

**Hojjatollah Ranjbar**

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**Professor of applied remote sensing**



**Ph.D. in geology, University of Delhi, India (1995)**

**M.Sc. in geology, Poona University, India (1990)**

**B.Sc. in geology, Poona University, India (1988)**

<b>Technical fields of study</b>	Remote sensing and geospatial information System
<b>Research interests</b>	Application of remote sensing in geology and mineral exploration Application of GIS in mineral exploration Application of GIS in site selection
<b>Courses taught (undergraduate)</b>	Remote sensing, principles of exploration and ore reserve estimation, Geological field survey, cartography and photogeology
<b>Courses taught (graduate)</b>	Remote sensing, Thermal remote sensing, Environmental remote sensing, Advanced image processing, GIS
<b>Positions/ Experiences</b>	Head of mining engineering department (for two years) Dean of research in the faculty of engineering (for one year)
<b>Memberships</b>	Member of Iranian society of economic geology Member of Iranian society of crystallography and mineralogy Member of Iranian society of geology
<b>Member of editorial board</b>	Journal of Advanced Applied Geology. Published by Shahid Chamran University. Journal of Analytical and Numerical Methods in Mining Engineering. Published by Yazd University.
<b>Advised thesis</b>	M. S. Dissertation: <ol style="list-style-type: none"><li>1- Mohammad Reza Mohammadhashemi, The Use of geological, Airborne Gravity, Airborne Magnetic and satellite Data in Oil Exploration by Using GIS, Supervisors: H. Ranjbar and M. R. Shayestehfar, July, 2007.</li><li>2- Mohammad Babae, The Use of Multivariate Methods for Exploratory Modeling in Sar Cheshmeh and Kuh Panj areas, Supervisor: H. Ranjbar, September, 2009.</li><li>3- Mostafa Shakarami, Integration of Geochemical , geophysical and Remote Sensing Data for Uranium indices by Using GIS in Chadormaloo Area, Supervisors: G. R. Rahimipour and H. Ranjbar, September, 2009.</li></ol>

	<ol style="list-style-type: none"> <li>4- Jamal, Fereidooni sarvestani, Site Selection for Construction of Underground Oil Storage by Using GIS, H., Supervisor: H. Ranjbar, January, 2010.</li> <li>5- Mohammad Khaleghi, Study of Porphyry and Vein Type Copper Mineralization in the Southern Half of The Sarduiyeh 1: 100000 Geological Map Using ASTER and ETM data, Supervisors: J. Shahabpour and H. Ranjbar, December, 2010.</li> <li>6- Taher Najafian, Mapping of Hydrothermal Minerals on Sarcheshmeh Area, Kerman Province, Using Multispectral and Hyperspectral Data, Supervisors: H. Ranjbar and N. Fathianpour, September, 2010.</li> <li>7- Saeed mojeddifar, Potential Mapping of porphyry Copper by Using the Neuro-Fuzzy Inference System and Support Vector Machine in the Western Part of Kerman, Supervisors: H. Ranjbar and H. Nezamabadipour, September, 2010.</li> <li>8- Mohammad Shafaatipour, Integration of Remote Sensing, Geochemical and Geophysical Data using Fuzzy Logic and artificial Neural Network for Recognition of the Areas with Mineral potential in Chahar Gonbad Area, Supervisor: H. Ranjbar, Kerman Province, June, 2011</li> <li>9- Samira Bakhtiari, The Study of the Potential Use of satellite Imagery for the Exploration of Placer Deposits, Supervisors: J. shahbpor and H. Ranjbar, September, 2012.</li> <li>10- Seyed reza Alenabi, Site Selection for Nuclear Waste Disposal in Kerman Province, Using GIS, September, Supervisor: H. Ranjbar, 2012.</li> <li>11- Mahmoud Shamsaddini Nejad, Deralo Tailing Dam Site Selection Using GIS, Supervisors: H. Ranjbar and M. R. Shayestehfar, August, 2012.</li> <li>12- Naer Rahmani, Site Selection of New Ore Dressing and Mineral Processing Plant for Chah Firoozeh Deposit, Supervisor: H. Ranjbar, September, 2013.</li> <li>13- Fardin Ahamadi, Vulnerability Assessment of Dehgolan Gas Network Using Geographic Information System, Supervisor: H. Ranjbar, January, 2013.</li> <li>14- Zahra Jalali, Spectral Analysis of Satellite Images of Baft Area for Investigating the Mineralized and Hydrothermally Altered Zones, Supervisor: H. Ranjbar, January, 2014.</li> <li>15- Mosayyeb Moradipour, An Investigation of Subsurface Characterestics of Heap Leaching at Sar Cheshmeh Copper Mine, Using Geophysical Methods, Supervisors: A. Hojjat and H. Ranjbar, January, 2014.</li> </ol> <p>Ph. D. Thesis</p> <ol style="list-style-type: none"> <li>1. Mehdi Honarmand, Potential mapping in the Kerman copper belt using GIS, Supervisors: J. Shahabpour and H. Ranjbar, 2012.</li> </ol>
<p><b>Books</b></p>	<p>Hojjat, A., Ranjbar, H., 2012, <i>principles of geoelectrical methods</i>, Setayesh, 278 p.</p> <p>Roonwal, G. S., Shahriar, K., Ranjbar, H., 2008. <i>Mineral resources and development</i>", Daya Publishing House, New Delhi, India.</p>
<p><b>Journal publications</b></p>	<p>Ranjbar, H., 1997. <i>Lithogeochemical patterns associated with the Darrehzar porphyry copper deposit, Pariz area , Iran . CIM Bulletin</i>, 90: 85- 90.</p> <p>Ranjbar, H., Roonwal, G. S., Ravindran, K. V., Babar, S., 2000. <i>Synergetic use of remote sensing and geophysical data in a GIS for exploration of porphyry copper deposits</i>. <i>Indian Journal of Remote Sensing</i>.28:205-212.</p> <p>Ranjbar, H. Hassanzadeh, H., Torabi, Ilaghi, O., 2001. <i>Integration and analysis of airborne geophysical data of the Darrehzar area, Kerman Province , Iran, using</i></p>

*principal component analysis*. Journal of applied geophysics, 48: 33-41.

Ranjbar, H. , Roonwal, G. S., and Ravindran, K. V. 2001, *Digital image processing for lithological and alteration mapping, using SPOT multispectral data. A case study of Pariz area, Kerman Province, Iran*, Geosciences.

Ranjbar, H., Shahhoseiny, M., and Tata, M. 2001. *Geophysical, geochemical , and geological data analyses of Darrehzar area, using canonical correlation method.*, Journal Earth and Space physics, 27: 9-19.

Honarmand, M., Ranjbar, H., Moezifar, Z., 2004. *Integration and analysis of Airborne geophysical and remote sensing data of Sar Cheshmeh area, using directed principal component analysis*. Exploration and Mining Geology, 11: 43-48.

Ranjbar, H., Honarmand, M., and Moezifar, Z., 2004. *Application of the Crosta technique for porphyry copper alteration mapping, using ETM+ data in the southern part of the Iranian Volcanic Sedimentary Belt*. Asian Journal of Earth sciences, 24: 237-243.

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Kariminasab, S., Ranjbar, H., Akbar, S., 2010. *Susceptibility assessment of the terrain for slope failure using remote sensing and GIS, a case study of Maskoon area, Iran*. International Geoinformatics Research and Development Journal, 1: 40-52.

Ranjbar, H., Masoumi, F., & Carranza, E. J. M. (2011). *Evaluation of geophysics and spaceborne multispectral data for alteration mapping in the Sar Cheshmeh mining area, Iran*. International Journal of Remote Sensing, 32(12), 3309-3327.

Ranjbar, H., 2011. *Remote sensing, applications to geophysics*. Encyclopedia of Solid Earth Geophysics, DOI 10.1007/978-90-481-8702-7, Springer Science.

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	<p>Honarmand, M., Ranjbar, H., &amp; Shahabpour, J. (2013). <i>Combined use of ASTER and ALI data for hydrothermal alteration mapping in the northwestern part of the Kerman magmatic arc, Iran</i>. International Journal of Remote Sensing, 34(6), 2023-2046.</p> <p>Shahriari, H., Ranjbar, H., &amp; Honarmand, M. (2013). <i>Image Segmentation for Hydrothermal Alteration Mapping Using PCA and Concentration–Area Fractal Model</i>. Natural resources research, 22(3), 191-206.</p> <p>Hadigheh, S. M. H, Ranjbar, H., (2013). <i>Lithological Mapping in the Eastern Part of the Central Iranian Volcanic Belt Using Combined ASTER and IRS data</i>, Journal of Indian Society of Remote Sensing, 41:921–931.</p> <p>Mojedifar, S., Ranjbar, H., Nezamabadi-pour, H., (2013). <i>Adaptive Neuro-Fuzzy Inference System application for hydrothermal alteration mapping using ASTER data</i>, Journal of Mining and Environment, 4: 83-96.</p> <p>Khaleghi, M., Ranjbar, H., Shahabpour, J., &amp; Honarmand, M. (2014). <i>Spectral angle mapping, spectral information divergence, and principal component analysis of the ASTER SWIR data for exploration of porphyry copper mineralization in the Sarduiyeh area, Kerman province, Iran</i>. Applied Geomatics, 6(1), 49-58.</p>
<p><b>Conference proceedings</b></p>	<p>Ranjbar, H. 1994. <i>Alteration detection and geological studies in the Sar Cheshmeh area, Iran, using SPOT XS images</i>, Proceedings of ISRS Silver Jubilee meeting, Dehra Dun , India.</p> <p>Ranjbar, H. and Roonwal, G. S., 1997. <i>Integrated mineral exploration for porphyry copper mineralization in Pariz area, Kerman: A case study of the Darrehzar porphyry copper deposit</i>. Proceedings of the forth biennial SGA , Meeting, Turku, Finland</p> <p>Ranjbar, H. and Roonwal, G. S., 2001. <i>Digital image processing for lithological and alteration mapping, using SPOT multispectral data. A case study of Pariz area, Kerman Province, Iran</i>, 8<sup>th</sup> international symposium on remote sensing, Toulouse, France.</p> <p>Ranjbar, H., Honarmand, M., Moezifar, Z., Shakoori, M., 2002. <i>Integration and analysis of remote sensing, airborne geophysics and geochemical data of Sar Cheshmeh area by using directed principal component analysis</i>. 9<sup>th</sup> international symposium on remote sensing, Crete, Greece.</p> <p>Ranjbar, H., Honarmand, M., and Moezifar, Z. and Roonwal, G. S. (2003). <i>Application of Crosta technique for porphyry copper alteration mapping, using ETM+ data: A case study of Meiduk and Sar Cheshmeh areas, Kerman, Iran</i>. Map India 2003.</p> <p>Ranjbar, H., Honarmand, M. and Moezifar, Z., 2003. <i>Analysis of ETM+ and airborne geophysical data for exploration of porphyry type deposits in the Central Iranian Volcanic belt using fuzzy classification</i>, SPIE Conference, Barcelona, 8-12 Sep. 2003.</p> <p>Ranjbar, H., Shahriari, H., and Honarmand, M., 2003. <i>Comparison of ASTER and ETM+ data for exploration of porphyry copper mineralization: A case study of Sar Cheshmeh area, Kerman, Iran</i>. Map Asia 2003, 13-15 October, 2003, Kuala Lumpur.</p> <p>Ranjbar, H., Honarmand, M., Moezifar, Z., 2003. <i>Integration and analysis of airborne geophysics, remote sensing and geochemical data of Sar Cheshmeh area, using directed principal component analysis</i>, Map Asia 2003, 13-15 October, 2003, Kuala Lumpur.</p> <p>Ranjbar, H., Shahriari, H., Honarmand, M., 2004. <i>Integration of ASTER and Airborne</i></p>

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Shayestehfar, M., Ranjbar, H., Ahmadi, O. , 2005. *Alteration mapping by using ETM+ and ASTER data in Dehaj area*. Proceedings of SPIE, No. 5983, GIS application and geology, Belgium, September, 2005.

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