

Prof. Dr. Mehdi ZARE



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Born in: Tehran, Iran;

Birth date: 9 September 1968

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Languages:

- Persian : maternal language
- English : Reading, Writing and Speaking
- French : Reading, Writing and Speaking
- Arabic and German: Reading only

#### **Education:**

- Ph.D.: Engineering Seismology, Joseph-Fourier (Grenoble I), University, Grenoble, France, March 1999
- M.Sc.: Engineering Geology, Tarbiat-Modarres University, Tehran, Iran, March 1994
- B.Sc.: Geology (degree with Honor), Tehran University, Tehran, Iran, June 1990

#### **Professional Experience:**

**Associate Member (Since Feb 2016); Division of Geology, Dept of Basic Sciences, the Academy of Sciences, I.R. of Iran** (*Started colabortion with the Academy f Sciences Since June 2014 as invited member*)

#### **Full Professor of Engineering Seismology**

##### **International Institute of Earthquake Engineering and Seismology (IIEES)**

- February 2005-November 2007: Director of Seismology Research Center of IIEES.
- November 2007-Oct 2013: IIEES Vice-President for Research and Technology
- November 2007- June 2014: Director of National Center for Earthquake Prediction
- Since June 2014; Director of Engineering Seismology Department, IIEES

-Since June 2015: Full Professor of Engineering Seismology, International Institute of Earthquake Engineering and Seismology, Tehran.

-November 2005-June 2014: Associate Professor of Engineering Seismology, International Institute of Earthquake Engineering and Seismology, Tehran.

- March 1999-November 2005: Assistant Professor: International Institute of Earthquake Engineering and Seismology, Tehran.

*Since MARCH 2000:* Adjacent Professor; Mining Engineering Department, Faculty of Engineering, University of Tehran, Tehran, IRAN

*Since November 2008;* Adjacent Professor; Disaster & Emergency Health Academy, I.R. Iran National Institute of Health Research, Tehran University of Medical Sciences, Tehran, IRAN

*Since September 2013;* Adjacent Professor; Faculty of Geography, University of Tehran, Tehran, IRAN

- October 1995 to March 1999: Research Student in the “Laboratoire de Géophysique Interne et Tectonophysique LGIT, IRIGM, Université Joseph Fourier, Grenoble, France.  
(Meanwhile: Faculty member and Head of Earthquake Reconnaissance Dept., International Institute of Earthquake Engineering and Seismology, Tehran.)

- December 1992 to October 1995: Research Associate in the International Institute of Earthquake Engineering and Seismology, Tehran.

- September 1990 to December 1992: Engineering Geologist and Geotechnical expert, Mahab-Ghods Consulting Engineers, Tehran.

- Since June 1992: Freelance Engineering Seismologist, Seismic Hazard and Risk Assessment for the Engineering Projects (Dams, Power Plants, Urbanism, ...etc) in Iran (45 projects studied).

- Expert to Control the Seismic Hazard Studies on the Bushehr Nuclear Power Plant (NPP).  
- May 2000-May2005; Technical Advisor to the Dez-Ab Consulting Engineers.

Supervised PhD Thesis;

- 1- Dr Fereidoun Sinaiean; November 2006, “Strong Motion Studies in Iran, Analysis and Attenuation Relationships”. IIEES (1<sup>st</sup> Finalized PhD in Geophysics in an Iranian Academic center; i.e. inside Iran)
- 2- Dr Mohammad Aryamanesh; (co-supervised with Dr M.R Zolfaghari); April 2007, Seismic Hazard Studies in Tabas Region, East Iran, IIEES
- 3- Dr Hadi Ghasemi, February 2009; Spectral Attenuation of Strong motion Studies in Iran, IIEES.
- 4- Dr Aref Bali-Lashak, September 2010; Earthquake Forecast in Iran, IIEES
- 5- Dr Arezu Dorostian, February 2011; Strong Motion Data Modelling in the Near-Field, IAU, Tehran
- 6- Dr Deynaz Iranbodi, September 2011; Earthquake Rupture Hazard Zone in South Tehran Region; IAU, Tehran
- 7- Dr Jamileh Vasheghani-Farahani, August 2012; Attenuation of Explosion Seismic Motions, IIEES.
- 8- Dr Mohammad Poumohammad-Shahvar; April 2013; Developing the ShakeMaps for Earthquakes in Iran, IIEES
- 9- Dr Sepideh Karimiparidari (co-supervised with Prof H. Memarian); September 2013; Probabilistic Seismic Hazard Zoning in Iran for 475 yers return period, IIEES

- 10- Dr Masoud Mojarab, June 2014, (co-supervised with Prof H. Memarian), Earthquake Prediction In Iran; M8 Method for mid-term predictions, College of Engineering, University of Tehran.
- 11- Dr Majid Maybodian; October 2014; Earthquake Forecast Using CN Method in Zagros Belt, Iran, IIEES
- 12- Abdollah Vaez-Shushtari, December 2015 **University Technology Malasiya (UTM)**, Attenuation of Strong Ground motions in SE Asia; (co-supervisor with Prof Adnan B. Azlan.

**Under supervision PhD Thesis (in IIEES):**

- 1. M. Salamat, Mmax Assessment and Analysis for Iranian Seismic Source Zones; IIEES, Started Nov 2012
- 2. Z. Farajpour, Next Generation Attenuation (GMPE) for Iran; IIEES, Started Nov 2012.
- 4. Hamideh Amini: Uncertainties on the Seismic Hazard Zoning in Iran, IIEES (Started in 2011).

**Scientific Activities:**

- Since May 1999: Seismic Regulations for the Nuclear Power Plants.
- Since May 1992: member of editorial board and founding the “Engineering Geology Group” in the Omran Magazine; Faculty of Civil Engineering, Sharif University of Technology, Tehran.

**Teaching Courses:**

Seismic Hazard Analysis,  
 Seismic Hazard Zoning,  
 Applied Geophysics,  
 Seismology,  
 Strong Ground Motion Seismology  
 Seismic Risk Analysis  
 Seismotectonic,  
 Disaster Risk Management and Uncertainties  
 Crisis Management  
 Aftermathes of Natural Disasters  
 (in BSc, MSc and PhD levels for Geophysics, Earthquake Engineering, Civil and Mining Engineering) in Tehran University, Petroleum Industry University, K.N. Toosi University of Technology, IAU University

**Scientific Stages:**

- September 1998: Commissariat d’Énergie Atomique (CEA), Fontenay-aux-roses, Attenuation of Strong Ground Motions, France.
- June-September 2000: LGIT-IRIGM, Grenoble France.

**Some Recent Major International Journal Papers:**

1. Lucia Luzi, Rodolfo Puglia, Emiliano Russo, Maria D'Amico, Chiara Felicetta, Francesca Pacor, Giovanni Lanzano, Ulubey Çeken, John Clinton, Giovanni Costa, Llambro Duni, Esmael Farzanegan, Philippe Gueguen, Constantin Ionescu, Ioannis Kalogeras, Haluk Özen, Damiano Pesaresi, Reinoud Sleeman, Angelo Strollo, Mehdi Zare, 2016, *The Engineering Strong-Motion Database: A Platform to Access Pan-European Accelerometric Data*, Seismological Research Letters Jun 2016, **DOI:** 10.1785/0220150278.
2. Ommi, S. H. Zafarani, and M. ZARE, 2016, Aftershock Decay Rates in the Iranian Plateau, *Pure Appl. Geophys.* 2016 Springer International Publishing DOI 10.1007/s00024-016-1285-0m .
3. Vaez Shoushtari, A., B. A. Azlan , and M. Zare, 2016, On the selection of ground-motion attenuation relations for seismic hazard assessment of the Peninsular Malaysia region due to distant Sumatran subduction intraslab earthquakes; *Soil Dynamics and Earthquake Engineering* 82, 123–137.
4. Vaez Shoushtari A. , A Adnan, M Zare, NSH Harith , 2015, Estimation of the maximum credible hazard in Kuala Lumpur and Singapore due to gigantic Sumatran megathrust earthquakes: based on a comparative study on attenuation laws, *Natural Hazards*, Vol.78, 725-751.
5. Ramezani Besheli P., M.ZARE, R. Ramazani Umali and G. Nakhaeezadeh, 2015, Zoning Iran based on earthquake precursor importance and introducing a main zone using a data-mining process. *Natural Hazards*, 10.1007/s11069-015-1745-3.
6. Talebi M. M. Zare, A. R. Madahi-zadeh and Bali-Lashak, 2015, Spatial-temporal analysis of seismicity before the 2012 Varzeghan, Iran, Mw 6.5 earthquake, *Turkish Journal of Earth Sciences*, Vol24, 24: © TÜBİTAK doi:10.3906/yer-1410-13, pp.1-13.
7. Norouzi, N., Masoud Mojarab, Zeinab Asadi, Mehdi Zare, 2014, A Case Study of Seismic Hazard Analysis at Al-Tajiat and Al-Zawraa Stadiums in Baghdad/Iraq Region, *Arab J Sci Eng* DOI 10.1007/s13369-014-1559-8.
8. Zare M. H. Amini, P. Yazdi, K. Sesetyan, M. B. Demircioglu, D. Kalafat, M. Erdik, D. Giardini, M.A. Khan, N. Tseriteli, 2014, Recent developments of the Middle East catalog, *Journal of Seismology*, DOI 10.1007/s10950-014-9444-1.
9. Vasheghani-Farhani J. and M. ZARE, 2014, Site characterizations for the Tehran network (TDMMO) in Tehran region using micro-earthquake, microtremor and quarry blast data, *Soil Dynamics and Earthquake Engineering* 63 (2014) 235–247.
10. Vasheghani-Farhani J., M. ZARE, and A. Cichowicz 2014, Microseismicity of the Tehran region based on the data recorded in a local monitoring network: 2004-2010, *Episodes* Vol. 37, no. 3, pp 206-217.

11. Vasheghani-Farhani J. and M. ZARE, 2014, Seismological aspects of the Varzeghan twin Earthquakes on 11 August 2012 (Mw 6.3 and Mw 6.1), in East Azerbaijan province, NW Iran, Episodes Vol. 37, no. 2, pp96-104.
12. Esmaeili, B. M. Almasian, M. ZARE, R. Alipoor, A. Alizadeh, 2014, Geophysical and geological study on the West Qarchak fault and its implications in seismic hazard, Tehran, Northern Iran, Episodes Vol. 37, no. 2, pp 105-110.
13. Asadi Z. and M. ZARE, 2014, Estimating magnitudes of prehistoric earthquakes and seismic capability of fault from landslide data in Noor valley (central Alborz, Iran), Natural Hazard, DOI 10.1007/s11069-014-1186-4.
14. Mojarab M. , H. Memarian and M. ZARE, A. H. Morshedy, M. H. Pishahang, 2014, Modeling of the seismotectonic provinces of Iran using the self-organizing map algorithm, Computers & Geosciences, Vol. 67, 150–162.
15. Mojarab M. , H. Memarian and M. ZARE, 2014; Performance evaluation of the M8 algorithm to predict M7+ earthquakes in Turkey, Arab Journal of Earth Sciences, DOI 10.1007/s12517-014-1624-3.
16. Zahedi-Khameneh A. R. SchererA, and M. ZARE, 2013, Non-parametric wave type based model for real-time prediction of strong ground motion accelerogram. Soil Dynamics and Earthquake Engineering, <http://dx.doi.org/10.1016/j.soildyn.2013.01.024>
17. Maybodan M. , M. ZARE, H. Hamzehloo, A. Peresan, A. Ansari, G. Panza, 2013, Analysis of precursory seismicity patterns in Zagros (Iran) by CN algorithm, Turkish J Earth Sci (2013) 22: TÜBİTAK doi:10.3906/yer-1212-6, pp1-9.
18. Karimiparidari, S. M. ZARE, H. Memarian and A. Kijko, 2013, Iranian earthquakes; A Uniformed Catalog with Moment Magnitude". Journal of seismology
19. Radan M. Y., H. Hamzehloo, A. Peresan, M. Zare , H. Zafarani, 2013, Assessing performances of pattern informatics method: a retrospective analysis for Iran and Italy, Natural Hazard, DOI 10.1007/s11069-013-0660-8.
20. Mohammad P. Shahvar, Mehdi Zare, and Silvia Castellaro (2013) A unified seismic catalog for the Iranian plateau (1900-2011); Seismological Research Letter, SRL-D-12-00144R2, . March-April 2013.
21. Zare M. A. Hashemi, R. Ebadi, S. Amirnejad-Mojdehi, R. Rahmani and A. Sardar, 2013, Tsunami hazard in the shorelines of Khark island (Persian Gulf), Iran, Earthq Sci (2012)25: 299–305, doi:10.1007/s11589-012-0855-1.
22. Shahvar , M. P. and Mehdi Zare, 2012, The 27 August 2010 Mw 5.7 Kuh-Zar earthquake (Iran): field investigation and strong-motion evidence, Nat Hazards DOI 10.1007/s11069-012-0507-8.

23. Reza Alipoora, Mehdi Zaré, Mohammad R. Ghassemi, 2012, Inception of activity and slip rate on the Main Recent Fault of Zagros Mountains, Iran, *J of Geomorphology*, <http://dx.doi.org/10.1016/j.geomorph.2012.06.025>, [ISI Cited Journal]
24. Jamileh Vasheghani Farahani, Mehdi Zare and Caro Lucas, 2012, Adaptive neuro-fuzzy inference systems for semi-automatic discrimination between seismic events: a study in Tehran region, *JOURNAL OF SEISMOLOGY* Volume 16, Number 2 (2012), 291-303, DOI: 10.1007/s10950-011-9270-7, [ISI Cited Journal]
25. Jamileh Vasheghani Farahani and Mehdi Zaré, 2011, The Southeastern Tehran Earthquake of 17 October 2009 (Mw = 4.0), doi: 10.1785/gssrl.82.3.404, *Seismological Research Letters* May/June 2011 v. 82 no. 3 p. 404-412. [ISI Cited Journal].
26. Jamileh Vasheghani Farahani, Mehdi Zaré, Artur Cichowicz, 2012, Attenuation of high-frequency P and S waves in south and southeast Tehran using blast data, *Soil Dynamics and Earthquake Engineering*, Volume 40, September 2012, Pages 99–108, [ISI Cited Journal].
27. M Zaré and , S Ghaychi Afrouz, 2012, Crisis Management of Tohoku; Japan Earthquake and Tsunami, 11 March 2011, *Iranian J Publ Health*, Vol. 41, No.6, Jun 2012, pp.12-20.
28. M. Zaré, and B. Nazmazar, 2013, Van, Turkey Earthquake of 23 October 2011, Mw 7.2; An Overview on Disaster Management, *Iranian J Publ Health*, Vol. 42, No.2, Feb 2013, pp. 134-144.
29. Maybodian M. , M. ZARE, H. Hamzehloo, A. Peresan, A. Ansari, G. Panza, 2013, Scaling of Long-Term Seismicity in Zagros, Iran, *Journal of Seismology and Earthquake Engineering*, Vol.15, No.2, pp 91-99.
30. Mojtaba Naghavi,<sup>1</sup> Zaher Hossein Shomali,<sup>1</sup> and Mehdi Zare<sup>2</sup>, 2012, Lg Coda Variations in North-Central Iran, *International Journal of Geophysics*. Volume 2012 (2012), Article ID 673506, 7 pages, doi:10.1155/2012/673506 [Scopus Cited Journal].
31. Bali Lashak A., M. Zaré, Gh. Mortezaejad , Sh. Poubeyranvand, 2010, Moment tensor inversion of nine events in Iran using INSN data, *Journal of Seismology*, DOI 10.1007/s10950-010-9197-4.
32. Bali. A. M. ZARE, A. Andalib, K. Poubeyramvand, Y. Radan, 2012, A Novel Method for Detection of Seismic Dual-Zones with Application to Earthquake Forecasting, Vol 14, N.1, pp1-12.
33. Alipoor, R. M. Poorkermani; M. Zaré, and R. E. Hamdouni, 2010, Active Tectonic Assessment around Rudbar Lorestan Dam Site, High Zagros Belt (SW of Iran), *Journal of Geomorphology*, Manuscript Number: GEOMOR-2011R2, DOI.10.1016/j.geomorph.2010.10.014.

34. Alipoor, R., M. ZARE, M.R. Ghasemi, 2012, Inception of activity and slip rate on the Main Recent Fault of Zagros Mountains, Iran, *Geomorphology*, doi:10.1016/j.geomorph.2012.06.025
35. Ghasemi, M. Zaré and F. Sinaeian, 2009, Smooth Spectra of Horizontal and Vertical Ground Motions For Iran, *ISET Journal of Earthquake Technology, Paper No. 500, Vol. 46, No. 1, March 2009, pp. 1–17.*
36. Ghasemi, H., M. Zaré, Y. Fukushima and F. Sinaeian, 2009, Applying empirical methods in site classification, using response spectral ratio (H/V): A case study on Iranian strong motion network (ISMN), *Journal of Soil Dynamics and Earthquake Engineering*, Vol.29, pp.121-132.
37. Ghasemi H., M. Zaré, Y. Fukushima and K. Koketsu, 2008, An empirical spectral ground-motion model for Iran, *J Seismology*, DOI 10.1007/s10950-008-9143-x.
38. Ghasemi H., M Zaré and Y Fukushima, 2008, Ranking of several ground-motion models for seismic hazard analysis in Iran, *J. Geophys. Eng.* 5 (2008) 301–310.
39. Zaré M, S. Karimiparidari, and S. Sabzali, 2008, Spectral Attenuation of Strong Motions for Near Source Motions in Iran, *Journal of Seismology and Earthquake Engineering, JSEE, Technical Note, Fall 2008, Vol. 10, No.3, pp. 147-152.*
40. Zaré, M. 2007, Spectral Demand Curves Based on the Selected Strong Motion Records in Iran, *Journal of Seismology and Earthquake Engineering (JSEE)*, Vol. 7, No.3. pp.111-123.
41. Zare M. S. Karimiparidari, MonaLisa, 2007, An investigation on Balakot, Muzaffarabad (Pakistan) earthquake, 8 Oct. 2005, Mw 7.6; geological aspects and intensity distribution, *J of Seismology*, DOI 10.1007/s10950-008-9120-4.
42. Ansari A., A. Noorzad and M. Zaré, 2007, Application of wavelet multi-resolution analysis for correction of seismic acceleration records, *Journal of Geophysics and Engineering, J. Geophys. Eng.* 4 (2007) 362–377 .
43. Zaré M., S. Karimi-Paridari, and S. Sabzali, 2008, Spectral Attenuation of Strong Motions for Near Source Motions in Iran, *Journal of Seismology and Earthquake Engineering (JSEE)*, Fall 2008, Vol. 10, No. 3. Technical Note. Pp147-152.
44. Zaré M. and H. Hamzehloo, Strong Motion study on Bam Earthquake of 26 December 2003, *Earthquake Spectra, Special Issue on Bam earthquake, December 2005.*

45. Zaré M. and P.-Y. Bard, 2002, Strong Motion Dataset of Turkey: Data Processing and Site Classification; *Journal of Soil Dynamics and Earthquake Engineering (SDEE)*, Vol22., No.8, Pages 703-718.
46. Zaré, 2002, Doppler Effect Observed on the Recorded Strong Ground Motions in Iran and Turkey by: *Journal of Seismology and Earthquake Engineering (JSEE)*, Vol.4, No. 2 and 3pp.21-36 Summer and Fall 2002.
47. Zaré M., P.-Y. Bard and M. Ghafory-Ashtiany, Site Categorization for the Iranian Strong Motion Network, *Soil Dynamics and Earthquake Engineering*, Elsevier Pub., Vol. 18, no.2, pp. 101-123, 1999.
48. Zaré M., P.-Y. Bard and M. Ghafory-Ashtiany, The Iranian Strong Motion Data Bank; A Revision and Data Correction, *Journal of Seismology and Earthquake Engineering*, IIEES Pub., Vol.1, no.1, pp.1-23., 1999.
49. Zaré M., An Overview on the Ardebil Iran (23 February 1997) Earthquake, *Seismological Research Letters*, vol. , pp., 1998.
50. Zaré M. and A.A.. Moinfar, Comment on the “Rudbar-Tarom Earthquake of 20 June 1990 in NW Persia, a Preliminary Field and Seismological Observations”, by: M.Berberian, M.Qorashi, J.A.Jackson, and T.Wallace, *Bulletin of the Seismological Society of America (B.S.S.A.)*, Vol.84, No., pp.484-485., 1994.