Hossein TAHGHIGHI, Ph.D., P.E.

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Degrees:

- **Postdoctoral Fellow**
  Institute of Industrial Science, University of Tokyo, Japan (2005 – 2008).

- **Doctor of Philosophy, Ph.D., in Civil Engineering**
  The University of Tokyo, Tokyo, Japan (2005)

- **Master of Science, M.Sc., in Earthquake Eng.**
  The University of Tehran, Tehran, Iran (1999)

- **Bachelor of Science, B.Sc., in Civil Engineering**
  The University of Tehran, Tehran, Iran (1997)

Academic Background:

- **Faculty Member, Dept. of Civil Engineering**
  University of Kashan, Iran (2008 – present).

- **Dean of Faculty**
  Faculty of Engineering, University of Kashan, Iran (2016 – 2018)

- **Associate Dean for Academic Affairs**
  Faculty of Engineering, University of Kashan, Iran (2012 – 2014).

- **Head of Civil Engineering Department**
  University of Kashan, Iran (2009 – 2012).
  - The initiator and founder of Undergraduate program in Civil Engineering.
  - The initiator and founder of Master program in Structural Engineering.
  - The initiator and founder of Building Material Laboratory.
  - The initiator and founder of Concrete Technology Laboratory.
  - The initiator and founder of Soil Mechanics Laboratory.

- **Head of Open and Electronic Education Center**
  University of Kashan, Iran (2008 – 2009).
  - The initiator and founder of OEE Center

Professional Background:

- **Professional Engineer**
  Design, Supervision, Construction, and Retrofitting of Civil Structures**.**
  (Professional Engineering Work License issued by Ministry of Housing and Urban Planning, Tehran, Iran; From 2001)

- **Postdoctoral Researcher**

  University of Tokyo, Japan (2005 – 2008).

- **Structural Design Engineer, Mahaab Ghods Consulting Eng., Tehran, Iran, 1999-2001.**

- **Structural Supervisor, Tehran Abad Saaz Inc., Tehran, Iran, 1996**

- **Structural Supervisor, Omran Kashan Eng. Inc., Kashan, Iran, 1995**

Scientific and Professional Memberships:

- Alumni Association of Faculty of Engineering, the University of Tehran (From 1996)

- Iranian Construction Engineers Organization (From 2001)

- Iranian Tunneling Association (From 2002)

- American Society of Civil Engineers, ASCE (From 2005)

- Alumni Association of School of Engineering, the University of Tokyo (From 2005)

Teaching

Course Taught:

- Statics
- Mechanics of Materials
- Design of Steel Structures
- Project of Steel Structural Design
- Design of Reinforced Concrete Structures, I
- Design of Reinforced Concrete Structures, II
- Project of Reinforced Concrete Structural Design
- Fundamentals of Earthquake Engineering
- Fundamentals of Wind and Earthquake Engineering
- Training
- Bachelor of Science project
- Structural Dynamics and Control
- Earthquake Engineering
- Design of Earthquake-Resistant Buildings
- Seismic Design of Structures
- Seminar and Research Method

Research Interests:

- Dynamics and Control of Structures
- Soil-Structure Interaction
- Structural Seismic Analysis
- Structural Seismic Design
- Lifeline and Special Structures Earthquake Engineering
- Earthquake Engineering & Engineering Seismology
- Earthquake Hazard and Risk Assessment of Structures
- Seismic Retrofit and Rehabilitation of Structures

Honors and Accomplishments:

- Research Excellence Award, University of Kashan, 2016.
- Academic Excellence Award, University of Kashan, 2015.
- Academic Excellence Award, University of Kashan, 2012.
- Research Excellence Award, University of Kashan, 2011.
- Post Doctoral Fellowship, Japan Society for the Promotion of Science, 2007.
- Scholarship for Post Graduate Research, University of Tokyo, 2005.
- Scholarship for Ph.D. study on abroad, Ranked first, nationwide exam, Iran MSRT, 2002.
- Ranked first, Ph.D. entrance exam, Dept. of Civil Eng., University of Tehran, 1999.
- Ranked first, M.Sc. degree, Dept. of Civil Engineering, University of Tehran, 1999.
- Honors graduate, B.Sc. degree, Dept. of Civil Eng., University of Tehran, 1997.
- Ranked 86th in Iranian nationwide university entrance exam out of over half Million applicants in the field of Mathematics and Physics, 1993.
- Ranked first, Mathematics and Physics Diploma at High school, Isfahan state, Iran, 1993.

Language Skill:

Persian, English, Japanese

Invited reviewer for scientific Journals/Papers

- Amirkabir Journal of Civil Engineering
- ASCE's International Journal of Geomechanics
- Bulletin of Earthquake Engineering
- Earthquake Engineering and Engineering Vibration
- Earthquake Engineering and Structural Dynamics
- Earthquakes and Structures
- Environmental Earth Sciences
- Iranian Journal of Science and Technology Transactions of Civil Engineering
- Journal of Asian Earth Sciences
- Journal of Civil and Environmental Engineering
- Journal of Earthquake Engineering
- Journal of Energy Management
- Journal of Ferdowsi Civil Engineering
- Journal of Steel and Structure
- Journal of Seismology and Earthquake Engineering
- Journal of Structural and Construction Engineering
- Modares Journal of Civil Engineering
- Scientia Iranica: International Journal of Science and Technology
- Sharif Journal of Civil Engineering

- Soil Dynamics and Earthquake Engineering
- Structural Engineering and Mechanics: An International Journal.
- National and International Conferences on Civil Engineering

Selected Publications:

Peer-Reviewed Journal Papers:

- Konagai, K., Yoshimi, M., Meguro, K., Yoshimura, M., Mayorca, P., Takashima, M., Farahani, A., **TAHGHIGHI**, H. and Keshavarz, M. (2004). "Provisional Report of the December26, 2003 BAM Earthquake, IRAN" Bulletin of Earthquake Resistant Structure Research Center, The University of Tokyo, No. 37, pp 95-106.

- Konagai, K., Yoshimi, M., Meguro, K., Yoshimura, M., Mayorca, P., Takashima, M., Farahani, A., **TAHGHIGHI**, H. and Keshavarz, M., (2004). "Strain Induced in Cracked Utility Poles and Damage to Dwellings from the Dec 26, 2003, Bam Earthquake," Bull. Earthquake Research Institute, University of Tokyo, Vol. 79, pp. 57-65.

- Konagai, K., Yoshimi, M., Farahani, A. and **TAHGHIGHI**, H. (2004). "Damage Distribution Induced Intense Shake of the December26, 2003 BAM Earthquake, IRAN using Cracked Utility Poles," Journal of Earthquake Engineering, Japan Society of Civil Engineering, JSCE (In Japanese).

- **TAHGHIGHI**, H. and Konagai, K. (2005). "Nonlinear Soil-Pile Interaction Analysis Using a Rational Winkler Spring Method," Bulletin of Earthquake Resistant Structure Research Center, The University of Tokyo, No.38, pp 155-163.

- **TAHGHIGHI**, H. and Konagai, K., (2005). "Impedance-Based Winkler Spring Method for Soil-Pile Interaction Analysis," Journal of Earthquake Engineering, JSCE, Vol. 28, No. 083, 2005.

- **TAHGHIGHI**, H. and Konagai, K. (2007), "Numerical Analysis of Nonlinear Soil–Pile group Interaction under Lateral Loads," Soil Dynamics and Earthquake Engineering, 27, 463-474.

- **TAHGHIGHI**, H. (2011), "Earthquake fault induced surface rupture – a hybrid strong ground motion simulation technique and discussion for structural design**,"** Earthquake Engineering and Structural Dynamics, 40, 1591-1608.

- **TAHGHIGHI**, H. (2012), "Simulation of strong ground motion using the stochastic method: Application and validation for near-fault region," Journal of Earthquake Engineering, 16: 1230-1247.

- **TAHGHIGHI**, H. and Hajnoruzi, M. (2014), "Numerical Evaluation of the Strike-Slip Fault Effects on the Steel Buried Pipelines," Journal of Seismology and Earthquake Engineering, 16(4): 219-230.

- **TAHGHIGHI**, H. and Shabkhan, M. (2014), "Nonlinear Seismic Analysis of Pile Groups in Layered Soils due to Kinematic Interaction Effects," Bulletin of Earthquake Science and Engineering, 2 (3): 51-62 (In Persian).

- **TAHGHIGHI**, H. and Rabiee, M. (2015), "Nonlinear Soil-Structure Interaction Effects on Building Frames: A Discussion on the Seismic Codes," Journal of Seismology and Earthquake Engineering, 17(1): 219-229.

- **TAHGHIGHI**, H. and Rabiee, M. (2017), "Influence of foundation flexibility on the seismic response of low-to-mid-rise moment resisting frame buildings," International Journal of Science and Technology, SCIENTIA IRANICA, 24(3): 979-992.

- **TAHGHIGHI**, H. and Hajnoruzi, M. (2017), "Finite Element Analysis of Buried Pipelines Crossing Reverse Fault," Modares Civil Engineering Journal, 17(2): 67-78 (In Persian).

- **TAHGHIGHI**, H. and Tameh, M.R. (2017), "Approximate Nonlinear Seismic Evaluation of Frame Buildings by Static and Dynamic Analysis Methods and Comparison with the Exact Solutions," Modares Civil Engineering Journal, 17(4): 101-110 (In Persian).

- Gholami, M.R. and **TAHGHIGHI**, H. (2018), "Numerical Study of Confinement Effect of FRP Coatings on behavior of RC Frames by using Nonlinear Analysis", Journal of Applied Engineering Science (JAES), 16(3): 430-440.

- Mohamadi, A. and **TAHGHIGHI**, H. (2019), "Seismic performance assessment of RC MRF buildings on shallow foundations incorporating soil-structure interaction," Journal of Civil and Environmental Engineering, 48 (4): 63-77 (In Persian).

- Dezgani, H. and **TAHGHIGHI**, H. (2019), "Comparison of standard No. 2800 with ASCE7 to scale earthquake records for seismic assessment of existing steel oil storage tanks," Journal of Science and Engineering Elites, 3(6): 86-96.

- Ghadimi Chermahini A. and **TAHGHIGHI,** H. (2019), "Numerical finite element analysis of underground tunnel crossing an active reverse fault: a case study on the Sabzkouh segmental tunnel," Geomechanics and Geoengineering, 14(3): 155-166.

- Alborzi, M., **TAHGHIGHI**, H. and A.R. Azarbakht (2019), "Numerical comparison on the efficiency of conventional and hybrid buckling restrained braces for seismic protection of short-to-mid-rise steel buildings," International Journal of Advanced Structural Engineering , 11 (4): 439-454.

- Edalati, A.A. and **TAHGHIGHI**, H. (2019), "Investigating the performance of isolation systems in improving the Seismic behavior of urban bridges: A case study on the Hesarak Bridge," Archives of Civil Engineering**,** 65 (4), 155-175.

- Alborzi, M. and **TAHGHIGHI**, H. (2020), "Evaluation of seismic behavior of steel frames constrained with hybrid core buckling-restrained braces," Amirkabir Journal of Civil Engineering, 51(4), 671-684 (In Persian).

- **TAHGHIGHI**, H. and Mohamadi, A. (2020), "Numerical evaluation of soil-structure interaction effects on the seismic performance and vulnerability of reinforced concrete buildings," International Journal of Geomechanics, 20 (6): 04020072. https://doi.org/10.1061/(ASCE)GM.1943-5622.0001651.

- Arbabi, M. and **TAHGHIGHI**, H. (2021), "Influence of nonlinear SSI on the seismic response of low-to-mid-rise steel moment resisting frame buildings," Journal of Structural and Construction Engineering (JSCE)**,** 7 (3), 35-52 (In Persian).

- Lazizi, A.H. and **TAHGHIGHI**, H. (2021), "Seismic Response Evaluation of Kashan Historical Bazaar Structure Including Soil-Structure Interaction," Journal of Seismology and Earthquake Engineering, 21(3): 77-93.

- Lazizi, A.H., and **TAHGHIGHI**, H. (2023), "Influence of soil–structure interaction on seismic demands of historic masonry structure of Kashan Grand Bazaar." Bull Earthquake Eng **21**, 151–176. https://doi.org/10.1007/s10518-022-01549-y.

Proceedings and Conference papers:

- Fadaei, A. and **TAHGHIGHI**, H. (2024). "Investigating the resilience of Ardestan city against earthquakes- Case study: four neighborhoods of Koushk, Abali, Rahmian, Fehra)", 3rd.International Conference on Architecture, Civil Engineering, Urban Development, Tabriz, Iran (In Persian).

- Lazizi, A.H. and **TAHGHIGHI**, H. (2019). "Structural seismic assessment of the Kashan historical Bazaar considering the soil-structure interaction," 8th International Conference of Seismology and Earthquake Engineering, Tehran, Iran.

- Dezgani, H. and **TAHGHIGHI**, H. (2019). "Seismic assessment of oil reservoirs using numerical FEM and analytical formulation of design standards," 8th International Conference of Seismology and Earthquake Engineering, Tehran, Iran.

- Momenian, M.H. and **TAHGHIGHI**, H. (2018). "Vulnerability Assessment of the most Common Arch of Historical Bazar in Kashan using Finite Element Method," 11th International Conference Civil Engineering, Tehran, Iran (In Persian).

- Dezgani, H. and **TAHGHIGHI,** H. (2018). "Comparison of standard No. 2800 with ASCE7 to scale earthquake records for seismic assessment of existing steel oil storage tanks," 11th International Conference Civil Engineering, Tehran, Iran.

- Hemmati, H.R. **TAHGHIGHI**, H. and Alborzi, M. (2017). "Seismic vulnerability assessment of a typical RC highway bridge in high seismic zone," 2nd International Conference on New Materials and Structures, Yazd, Iran.

- Heidary Raran, A. and **TAHGHIGHI**, H. (2015). "Progressive Collapse Assessment of Seismically Designed Steel Frame Buildings," 2nd International & 6th National Conference on Earthquake & Structures, Kerman, Iran.

- Arbabi, M. and **TAHGHIGHI**, H. (2015). "Evaluation of Soil-Structure Interaction Effects Using Seismic Codes," 7th International Conference of Seismology and Earthquake Engineering, Tehran, Iran (In Persian).

- Davoodi, M. and **TAHGHIGHI**, H. (2015). "Numerical Evaluation of the Strike Slip Fault Effects on the Steel Buried Pipelines," 7th International Conference of Seismology and Earthquake Engineering, Tehran, Iran.

- **TAHGHIGHI**, H. (2012). "Investigation of seismic protection for high-rise buildings subjected to long-period ground motions," 15th World Conference of Earthquake Engineering, Lisbon, Portugal.

- **TAHGHIGHI**, H. (2012). "Damaging Long-Period Ground Motions from the *Mw*9.0, 2011 Tohoku, Japan Earthquake," 9th International Congress on Civil Engineering, Isfahan, Iran.

- **TAHGHIGHI**, H. (2011). "Influence of pile-to cap connection on the laterally loaded pile group behavior," Sixth International Conf. of Seismology and Earthquake Engineering, Tehran, Iran.

- **TAHGHIGHI**, H. (2011). "Fault induced permanent ground deformations – A discussion for seismic design of civil infrastructures," Sixth International Conf. of Seismology and Earthquake Engineering, Tehran, Iran.

- **TAHGHIGHI**, H. (2010). "A simplified hybrid method for simulating near-source ground motion," 14th European Conference on Earthquake Engineering, Republic of Macedonia.

- **TAHGHIGHI**, H. (2010). "Numerical evaluation of laterally loaded pile groups using simple nonlinear soil model," 14th European Conference on Earthquake Engineering, Republic of Macedonia.

- **TAHGHIGHI**, H. (2010). "Broad-Band Near-Fault Strong Motion Time Histories Simulations – Surface Faulting and Rupture Directivity Effects," 5th National Congress on Civil Engineering, Ferdowsi University of Mashhad, Iran.

- **TAHGHIGHI**, H. and Konagai, K. (2009), "Finite Source Simulation of Near-Fault Strong Motion Records from the 1999 Chi-Chi, Taiwan Earthquake," 8th International Congress on Civil Engineering, May 11-13, 2009, Shiraz University, Shiraz, Iran.

- **TAHGHIGHI**, H. and Konagai, K. (2006). "Numerical study of soil-pile group interaction in sand," First European Conference on Earthquake Engineering and Seismology, a joint event of the 13th ECEE & 30th General Assembly of the ESC, Geneva, Switzerland, 3-8 September 2006, No. 789, CD-ROM.

- **TAHGHIGHI**, H. (2006). "Devastations in Recent Massive Earthquakes - Possible Countermeasures," First European Conference on Earthquake Engineering and Seismology, a joint event of the 13th ECEE & 30th General Assembly of the ESC, Geneva, Switzerland, 3-8 September 2006, No. 1333, CD-ROM.

- **TAHGHIGHI**, H. and Konagai, K., (2006). "Prediction of Lateral Response of Nonlinear Soil-Pile group Interaction," American Society of Civil Engineers, ASCE, Geo Congress 2006, Atlanta, USA, Feb. 26 – March 1, 2006, CD-ROM.

- **TAHGHIGHI**, H. and Konagai, K. (2006). "Lessons from Devastations in Recent Massive Earthquakes and Necessary Remedial Countermeasures," First Scientific Seminar of Academic Society of Iranian in Japan, Tokyo, Japan.

- **TAHGHIGHI**, H. and Konagai, K. (2005). "Nonlinear Soil-Pile Interaction Analysis in a Simplified Method," The 2005 Joint ASCE/ASME/SES Conference on Mechanics and Materials, Baton Rouge, LA, USA.

- حسین تحقیقی، امیرحسین شفیعی (۱۳۹۲). "بررسی بهسازی لرزه ای ساختمان های بتنی- مطالعه موردی یک ساختمان پنج طبقه واقع در شهر اصفهان" دومین کنفرانس ملی صنعت بتن، دانشگاه سمنان، ایران

- محمدرضا طامه، حسین تحقیقی (۱۳۹۳). " بررسی نتایج تحلیل های غیرخطی استاتیکی مودال و تاریخچه زمانی در سازه های مجهز به جداگر لرزه ای" هشتمین کنگره ملّی مهندسی عمران، دانشگاه صنعتی بابل، ایران

- حسین تحقیقی، مجتبی نوروززاده (۱۳۹۳). " بررسی اثر مولفه قائم زلزله بر روی پل های بتنی در نواحی نزدیک گسل" هشتمین کنگره ملّی مهندسی عمران، دانشگاه صنعتی بابل، ایران
- حسین تحقیقی، محمد اربابی (۱۳۹۳). " مطالعه تأثیر اندرکنش خاک و سازه بر پاسخ لرزه ای غیرخطی ساختمان های فولادی" هشتمین کنگره ملّی مهندسی عمران، دانشگاه صنعتی بابل، ایران

- مجید شبخوان، حسین تحقیقی، حسن استادحسین (۱۳۹۳). " نیروهای کینماتیکی لرزه ای در شمع ها ی منفرد واقع در محیط خاک لایه ای غیرخطی" هشتمین کنگره ملّی مهندسی عمران، دانشگاه صنعتی بابل، ایران

- سردار سیدقادری مکری، حسین تحقیقی (۱۳۹۴). "مطالعه و ارزیابی دقت روش تحلیل استاتیکی غیرخطی در تعیین بازتاب لرزه ای سازه ها در ساختگاه حوزه نزدیک و دور از گسل" هفتمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله، تهران، ایران

- محمدحسین محمدخانی، حسین تحقیقی (۱۳۹۴). بررسی رفتار لرزه ا ی مهار بازویی و کمربند خرپایی به عنوان سیستم مقاوم جانبی برای ساختمان های بلند فولادی" هفتمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله، تهران، ایران

- امیر قدیمی‌چرمهینی، حسین تحقیقی (۱۳۹۵). " بررسی رفتار تونل‌های متقاطع با گسل برمبنای مطالعات آزمایشگاهی و عددی" نهمین کنگره ملی مهندسی عمران، دانشگاه فردسی مشهد، مشهد ایران

- محمد رشید غلامی کوپائی، حسین تحقیقی، مهدی البرزی ورکی (۱۳۹۵). "تحلیل غیرخطی ستون‌های بتن مسلح مدور مقاوم‌سازی شده توسط مصالح CFRP" نهمین کنگره ملی مهندسی عمران، دانشگاه فردسی مشهد، مشهد ایران

- فروغ یگانه‌کیوانی، حسین تحقیقی، احمد روشنایی (۱۳۹۵). "تحلیل لرزه‌ای پل‌های کابلی ترکه‌ای به روش دینامیکی تاریخچه زمانی و استاتیکی غیرخطی" نهمین کنگره ملی مهندسی عمران، دانشگاه فردسی مشهد، مشهد ایران

- امیر قدیمی‌چرمهینی، حسین تحقیقی (۱۳۹۶). "بررسی اثر جابجایی گسل معکوس سولقان بر تونل انتقال آب سبزکوه به روش تحلیل اجزاء محدود" دهمین کنگره ملی مهندسی عمران، دانشکده مهندسی عمران، دانشگاه صنعتی شریف، تهران، ایران

- حسین تحقیقی، وحید مظفری بیدگلی (۱۳۹۶). "ارزیابی لرزه ای و استاتیکی گنبد تاریخی مسجد آقا بزرگ کاشان" دهمین کنگره ملی مهندسی عمران، دانشکده مهندسی عمران، دانشگاه صنعتی شریف، تهران، ایران

- محمد حسین مومنیان، حسین تحقیقی، امیرحسین لذیذی (۱۳۹۷). "بازار تاریخی کاشان: شکل‌گیری، ساختار سازه‌ای، آسیب-شناسی و مشاهدات میدانی" دومین همایش تخصصی توانمندسازی میراث معماری و شهری در برابر زلزله، تهران، ایران

- محمد حسین مومنیان، حسین تحقیقی (۱۳۹۷). " بازار تاریخی کاشان: آسیب‌شناسی، ارزیابی لرزه‌ای و پیشنهاد روش بهسازی" دومین همایش تخصصی توانمندسازی میراث معماری و شهری در برابر زلزله، تهران، ایران

- امیرحسین لذیذی، حسین تحقیقی، محمدحسین مومنیان (۱۳۹۸). "ارزیابی آسیب‌پذیری طاق و چشمه‌های دارای پلان نامتقارن در بازار تاریخی کاشان - ارائه راهکارهای بهسازی" یازدهمین کنگره ملّی مهندسی عمران، دانشگاه شیراز، شیراز، ایران

- ایمان غریبیان، حسین تحقیقی (۱۴۰۱). "ارزیابی خطرپذیری لرزه‌ای بازار تاریخی کاشان به روش تحلیل سلسله مراتبی" سیزدهمین کنگره ملی مهندسی عمران، دانشگاه صنعتی اصفهان، اصفهان، ایران.

Scientific Research Reports:

- TAHGHIGHI, H. and Ghafuri, M.M. (2023) "Risk Assessment of Kashan Water and Wastewater Systems Subjected to Earthquake Hazard" Grant-in-Aid for Scientific Research, No. 401/36444, Kashan Water and Watewater Company, Kashan, Iran (in Persian).

- TAHGHIGHI, H. (2019) "Vulnerability Study and Seismic Improvment of RC Highway Bridges: A Case Study of Shadchai Bridge on Tehran-Saveh Highway" Grant-in-Aid for Scientific Research, No. 95-3-1372, Road, Housing and Urban Develeopment Research Center, Tehran, Iran (in Persian).

- TAHGHIGHI, H. (2016) "Evaluation Of Earthquake Faulting Effects On The Performance of Buried Pipelines" Grant-in-Aid for Scientific Research, No. 612499, The University of Kashan, Iran

- TAHGHIGHI, H. (2015) "Seismic Performance Assessment Of Multi-Story Structures Considering Nonlinear Winkler-Based Soil-Structure Interaction Model" Grant-in-Aid for Scientific Research, No. 493460, The University of Kashan, Iran

- TAHGHIGHI, H. (2014). "On the structural seismic evaluation of pipelines against earthquake hazards" Grant-in-Aid for Scientific Research, No. 367710, The University of Kashan, Iran

- TAHGHIGHI, H. (2012). "Investigation of active structural control for seismic protection of high-rise buildings under large earthquakes," Grant-in-Aid for Scientific Research, No. 547, The University of Kashan, Iran

- TAHGHIGHI, H. (2011). "Pile foundation seismic behavior in layered soil media

considering soil-structure interaction," Grant-in-Aid for Scientific Research, No. 79459, The University of Kashan, Iran

- TAHGHIGHI, H. and Konagai, K. (2008). "Hybrid Stochastic Simulation of Near-Fault Strong Motion Records from the 1999 Chi-Chi, Taiwan Earthquake," Report on JSPS Research Project for Rational Design of Lifelines Near Seismic Faults, The University of Tokyo, Japan.

- TAHGHIGHI, H. (2007). "Seismic Retrofitting of Foundation – A Preliminary Research on Laterally Loaded Pile group Foundations for Japan Railway (JR) Shinkansen Bridge Project," Report on JR Research Project, Institute of Industrial Science, The University of Tokyo, Japan.

MSc Thesis Supervised:

1. Evaluation of accuracy in nonlinear static analysis for steel moment-resisting frames under near-fault earthquakes

2. Analysis of pile foundations in layered soil media due to nonlinear soil-pile kinematic interaction

3. On the performance of high-rise building subjected to long-period ground motions

4. Evaluation of blast loads effects on conventional reinforced concrete buildings

5. Response Modification Factor of Steel Structures with Buckling Restrained Braced Frame (BRBF)

6. Performance of steel structural buildings incorporating nonlinear soil–structure interaction effects

7. The investigation of modal pushover analysis and incremental dynamic analysis in isolated steel buildings

8. Seismic assessment of reinforced concrete bridges due to the vertical earthquake component at near-fault area

9. Seismic behavior of buried pipelines due to surface-faulting

10. On the seismic performance evaluation of outrigger and belt truss for steel high-rise buildings as a lateral resistant system

11. A numerical study on nonlinear response of steel plate shear wall systems by using strip models

12. Finite element analysis of buried steel pipelines subjected to reverse faults displacement

13. Progressive collapse assessment of seismically designed steel frame buildings

14. Response and damage investigation of RC frames due to blast loadings

15. Evaluating response modification factor in hybrid buckling-restrained braced frames

16. Seismic analysis of special moment frame buildings supported by shallow flexible foundations

17. Numerical study on the dynamic and static behavior of cable-stayed bridge under seismic loading

18. High-rise buildings behavior under earthquake loads by using belt truss and outriggers systems

19. Effect of concentric braces on behavior factor of steel structure by pushover analysis

20. Non-linear response evaluation of cable stayed bridges with time history and pushover analysis methods

21. Performance assessment of reinforced concrete buildings located on shallow foundation considering nonlinear soil-structure interaction

22. Finite element analysis of tunnels behavior due to reverse fault displacement

23. Seismic retrofit of circular reinforced concrete columns confined with CFRP

24. Seismic risk assessment of oil steel storage tanks using finite element analysis method and comparison with code provisions

25. Seismic vulnerability assessment of reinforced concrete highway bridges –A case study on Shad-Chaiy bridge

26. Rapid screening and seismic vulnerability evaluation of hospitals in kashan

27. Seismic vulnerability analysis of the different arches of kashan historical bazaar using finite element method

28. Assessing performance of RC highway bridges at high seismic hazard zones using fragility curves

29. Investigating the performance of seismic isolation systems in improving the behavior of urban bridges under Earthquake (A case study on the Hesarak Bridge)

30. Effects of ground motion scaling procedures for the seismic assessment of steel liquid petroleum storage tanks

31. Structural seismic assessment of the Kashan historical Bazaar considering the soil-structure interaction

32. Effect of Masonry Infills on the Seismic Behavior of Very Important Steel Moment Frame Buildings

33. A comparison of the seismic performance improvement of existing hospital buildings using new retrofitting systems: A case study on the Shahid Beheshti Hospital, Kashan

34. Seismic risk assessment of Kashan historical Bazar using Analytical Hierarchy Process

35. Evaluation of progressive collapse of seismically designed steel frame buildings taking into account the infill wall

36. Investigating the resilience of Ardestan city against earthquakes (Case study: four neighborhoods of Koushk, Abali, Rahmian, Fehra)

37. Assessing and evaluating the resilience of urban infrastructure against earthquakes (Case study: water facilities in Kashan city)

BSc Thesis Supervised (in Persian):

سرپرستی پایان‌نامه‌های کارشناسی به فارسی:

- بتن و فن آوری نانو

- دستاوردهای جدید علمی در زمینه روشهای کاهش آسیب پذیری سازه ها و کمک به مدیریت بحران در برابر زلزله

- بررسی طراحی و رفتار لرزه ای مخازن ذخیره مایعات و گازها

- بررسی آسیب پذیری لرزه ای سازه های بتنی با دیوارهای پر کننده مصالح بنایی

- چگونگی تاثیر زلزله بر شریان های حیاتی

- مدل‌سازی خرابی ناشی از رطوبت در مقاومت مخلوط آسفالتی

- کاربرد مایکروپایل در بهسازی و تقویت پی سازه ها

- بررسی روشهای ترمیم و مقاوم سازی سازه ها

- ایمنی سیستم حمل و نقل جاده ای

- بررسی و مقایسه سیستم های مختلف سازه ای مقاوم در برابر بار جانبی