Curriculum Vitae of Dr. Iraj Rahmani

Personal Information

Name: Iraj Surname: Rahmani

Date and place of birth: 11 September 1970, Tehran,

Iran

Martial status Married with two children

Citizenship : Iranian

Email address : ,<u>Iraj.Rahmani@gmail.com</u>

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Address : Appt. 2, No. 2, Street Alborz 9, Alborz Streese,

Marzdaran avenue, Tehran, Iran

Job Titel : Assistance professor of Geotechnical and Infrastructures

Department, Building & Housing Research Center

1- Education

- PhD degree in civil engineering with courses [2002-2006]

Specialty: Geotechnics

Thesis title:

'Comportement Hydromécanique des Joints Rocheux: Expérimentation et

Modélisation Constitutive' in French

'Hydromechanical Behaviour of Rock Joints: Experimentation and Constitutive

Modelling' in English

Supervisor: Professor Marc Boulon

University of JOSEPH FOURIER, INPG de Grenoble, Grenoble, France

- M.Sc. degree in civil engineering with courses [1993-1996]

Specialty: Hydraulic Structure

Thesis title:

'Methodology of seismic response microzonation, case study: South-west of Tehran

and evaluation of water table depth on seismic surface response' in persian

Department of civil engineering, Sharif university of Technology, Tehran, Iran

- B.S. degree in civil engineering [1989-1993]

Department of civil engineering, Sharif university of Technology, Tehran, Iran

- 48th rank in national university entrance general examination, 1989
- Diploma in mathematics and physics, Kharazmi high school, Tehran, Iran Grade: 17.38 out of 20



2- Publication

- 1- **RAHMANI I.**, GOHARSHENASAN K., TABDILI R. Nonlinear analysis of water tower First student conference of civil engineering, May 1994, Sharif university of technology, Tehran, Iran.
- 2- **RAHMANI I.**, BASYRYAZDI S., BAGHERI A.R. Earth Dams Omran Sharif Magazine, No. 9, p. 34-38, 1994, Tehran, Iran.
- 3- JAFARI M.K., **RAHMANI I.**, ASGHARI E. Microzonation of south-west of Tehran against amplification 4th Proceeding of international conference of civil engineering, persian Volume II, p. 344-354, May 1997, Sharif university of technology, Tehran, Iran.
- 4- JAFARI M.K., ASGHARI E., **RAHMANI I.** Shear wave velocity formula against SPT for Tehran 4th Proceeding of international conference of civil engineering, persian Volume II, p. 355-365, May 1997, Sharif university of technology, Tehran, Iran.
- 5- **RAHMANI I.**, BOULON M. Comportement hydromécanique de fractures rocheuses 10 émes journée des thésards du laboratoire 3S, 19-20 Mai 2005, Les Nivéoles, Franc, p.19-24.
- 6- LOPEZ P., **RAHMANI I.**, BUZZI O., BOULON M., THORAVAL A., ESCUREDO-RODRIGUEZ M. Void Space against Fracture Hydro Mechanical Behavior at Sample Scale Proceedings of EUROCK 2006 (ISRM), 8-12 Mai 2006, Liege, Belgium, p. 141-147.
- 7- SOULEY M., BOULON M., **RAHMANI I.**, THORAVAL A. Laboratory measurements of hydraulic exchanges and associated hydraulic couplings between fracture and rock mass I the case of Sandstone and Limestone 11th International Congress on Rock Mechanics 2007, Portugal, Lisbon.
- 8- LOPEZ P., THORAVAL A., BUZZI O., **RAHMANI I.**, BOULON M., Advances in constitutive modeling of jointed rock hydro mechanical interactions at laboratory scale- Journal of Studia Geotechnica et Mechanica, Vol. XXX, No. 1-2, 223-233 (2008)
- 9- Kamalian M., Sohrabi Bidar A., Razmkhah A., Taghavi A.A., **RAHMANI I.** Considerations on Seismic Microzonation in Areas with Two-Dimensional Hills Journal of Earth System Science, Vol. 117, No. S2, pp. 783-796 (2008) (**ISI**)
- 10- Hafezimoghadas N., Nikoodel M. R., **RAHMANI I.,** Shafifar M., Initial zonation of rock resources for use in the breakwater construction, 10th Marine Industries Conference, 2008 (in Persian)
- 11- Amini M., Shafifar M., **RAHMANI I.**, Evaluation of igneous rocks in the south of the country based on the evaluation of the stone breakwaters rock mass, 8th International Conference on Coasts, Ports and Marine Structures, 2008 (in Persian)
- 12- Nazem M., **Rahmani I.**, Rezaee-Pajand M., Nonlinear FE Analysis of Reinforced Concrete Structures Using a Tresca-type Yield Surface- SCIENTIA IRANICA Journal, Vol. 16, No. 6, pp. 512-519 (2009) (**ISI**)
- 13-Ghareh S., **RAHMANI I.**, New methods of stabilization and consolidation beaches, 11th Marine Industries Conference, 2009 (in Persian)
- 14-Ghiasian H., Ghareh S., Salehzadeh H., Rasooli R., **RAHMANI I.**, Experimental and analytical study on the effects of Reinforcement elements in the improvement soil

- geotechnical properties, Scientific Quarterly Journal, Geosciences, Vol. 19, No. 74, Winter 2010 (in Persian) (ISI)
- 15- Haeri S.M., Kavand A., **RAHMANI I.**, Torabi H., 1-g Shaking Table Model Test on Liquefaction-induced Lateral Spreading and Its Effects on Single Piles, 4th International Conference on Geotechnical Engineering and Soil Mechanics (ICGESM 2010), 2010
- 16- Salmanzadeh A., Mirlatifi A. R., **RAHMANI I.**, Case study Access Tower Bridge, the first bridge geogrid's seat, 4th International Conference on Geotechnical Engineering and Soil Mechanics (ICGESM 2010), 2010 (in Persian)
- 17- Haeri S.M., Kavand A., Torabi H., **RAHMANI I.**, The effect of Liquefaction-induced Lateral Spreading on the single deep foundations using shaking table test, 4th International Conference on Geotechnical Engineering and Soil Mechanics (ICGESM 2010), 2010 (in Persian)
- 18- **RAHMANI I.**, Ghiasian H., Jalili M., Scaling of granular dredging materials to construct physical models of geosynthetic cellular system (GCS), 4th International Conference on Geotechnical Engineering and Soil Mechanics (ICGESM 2010), 2010 (in Persian)
- 19- Haghshenas H., **RAHMANI I.**, Gerivani H., Rakhshandeh M., Liquefaction hazard zonation on the Iran southern coast by using satellite images, 4th International Conference on Geotechnical Engineering and Soil Mechanics (ICGESM 2010), 2010 (in Persian)
- 20- Jalili M., **RAHMANI I.**, H. Alieahi, Clarification on the Methodology of Calculation of Seismic Lateral Earth Pressure in Cohesive Soils, The Electronic journal of Geotechnical Engineering, Volume 15 Bundle L, pp. 1171-1181 (2010)
- 21- Shafieefar M., **RAHMANI I.**, Nikudel M. R., Moghadas N. H., Introduction to The Iranian Manual On The Use of Rock in Breakwaters and Shore Protection Structures, 9th International Conference on Coasts, Ports and Marine Structures (ICOPMAS 2010), 2010
- 22- Haghshenas H., **RAHMANI I.**, Gerivani H., Rakhshandeh M., Evaluation of constitutive model for determining high settlement due to the consolidation and creep, National Conference on New Finding in Civil Engineering, 2010 (in Persian)
- 23- Panahi R., **RAHMANI I.**, Seif M.S., Evaluation of commercial software available to maneuver the vessel and port hydrodynamics, 13th Marine Industries Conference, 2011 (in Persian)
- 24- Azarsina F., Panahi R., **RAHMANI I.**, A review of existing standards on vessels carrying liquefied natural gas reservoirs Slashing phenomenon, 13th Marine Industries Conference, 2011 (in Persian)
- 25- **RAHMANI I.**, Golpazir I., The Basal Heave Stability Analysis of Braced Excavations in Soft Soils Using Numerical Methods, Jadeh (a Scientific, Promoting, Quarterly Magazin In The field of Road and Transportation), No. 67, 31-44, summer 2011 (in Persian)
- 26- Ardalan Akbari H., Meghdarpour M., RAHMANI I., Reliability Analysis anchored walls using a probabilistic Monte Carlo method, 2nd Iranian Conference on Reliability Engineering, 2011 (in Persian)
- 27- Meghdarpour M., Ardalan Akbari H., **RAHMANI I.**, Reliability Analysis anchored walls using a probabilistic Monte Carlo metho The sensitivity analysis was nailed walls of Tehran-Tabriz railway line by examining the parameters for stability analysis, 2nd Iranian Conference on Reliability Engineering, 2011 (in Persian)

- 28- **RAHMANI I.**, Rezai A., Comparison of numerical analysis and empirical analysis to evaluate liquefaction potential, 5th National Congress on Civil Engineering, 2011 (in Persian)
- 29- Khandan M., Bolooribazaz J., **RAHMANI I.**, Najafi J., Optimization of irregular arrangement of pile groups using genetic algorithm asymmetric loading, 6th National Congress on Civil Engineering (6NCCE), 2011 (in Persian)
- 30- Haeri S. M., Asefzadeh A., Kavand A., **RAHMANI I.**, Evaluation of pile group with 4 piles response to liquefaction-induced lateral spreading by large scale shake table testing, 6th National Congress on Civil Engineering (6NCCE), 2011 (in Persian)
- 31- Fakher A., Ehsani M., **RAHMANI I.**, Report for "Marine Geotechnical Investigation Guideline for Coastal Line of Iran", 6th National Congress on Civil Engineering (6NCCE), 2011 (in Persian)
- 32- **RAHMANI I.**, Ghareh S., Ardalan Akbari H., Meghdarpour M., Mashhad Narges hotel seismic assessment nailed walls, under seismic dynamic and quasi-static loads, First National conference on disaster management and HSE: Earthquake and Vulnerable Areas, 2011 (in Persian)
- 33- Hadjizadeh Zaker N., **RAHMANI I.**, Moghaddam M., Shadi R., Abesi O., Concentrations and Sources of Petroleum Hydrocarbons in the Sediments of Anzali Port in the Caspian sea, Iran, Vol. 37, No. 60, Page 99-106, Winter 2012 (Persian) (ISC)
- 34- RAHMANI I., Mirhaji A. A., Forces evaluation on the single pile under the effect of liquefaction by OpenSeesPL0.8.0, 9th International Congress on Civil Engineering, 2012 (in Persian)
- 35- Haeri S. M., Kavand A., Reisianzadeh J., Bakhshi A., Padash H., **RAHMANI I.**, Evaluation of stone columns performance in reducing liquefaction-induced lateral spreading effects flexible piles group by large scale shake table testing, 9th International Congress on Civil Engineering, 2012 (in Persian)
- 35- Asgarian B., **RAHMANI I.**, Badri S. H., Mahdavi J., Futuhi S., Aghakoochak A., The introduction to rapid assessment of Iranian ports structures manual, 9th International Congress on Civil Engineering, 2012 (in Persian)
- 37- S. Mohsen Haeri, Ali Kavand, **Iraj Rahmani**, Hooman Torabi Response of a group of piles to liquefaction-induced lateral spreading by large scale shake table testing, Soil Dynamics and Earthquake Engineering Journal, Vol. 38, pp. 25-45 (2012) (**ISI**, **I.F.=1.010**)
- 38- Moeini M.H., Etemad-Shahidi A., Chegini V., Rahmani I. Wave data assimilation using a hybrid approach in the Persian Gulf, Ocean Dynamics Journal, Vol. 62, No. 5, pp. 758-797 (2012) (ISI, I.F.=1.038)
- 39- **RAHMANI I.**, Golpazir I., Evaluating the Effect of Selecting Constitutive Models on Prediction of the Ground Movement Adjacent to Deep Excavations, Jadeh (a Scientific, Promoting, Quarterly Magazin In The field of Road and Transportation), No. 72, 215-226, summer 2011 (in Persian)
- 40- **RAHMANI I.**, Zahmati A., Parametric study of seismic behavior of piles considering lateral spreading in multi-layer soils, 10th International Conference on Coasts, Ports and Marine Structures (ICOPMAS 2012), 2012
- 41- Moeini M.H., Etemad-Shahidi A., Chegini V., RAHMANI I., Moghadam M., Error prediction and correction of the simulated wave data at the Persian Gulf for different climatic conditions, 10th International Conference on Coasts, Ports and Marine Structures (ICOPMAS 2012), 2012

- 42- Ashrafi K., Hajizadehzaker N., RAHMANI I., Moghadam M., Sampling and Analysis of Air Pollutants in Imam Khomeini Port, 10th International Conference on Coasts, Ports and Marine Structures (ICOPMAS 2012), 2012
- 43- Hajizadehzaker N., Ashrafi K., **RAHMANI I.**, Moghadam M., Sampling and Analysis of Air Pollutants in Shahid Rajaee Port, 10th International Conference on Coasts, Ports and Marine Structures (ICOPMAS 2012), 2012
- 44- **RAHMANI I.**, Hajizadehzaker N., Moghadam M., Model 2 and 5 of the MARPOL Convention (pollution from ships) in Iran, using international experiences, National Conference on Water Flow and Pollution, 2012
- 45- Zahmati A., **RAHMANI I.**, Ghareh S., Numerical analysis of seismic behavior of deep foundations in coastal areas with a gentle slope, National Conference on Transportation Infrastructures, 2012
- 46- Emami K., **RAHMANI I.**, Numerical evaluation of ultimate pullout capacity of a horizontal anchored plate, National Conference on Transportation Infrastructures, 2012
- 47- Panahi R., **RAHMANI I.**, Seif M. S., Clustering software applications in the field of hydrodynamics and maneuver in ports, National Conference on Transportation Infrastructures, 2012
- 48- Dilmaghani B., **RAHMANI I**., Numerical evaluation of ultimate bearing capacity of surface foundation placed in slope reinforced by geosynthetics, National Conference on Transportation Infrastructures, 2012
- 49- Moghadam M., Pak A., **RAHMANI I**., Evaluation of reuse of dredged material methods, National Conference on Transportation Infrastructures, 2012
- 50- Kamalian M., Goldasteh M.H., Safayian Amoli R., **RAHMANI I.**, Estimation of Seismic Bearing Capacity Coefficients of Strip Foundations Adjacent to the Top of Slopes by the Stress Characteristic Method, Sharif Civil Engineering Journal, Volume 29, Issue 3, pp. 81-90 (2013) (in Persian)
- 51- **RAHMANI I.,** Zahmati A., Ardalan Akbari H., Seismic Behavior Analysis of Piles by Considering Lateral Spreading, The Electronic journal of Geotechnical Engineering, Volume 18, Bundle N, pp. 2989-2996 (2013)
- 52- Haeri S.M., Kavand A., Asefzadeh A., **RAHMANI I.**, Large scale 1-g shake table model test on the response of a stiff pile group to liquefaction induced lateral spreading, 18th International Conference on Soil Mechanics and Geotechnical Engineering, Paris 2013
- 53-Ghiassian H., Jalili M., **Rahmani I.**, Mohammad S., Madani S.M.M.- Laboratory study of geosynthetic cellular system (GCS) models under wave action in flume, International Journal of Civil Engineering, Vol. 11, No. 4, Transaction A: Civil Engineering, pp. 251-260 (2013)
- 54- Mansoorzadeh S. M., **RAHMANI I.**, Zahiri M., Moghadam M., Investigation of water destructive effects on Tunnels, Jadeh (a Scientific, Promoting, Quarterly Magazin In The field of Road and Transportation), No. 67, 31-44, summer 2013 (in Persian)
- 55- Moeini M.H., Etemad-Shahidi A., Chegini V., Rahmani I., Moghadam M. Error distribution and correction of the predicted wave characteristics over the Persian Gulf, Ocean Engineering Journal, Vol. 75, pp. 81-89 (2014) (ISI, I.F.=1.448)
- 56- Kavand A. Haeri S.M., Asefzadeh A., **Rahmani I.**, Ghalandarzadeh A., Bakhshi A. Study of the Behavior of Pile Groups During Lateral Spreading in Medium Dense Sands by Large Scale Shake Table Test, International Journal of Civil Engineering, Vol. 12, No. 0, Transaction B: Geotechnical Engineering, pp. 186-203 (2014)

3- Manager of Research Projects

	Title	
1	Manual on the Use of Rock in Breakwaters and Shore Protection Structures	Transportation Research Institute
2	Liquefaction Hazard Zonation of Southern Coastlines of Iran	Transportation Research Institute
3	A Theoretical and Experimental Study of Geosynthetic cellular Systems (GCS)	Transportation Research Institute
4	Effects of Liquefaction Induced Lateral Spreading on Deep Foundations of Ports and Harbors	Transportation Research Institute
5	Marine Geotechnical Investigation Guideline for Coastal Line of Iran	Transportation Research Institute
6	Iranian Ports Waterfront Structures Inspection Guideline	Transportation Research Institute
7	Manual of rapid assessment of Iranian ports structures	Transportation Research Institute

4- Educational and University Research Activities

Teaching assistant during my B.S. and M.Sc.: Steel structure, Static, Hydrology, Concrete Structure.

Small Dams, First semester of 2007-2008 in University of Science and Culture, Tehran, Iran, (B.S.)

Underground Structures Second semester of 2007-2008 in University of Science and Culture, Tehran, Iran, (B.S.)

Advance Soil Mechanics 2, Second semester of 2008-2009 in Science and Research Branch of Islamic Azad University, Tehran, Iran, (PhD)

Advance Foundation Engineering, Second semester of 2008-2009 in Tehran Central Branch of Islamic Azad University, Tehran, Iran, (M.Sc.)

Advance Soil Mechanics 2, Second semester of 2009-2010 in Science and Research Branch of Islamic Azad University, Tehran, Iran, (PhD)

Foundation Engineering, First semester of 2014-2015 in Tehran Central Branch of Islamic Azad University, Tehran, Iran, (B.S.)

Foundation Engineering, Second semester of 2014-2015 in Tehran Central Branch of Islamic Azad University, Tehran, Iran, (B.S.)

Finite elements methods, second semester of 2014-2015 in Tehran Central Branch of Islamic Azad University, Tehran, Iran, (B.S.)

5-Experince

I have some experiments in structural design of building and industrial structure and hydraulics structures, using common in civil engineering.

- Head of Maritime Transportation & Technology Group, Transportation Research Institute [2009-2013]
- Assistance professor of Transportation Research Institute [2006-now]
- Sazeh consulting engineers, design of interconnecting piperack in South Pars Phase 12 Assalloyeh and interconnecting piperack and equipments support structure design in IRAN LNG and Bidboland II projects. [2010-Now]
- Tehran Disaster Mitigation and Management Organization advisor in Geo hazard mitigation division, [2009-2010]
- Imensazan consulting engineers, Quality control of Stations of Tehran metro (line7) , [2008- 2009]
- Sazeh consulting engineers, design of equipments support structure in 4th Aromatic project in Assalloyeh [2001-2002]
- Radan consulting engineers, design of industrial structures [1999-2001]
- BandAb consulting engineers, design of hydraulic structure of dams [1997-1999]
- Eskan house worker office, design of structural buildings [1995-1997]
- International society of earthquake engineering and seismology (IIEES), department of Geotechnical engineering [1994-1997]
- Sazeh-Pardazi consulting engineers design of industrial structures [1993-1994]
- -Project Management of Nasr industrial structures [2000-2001]
- Member of Iranian construction engineers [1998-now]

6-Award

Post-graduate Scholarship, Ministry of Culture and Higher Education, Iran [2002-2006]

Post-graduate Scholarship, EGIDE, France [3 months]

7- Research interests

Geotechnical engineering, Geotechnical earthquake engineering, Constitutive modeling, Numerical method, Tunnel Engineering, Rock mechanics,

8- Hobby and social activity

- Sharif Omran magazine, member of scientific and research groups, Sharif university of technology, [1990-1996], Tehran, Iran.
- Contribution in first Iranian student civil engineering conference.
- Sports: Football, swimming, mountain climbing
- Persian music

9- Language

- Persian, Native
- English
- French