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## **Education**

Ph.D in Tectonics and Geodynamics, Uppsala University, Uppsala, Sweden.  
May 2002.

Master of Science in Structural Geology, Shahid Beheshti University, Tehran,  
Iran. July 1992.

Bachelor of Science in Geology, Shahid Beheshti University, Tehran, Iran.  
February 1989.

## **Work Experience**

### *July 92- Present*

Assistant Professor, IIEES, International Institute of Earthquake Engineering and Seismology, Tehran, Iran. In addition to research on Recent deformations including co-seismic surface ruptures and related subjects such as, paleoseismological investigations and GPS measurements and interpretations was also in charge of a project on "Major Active Faults of Iran".

### *Oct. 02-Present*

Lecturer, Faculty of Basic Sciences, Tarbiat Modares University, Tehran, Iran.  
Course on Active Tectonics.

### *Jan. 92-July 94*

Instructor, Civil Engineering Department, Azad University, Tehran, Iran.  
Introductory Course on Engineering Geology; instructed students on physical geology and soil mechanics both in theory and field aspects.

### *Apr. 91- July 92*

Field Geologist, Geological Survey of Iran, Tehran, Iran. Active member of the team responsible for the preparation of 1:100,000 geological maps.

### *Jan. 90- Apr. 91*

Engineering Geologist, Mahab Ghodss Consulting Engineers, Tehran, Iran. In charge of geological investigation of water resources, planning and design of projects including diversion dams and irrigation drainage canals.

### *Mar. 89- July 91*

Teaching Assistant, Earth Sciences Department, Shahid Beheshti University, Tehran, Iran. Was in charge of the lab for second semester "Optic Crystallography" classes.

## Publications

Soleymani Azad, S., Nemati, M., Abbassi, M. R., Foroutan, M., Hessami, K., Dominguez, S., Bolourchi, M. J., Shahpasandzadeh, M., 2019. Active-couple indentation in geodynamics of NNW Iran: Evidence from synchronous left- and right-lateral co-linear seismogenic faults in western Alborz and Iranian Azerbaijan domains. *Tectonophysics*, 754, 1–17.  
doi: 10.1016/j.tecto.2019.01.013

Sesetyan, K., Danciu, L., Demircioglu Tumsa, M.B., Giardini, D., Erdik, M., Akkar, S., Gulen, L., Zare, M., Adamia, S., Ansari, A., Arakelyan, A., Askan, A., Avanesyan, M., Babayan, H., Chelidze, T., Durgaryan, R., Elias, A., Hamzehloo, H., Hessami, K., Kalafat, D., Kale, O., Karakhanyan, A., Asif Khan, M., Mammadli, T., Al-Qaryouti, M., Sayab, M., Tsereteli, N., Utkucu, M., Varazanashvili, O., Waseem, M., Yalcin, H., Tolga Yilmaz, M., 2018. The 2014 seismic hazard model of the Middle East: overview and results. *Bulletin of Earthquake Engineering*, doi: /10.1007/s10518-018-0346-4.

Danciu, L., Sesetyan, K., Demircioglu, M., Gulen, L., Zare, M., Basili, R., Elias, A., Adamia, S., Tsereteli, N., Yalcin, H., Utkucu, M., Asif Khan, M., Sayab, M., Hessami, K., Rovida, A.N., Stucchi, M., Burg, J.P., Karakhanyan, A., Babayan, H., Avanesyan, M., Mammadli, T., Al-Qaryouti, M., Kalafat, D., Varazanashvili, O., Erdik, M., Giardini, D., 2017. The 2014 Earthquake Model of the Middle East: seismogenic sources. *Bulletin of Earthquake Engineering*, doi:10.1007/s10518-017-0096-8.

Koyi, H., Nilforoushan, F., Hessami, K., 2016. Modelling the role of basement block rotation and strike-slip faulting on structural pattern in cover units in fold-and-thrust belts. *Geological Magazine*, doi:10.1017/S0016756816000595.

Farbod, Y., Shabanian, E., Bellier, O., Abbassi, M.R., Braucher, R., Benedetti, L., Bourlès, D., & Hessami, K., 2016. Spatial variations in late Quaternary slip rates along the Doruneh Fault System (Central Iran), *Tectonics*, 35, doi:10.1002/2015TC003862.

Soleymani Azad, S., Philip, H., Dominguez, S., Hessami, K., Shahpasandzadeh, M., Foroutan, M., Tabassi, H., Lamothe, M., 2015. Paleoseismological and morphological evidence of slip rate variations along the North Tabriz fault (NW Iran). *Tectonophysics*, 640-641, 20-38, doi: 10.1016/j.tecto.2014.11.010.

Farahpour, M.M. & Hessami, K., 2012. Cretaceous sequence of deformation in the SE Zagros fold-thrust belt. *Journal of the Geological Society, London*, 169, 733-743. doi: 10.1144/jgs2012-042.

Yaminifard, F., Tatar, M., Hessami, K., Gholamzadeh, A. & Bergman, E.A., 2012. Aftershock analysis of the 2005 November 27 (Mw 5.8) Qeshm Island earthquake (Zagros -Iran): triggering of strike-slip faults at the basement. *Journal of Geodynamics*, 61, 138-147, doi:10.1016/j.jog.2012.04.005.

- Yaminifard, F., Hassanpour Sedghi, M., Gholamzadeh, A., Tatar, M. & Hessami, K., 2012. Active faulting of the southeastern-most Zagros (Iran): microearthquake seismicity and crustal structure. *Journal of Geodynamics*, 55, 56-65, doi:10.1016/j.jog.2012.01.003.
- Karim, K.H., Koyi, H., Baziany, M.M. & Hessami, K., 2011. Significance of angular unconformities between Cretaceous and Tertiary strata in the northwestern segment of the Zagros fold-thrust belt, Kurdistan Region, NE Iraq. *Geological Magazine*, 148, 925-939, doi:10.1017/S0016756811000471.
- Solaymani Azad, S., Dominguez, S., Philip, H., Hessami, K., Forutan, M.R., Shahpasan Zadeh, M. & Ritz, J.-F., 2011. The Zandjan fault system: Morphological and tectonic evidences of a new active fault network in the NW of Iran. *Tectonophysics*, 506, 73-85, doi:10.1016/j.tecto.2011.04.012.
- Motaghi, K., Hessami, K. & Tatar, M., 2010. Pattern recognition of major asperities using local recurrence time in Alborz Mountains, Northern Iran. *Journal of Seismology*, 14, 787-802, doi: 10.1007/s10950-010-9201-z.
- Jamali, F., Hessami, K. & Ghorashi, M., 2010. Active tectonics and strain partitioning along dextral fault system in Central Iran: Analysis of geomorphological observations and geophysical data in the Kashan region. *Journal of Asian Earth Sciences*, 40, 1015-1025, doi:10.1016/j.jseas.2010.05.013.
- Azadi, A., Hessami, K. & Javan-Doloei, G., 2010. Integrated geophysical methods for determining geometry of the Kahrizak Fault, Tehran, Iran. *Nat Hazards*, 54, 813–825, doi: 10.1007/s11069-010-9506-9.
- Peyret, M., Djamour, Y., Hessami, K., Regard, V., Bellier, O., Vernant, P., Daignières, M., Nankali, H., Van Gorp, S., Goudarzi, M., Chéry, J., Bayer, R. & Rigoulay, M., 2009. Present-day strain distribution across the Minab-Zendan-Palami fault system from dense GPS transects. *Geophysical Journal International*, 179, 751-762, doi: 10.1111/j.1365-246X.2009.04321.x.
- Gholamzadeh, A., Yamini-Fard, F., Hessami, K. & Tatar, M., 2009. The February 28, 2006 Tiab earthquake,  $M_w$  6.0: Implications for tectonics of the transition between the Zagros continental collision and the Makran subduction zone. *Journal of Geodynamics*, 47, 280-287, doi:10.1016/j.jog.2009.01.005.
- Koyi, H., Ghasemi, A., Hessami, K. & Dietl, C., 2008. The mechanical relationship between strike-slip faults and salt diapirs in the Zagros fold-thrust belt. *Journal of the Geological Society, London*, 165, 1031-1044, doi:10.1144/0016-76492007-142.
- Mokhtari, M., Abdollahie Fard, I. & Hessami, K., 2008. Structural elements of the Makran region, Oman sea and their potential relevance to tsunamigenesis. *Natural Hazards*, 47, 185-199, doi: 10.1007/s11069-007-9208-0
- Fu, B., Lei, X., Hessami, K., Ninomiya, Y., Azuma, T. & Kondo, H., 2007. A new fault rupture scenario for the 2003  $M_w$  6.6 Bam earthquake, SE Iran:

Insights from the high-resolution QuickBird imagery and field observations. *Journal of Geodynamics*, 44, 160-172, doi:10.1016/j.jog.2007.02.002.

Hessami, K., Nilforoushan, F. & Talbot, C.J., 2006. Active deformation within the Zagros Mountains deduced from GPS measurements. *Journal of the Geological Society, London*, 163, 143-148, doi:10.1144/0016-764905-031.

Hessami, K., Tabassi, H., Okumura, K., Abbassi, M.R. & Azuma, T., 2005. Surface deformation and the fault responsible for the December 26, 2003 earthquake at Bam, Iran. *Earthquake Spectra*, 21 (3), 113-123.

Hessami, K., Tabassi, H., Abbassi, M.R., Azuma, T., Okumura, K., Echigo, T. & Kondo, H., 2004. Surface expression of the Bam fault zone in southeastern Iran: causative fault of the December 26, 2003 earthquake. *Journal of Seismology and Earthquake Engineering*, 5 (4), 5-14.

Karakhanian, A.S., Trifonov, V.G., Philip, H., Avagyan, A., Hessami, K., Jamali, F., Bayraktutan, M.S., Bagdassarian, M., Arakelian, S. & Davtian, V., 2004. Active faulting and natural hazards in Armenia, eastern Turkey and north-western Iran. *Tectonophysics*, 380 (3-4), 189-219, doi:10.1016/j.tecto.2003.09.020.

Bachmanov, D.M., Trifonov, V.G., Hessami, K., Kozhurin, A.I., Ivanova, T.P., Rogozhin, E.A., Hademi, M.C. & Jamali, F., 2004. Active faults in Zagros and central Iran. *Tectonophysics*, 380 (3-4), 221-241, doi:10.1016/j.tecto.2003.09.021.

Hessami, K., Pantosti, D., Tabasi, H., Shabanian, E., Abbasi, M.R., Feghhi, K. & Soleymani, S., 2003. Paleoearthquakes and slip rates of the North Tabriz Fault, NW Iran: preliminary results. *Annals of Geophysics*, 46 (5), 903-915.

Hessami, K., Koyi, H., Talbot, C.J., Tabasi, H. & Shabanian, E., 2001. Progressive unconformities within an evolving foreland fold-thrust belt, Zagros Mountain. *Journal of the Geological Society, London*, 158 (6), 969-981, doi:10.1144/0016-764901-007.

Hessami, K., Koyi, H. & Talbot, C.J., 2001. The Significance of Strike-slip faulting in the basement of the Zagros fold and thrust belt, *Journal of Petroleum Geology*, 24 (1), 5-28.

Koyi, H., Hessami, K. & Teixell, A., 2000. Epicenter distribution and magnitude of earthquakes in fold-thrust belts: insights from sandbox models, *Geophysical Research Letters*, 27 (2), 273-276, doi:10.1029/1999GL010833.

De Martini, P.M., Hessami, K., Pantosti, D., D'Addezio, G., Alinaghi, H. & Ghafory-Ashtiani, M., 1998. A geologic contribution to the evaluation of the seismic potential of the Kahrizak fault (Tehran, Iran), *Tectonophysics*, 287, 187-199.

Hessami, K., Alyasin, S. & Jamali, F., 1997. An investigation of some historical earthquakes and paleoseismic sources in Iran, *Historical and Prehistorical*

*Earthquakes in the Caucasus*, In: D. Giardini and S. Balasanian (eds.), NATO Asi Series, 2. Environment, Vol. 28, Kluwer Academic Publishers, The Netherlands, 189-199.

Hessami, K. & Jamali, F., 1996. Active Faulting in Iran, *Journal of Earthquake Prediction Research*, 5 (3), 403-412.