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Work Experience

04/2021-current	consultant for TRS Energy Consultants Ltd.
02/2021-current	consultant for the BC Oil and Gas Commission
10/2020-current	consultant for the Ferdowsi University of Mashhad
07/2019-current	consultant for BC Hydro
01/2018-03/2019	consultant for Natural Resources Canada
05/2019-06/2019	consultant for Symroc Business and Project Management Ltd.
02/2015-current	project seismologist consultant for Geoscience BC
12/2014-current	director at Mahan Geophysical Consulting Inc.
01/2014-05/2014	sessional instructor at University of Calgary
04/2013-02/2015	postdoctoral scholar at University of Calgary
10/2012-07/2016	geophysicist consultant for M. Tuttle & Associates
09/2008-04/2013	graduate research and teaching assistant at Western University
2005-2008	geophysicist in Iran (part time)

Projects

04/2021-current	damaging potential of induced earthquakes in Oklahoma (TRS Energy Consultants Ltd.)
02/2021-current	update on the investigation of observed seismicity in the Montney Trend (BC Oil and Gas Commission)
10/2020-current	Tehran earthquake early warning system (Ferdowsi University of Mashhad)
07/2019-current	BC Hydro dam safety: historical ground motion recordings

05/2019-06/2019	seismological support for sensor reviews, analysis of waveform data, and technical reports (Symroc Business and Project Management Ltd.)
02/2019-03/2019	performance and capacity upgrade of the SeisComp3 system for induced seismicity research (Natural Resources Canada)
01/2018-03/2018	construction and configuration of an automated earthquake location system (ALES) for induced seismicity research (Natural Resources Canada)
02/2015-current	induced seismicity monitoring project in northeast BC (Geoscience BC)
06/2014-02/2015	investigation of induced seismicity in Alberta (postdoctoral project)
04/2014-02/2015	hydraulic fracturing knowledge integration project (Canadian Water Network funded project)
04/2013-02/2015	adaptation of probabilistic seismic hazard assessment methods to site evaluation for carbon capture and storage in Alberta (Carbon Management Canada funded project)
04/2013-05/2014	paleoseismology project in the region of the Lepreau Nuclear Generating Station, New Brunswick (M. Tuttle & Associates)
10/2012-07/2016	paleoseismology project for Vale/Inco's Copper Cliff tailings facility - Sudbury Region, Ontario (M. Tuttle & Associates)
09/2008-04/2013	analysis of earthquake ground motion across North America (Ph.D. project)
07/2008-08/2008	seismicity study and seismic hazard assessment of Shiraz, Iran
2005-2008	electrical resistivity and electromagnetic surveys in Iran (water and mining exploration)

Journal Publications

Babaie Mahani, A., S. Venables, H. Kao, R. Visser, M. Gaucher, R. M. H. Dokht, and J. Johnson (2021). Intensity of Induced Earthquakes in Northeast British Columbia, Canada, *Seismological Research Letters*, <https://doi.org/10.1785/0220210037>

Dokht, R., H. Kao, **A. Babaie Mahani**, and R. Visser (2021). Spatiotemporal analysis of seismotectonic state of injection-induced seismicity clusters in the Western Canada Sedimentary Basin, *Journal of Geophysical Research: Solid Earth*, <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2020JB021362>

Babaie Mahani, A. (2021). Seismic b-value within the Montney Play of Northeast British Columbia, Canada, *Canadian Journal of Earth Sciences*, <https://doi.org/10.1139/cjes-2020-0157>

Babaie Mahani, A., D. Malyskyy, R. Visser, M. Hayes, M. Gaucher, and H. Kao (2020). Well-log-based Velocity and Density Models for the Montney Unconventional Resource Play in

Northeast British Columbia, Canada, Applicable to Induced Seismicity Monitoring and Research, *seismological research letters*, Vol. 92, No. 2A, p. 886-894, <https://doi.org/10.1785/0220200213>

Najaftomaraei, M., H. Rahimi, G. Tanircan, **A. Babaie Mahani**, and M. Shahvar (2020). Site Classification and Probabilistic Estimation of V_{S30} for the Iranian Strong Motion Network, *Physics of the Earth and Planetary Interiors*, Vol. 308, 106583, <https://doi.org/10.1016/j.pepi.2020.106583>

Mousavi-Bafrouei, S. H. and **A. Babaie Mahani** (2020). A Comprehensive Earthquake Catalogue for the Iranian Plateau (400 B.C. to December 31, 2018), *Journal of Seismology*, Vol. 24, p. 709-724, <https://doi.org/10.1007/s10950-020-09923-6>

Babaie Mahani, A., F. Esfahani, H. Kao, M. Gaucher, M. Hayes, R. Visser, and S. Venables (2020). A Systematic Study of Earthquake Source Mechanism and Regional Stress Field in the Southern Montney Unconventional Play of Northeast British Columbia, Canada, *Seismological Research Letters*, Vol. 91, No. 1, p. 195-206, <https://doi.org/10.1785/0220190230>

Babaie Mahani, A., H. Kao, G. M. Atkinson, K. Assatourians, K. Addo, and Y. Liu (2019). Ground Motion Characteristics of the 30 November 2018 Injection-Induced Earthquake Sequence in Northeast British Columbia, Canada, *Seismological Research Letters*, Vol. 90, No. 4, p. 1457-1467, <https://doi.org/10.1785/0220190040>

Babaie Mahani, A. and H. Kao (2019). Accurate Determination of Local Magnitude for Earthquakes in the Western Canada Sedimentary Basin, *Seismological Research Letters*, Vol. 90, No. 1, p. 203-211, <https://doi.org/10.1785/0220180264>

Kao, H., R. D. Hyndman, Y. Jiang, R. Visser, B. Smith, **A. Babaie Mahani**, L. J. Leonard, H. Ghofrani, and J. He (2018). Induced Seismicity in Western Canada Linked to Tectonic Strain Rate: Implications for Regional Seismic Hazard, *Geophysical Research Letters*, Vol. 45, No. 20, p. 11, 104-11,115, <https://doi.org/10.1029/2018GL079288>

Babaie Mahani, A. and J. Kazemian (2018). Strong Ground Motion from the November 12, 2017 M 7.3 Kermanshah Earthquake in Western Iran, *Journal of Seismology*, Vol. 22, No. 6, p. 1339-1358, <https://doi.org/10.1007/s10950-018-9761-x>

Babaie Mahani, A. and H. Kao (2018). Ground Motion from M 1.5 to 3.8 Induced Earthquakes at Hypocentral Distance < 45 km in the Montney Play of Northeast British Columbia, Canada, *Seismological Research Letters*, Vol. 89, No. 1, p. 22-34, <https://doi.org/10.1785/0220170119>

Babaie Mahani, A., R. Schultz, H. Kao, D. Walker, J. Johnson, and C. Salas (2017). Fluid Injection and Seismic Activity in the Northern Montney Play, British Columbia, Canada, with Special Reference to the 17 August 2015 Mw 4.6 Induced Earthquake, *Bulletin of Seismological Society of America*, V. 107, No. 2, p. 542-552, <https://doi.org/10.1785/0120160175>

Babaie Mahani, A., H. Kao, D. Walker, J. Johnson, and C. Salas (2016). Performance Evaluation of the Regional Seismograph Network in Northeast British Columbia, Canada, for Monitoring of Induced Seismicity, *Seismological Research Letters*, V. 87, No. 3, p. 648-660, <https://doi.org/10.1785/0220150241>

Eaton, D. W. and **A. Babaie Mahani** (2015). Focal Mechanisms of Some Inferred Induced Earthquakes in Alberta, Canada, *Seismological Research Letters*, V. 86, No. 4, p. 1078-1085, <https://doi.org/10.1785/0220150066>

Rubinstein, J. L. and **A. Babaie Mahani** (2015). Myths and Facts on Wastewater Injection, Hydraulic Fracturing, Enhanced Oil Recovery, and Induced Seismicity, *Seismological Research Letters*, V. 86, No. 4, p. 1060-1067, <https://doi.org/10.1785/0220150067>

Babaie Mahani, A. and G. M. Atkinson (2013). Regional Differences in Ground-Motion Amplitudes of Small-to-Moderate Earthquakes across North America, *Bulletin of the Seismological Society of America*, V. 103, No. 5, p. 2604-2620, <https://doi.org/10.1785/0120120350>

Atkinson, G. M. and **A. Babaie Mahani** (2013). Estimation of Moment Magnitude from Ground Motions at Regional Distances, *Bulletin of the Seismological Society of America*, V. 103, No. 1, p. 107-116, <https://doi.org/10.1785/0120120182>

Babaie Mahani, A. and G. M. Atkinson (2012). Evaluation of Functional Forms for the Attenuation of Small-to-Moderate-Earthquake Response Spectral Amplitudes in North America, *Bulletin of the Seismological Society of America*, V. 102, No. 6, p. 2714-2726, <https://doi.org/10.1785/0120120050>

Technical Reports

Babaie Mahani, A. (2020). Induced Seismicity Monitoring Project (ISMP): April 2019-March 2020 Report, 26 pages, <http://www.bcogris.ca/sites/default/files/ei-2016-06-final-year-8-report-ver-3-may-2620.pdf>

Visser, R., H. Kao, B. Smith, C. Goerzen, B. Kontou, R.M.H. Dokht, J. Hutchinson, F. Tan, and **A. Babaie Mahani** (2020). A Comprehensive Earthquake Catalogue for the Fort St. John-Dawson Creek Region, British Columbia, 2017-2018, *Geological Survey of Canada Open File*, 8718, 28 pages, <https://doi.org/10.4095/326015> (open access)

Babaie Mahani, A. and H. Kao (2020). Determination of Local Magnitude for Induced Earthquakes in the Western Canada Sedimentary Basin: An Update, *RECORDER*, V. 45, No. 02, 12 pages, https://csegrecorder.com/assets/pdfs/2020/2020-04-RECORDER-Determination_of_Local_Magnitude.pdf

Babaie Mahani, A. (2020). Systematic Study of Earthquake Source Mechanism and Regional Stress Field in the Southern Montney Unconventional Play of Northeastern British Columbia (NTS 093P/09, 10, 15, 16, 094A/01, 02, 07, 08); in *Geoscience BC Summary of Activities 2019: Energy and Water*, Geoscience BC, Report 2020-02, p. 13-18, http://www.geosciencebc.com/i/pdf/SummaryofActivities2019/EW/Project%202012-SEIS01_EW_SOA2019.pdf

Babaie Mahani, A. (2019). Induced Seismicity Monitoring Project (ISMP): April 2018-March 2019 Report, 17 pages, <http://www.bcogris.ca/sites/default/files/ei-2016-06-final-report-year-7-mar-3119-ver-1.pdf>

- Babaie Mahani, A.** and H. Kao (2019). Local Magnitude Scale for Earthquakes in the Western Canada Sedimentary Basin, Northeastern British Columbia and Northwestern Alberta; in *Geoscience BC Summary of Activities 2018: Energy and Water*, Geoscience BC, Report 2019-2, p. 47-54, http://cdn.geosciencebc.com/pdf/SummaryofActivities2018/EW/2012-SEIS_SoA2018_EW_BabaieMahani.pdf
- Babaie Mahani, A.** (2018). Induced Seismicity Monitoring Project (ISMP): October 2017-March 2018 Report, 16 pages, <http://www.bcogris.ca/sites/default/files/ei-2016-06-final-report-year-6-mar-3118-final.pdf>
- Babaie Mahani, A.** and H. Kao (2018). Attenuation of Ground-Motion Amplitudes from Small-Magnitude Earthquakes in the Montney Play, Northeastern British Columbia; in *Geoscience BC Summary of Activities 2017: Energy*, Geoscience BC, Report 2018-4, p. 15-22, http://cdn.geosciencebc.com/pdf/SummaryofActivities2017/Energy/SoA2017_E_Mahani.pdf
- Visser, R., B. Smith, H. Kao, **A. Babaie Mahani**, J. Hutchinson, and J. McKay (2017). A Comprehensive Earthquake Catalogue for Northeastern British Columbia and Western Alberta, 2014-2016, *Geological Survey of Canada Open File 8335*, 28 pages, <https://doi.org/10.4095/306292> (open access)
- Kao, H., **A. Babaie Mahani**, J. Johnson, and S. Venables (2017). Magnitude Calculations for Induced Seismicity in the NE BC Oil and Gas Operating Area, 6 pages
- Babaie Mahani, A.** (2017). BC-OGRIS 2016-2017 Report for Year 5 of the Induced Seismicity Monitoring Project (ISMP), 52 pages, <http://www.bcogris.ca/sites/default/files/ei-2016-06-seismic-array-network-final-report-year-5-oct17-ver-1a.pdf>
- Rashedi, H., and **A. Babaie Mahani** (2017). Data Analysis of Induced Seismicity in Western Canada, CSEG Recorder, January, page 26-28
- Babaie Mahani, A.**, H. Kao, J. Johnson, and C. Salas (2017). Ground Motion from the August 17, 2015, Moment Magnitude 4.6 Earthquake Induced by Hydraulic Fracturing in Northeastern British Columbia; in *Geoscience BC Summary of Activities 2016*, Geoscience BC, Report 2017-1, p. 9-14, http://cdn.geosciencebc.com/pdf/SummaryofActivities2016/SoA2016_BabaieMahani.pdf
- Kao, H., D. W. Eaton, G. M. Atkinson, S. Maxwell, and **A. Babaie Mahani** (2016). Technical Meeting on the Traffic Light Protocols (TLP) for Induced Seismicity: Summary and Recommendations, *Geological Survey of Canada Open File 8075*, 20 pages, <https://doi.org/10.4095/299002> (open access)
- Tuttle, M. P., **A. Babaie Mahani**, Z. Fuentes, and K. Dyer-Williams (2016). Paleoseismology Project Sudbury Region, Ontario, for Vale/Inco's Copper Cliff Tailings Facility, Phase 2 Report
- Babaie Mahani, A.**, H. Kao, D. Walker, J. Johnson, and C. Salas (2016): Regional Monitoring of Induced Seismicity in Northeastern British Columbia; in *Geoscience BC Summary of Activities 2015*, Geoscience BC, Report 2016-1, p. 79-88, http://cdn.geosciencebc.com/pdf/SummaryofActivities2015/SoA2015_Babaie.pdf

Ryan, M. C., D. S. Alessi, **A. Babaie Mahani**, A. Cahill, J. Cherry, D. Eaton, R. Evans, N. Farah, A. Fernandez, O. Forde, P. Humez, S. Kletke, B. Ladd, J-M. Lemieux, B. Mayer, K. U. Mayer, J. Molson, L. Muehlenbachs, A. Nowamooz, and B. Parker (2015). Subsurface Impacts of Hydraulic Fracturing: Contamination, Seismic Sensitivity, and Groundwater Use and Demand Management, *Canadian Water Network*, 149 pages, <http://cwn-rce.ca/wp-content/uploads/2014/04/Ryan-et-al-2015-CWN-Report-Subsurface-Impacts-of-Hydraulic-Fracturing.pdf>

Babaie Mahani, A. and D. W. Eaton (2015). Estimation of Subsurface Ground Motion Using Surface Recordings, *Microseismic Industry Consortium Annual Research Report, Volume 5*

Tuttle, M. P., **A. Babaie Mahani**, K. Dyer-Williams, A. S. MacKay, and T. A. Busch (2014). Paleoseismology Project in the Region of the Point Lepreau Generating Station, *Final Report prepared for the New Brunswick Power Nuclear Corporation*, 290 p.

Tuttle, M. P. and **A. Babaie Mahani** (2013). Paleoseismology Project Sudbury Region, Ontario, *for Vale/Inco's Copper Cliff Tailings Facility, Phase 1 Report*

Babaie Mahani, A. and J. Kazemian (2008). Seismotectonics, Seismicity, Seismic Hazard Assessment, and Strong Ground Motion Analysis for the Region of Shiraz, Iran, *prepared for the seismic retrofitting plan of the city of Shiraz water supply system (in Persian)*

Invited Speaker

A Systematic Study of Earthquake Source Mechanism and Regional Stress Field in the Southern Montney Unconventional Play of Northeast British Columbia, Canada, *CSUR Induced Seismicity Workshop V, October 17, 2019, Calgary*

Analysis of Near Field Ground Motion Amplitudes in Northeast British Columbia, *11th BC Unconventional Gas Technical Forum, Victoria, BC, April 24, 2018*

Monitoring of Induced Seismicity in Northeast BC (2012-2017), *Canadian Society for Unconventional Resources Induced Seismicity Workshop, December 5, 2017, Calgary*

Ground Motion from Small Induced Earthquakes Recorded at Short Hypocentral Distance in Northeast BC, *Geoscience BC: Update on Induced Seismicity & Natural Gas Liquids Research, CSUR, Calgary, Alberta, September 19, 2017*

Ground Motion Amplitudes in Alberta and Northeastern British Columbia, *Alberta Energy Regulator Workshop on Induced Seismicity, Calgary, February 16, 2017*

Fluid Injection and Seismic Activity in the Northern Montney Play, British Columbia, with Special Reference to the August 17, 2015 Mw 4.6 Induced Earthquake, *Microseismic User Group, Calgary, January 30, 2017*

Induced Seismicity in NE BC: an Update, *Canadian Induced Seismicity Collaboration Workshop, TransAlta office, Calgary, October 27, 2016*

Induced Seismicity Monitoring Project, *Canadian Society for Unconventional Resources Induced Seismicity Workshop, November 19, 2015, Calgary*

Regional Monitoring of Induced Seismicity in NE BC, *Canadian Society for Unconventional Resources technical luncheon, November 12, 2015, Calgary*

Panelist for the Technical Meeting on Traffic Light Protocols for Induced Seismicity, *University of Calgary, October 6, 2015*

Induced Seismicity Monitoring Project: Northeast BC, *Workshop on Canadian Induced Seismicity Collaboration, TransAlta office, Calgary, October 5, 2015*

Monitoring of Induced Seismicity in Northeast British Columbia, *Canadian Society for Unconventional Resources, June 16, 2015, Calgary, Alberta*

Seismicity in Alberta and its Connection with Human Activity, *FATS talk series, department of Geoscience, University of Calgary, November 21, 2014*

Source Mechanisms for Induced Seismicity in Western Canada, *BC Oil and Gas commission Induced Seismicity Workshop, November 19, 2014, Calgary, Alberta*

Introduction to Seismology, *Geology 209 course, University of Calgary, October 10, 2014*

Hydraulic Fracturing and Induced Seismicity Knowledge Gaps, *Canadian Water Network Hydraulic Fracturing Knowledge Integration workshop, September 25-26, 2014, Guelph, Ontario*

Regional Moment Tensor Inversion for Recent Events, *Induced Seismicity Workshop, TransAlta office, September 19, 2014, Calgary, Alberta*

Introduction to Probabilistic Seismic Hazard Assessment, *Microseismic Industry Consortium Short Course, September 2-6, 2014, Calgary, Alberta*

Conference Presentations and Extended Abstracts

Babaie Mahani, A. and H. Kao (2020). Determination of Local Magnitude for Induced Earthquakes in the Western Canada Sedimentary Basin: An Update, *geoconvention, September 21-23, 2020, Calgary, Alberta (extended abstract and oral presentation)*

Mousavi-Bafrouei, S. H. and **A. Babaie Mahani** (2020). Aftershocks of Some Major Earthquakes in the Iranian Plateau, *19th Iranian Geophysical Conference, Iranian Geophysical Society, April 22-23, 2020, Tehran, Iran (extended abstract)*

Kao, H., R. Visser, R. Dokht, S. Venables, **A. Babaie Mahani**, Y. Liu, and F. Tan (2019). Quantitative Relationship Between Injection Operations and Induced Seismicity in the Southern Montney Play, British Columbia, Canada, *American Geophysical Union annual meeting, December 9-13, 2019, San Francisco, CA*

Babaie Mahani, A. (2019). Monitoring of Induced Seismicity in Northeast British Columbia, Canada, *8th International Conference on Seismology & Earthquake Engineering, November 11-13, 2019, Tehran, Iran (extended abstract)*

- Babaie Mahani, A.** (2019). Strong Ground Motion from the November 12, 2017 Mw 7.3 Sarpol-e Zahab Earthquake: Analysis of Source and Site Condition, *8th International Conference on Seismology & Earthquake Engineering, November 11-13, 2019, Tehran, Iran (extended abstract)*
- Eaton, D. W., **A. Babaie Mahani**, R. Salvage, H. Kao, and M. van der Baan (2019). A Tale of Three Earthquakes: New Insights into Fault Activation in Light of Recent Occurrences in Western Canada, *New Directions in Geosciences for Unconventional Resources, October 15-17, 2019, Banff, Canada (extended abstract)*
- Kao, H., R. D. Hyndman, Y. Jiang, R. Visser, B. Smith, **A. Babaie Mahani**, L. J. Leonard, H. Ghofrani, and J. He (2018). Tectonic Strain Rate as a Controlling Factor of Injection-Induced Earthquakes in Western Canada, *American Geophysical Union annual meeting, December 10-14, 2018, Washington, D.C.*
- Babaie Mahani, A.** (2018). Near-Field Ground-Motion Amplitudes from Induced Earthquakes in the Western Canada Sedimentary Basin, *CSUR Induced Seismicity Workshop, Banff Alberta, October 24-26, 2018 (extended abstract)*
- Kao, H., **A. Babaie Mahani**, and R. Schultz (2016). The Largest Hydraulic Fracturing – Induced Earthquake in Canada: Source Characteristics and Seismic Hazard Implications of the August 17, 2015, Mw 4.6 Earthquake in Northeast British Columbia, *American Geophysical Union annual meeting, December 12-16, 2016, San Francisco, CA*
- Babaie Mahani A.**, H. Kao, D. Walker, Jeff Johnson, and Carlos Salas (2016). Performance Evaluation of the Regional Seismograph Network in Northeast British Columbia, Canada, for Monitoring of Induced Seismicity, *Seismological Society of America annual meeting, Reno, Nevada, April 20-22, 2016*
- Babaie Mahani A.**, R. Schultz, H. Kao, D. Walker, J. Johnson, and C. Salas (2016). The August 17, 2015 Mw4.6 Hydraulic Fracturing-Induced Earthquake in Northern MontneyPlay, British Columbia, Canada, *Seismological Society of America annual meeting, Reno, Nevada, April 20-22, 2016*
- Kao, H., **A. Babaie Mahani**, D. Walker, G. M. Atkinson, and D. W. Eaton (2016). The First Step Toward an Effective Traffic Light Protocol for Induced Seismicity: A Data-Sharing Framework for Earthquake Monitoring in Northeast British Columbia, Canada, *Seismological Society of America annual meeting, Reno, Nevada, April 20-22, 2016*
- Kao, H., **A. Babaie Mahani**, G. M. Atkinson, D. W. Eaton, and S. Maxwell (2015). Traffic Light Protocol for Induced Seismicity: What Is the Best Strategy?, *Abstract S11C-08 presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec*
- Kao, H., M. Lamontagne, J. F. Cassidy, D. Snyder, A. M. Farahbod, **A. Babaie Mahani**, and D. Lavoie (2015). An Update on Natural Resources Canada's Induced Seismicity Research Project, *presented at the 87th Seismological Society of America East Section Annual Meeting, Memphis, Tennessee, USA, 5-8 Oct, 2015*

- Babaie Mahani, A.,** H. Kao, D. Walker, J. Johnson, and C. Salas (2015). Performance Analysis of the Canadian National Seismic Network (CNSN) in Northeast British Columbia, *9th Unconventional Gas Technical Forum, June 8-9, 2015, Victoria, BC*
- Babaie Mahani, A.** and D. W. Eaton (2014). Source Parameters of the Crooked Lake Induced Seismicity Sequence, *Joint SEG/SPE/ARMA Induced Seismicity Workshop, September 15-18, 2014, Banff, Alberta*
- Babaie Mahani, A.** and D. W. Eaton (2014). Estimation of Ground Motion Amplitudes at Depth: A Case Study for Underground CO₂ Storage in Alberta, *Carbon Management Canada Annual Meeting, May 27-29, 2014, Banff, Alberta*
- Babaie Mahani, A.** and D. W. Eaton (2014). An Empirical Transfer Function to Estimate Subsurface Ground Motion Using Surface Recordings, *Canadian Geophysical Union Annual Meeting, May 4-8, 2014, Banff, Alberta*
- Babaie Mahani, A.** and D. W. Eaton (2014). An Empirical Transfer Function to Estimate Subsurface Ground Motion Using Surface Recordings for the Case of Underground Storage of Carbon Dioxide in Alberta, *Micorseismic Industry Consortium Sponsor Meeting, Feb 27-28, 2014, Calgary, Alberta*
- Babaie Mahani, A.** and D. Eaton (2013). Adapting Surface Ground Motion Relations to Underground Conditions: A Case Study for the Sudbury Neutrino Observatory in Sudbury, Ontario, Canada, *American Geophysical Union annual meeting, December 9-13, 2013, San Francisco, CA*
- Eaton, D., J. Davidsen, P. Pedersen, N. Boroumand, and **A. Babaie Mahani** (2013). Statistical Characteristics of Tectonic and Induced Earthquakes in North America., *Workshop on Statistics and Triggering of Earthquakes, Banff, Alberta, Canada, August 30-September 1, 2013*
- Babaie Mahani, A.** and D. Eaton (2013). Adapting Surface Ground Motion Relations to Underground Conditions: A Case Study for the Carbon Capture and Storage (CCS) Sites in Central Alberta, *Carbon Management Canada Annual Meeting, Calgary, Alberta, June 3-5, 2013*
- Babaie Mahani, A.** and G. M. Atkinson (2012). Comparison of the Regional Variability in Response Spectral Amplitudes of Small-to-Moderate Earthquakes in North America, *Canadian Seismic Research Network conference, Montreal, Quebec, September 15, 2012*
- Babaie Mahani, A.** and G. M. Atkinson (2012). Evaluation of Attenuation Models in North America, *Seismological Society of America, San Diego, CA. April 17-19, 2012*
- Babaie Mahani, A.** and G. M. Atkinson (2011). Regional Variations in Ground-Motion Amplitudes across North America, *Canadian Geophysical Union, Banff, Alberta, May 15-18, 2011*
- Babaie Mahani, A.** and J. Kazemian (2007). Strong Ground Motion Parameters of February 22, 2005 Dahuiyeh (Zarand) Earthquake in Central Iran, *International Earthquake Symposium, Kocaeli, Turkey, October 22-26, 2007*

Babaie Mahani, A., S. Mehrabian, and M. Bagheri (2007). Paleoseismology in Iran; Aims, Previous Record and Future Panorama, *International Earthquake Symposium, Kocaeli, Turkey, October 22-26, 2007*

Education

01/09/2008-10/01/2013 PhD in Geophysics, Western University, Canada
01/02/2006-27/04/2008 M.Sc. in Geophysics, University of Tehran, Iran
01/02/2001-17/09/2005 B.Sc. in Geology, Shahid Bahonar University of Kerman, Iran

Theses

Ph.D.

Babaie Mahani, A. (2013). Variability in Characteristics of Ground Motions across North America. Electronic Thesis and Dissertation Repository. Paper 1094. <http://ir.lib.uwo.ca/etd/1094>

M.Sc.

Babaie Mahani, A. (2008). Attenuation Relationship Considering Rupture Directivity Effect for the Iranian Plateau, University of Tehran (*in Farsi*)

Teaching Experience

GOPH 457: Physical Properties of Rocks (instructor at University of Calgary)
ES 1022A: Earth Rocks (teaching assistant at Western University)
ES 1023A: Planet Earth: Shaken & Stirred (teaching assistant at Western University)
ES 2222B: Data Analysis & Signal Processing in Sciences (teaching assistant at Western University)

Supervised Projects

Determination of focal mechanism for induced earthquakes in British Columbia, Canada (master thesis)

Strong ground motion from the February 23, 2020 Ghotor earthquakes in the west Azerbaijan province, Iran (master thesis)

Scholarships and Awards

04/2013-02/2015 post-doctoral research fellowship (University of Calgary)
09/2008-09/2012 western graduate research scholarship (Western University)
05/2011 Canadian Geophysical Union travel award

Academic and Professional Volunteering

Reviewer for Bulletin of Seismological Society of America, Seismological Research Letters, Earthquake Spectra, Geosciences, and Journal of Geophysical Research-Soil Earth

Mentor for the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) mentorship program

Visiting Scientist at the Pacific Geoscience Center, Geological Survey of Canada, Sidney, BC

Chair of the technical meeting on traffic light protocols for induced seismicity, University of Calgary, October 6, 2015

Outstanding student presentation award (OSPA) judge at the American Geophysical Union fall meeting in San Francisco, December 9-13, 2013

Chair of the Geophysics session at the AESRC (Advances in Earth Sciences Research Conference), Western University, London, Ontario, Canada, March 22-24, 2013

Certificates and Memberships

Professional Geoscientist (P.Ge.) licensee from APEGBC since 2016