazards and Earth System Sciences*, 16, 529-542, doi:10.5194/nhess-16-529-2016.
7. Ischuk, A., Bendick, R., Rybin, A., Molnar, P., Khan, S.H., Kuzikov, S., **Mohadjer, S.**, Saydullaev, U., Ilyasova, Z., and Schelochkov, G., Kinematics of the Pamir and Hindu Kush regions from GPS geodesy, 2013, *Journal of Geophysical Research Letters- Solid Earth*, Vol. 118, 1-9 PP
8. **Mohadjer, S.**, Bendick, R., Ischuk, A., Kuzikov, S., Kostuk, A., Saydullaev, Lodi, S., Kakar, D.M., Wasy, A., Khan, M.A., Molnar, P., Bilham, R., and Zubovich, A.V., 2010, Partitioning of India-Eurasia convergence in the Pamir-Hindu Kush from GPS measurements, *Geophysical Research Letters*, Vol. 37, L04305, 6 PP.
9. **Mohadjer, S.**, Bendick, R., Halvorson, S., Saydullaev, U., Hojiboev, O., Stickler, C., Adam, Z., 2010, Earthquake Emergency Education in Dushanbe, Tajikistan, *Journal of Geoscience Education*, v. 58, n. 2, p. 86-94.

### *USGS Open-File Reports*

10. Wilson, F.H., Blodgett, R.B., Blome, C.D., **Mohadjer, S.**, Preller, C.C., Klimasauskas, E.P., Gamble, B.M., and Coonrad, W.L., 2017, Bedrock geologic map of the northern Alaska Peninsula area, southwestern Alaska: U.S. Geological Survey Scientific Investigations Map 2942, pamphlet 43 p., scale 1:350,000, <https://pubs.er.usgs.gov/publication/sim2942>.
11. Wilson, F.H., Hults, C.P., **Mohadjer, S.**, Coonrad, W.L., 2013, Reconnaissance Geologic Map for the Kuskokwim Bay Region of Southwest Alaska, U.S. Geological Survey Scientific Investigations Map 3100, pamphlet 46 p., 1 sheet, scales 1:500,000, 1:300,000, 1:250,000, <https://pubs.usgs.gov/sim/3100/>.
12. Wilson, F.H., **Mohadjer, S.**, Labay, K.A., and Shew, N.B., 2006, Digital datasets for geologic map by Wilson, F.H., Blodgett, R.B., Blome, C.D., Mohadjer, S., Preller, C.C., Klimasauskas, E.P., Gamble, B.M., and Coonrad, W.L.: Preliminary Integrated Geologic Map Databases for the United States: Digital Data for the Reconnaissance Bedrock Geologic Map for the Northern Alaska Peninsula Area, Southwest Alaska: U.S. Geological Survey Open-File Report 2006-1303, on-line only. <https://pubs.er.usgs.gov/publication/ofr20061303>
13. Wilson, F.H., **Mohadjer, S.**, Labay, K.A., and Shew, N.B., 2006, Digital datasets for the geologic map by Wilson, F.H., Mohadjer, S., and Grey, D.M.: Preliminary Integrated Geologic Map Databases for the United States: Digital Data for the Reconnaissance Geologic Map of the Western Aleutian Islands, Alaska: U.S. Geological Survey Open-File Report 2006-1302, on-line only. <http://pubs.usgs.gov/of/2006/1302>

14. Wilson, F.H., **Mohadjer, S.**, and Grey, D.M., in press, Reconnaissance geologic map for the Western Aleutian Islands, Alaska: U.S. Geological Survey Scientific Investigations Map SIM-2941, 31 manuscript pages, various scales, in press (USGS Director's approval 1/3/08). (This is the formal publication to accompany the above Open-File Report).
15. Shew, N.B., Peterson, C.S., Grabman, N., **Mohadjer, S.**, Grunwald, D., Wilson, F.H., and Hults, C.K., 2006, Preliminary Integrated Geologic Map Databases for the United States: Digital Data for the Geology of Southwest Alaska by George E. Gehrels and Henry C. Berg: U.S. Geological Survey Open-File Report 2006-1290, on-line only. <http://pubs.usgs.gov/of/2006/1290/>

*Books*

16. Benoit, Peter. The Haitian Earthquake of 2010. Content Consultant, **Mohadjer, S.**, United Kingdom: Children's Press, 2011. Print.