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SUMMARY OF PROFESSIONAL QUALIFICATIONS

- Assistant Professor in Structural Geology and Exploration Geophysics
- Experienced researcher with expertise in structural controlling of ore genesis and exploration targeting
- Extensive practical background in high-grade metamorphic geology, ore deposit evolution, exploration Geophysics, and analogue modeling

EDUCATION

Ph.D. in Structural Geology and Geodynamics, Tarbiat Modarres University, Tehran, 1995-2000
Concentrations: structural analysis of poly-deformed metamorphic terrain, structural controlling of ore deposits, shear zone processes

M.Sc. in Structural Geology, Tarbiat Moallem University, Tehran, 1990-1992
Concentrations: structural analysis, tectonic mélanges, accretionary prism, fore-arc basins

B.Sc. in Geology, Kerman University, Kerman, 1985-1989

GRANTS, AWARDS AND HONORS

- **Post-doctoral Guest Scholarship**, Swedish Institute, 2007
- **Dissertation Research Grant**, Tarbiat Modarres University, 2000
- **Outstanding Academic Award**, Tarbiat Moallem University, International Student and Scholars, 1992
- **First Rank Graduate Student**, Tarbiat Moallem University, 1992
- **Graduate Fellowship**, Tarbiat Moallem University, 1991
- **First Rank Undergraduate Student**, University of Kerman, 1989

PROFESSIONAL EXPERIENCE

TEACHING EXPERIENCES

Instructor: Graduate University of Advanced Technology, Kerman, Iran, 2009-Present

- Taught courses of Advanced Structural geology, Structural geology and ore mineralization, Tectonics, Applied geophysics for graduate students.
- Laboratory and fieldtrips, emphasis on structural controlling of ore deposits, geological mapping skills, and exploration geophysics.

Guest Lecturer: Tectonics, Uppsala University, Uppsala, Sweden, Fall 2007

- Taught two sections of the course (seminar) on neotectonics of the Alborz for undergraduate and graduate students.

Co-Instructor: Seismotectonics, International Institute of Earthquake Engineering and Seismology (IIEES), Tehran, Iran, Spring 2007

- Designed and taught course for graduate students.

Instructor: University of Gorgan, Gorgan, Iran, 2002-2004

- Taught courses of Structural geology, Tectonics, Active tectonics, Applied geophysics, and Field geology for undergraduate students.
- Laboratory and fieldtrips, emphasis on structural analysis and geological mapping skills.

Lecturer: Islamic Azad University, Kerman, Iran, 1994-1995

- Developed syllabus and taught courses of Physical geology, Structural geology, and Tectonics for undergraduate students.

Lecturer: Tarbiat Moallem (Kharazmi) University, Tehran, Iran, 1992-1994

- Taught courses of Structural geology, Tectonics, and Field geology for undergraduate students.
- Lectures and weekend outings, emphasis on structural mapping skills.

Teaching Assistant: Mineralogy Laboratory, Shahid Bahonar University, Kerman, Iran, Spring 1989

- Sole responsibility for laboratory in Mineralogy and Petrography.

SUPERVISORY EXPERIENCES

- **Ph.D. Dissertation supervised/advised**

1. Amir Shafei Baftai, Ph.D., (with Dr. Mohsen Pourkermani) Structural, and geomorphological features of Quaternary faults in SE of central Iran, Islamic Azad University, Research and Sciences Campus, August 2006.

- **M.Sc. Theses supervised/advised**

1. Nasim Mozaffari, M.Sc., (with Dr. Mohsen Pourkermani) Quaternary tectonics and earthquake geology of the North Tehran faults, central Alborz, University of Shahid Beheshti, August 2007.
2. Nazanin Jamalian, M.Sc., (with Dr. Mehran Arian) Tectonic geomorphology and Structure of the Moshfa active fault, Ardineh area, central Alborz, Islamic Azad University, Research and Sciences Campus, May 2007.
3. Marzieh Esterabi, M.Sc., (with Dr. Ali Yasaghi) Structural analysis of the Doruneh (Great Kavir) fault terminatin, central Iran, Tarbiat Modarres University, December 2006.
4. Hamid Javadi, M.Sc., (with Dr. Mohammad Reza Ghasemi) Active tectonics, seismotectonics, and structural analysis of the Doruneh (Great Kavir) fault, Geological Survey of Iran, August 2006.
5. Photovvat, M.Sc., (with Dr. Mohammad Mohajjel) Structural evolution of exhumed shear zones, Gorgan metamorphic complex, Tarbiat Modarres University, August 2006.
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ACADEMIC SERVICE

- Head of Earth Sciences Department, Gorgan University, 2009-present
- National Earthquake Prediction Evaluation Council, IIEES, 2005-2008
- Lead field trip of SEE-5 (5th International Conference on Seismology and Earthquake Engineering), “Review of Evidences for Active Faulting in South-Central Alborz Region, North of Tehran,” IIEES, May 2007
- Workshop co-organizer, IIEES-CEA (China Earthquake Administration) workshop, “Risk Reduction Experiences,” IIEES, January 2006
- Workshop co-organizer, IIEES-SBRAS (Institute of Geophysics, Siberia, Russia) workshop, “Active crustal deformation monitoring,” IIEES, November 2005
- Journal article reviewer, Bulletin of Seismology and Earthquake Engineering, Geoscience Quaterly Journal, IIEES, 2004-present
- Workshop organizer, “Implications of Rockwork software,” Gorgan University, April 2003
- Head of Geology Department, Gorgan University, 2002-2004

TEACHING INTERESTS

Structural Geology, Ore mineralization, Tectonics, Physical Geology, Field geology, Exploration Geophysics

RESEARCH EXPERIENCE

Guest Researcher, Department of Earth Sciences, Uppsala University, Sep. 2007 to May 2008

- Analogue modelling of active faulting in the Alborz fold-thrust belt designed to simulate different aspects of oblique plate convergence and underlying upper crustal deformation, funded by the Guest scholarship programme of the Swedish Institute (with Professor Hemin Koyi).

Invited Researcher, Faculty of Geosciences, Ludwig-Maximilians University, Munich, April 2006

- Coordinated defining a joint IIEES-LMU research project on active tectonics of the Alborz fold-thrust belt (with Professor Anke Fredriech).
- Presented lectures on the active faulting in the south-central Alborz and central Iran.

Guest Researcher, Department of Earth Sciences, University of Bergen, June-August 2006

- Analysed earthquake waveforms and conducted stress inversion based on focal mechanisms in the central Alborz (with Professor Kuvvet Atakan).

Assistant Professor, IIEES, Geodynamics and Earthquake Department, Tehran, 2004-2007

- Investigated structural, tectonic geomorphology, and seismogenics features of the Moshafault and the North Tehran fault with collaboration of Potsdam University (with Professor Manfred Strecker).
- Paleoseismology and tectonic geomorphology studies of the Tabriz and Astaneh faults, emphasis on site selection, excavating and logging five trenches with collaboration of the Joseph Fourier University (with Professors Herve Philip and J-P Ritez and Dr. Stephan Dominiquiz).
- Investigated tectonic geomorphology and structural features of Quaternary faults in southern Alborz and central Iran.
- Prepared, reviewed and executed manuals on Earthquake Forecasting Program.
- Co-executed installation of the IIEES Telemetric Seismic Networks.

Researcher, IIEES, Seismological Department, Tehran, 1995-1997

- Paleoseismology study of the Kahrizak Fault (south of Tehran) with collaboration of the Istituto Nazionale di Geofisica e Vulcanologia, Italy (INGV, Professor Daniela Pantosti).
- Seismic hazard analysis, intensive field works and data processing.

RESEARCH INTERESTS

Exploration targeting: structural controlling of ore genesis, ore deposit evolution, Precambrian tectonics, structural analysis of poly-deformed metamorphic terrains, exploration Geophysics, analogue/numerical modeling, shear zone and fault structures and processes.

Geodynamics and active tectonics: seismotectonics, tectonic geomorphology, paleoseismology, neo-stress analysis, earthquake stress transferring and triggering, mechanics of earthquake faulting, geodetic modeling of crustal deformation

SELECTED PUBLICATIONS

Shahpasandzadeh, M., H. Koyi, and F. Nilfouroushan, 2017. The significance of switch in convergence direction in the Alborz Mountains, northern Iran: Insights from scaled analogue modeling, *Interpretation*, 5, 1, SD81–SD98.

Rezaeifar, M., M., E. Kissling, Z. H. Shomali, **M. Shahpasand-Zadeh**, 2016. 3D crustal structure of the northwest Alborz region (Iran) from local earthquake tomography, *Swiss Journal of Geosciences*, DOI 10.1007/s00015-016-0219-2.

Jalalat Vakil-Kandi, S., **M. Shahpasand-Zadeh**, H. Ahmadi-pour, M. Honarmand, 2016. Analysis of the microstructures and deformational mechanisms of the Dehsheikh ultramafic-mafic complex, Esfandagheh region, south of Kerman province, *Scientific Quarterly Journal, Geosciences*, 26, 101, 159-166.

Talebian, M., **M. Shahpasand-Zadeh**, Y. Djamour, M. R. Sepahvand, and A. Arabpour, 2016. Modeling for the earthquake cycle of the North Tabriz fault by using GPS data, *Scientific Quarterly Journal, Geosciences* 25, 99, 169-178.

- Javadi, H.R., M. Esterabi Ashtiani, B. Guest A. Yassaghi , M.R. Ghassemi , **M. Shahpasandzadeh** , and A. Naeimi, 2015. Tectonic reversal of the western Doruneh Fault System: Implications for Central Asian tectonics, *Tectonics*, 34, doi:10.1002/2015TC003931.
- Solaymani Azad S., H. Philip, S. Dominguez, K. Hessami, **M. Shahpasandzadeh**, M. Foroutan, H. Tabassi, and M. Lamothe. 2015. Paleoseismological and morphological evidence of slip rate variations along the North Tabriz fault (NW Iran), *Tectonophysics*, 640-641, 20-38.
- Naderi, T., A. Shafiei Bafti, and **M. Shahpasandzadeh**, 2015. Structural Analysis of the Kuh-Banan Fault System in the Tikdar-Goorchoieh Region, North of Kerman, Central Iran. *Scientific Quarterly Journal, Geosciences*, 24, 3-12.
- Negarestani, A., M. Namvaran, **M. Shahpasandzadeh**, S. J. Fatemi, S. A. Alavi, S. M. Hashemi, and M. Mokhtari, 2014. Design and investigation of a continuous radon monitoring network for earthquake precursory process in Great Tehran, *Journal of Radioanal Nucl Chemistry*, 300, 757-767, DOI 10.1007/s10967-014-3020-6.
- Barany, F., G. Fanaee Kheirabad, **M. Shahpasandzadeh**, and A. Joo-Ata Beyrami, 2014. Determination the optimum points for exploitation of geothermal renewable energy: using Magnetotelluric in Sabalan area, *Journal of Middle East Applied Science and Technology (JMEAST)*, 2305-0225, 23, 764-769.
- Barany, F., G. Fanaee Kheirabad, M. Shahpasandzadeh, and A. Joo-Ata Beyrami, 2014. One-dimensional Modeling of Geothermal Reservoir of Sabalan Zone: using Magnetotelluric Method, *Journal of Middle East Applied Science and Technology (JMEAST)*, 2305-0225, 12(2), 328-331.
- Javadi, H.R., M.R. Ghassemi M. **M. Shahpasandzadeh**, B. Guest, Esterabi Ashtiani, A. Yassaghi ,and M. Kohpeyma, 2013. History of faulting on the Doruneh Fault System: implications for the kinematic changes of the Central Iranian Microplate, *Geological Magazine*, doi:10.1017/S0016756812000751.
- Solaymani Azad, S., S. Dominguez, H. Philip, K. Hessami, M.-R. Foroutan, **M. Shahpasandzadeh**, and J.-F. Ritz, 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.
- Shahpasandzadeh, M.**, F. Nilfouroushan, and H. A. Koyi, 2010. Kinematics of structures and active tectonics of an active orogenic belt, Alborz Mountains, northern Iran: New insights from scaled analogue modelling, *Geophysical Research Abstracts*, Vol. 12, EGU2010-1055, 2010.
- Landgraf, A., P. Ballato, M. R. Strecker, A. Friedrich, S. H. Tabatabaei, and **M. Shahpasandzadeh**, 2009. Fault-kinematic and geomorphic observations along the North Tehran Thrust and Mosha Fasham Fault, Alborz mountains Iran: implications for fault-system evolution and interaction in a changing tectonic regime, *Geophysical Journal International*, 177, 676-690. doi: 10.1111/j.1365-246X.2009.04089.x
- Gorshkov, A., M. Mokhtari, E. Piotrovskaya, and **M. Shahpasandzadeh**, 2007. Identification of earthquake prone areas in the Alborz region. SEE-5 Proceeding, 13-16 May, IIEES, Tehran.
- Shahpasandzadeh, M.**, and N. Jamalian, 2007. Slip sense inversion on the active Mosha strike-slip fault system, central Alborz, Iran. *Geophysical Research Abstracts*, Vol.9, 00950, SRef-ID: 1607-7962/gra/EGU2007-A-00950.
- Shafei Bafti, A., **M. Shahpasandzadeh**, F. Iranmanesh, F. Tavakoli, and, M. Shirzaii, 2007. Quaternary slip rate on the Kuh Banan strike-slip fault system, southeast Iran, inferred from geomorphic features and geodetic measurements. *Geophysical Research Abstracts*, Vol. 9, 07854, 2007 SRef-ID: 1607-7962/gra/EGU2007-A-07854.
- Shahpasandzadeh, M.**, H.R. Javadi, M. R. Ghassemi, A. Yasaghi, and M. Esterabi, 2007. Recurrence time of major earthquakes along the Doruneh fault system, eastern Iran, determined using geologic and geomorphic features. *Geophysical Research Abstracts*, Vol.9, 00952, SRef-ID: 1607-7962/gra/EGU2007-A-00952.

- Landgraf, A., P. Ballato, M. R. Strecker, **M. Shahpasandzadeh**, A. Friedrich, and S. H. Tabatabaei, 2007. Kinematic Evolution of the North-Tehran Fault (NTF), Alborz Mountains, Iran. *Eos Trans. AGU*, 88(52), Fall Meeting.
- Shahpasandzadeh, M.**, K. Atakan, and, M. Raisi, 2007. A reappraisal earthquake focal mechanisms and active faulting in the central Alborz mountains, Iran. *Geophysical Research Abstracts*, Vol. 9, 00956, 2007, SRef-ID: 1607-7962/gra/EGU2007-A-00956.
- Shahpasandzadeh, M.** and A. Shafeyi, 2006. Quaternary offset and evolution of a major active strike-slip fault system: Kuhbanan fault, central Iran. *Geophysical Research Abstracts*, Vol. 8, 00296, 2006, SRef-ID: 1607-7962/gra/EGU06-A-00296.
- Shahpasandzadeh, M.**, 2006. The 2005 November 27 Qeshm earthquake (M_w 6.4) in the Persian Gulf: blind thrusting and triggering earthquake. 13th ECEE & 30th General Assembly of the ESC, 3-8 September, Geneva, Swiss.
- Shafeyi, A. and **M. Shahpasandzadeh**, 2006. Seismicity of SE of central Iran, Kuhbanan fault: an intra-continental strike-slip fault system. *Geophysical Research Abstracts*, Vol. 8, 00243, 2006, SRef-ID: 1607-7962/gra/EGU06-A-00243.
- Shahpasandzadeh, M.**, and Y. Djamour, 2006. The long-term and short-term slip rates of the Mosha fault, central Alborz, Iran: a major active strike-slip fault system. *Geophysical Research Abstracts*, Vol. 8, 00302, 2006, SRef-ID: 1607-7962/gra/EGU06-A-00302.
- Shahpasandzadeh, M.** and A. Shafiei, 2006. Seismic activities of an intra-continental strike-slip Fault system: Kuhbanan fault, central Iran. *Seismological Research Letters*, Volume 77, No. 2.
- Shahpasandzadeh, M.**, 2005. Roles of seismogenic activities and monsoonal precipitations on the fluvial sediment flux, Gorgan-Rud Delta, NE Iran. *International Conference on DELTAS Proceeding*, 10-16 January 2005, HO Chi Minh City, Vietnam, pp.102.
- Shahpasandzadeh, M.** and M. Zare, 2005. Surface ruptures associated with the active faulting in the Zagros fold-thrust belt of Iran, Mishan earthquake fault. 2nd Gulf Seismic Forum, 20-23 February, Al-Ain, UAE.
- Shahpasandzadeh, M.**, 2005. The role of seismogenic activities on the fluvial sediment flux of Gorgan-Rud River in the active Alborz mountain belt, NE Iran: A new approach to long-term earthquake prediction. *AOGS, 2nd Annual Meeting*, 20-24 June, Singapore.
- Shahpasandzadeh, M.**, A. Shafeyi, and M. Pourkermany, 2005. Seismic activities of Kuhbanan fault, SE of central Iran: an intra-continental strike-slip fault system. *IASPEI General Assembly*, 02-08 October, Chile.
- Shahpasandzadeh, M.** and M. Raghimi, 2004. The influence of seawater intrusion on the hydrochemistry of coastal aquifers, Bandare-Gaz, NE Iran. 5th Asian Marine Geology Conference Proceeding, 14-20 January 2004, Bangkok, Thailand, pp.181.
- Shahpasandzadeh, M.**, 2004. Post-Eocene exhumation of the Chapedony metamorphic complex in NW of central Iran: Structural and kinematics history. 32th International Geologic Conference Proceeding, August 20-28, 2004, Florence, Italy, Part 2, pp. 1460.
- Raghimi, M. and **M. Shahpasandzadeh**, 2004. Effects of human activities on the seawater encroachment in the coastal aquifers of NE Iran, Bandar-e-Gaz. 32th International Geologic Conference Proceeding, August 20-28, 2004, Florence, Italy, Part 1, pp. 787.
- Shahpasandzadeh, M.**, 2004. Seismicity and seismotectonics of Golestan province, NE Iran. *International Conference of Earthquake: A Memorial of Bam Disaster Proceeding*. December, Kerman, Iran, pp. 28-30.
- Shahpasandzadeh, M.**, M.A.A. Nogol-Sadat, and A. Aftabi, 2003. Structural and kinematics analysis of the Posht-e-Badam, Chapedony, and Chatak-Neybaz faults in NW of central Iranian micro continent. *Quarterly Journal of Geosciences of Geological Survey of Iran*, 47-48, pp. 68-77.

- Shahpasandzadeh, M.**, 2003. Structural analysis of the Poshte-Badam metamorphic complex in the west of central Iran. Abstracts of the 21th Symposium on Geoscience, February 2003, Tehran, Iran, pp. 306-307.
- Shahpasandzadeh, M.**, M.A.A. Nogol-Sadat, and A. Aftabi, 2002. The synkinematics evidences of granitoids intrusions in the Chapedony metamorphic complex. Abstracts of the 20th Symposium on Geoscience, Geological Survey of Iran, February 2002, Tehran, Iran, pp. 138-139
- Shahpasandzadeh, M.**, M. Raghimi, and M.Z. Damavandi, 2000. The relationship of between faults related jointing in the seismic zonation of Gorgan district, Golestan province. Proceeding of the 4th Symposium of Geological Society of Iran, August 2000, Tabriz, Iran, pp.394-396.
- Shahpasandzadeh, M.**, and M.A.A. Nogol-Sadat, 1999. Structural evolution of the Chapedony metamorphic complex in Saghand, Poshte-Badam district, west of central Iran. Proceeding of the 3th Symposium of Geological Society of Iran, 31 Aug.-2 Sep. 1999, Shiraz, Iran, pp.359-362.
- Zare, M., M. Heidari, **M. Shahpasandzadeh**, and A.R. Alinaghi, 1997. A preliminary study of seismicity, seismotectonics, and seismic hazard analysis in the Kurdistan province, southwest of Iran. IIEES Bulletin, pp. 31-34.
- Shahpasandzadeh, M.**, and M. Heidari, 1997. A preliminary study of seismicity, seismotectonics, and seismic hazard analysis in the Kerman province, central Iran. IIEES Bulletin, pp. 20-25.
- Shahpasandzadeh, M.**, and M. Heidari, 1997. A preliminary study of seismicity, seismotectonics, and seismic hazard analysis in the Isfahan province, central Iran. IIEES Bulletin, pp. 43-46.
- Shahpasandzadeh, M.**, and M. Zare, 1996. A preliminary study of seismicity, seismotectonics, and seismic hazard analysis in the Eastern Azerbaijan province, northwest of Iran. IIEES Bulletin, pp.11-13.
- Shahpasandzadeh, M.**, and M. Zare, 1996. Active faulting in the Zagros fold-thrust belt of Iran, Mishan earthquake fault. Proceeding of the 9th Geophysics Conference of Iran, Tehran University, Tehran, Iran, October 1996, pp.111.
- Shahpasandzadeh, M.**, M. Zare, and M. Heidari, 1996. A preliminary study of seismicity and active faulting in the Khuzestan province. Proceeding of the 9th Geophysics Conference of Iran, Tehran University, Tehran, Iran, October 1996, pp.109.
- Heidari, M., and **M. Shahpasandzadeh**, 1996. A preliminary study of seismicity, seismotectonics, and seismic hazard analysis in the Lorestan province, southwest of Iran. IIEES Bulletin, pp. 16-19.
- Shahpasandzadeh, M.**, and M. Zare, 1995. Active faulting in the Zagros fold-thrust belt. IIEES Bulletin, 5, pp. 10-12.
- Shahpasandzadeh, M.**, and M. Heidari, 1995. A preliminary study of seismicity, seismotectonics, and seismic hazard analysis in the Mazandaran province, northern Iran. IIEES Bulletin, pp. 4-7.
- Shahpasandzadeh, M.**, 1995. Seismotectonics of the Zagros fold-thrust belt of Iran: a review. Proceeding of 3th Conference on Civil Engineering, Khajeh Naserradin Tusi University, Tehran, Iran, pp. 125-129.
- Heidari, M., **M. Shahpasandzadeh**, and M. Zare, 1995. A preliminary study of seismicity, seismotectonics, and seismic hazard analysis in the Khuzestan province, southwest of Iran. IIEES Bulletin, pp. 12-15.
- Shahpasandzadeh, M.**, 1995. Seismotectonics implications of thrust faulting and related systematic joint systems in the Gorgan area, NE Iran. Proceeding of Second International Conference on Seismology and Earthquake Engineering, May 1995, Tehran, Iran, pp.197-204.

TECHNICAL SKILLS

- **Technical Software:** Rockware, TectonicsFP, Geosoft, Encom, MATLAB, GMT, ArcGIS, Seisan, AutoCAD

- **Operating Systems:** Linux, Microsoft

PROFESSIONAL SOCIETY MEMBERSHIP

- European Geosciences Union, 2006
- IGCP-475 Delta MAP, APN Project on Mega-Deltas of Asia, 2004
- Iranian Earthquake Engineering Association (IEEA), 2003
- Geological Society of Iran (GSI), 2001
- International Association of Structural and Tectonic Geologists (IASTG), 1992