# Mahmood HOSSEINI's Detailed Curriculum Vitae



With a group of my MSc and PhD students during SEE-8 Conference in Tehran, in Nov. 2019

Updated in August 2023



Life is an opportunity to make the best out of you, and help others to do the same too.

# **Present Occupations:**

- Professor, Dept. of Civil Eng., Faculty of Eng., Eastern Mediterranean University (EMU), Famagusta, North Cyprus, Email: <a href="mailto:mahmood.hosseini@emu.edu.tr">mahmood.hosseini@emu.edu.tr</a>
  Phone: +90 392 630 2361, Cell: +90 539 102 4894
- Board Member of the Center of Excellence in Architectural Technology (CEAT) of University of Tehran (UT)

#### **Pending Occupation (on leave):**

• Emeritus Faculty Member, Structural Eng. Research Center, Int'l Institute of Earthquake Eng. and Seismology (IIEES), Tehran, Iran

# **EDUCATION:**

**M.Sc.** in Civil Engineering (Majoring in Structural Engineering), Department of Civil Engineering, School of Engineering, University of Tehran, 1979-1987.

It is worth mentioning that in 1979, when I graduated from high school, and took part in the National University Entrance Exam of the country, the admission policy of College of Engineering of University of Tehran was accepting students directly for a Master's Degree. So I started studying Civil Engineering in 1979, and after completing all credits of the Bachelor's Level, I straightly continued studying for the Master's Degree and accomplished it in 1987. It is also worth mentioning that all universities were closed in the country for 2.5 years due to the so-called 'Cultural Revolution'. So, after high school my studies for the MSc Degree took around 8 years.

<u>Thesis Title</u>: Dynamic Analysis of Multi-Span Beams Having Internal Discontinuity under Impulsive Loads

**Ph.D.** in Civil (Structural) Engineering, Concentrating on Dynamics of Structures and Earthquake Engineering, Civil Engineering Department, Science and Research Branch of the Islamic Azad University (IAU), Tehran, Iran, 1987-1991\*.

<u>Dissertation Topic</u>: Stochastic Response of Nonlinear MDOF Systems Subjected to Nonstationary Earthquake Excitations

<sup>\*</sup> This has been the first Ph.D. degree awarded inside Iran in the Engineering Field.

### **SPECIAL VISIT & TRAINING:**

- A 45-day Scientific and Technical Visit in summer 1989 to Japan, visiting several Japanese universities and research centers, including Earthquake Engineering Research Center of Tokyo University, Institute of Industrial Science (IIS), Chiba Experimental Station of Tokyo University, Kajima Corporation, Tsukuba Science City, Okumura Corporation, Tsukuba University, Building Research Institute (BRI), Public Work Research Institute (PWRI), Kyoto University and its Uji Campus, Kobe University, and Port Island, during which I visited several professors and researchers, including Professors Minami, Katayama, Okamoto, Kameda, Iemura, Minaii, Matsushima, Yamazaki, and Takada, and had technical discussion with some of them with regard to various Earthquake Engineering Issues, as well as my Ph.D. Dissertation.
- Earthquake Sources and Regional Lithospheric Structures from Seismic Wave Data, A One-month Training Course held at International Center for Theoretical Physics (I.C.T.P.), Italy, in November 1990, and taught by Professors from Italy, USA and Russia, including Professors Panza, Jordan (from MIT), and Levinsky, etc.

## **COMPLEMENTARY EDUCATION (most recent first):**

- Seismic Isolation Theory, Practice and Techniques for Developing Countries, Short course at IIEES, Instructed by Prof. James Kelly from University of California at Berkeley, USA, and Dr. Farzad Naeim from John A. Martin & Associates, USA, May 1999.
- Earthquake Resistant Design of Reinforced Concrete Structures, Short course at IIEES, Instructed by Prof. Thomas Paulay from University of Canterbury, New Zealand, May 1995.
- Aseismic Design of Steel and R/C Structures, Lectures presented at IIEES by Dr. Farzad Naeim from John A. Martin & Associates Inc., USA, June 1994.
- Random Vibrations with Application to Earthquake Engineering, and Recent Advances in Passive and Active Control, Short Course at IIEES Instructed by Prof. G. Ahmadi from Clarkson University, USA, July 1993.
- Lessons from Earthquake Damages, Seismic Diagnostic Method, Repair and Retrofitting, and Design Guidelines, Lectures Presented at IIEES by Dr. M. Hirosawa from BRI, Japan, March 1992.
- Forced vibration, Seismic Instrumentation, and Testing of Buildings, Lectures presented at IIEES, by Dr. Y. Yamazaki from BRI, Japan, November 1991.

## **SABBATICAL LEAVE:**

- Conducting a thorough study on "Seismic Upgrading of Gas and Water Systems" as the Sabbatical Leave Study and Research Work in School of Civil and Environmental Engineering, Cornell University, USA, June 2001 September 2002.
- Developing the curriculum of a new course entitled "Earthquake Considerations in Architectural and Urban Design", proposed to and approved by the School of Architecture of Cornell University, and teaching that course there in second semester of school year 2001-2002.
- Teaching another course entitled "Structural Concept" in the School of Architecture of **Cornell University** in summer semester of 2002.

### **INVENTIONS AND AWARDS (oldest first):**

- A technique for strengthening the existing buildings and adding a safe space to them, by Farzad Salimi and Mahmood Hosseini, registered by Iran Patent Organization by No. 32389, 1384 (2005).
- A rolling-based seismic isolating system made of two pairs of orthogonal rollers moving on concave beds, by Kambiz Kangarlou and Mahmood Hosseini, registered by Iran Patent Organization, 1385 (2006).
- Pillow-Shape Seismic Isolator, by Ali Tayaran and Mahmood Hosseini, Iran Patent 139450140003003700, 1394 (2015).
- Resilient Buildings by Using Replaceable Dampers and Rocking Motion, by Ehsan Noroozinejad Farsangi and Mahmood Hosseini, Iran Patent 139650140003014284, 1396 (2017).
- Multi-tapered yielding plate energy dissipater, WO/2017/141083, Seyed Sasan ALAVI SHIRKHORSHIDI and Mahmood HOSSEINI, Priority 2016-02-15 Filed 2016-04-26 Published 2017-08-24.
  - https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2017141083&\_cid=P11-L0CR1B-99659-1
  - Gold medal of the 46<sup>th</sup> Invention Exhibition of Geneva for MTYPED device, Geneva, Switzerland, April 2018.
  - Gold medal award of the Romanian Ministry of Science and Technology for the MTYPED device, Geneva, Switzerland, April 2018.
- <u>Seesaw structural systems for seismic low-rise buildings</u>, <u>WO/2020/240260</u>, Seyed Sasan ALAVI SHIRKHORSHIDI and Mahmood HOSSEINI, Priority 2019-05-30, Filed 2019-05-30, Published 2020-12-03.
  - $\underline{https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2020240260\&\_cid=P11-L0CR58-00565-1$
- Foamed hair-reinforced clay (FHRC) with less density and more resistance than ordinary clay, **WO/2022/038390**, Mona ZARYOUN and Mahmood HOSSEINI, International Filing Date 19.08.2020, Publication Date 24.02.2022 (Formerly Patented in Iran in 1397 (2018), 139750140003003955).
  - $\underline{https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022038390\&\_cid=P11-\underline{L0CPZ1-86182-1}$

# **PUBLICATIONS:**

In the following publications lists the names shown in orange and red belong, respectively, to my MSc and PhD students, contributing to the publications, that I have been their main advisor or supervisor, and those in blue belong to the PhD students that I have been their co-advisor. The names of my female co-authors are shown in pink (showing my commitment to advancing equity and inclusion of female students and scholars), and those of the co-authors, from remote areas and universities other than the capital's universities, have been underlined (indicating my commitment to advancing equity and inclusion of students from underrepresented and remote areas). Furthermore, the work Architecture and all Architecture-Related words have been shown in green, to show the extent of my concern in this regard.

## **ISI & Web of Science Papers (oldest first):**

1. **Hosseini, M.** and Imagh-e-Naiini, M., A Quick Method for Estimating the Lateral Stiffness of Building Systems, *The Structural Design of Tall Buildings*, Vol. 8, pp 247-260, September 1999.

2. Mansour-Khaki A., **Hosseini**, M., and **Shariat**, A., Evaluating the Performance of Urban Transportation Networks in the Aftermath of an Earthquake in Large Populated Cities, *International Journal of Engineering*, Vol. 14, No. 4, 2003.

- 3. **Hosseini, M.**, Behavior of Nonstructural Elements in the 2003 Bam, Iran Earthquake, *Earthquake Spectra*, Vol. 21, No. S1, pages S439-S453, December 2005.
- 4. Izadkhah, Y. O. and Hosseini, M., Towards Resilient Communities in Developing Countries through Education of Children for Disaster Preparedness, *International Journal of Emergency Management*, Vol. 2, No. 3, 2005.
- 5. Mahmoudabadi M., Ghafory-Ashtiany, M. and Hosseini, M., Identification of Modal Parameters of Non-Classically Damped Linear Structures under Multi-Component Earthquake Loading, *International Journal of Earthquake Engineering and Structural Dynamics*, Vol. 36, No. 6, pp765-782, 2007.
- 6. Ghafory-Ashtiany M. and **Hosseini, M.**, Post Bam Recovery and Reconstruction, *International Journal of Natural Hazards*, Vol. 44, No. 2,pp229-241, Feb. 2008.
- 7. Firoozi Nezamabadi, M., Moghadam, A. S., and **Hosseini**, **M.**, The Effect of Vertical Component of Earthquake on Seismic Response of Torsionally Coupled Systems, *Journal of Applied Sciences*, Year 2008, Volume 8, Issue 22, Page No. 4029-4039.
- 8. <u>Azizpour</u>, O. and **Hosseini**, M., A Verification Study of ASCE Recommended Guidelines for Seismic Evaluation and Design of Combination Structures in Petrochemical Facilities, *Journal of Applied Sciences*, Vol. 9, No. 20, pp3609-3628, 2009.
- 9. Haddad Shargh, F. and Hosseini, M., A study on the existence of an optimal distribution of stiffness over the height of mid- to high-rise buildings to minimize the seismic input energy, *Journal of Applied Sciences*, Vol. 10, No. 1, pp45-51, January 2010.
- 10. **Hosseini**, **M.** and **Izadkhah**, Y. O., Training Emergency Managers for Earthquake Response: Challenges and Opportunities, *International Journal of Disaster Prevention and Management*, Vol. 19, No. 2, pp185-198, April 2010.
- 11. Vaziri, Pantea; Davidson, Rachel A.; Nozick, Linda K. and **Hosseini, M.**, Resource Allocation for Regional Earthquake Risk Mitigation: A Case Study of Tehran, Iran, *International Journal of Natural Hazards*, Vol. 53(3), pp527-546, 2010.
- 12. Izadkhah, Y. O. and **Hosseini, M.**, Sustainable Neighbourhood Earthquake Emergency Planning in Megacities, *International Journal of Disaster Prevention and Management*, Volume 19, Number 3, pp345-357, 2010.
- 13. <u>Roudsari</u>, M.T. and **Hosseini**, M., Using neural network for reliability assessment of buried steel pipeline networks subjected to earthquake wave propagation, *Journal of Applied Sciences*, 11(18), pp.3233-3246, 2011.
- 14. **Hosseini**, Mahmood, and **Samira Jalili**. "Assessment of the Nonlinear Behavior of Connections in Water Distribution Networks for Their Seismic Evaluation." *Procedia engineering* 14 (2011): 2878-2883.
- 15. **Hosseini**, Mahmood, Hossein <u>Sadeghi</u>, and Seidali <u>Habiby</u>. "Comparing the nonlinear behaviors of steel and concrete link beams in coupled shear walls system by finite element analysis." *Procedia engineering* 14 (2011): 2864-2871.
- 16. Faroughi, Alireza, and Mahmood **Hosseini**. "Simplification of earthquake accelerograms for quick time history analyses by using their modified inverse Fourier Transforms." *Procedia Engineering* 14 (2011): 2872-2877.
- 17. **Hosseini, M.** and Soroor A., Using Orthogonal Pairs of Rollers on Concave Beds (OPRCB) as a Base Isolation System Part (I): Analytical, Experimental and Numerical Studies of OPRCB Isolators, *Journal of Structural Design of Tall and Special Buildings*, Vol. 20, Issue 8, pages 928–950, December 2011 [First published online in 08 March 2010].

- 18. **Hosseini, M.** and Noroozinejad Farsangi, Ehsan, Telescopic Columns as a New Base Isolation System for Vibration Control of High-rise Buildings, *International Journal of Earthquakes and Structures*, Vol. 3, No. 3: pp853-867, Dec. 2012.
- 19. Ranjbaran F, Hosseini M, Soltani M. Simplified formulation for modeling the nonlinear behavior of confined masonry walls in seismic analysis. *International Journal of Architectural Heritage*. 2012 May 1; 6(3):259-289.
- 20. **Hosseini, M.** and Soroor A., Using Orthogonal Pairs of Rollers on Concave Beds (OPRCB) as a Base Isolation System Part (II): Application to Multi-Story and Tall Buildings, *Journal of Structural Design of Tall and Special Buildings*, Vol. 22, Issue 2, pages 192–216, Feb. 2013 [First published online in 28 December 2010].
- 21. <u>Tahamouli</u> Roudsari, Mehrzad and **Hosseini**, M., On the Relation between Rigorous and Simplified Models for the Dynamic Response Analysis of Multi-component and Multi-support Excitations, *Journal of Earthquake Spectra*, Vol. 29, Issue 2, pp. 527-546, May 2013.
- 22. Poursamad Bonab, A., Hosseini Hashemi, B. and **Hosseini**, M., Experimental evaluation of the elastic buckling and compressive capacity of laced columns, *Journal of Constructional Steel Research*, 86, 66-73, 2013.
- 23. Varsei, M., S. Shaikhzadeh Najar, M. Hosseini, and M. Seyed Razzaghi. "Bending properties of fine-grained concrete composite beams reinforced with single-layer carbon/polypropylene woven fabrics with different weave designs and thread densities." *Journal of the Textile Institute* 104, no. 11 (2013): 1213-1220.
- 24. **Hosseini M**, Emamjomeh H. Entropy-based serviceability assessment of water distribution networks, subjected to natural and man-made hazards. *International Journal of Engineering Transactions* B: Applications. 2014 May 1; 27(5):675-88.
- 25. Ranjbaran, Fariman and **Hosseini, M.**, Seismic Vulnerability Assessment of Confined Masonry Wall Buildings, *Journal of Earthquakes and Structures*, Vol.7, No. 2, pp201-216, September 2014.
- 26. **Hosseini**, Mahmood, and Mehrzad Tahamouli Roudsari. "Minimum effective length and modified criteria for damage evaluation of continuous buried straight steel pipelines subjected to seismic waves." *Journal of Pipeline Systems Engineering and Practice* 6, no. 4 (2015): 04014018.
- 27. **Hosseini M**, Fekri M, Yekrangnia M. Seismic performance of an innovative structural system having seesaw motion and columns equipped with friction dampers at base level. *Structural Design of Tall and Special Buildings*. 2016 Nov; 25(16):842-65.
- 28. Rostami, Arash, Hamid Alielahi, Abdoreza Sarvghad Moghadam, and **Mahmood Hosseini**. "Steel Buildings' Seismic and Interaction Behavior, Under Different Shapes of Tunnel Drilling." *International Journal of Geotechnical Earthquake Engineering* (*IJGEE*) 7, no. 2 (2016): 1-23.
- 29. Zareei, Seyed Alireza, **Mahmood Hosseini**, and Mohsen Ghafory-Ashtiany. "Seismic failure probability of a 400 kV power transformer using analytical fragility curves." *Engineering Failure Analysis* 70 (2016): 273-289.
- 30. <u>Kashani</u>, Mostafa Ghanbari, Mahmood **Hosseini**, and Armin Aziminejad. "Reliability evaluation of water distribution network considering mechanical characteristics using informational entropy." *Structural Engineering and Mechanics* 58, no. 1 (2016): 21-38.
- 31. Faroughi, Alireza, Abdolreza S. Moghadam, and **Mahmood Hosseini**. "Seismic progressive collapse of MRF–EBF dual steel systems." *Proceedings of the Institution of Civil Engineers: Structures and Buildings* 170, no. 1 (2017): 67-75.
- 32. **Hosseini**, M., <u>Hashemi</u>, Banafshesadat and Safi, Zahra, Seismic design evaluation of reinforced concrete buildings for near-source earthquakes by using nonlinear time history analyses. *Procedia engineering*, 199 (2017):176-181.

- 33. Zareei, Seyed Alireza, **Mahmood Hosseini**, and Mohsen Ghafory-Ashtiany. "Evaluation of power substation equipment seismic vulnerability by multivariate fragility analysis: a case study on a 420 kV circuit breaker." *Soil Dynamics and Earthquake Engineering* 92 (2017): 79-94.
- 34. Mohammadpour, S. and Hosseini, M., 2017. Experimental system identification of a 63kv substation post insulator and the development of its fragility curves by dynamic finite element analyses. *Earthquake spectra*, 33(3), pp.1149-1172.
- 35. Nezamisavojbolaghi, K. and Hosseini, M., 2017. Behavior of Special Hospital Equipments as Rigid Block with Mass Eccentricity Subjected to Horizontal Component of Ground Motion. *Procedia engineering*, 199, pp.753-758.
- 36. Faroughi, A. and **Hosseini, M.**, Incremental dynamic analysis of SDOF by using nonlinear earthquake accelerograms based on modified Inverse Fourier Transform. *Journal of Vibroengineering*, 19(8) (2017):6170-6182.
- 37. <u>Milanchian</u>, R., **Hosseini**, M. and Nekooei, M., 2017. Vertical isolation of a structure based on different states of seismic performance. *Earthquakes and Structures*, *13*(2), pp.103-118.
- 38. Zareei, Seyed Alireza, **Mahmood Hosseini**, and Mohsen Ghafory-Ashtiany. "The role of equipment in seismic risk of power substations." *Proceedings of the Institution of Civil Engineers: Energy* 170, no. 4 (2017): 150-162.
- 39. **Hosseini, Mahmood**, Mohammad Ali Goudarzi, and Amirhossein Soroor. "Reduction of seismic sloshing in floating roof liquid storage tanks by using a Suspended Annular Baffle (SAB)." *Journal of Fluids and Structures* 71 (2017): 40-55.
- 40. Nejati, Faezeh, Mahmood Hosseini, and Amir Mahmoudzadeh. "Design of repairable regular steel buildings with square plan based on seesaw motion of building structure and using DADAS dampers." *International Journal of Structural Integrity* 8, no. 3, pp326-340, 2017.
- 41. Faroughi, A. and Hosseini, M., Quick Nonlinear Time History Analyses of SDOF by Using Simplified Earthquake Accelerograms Based on Modified Inverse Fourier Transform. *Romanian Journal of Acoustics and Vibration*, 14(1), p.11, 2017
- 42. Mahmoodi Kordkheili, Hamidreza, Gholamreza Ghodrati Amiri, and Mahmood **Hosseini**. "Axisymmetric analysis of a thermoelastic isotropic half-space under buried sources in displacement and temperature potentials." *Journal of Thermal Stresses* 40, no. 2 (2017): 237-254.
- 43. <u>Astaraki</u>, A., **Hosseini, M.,** Soroushian, A. and Jalili Ghazizadeh, M., Experimental and Numerical Investigations on the Effect of Rectangular Openings' Aspect Ratio on Outflow Discharge. *Journal of Applied and Computational Mechanics*, 4, pp.457-466, 2018.
- 44. <u>Taheri</u>, A., Hosseini, M. and Moghadam, A.S., Creation of innovative earthquake resistant steel buildings by dividing the structure into inner and outer parts having interaction by hysteretic dampers. *Journal of Vibroengineering*, 20(1), 2018.
- 45. <u>Mahdavi</u>, Vahid, **Mahmood Hosseini**, and Alireza Gharighoran. "Mushroom skeleton to create rocking motion in low-rise steel buildings to improve their seismic performance." *Earthquakes and Structures* 15, no. 6 (2018): 639-654.
- 46. Chavoshy, A., Amini Hosseini, K. and **Hosseini, M.**, Resiliency cube: A new approach for parametric analysis of earthquake resiliency in urban road networks. *International Journal of Disaster Resilience in the Built Environment*, 9(4/5), pp.317-332, 2018.
- 47. <u>Mahmoodi Kordkheili</u>, H., Ghodrati Amiri, G. and **Hosseini**, M., Axisymmetric wave propagation of thermoelastic transversely isotropic half-space under buried loading using potential functions. *Waves in Random and Complex Media*, 28(4), pp.760-783, 2018

- 48. <u>Dolatabadi</u> PD, Khanlari K, Ashtiany MG, **Hosseini M.**, Sensitivity of beam-column element stiffness matrix to the crack parameters, **Journal of Vibroengineering**; 20(4), June 2018.
- 49. Ashrafi, Hamed, Akbar Vasseghi, Mahmood Hosseini, and Milad Bazli. "Development of fragility functions for natural gas transmission pipelines at anchor block interface." *Engineering Structures* 186 (2019): 216-226.
- 50. Zaryoun, M. and **Hosseini, M.**, Lightweight fiber-reinforced clay as a sustainable material for disaster resilient architecture of future buildings. *Architectural Engineering and Design Management*, 15, no. 6 (2019): 430-444.
- 51. <u>Kazemifard</u>, H., **Hosseini**, M., Nekooei, M. and Hashemi, B.H., Numerical Study of the Circumferential Fuses Used in Steel Repairable Buildings with Seesaw Motion, *Latin American Journal of Solids and Structures*, *16*(3), 2019.
- 52. Milanchian, R. and Hosseini, M., Study of vertical seismic isolation technique with nonlinear viscous dampers for lateral response reduction, *Journal of Building Engineering*, 23, pp.144-154, 2019.
- 53. <u>Dolatabadi</u> PD, Khanlari K, Ashtiany MG, **Hosseini M.** System identification method by using inverse solution of equations of motion in time domain and noisy condition, *Physica A: Statistical Mechanics and its Applications*, 16:122680, Sep. 2019.
- 54. <u>Varzaneh</u>, Mehdi Najari, and Mahmood **Hosseini**. "Cyclic Performance and Mechanical Characteristics of the Oval-shaped Damper." *KSCE Journal of Civil Engineering* (2019): 23(11): 4747-4757.
- 55. Legzian, Gholamreza, Behrokh Hosseini Hashemi and **Mahmood Hosseini**, A study on the behavior of structures based on the rocking motion of rigid cores involving precompressed springs and viscous dampers, *Journal of Vibroengineering*, 21(8): 2180-2195, December 2019.
- 56. Ashrafy, Mohammad, Mehrzad TahamouliRoudsari, and **Mahmood Hosseini**. "A New Formulation for Establishing the Lateral Interaction Between Buried Steel Pipeline and Sandy Soil Subjected to Strike-Slip Faulting." *Journal of Pressure Vessel Technology* 142, no. 2 (2020).
- 57. Rostami, Arash, Abdolreza S. Moghadam, **Mahmood Hosseini** and Nima Asghari, Evaluation of Formation of Plastic Hinge and Seismic Behavior of Steel Structures Due to Soil–Structure–Tunnel Interaction, *Journal of Earthquake and Tsunami* (2020) Vol. 14, No. 3-4 (JUNE-AUGUST/20).
- 58. Milanchian, Reza and Mahmood Hosseini, Torsional response reduction of planasymmetric vertical seismic isolation by appropriate distribution of viscous and viscoelastic dampers, *Structures*, 27 (2020) 962–974.
- 59. Ardekani, Amirreza, I. Dabbaghchian, M. Alaghmandan, M. Golabchi, S. M. Hosseini, and S. R. Mirghaderi. "Parametric design of diagrid tall buildings regarding structural efficiency." *Architectural Science Review* 63, no. 1 (2020): 87-102.
- 60. <u>Kherad</u>, Soroush, **Mahmood Hosseini**, and Mehrtash Motamedi. "Seismic Performances of Conventional and LRB-Isolated Buildings Comparing to Seesaw Buildings." *Journal of Applied Engineering Sciences* 10, no. 1 (2020): 45-54.
- 61. **Hosseini, Mahmood**, Ehsan Ghalyani, and Nooshin Ghorbani Amirabad. "Development of double-variable seismic fragility functions for oil refinery piping systems." *Journal of Loss Prevention in the Process Industries* 68 (2020): 104259.
- 62. Kherad, Soroush, **Mahmood Hosseini**, and Mehrtash Motamedi. "Experimental study on a novel replaceable yielding-based energy dissipator for rocking and seesaw buildings." *The Structural Design of Tall and Special Buildings*, 29(15) (2020): e1795.

- 63. <u>Tamaddon</u>, S., **Hosseini**, M. and Vasseghi, A., The effect of curvature angle of curved RC box-girder continuous bridges on their transient response and vertical pounding subjected to near-source earthquakes, *Structures*, 28 (2020) 1019-1034.
- 64. Ghasemi, Sobhan, Maryam F. Nezamabadi, Abdolreza S. Moghadam, and **Mahmood Hosseini**. "Optimization of relative-span ratio in rocking steel braced dual-frames." *Bulletin of Earthquake Engineering* 19, no. 2 (2021): 805-829.
- 65. Labibi, H., M. Gerami, M. Hosseini, Sensitivity Analysis of Behavior of Simple Trapezoidal Steel Plates to Introduce a New Yielding Damper, *International Journal of Engineering, Transactions A*: Basics, Vol. 34, No. 10, (2021), 2302-2312.
- 66. Zaryoun, M., Hosseini, M. and Soleymani, K., "Sustainable architecture and earthquake resilience of vernacular Zegalli houses in northern Iran", *Engineering, Construction and Architectural Management*, Vol. 29 No. 2, pp. 1061-1085, 2021. https://doi.org/10.1108/ECAM-05-2020-0362
- 67. Jouneghani, Kourosh Talebi, Mohammad Sadegh Rohanimanesh, Mahmood **Hosseini**, and Morteza Raissi. "Reducing the lateral displacement of lead rubber bearing isolators under the near field earthquakes by crosswise dissipaters connected to rigid support structure: earthquake engineering." *Stavební obzor-Civil Engineering Journal* 30, no. 4 (2021).
- 68. Kamarroudi, Soroush Heidary, **Mahmood Hosseini**, and Khosrow Hosseini. "Influence of earthquake vertical excitations on Sloshing-Created P-Δ effect in elevated water Tanks: Experimental Validation, numerical simulation and proposing a modification for Housner model." *Engineering Structures* 246 (2021): 112995.
- 69. Tahamouli Roudsari, Mehrzad, Mahmood Hosseini, Mohammad Ashrafy, Milad Azin, Mohammadreza Nasimi, Morteza Torkaman, and Ali Khorsandi. "New method to evaluate the buried pipeline–sandy soil interaction subjected to strike slip faulting." *Journal of Earthquake Engineering* 26, no. 1 (2022): 89-112. (published online in 19 Sep. 2019)
- 70. Keihani K, Nasser Taghizadieh & Mahmood Hosseini, "Seismic Performance of Super Tall Steel Tubular Frames Buildings with Specific Energy Absorbing Stories", to appear in *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, 2022.
- 71. Kazemifard, Hossein, and Mahmood **Hosseini**. "Creating and designing repairable regular steel buildings with seesaw motion to achieve seismic resilience." *European Journal of Environmental and Civil Engineering* 26, no. 10 (2022): 4687-4708.
- 72. Tamaddon, S., M. **Hosseini**, and A. Vasseghi. "Effect of Non-Uniform Vertical Excitations on Vertical Pounding Phenomenon in Continuous-Deck Curved Box Girder RC Bridges Subjected to Near-Source Earthquakes." to appear in *Journal of Earthquake Engineering*, 2022.
- 73. Malekzadeh, Hoodean, Mahmood Hosseini, Hassan Abbasi, Armin Aziminejad, and Mohammadreza Adib Ramazani. "Developing a multi-variable vulnerability function for a class of multi-span continuous concrete box-girder highway bridges with emphasis on nearfield earthquakes." to appear in *European Journal of Environmental and Civil Engineering*, 2022.

74. Hafezi, Maryam, Armin Aziminejad, Mohammad Reza Mansoori, **Mahmood Hosseini**, and Abdolreza Sarvghad Moghadam. "Improving the torsional response of asymmetric buildings with self-centering controlled rocking steel braced frame system." *Advances in Structural Engineering* 25, no. 4 (2022): 789-803.

75. Mohammadpour Saman and **Mahmood Hosseini**, "Dispersion reduction of the analyses data for more reliable fragility curves of selected electric substations equipment", *Bulletin of Earthquake Engineering*, 2022, 1-26.

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- 76. Labibi, Hossein, Mohsen Gerami, and Mahmood Hosseini. "Experimental and Numerical Study of Pyramidal Steel Damper for Use in Frames with Diagonal Bracing." *International Journal of Steel Structures* (2022): 1-20.
- 77. Hamedi, Mohammad Reza, Mohsen Ghafory-Ashtiany, and Mahmood **Hosseini**. "Hybrid simulation modeling framework for evaluation of Thermal Power Plants seismic resilience in terms of power generation." *International Journal of Disaster Risk Reduction* 78 (2022): 103120.
- 78. Ghasemi, Sobhan, Maryam F. Nezamabadi, Abdolreza S. Moghadam, and **Mahmood Hosseini**. "Optimization of design parameters for controlled rocking steel braced dual-frames", *Earthquake Engineering and Engineering Vibration* (2022) 21: 1053-1068. http://doi.org/10.1007/s11803-022-2134-z
- 79. **Hosseini Mahmood**, Samira Azhari and Reihane Shafie Panah, "Extending the OPRCB Seismic Isolation System's Governing Equations of Motion to 3D State and Its Application in Multi-Story Buildings", to appear in *Earthquakes and Structures* (2023) 24(3).

# Other Peer-reviewed Journal Papers (in English or Persian - oldest first):

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- 198. <u>Sadeghi</u>, M., Hosseini, M. and <u>Pakdel Lahiji</u>, N., Developing Fragility Curves for Seismic Vulnerability Assessment of Tubular Steel Power Transmission Tower Based on Incremental Dynamic Analysis, Proceedings of the 15WCEE, Lisbon, Portugal, 24-28 September 2012.

- 199.Khalvati, A.H. and Hosseini, M., Experimental study of Dynamic Characteristics of 63kV & 132 kV Post Insulators with Flexible Conductors, Proceedings of the 15WCEE, Lisbon, Portugal, 24-28 September 2012.
- 200.Ranjbaran, F. and Hosseini, M., Analytical Fragility Curves of Confined Masonry Buildings, Proceedings of the 15WCEE, Lisbon, Portugal, 24-28 September 2012.
- 201.Bastami, M., Hajhasani, M. and Hosseini, M., Proposed Input Waves for Seismic Design of Power Substation Equipments, Proceedings of the 15WCEE, Lisbon, Portugal, 24-28 September 2012.
- 202.Haddad Shargh, F. and Hosseini, M., An Optimal Distribution of Stiffness over the Height of Buildings and its Influence on the Degree and Distribution of Earthquake induced Damages, Proceedings of the 15WCEE, Lisbon, Portugal, 24-28 September 2012.
- 203.Hosseini, M., Foulad L. and Foulad R., Seismic Evaluation of Narmashir, Iran, Concrete-Face Rockfill Dam by Using Dynamic Finite Element Analysis, Proceedings of the 15WCEE, Lisbon, Portugal, 24-28 September 2012.
- 204.Hosseini, M. and Abizadeh, Sh., Behavior of Reinforced Concrete Rectangular Aboveground Tanks Subjected to Near-Source Seismic Excitations, Proceedings of the 22nd Australasian Conference on the Mechanics of Structures and Materials, Sydney, Australia, 11-14 December 2012.
- 205.Hosseini, M. and Sheikhlou, F., A Comparative Study on the Seismic Performance of Moment Frames Steel Buildings, Designed by IBC and Eurocode, Based on Nonlinear Time History Analyses, Proceedings of the 22nd Australasian Conference on the Mechanics of Structures and Materials, Sydney, Australia, 11-14 December 2012.
- 206.Kashani Madani, B. and Hosseini, M., Optimal story-wise distribution of viscous dampers in a five-story building, Proceedings of the 22nd Australasian Conference on the Mechanics of Structures and Materials, Sydney, Australia, 11-14 December 2012.
- 207. Hosseini, M. and Bozorgzadeh, Saeedeh, Investigating Double-ADAS Device Behavior and Comparison with ADAS Device, Proceedings of SE-50EEE conference, Skopje, Macedonia, 29-31 May 2013.
- 208.Hosseini, M., Shadravan, Shideh and Farshadmanesh, Pegah, A Simple Procedure for Evaluation of Baffles Arrangement Effects on Sloshing Phenomenon in Rectangular Tanks Subjected to 3-Dimensional Earthquake Excitations Using FVM-ANN Technique, Proceedings of SE-50EEE conference, Skopje, Macedonia, 29-31 May 2013.
- 209.Hosseini, M. and Izadkhah, Y. O., Strengthening Women's Participation in Development Planning and Post–Earthquake Reconstruction, Proceedings of SE-50EEE conference, Skopje, Macedonia, 29-31 May 2013.
- 210.Hosseini, M. and Mirzaei, Iman, Simplification of Earthquake Accelerograms for Rapid Time History Analysis Based on the Impulsive Load Concept, Proceedings of COMPDYN 2013, Kos Island, Greece, June 2013.
- 211.Ramezani, S., Hosseini, M., A Study on the Near-Resonance Response of Machinery Structural Systems to Frequency-Sweep Input, Proceedings of the 11th International Conference on Vibration Problems (ICoVP), Z. Dimitrovová et al. (eds.), Lisbon, Portugal, 9-12 September 2013.
- 212.Hosseini, M., Arian Moghaddam, and Motovali Emami, S. M., A Method for Simplification of Earthquake Accelerograms for Rapid Time History Analysis Based on Time-Frequency Representations, Proceedings of the 11th International Conference on Vibration Problems (ICoVP), Z. Dimitrovová et al. (eds.), Lisbon, Portugal, 9-12 September 2013.
- 213. Hashemnejad Abrasi, M., Hosseini, M. and Tavousi Tafreshi, Sh., Seismic Evaluation of an Existing Overpass Steel Bridge by Time History Analysis for Its Retrofit Design,

- Proceedings of Thirteenth East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-13), Sapporo University, Japan, September 2013.
- 214. Hosseini, M. And Bozorgzadeh, Saeedeh, An Innovative Design for Repairable Regular Steel Buildings by Using a 4-Cell Configuration Structure with Some Inclined Columns at Base Level, Equipped with Double-ADAS Devices, and Security Cables at Corners, Proceedings of Thirteenth East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-13), Sapporo University, Japan, September 2013.
- 215.Hosseini, M. and Farshadmanesh, Pegah, Evaluating the Effect of Multiple Vertical Orthogonal Baffles on Sloshing Phenomenon in Rectangular Tanks Subjected to 3-Dimensional Earthquake Excitations, Proceedings of Thirteenth East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-13), Sapporo University, Japan, September 2013.
- 216.Hosseini, M., <u>Mousavi Tirabadi</u>, Younes and Hosseinzadeh, Naghd Ali, An Innovative Seismic Design for Repairable Regular Steel Buildings by Using Rocking Motion and Circumferential Energy Dissipating Columns at Base Level, Proceedings of Thirteenth East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-13), Sapporo University, Japan, September 2013.
- 217. Soleymani, Kaveh, Hosseini, M., Effects of Near-Field Earthquakes on Elevated Cylindrical Water Tanks, Proceedings of Thirteenth East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-13), Sapporo University, Japan, September 2013.
- 218. Hosseini, M. and Kherad, Soroush, A Multi-Stud Energy Dissipating Device as the Central Fuse to Be Used in Short- to Mid-Rise Regular Steel Buildings with Rocking Motion, International Van Earthquake Symposium, Van, Turkey, October 2013.
- 219.Hosseini, M.; Alireza Boorboor; and Pegah Farshadmanesh, Analysis of Water Distribution Buried Jointed Pipe Networks Subjected to Seismic Waves Considering the Nonlinear Behavior of Connections, Proceedings of ASCE Pipelines 2014 Conference: From Underground to the Forefront of Innovation and Sustainability: pp.1175-1186, August 2014.
- حيدري تفرشي ا مر حسيني مر روحاني منش م. عنوان: آسيب پذيري و بهسازي لرزه اي سازه ها: بررسي عملكرد ساختمان هاي قاب خمشي .220 حيدري تفرشي ا مر حسيني م. وحاني منش م. عنوان: آسيب پذيري و بهسازي لرزه اي سبي طبقات.
- 221. Hosseini, Mahmood, and N. <u>Ghorbani Amirabad</u>. "Yielding-Curved-Bars and Hemisphere Core Energy Dissipating Device as the Central Support of Repairable Buildings with See-Saw Motion." In Proc. of the 7th Int'l Conf. on Seismology and Earthquake Eng. (SEE-7), Tehran, Iran. 2015.
- 222. Mahmoudkhani, Sadegh and Mahmood Hosseini. "Dynamic Equations of Bidirectional Motion of the Uplift-Restrained OPRCB Isolator." In Proc. of the 7th Int'l Conf. on Seismology and Earthquake Eng. (SEE-7), Tehran, Iran. 2015.
- 223. Chavoshy, Amirpurya, Kambod Amini Hosseini and Mahmoud Hosseini. "Transportation Network Resiliency as a Measure of Performance throughout Earthquake, a Paradigm Shift." In Proc. of the 7<sup>th</sup> Int'l Conf. on Seismology and Earthquake Eng. (SEE-7), Tehran, Iran. 2015.
- 224. Hosseini, M. and <u>Ebrahimi</u>, H., Proposing a yielding-plate energy dissipating connection for circumferential columns of steel rocking buildings and investigating its proper properties by nonlinear finite element analyses. In 11th International Workshop on Advanced Smart Materials and Smart Structures Technology. Illinois, USA, 2015.
- 225. <u>Astaraki</u>, A., Hosseini, M. and Soroushian, A., More Accurate Estimation of Crack Discharge and its Effect on Seismic Serviceability of Water Supply Network, Proceedings of COMPDYN 2015, Greece.

- 226. Soroushian, A., M. Hosseini, and S. M. H. Khalkhali. "On the frequency content of errors originated in a time integration computational cost reduction technique." In Proceedings of 7<sup>th</sup> European congress on computational methods in applied sciences and engineering (ECCOMAS VII), Crete Island, Greece. 2016.
- 227. Haniyeh Okhovvat, Mahmood Hosseini and Mona Zaryoun, Disaster-Resiliency Aspects of Vernacular Architecture: Case Study of Dezful, Southwest Iran, In the 7<sup>th</sup> Conference of the International Society for Integrated Disaster Risk Management, Isfahan, Iran, 2016.
- 228. <u>Leili</u>, Nazanin and Mahmood Hosseini, Comparing the Earthquake Performance of Four Selected Hospitals in Tehran Based on the Fragility of Their Emergency Section Equipment, In the 7<sup>th</sup> Conference of the International Society for Integrated Disaster Risk Management, Isfahan, Iran, 2016.
- 229.Zaryoun, Mona and Mahmood Hosseini, On the Role of Modern Sustainable Architecture in Disaster-Resiliency of New Buildings and Cities, In the 7<sup>th</sup> Conference of the International Society for Integrated Disaster Risk Management, Isfahan, Iran, 2016.
- 230.Bayat, Zohreh and Mahmood Hosseini, On the Use of Spaces under City Bridges for Disaster Emergency Response and Post-Disaster Sheltering Case Study: Hafez Overpass Bridges in Tehran, In the 7<sup>th</sup> Conference of the International Society for Integrated Disaster Risk Management, Isfahan, Iran, 2016.
- 231.Adibzadeh, Seyed Benyamin and Mahmood Hosseini, Increasing the Seismic Resilience of Buildings Using Movable Bracing Elements for Temporary Night-time Retrofit, In the 7<sup>th</sup> Conference of the International Society for Integrated Disaster Risk Management, Isfahan, Iran, 2016.
- 232.Hashemi, Banafshehalsadat and Mahmood Hosseini, Effects of Earthquakes on Railway Transportation System, and Some Measures for Upgrading Its Resilience, In the 7<sup>th</sup> Conference of the International Society for Integrated Disaster Risk Management, Isfahan, Iran, 2016.
- 233.Khalkhali, S.M.H., Hosseini, M. and Aziminejad, A., Dividing Building's Structure into 4 Interactive Rocking Parts to Make It Repairable after Major Earthquakes, Proceedings of the 16<sup>th</sup> World Conference on Earthquake Engineering, Santiago, Chile, Jan. 2017.
- 234.Hosseini M., Z. Safi, B. Hashemi and B. Adibzadeh, Seismic Evaluation of RC and Steel Buildings Subjected to Near-Source Earthquakes by Using Nonlinear Time History Analyses, Proceedings of the 1<sup>st</sup> Global Civil Engineering Conference Kuala Lumpur, Malaysia, on July 25–28, 2017.
- 235.Hosseini, M and Seyed Benyamin Adibzadeh, Opportunities and Challenges for Compulsory Earthquake Insurance in Seismic Developing Countries Case Study of Iran, In the 8<sup>th</sup> Conference of the International Society for Integrated Disaster Risk Management, Reykjavik, Iceland, 2017.
- 236. Nezamisavojbolaghi, K., Hosseini, M. and Shafiei, A., 2017. Numerical Modeling of Infills in Asymmetric Steel Moment Frames for Their Dynamic Analysis with Progressive Collapse Approach. In Proceedings of the 6th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (pp. 1403-1418).
- 237. Shoghi, K.M.H., Izadkhah, Y.O. and Hosseini, M., 2017. Emergency Settlements Considering The Influential Buildings (Case Study: Chizar District Of Tehran).
- 238.Mohamad Reza Hamedi, Nadia Hamedi, Mahmood Hosseini, 2019. Reducing the risk of earthquake induced casualty through creation of safe spaces inside, Proceedings of the 7<sup>th</sup> Structural Engineers World Congress (SEWC2019), Istanbul.
- 239. Abolfathi Rad, Azita and **Hosseini, Mahmood**, 2019. Contents and equipment for creation of double-function buildings to be responsive to post-earthquake needs, Proceedings of the 7<sup>th</sup> Structural Engineers World Congress (SEWC2019), Istanbul.

- 240.Zaryoun, Mona and Hosseini, Mahmood, 2019. A Light-Weight and High Resistance Wall and False Ceiling System Made of Recycled and Natural Materials to Increase the Sustainability and Resilience of Buildings, Proceedings of the 7<sup>th</sup> Structural Engineers World Congress (SEWC2019), Istanbul.
- 241. <u>Tamadon</u>, Saeed and **Hosseini**, **Mahmood**, 2019. Effect of the Earthquake Incidence Angle on the Seismic Response of Steel Buildings with Plan Irregularity, Proceedings of the 7<sup>th</sup> Structural Engineers World Congress (SEWC2019), Istanbul.
- 242.Saeedi, Samira, Hosseini Hashemi, Behrokh and **Hossieni, Mahmood**, 2019. The use of TADAS device with variable heights of plates to control energy dissipation for earthquakes of different levels, Proceedings of the 7<sup>th</sup> Structural Engineers World Congress (SEWC2019), Istanbul.
- 243. Afshar, Zeinab and **Hosseini, Mahmood**, 2019. Architectural and Structural Designs of Neighborhood Self-help Centers Considering Sustainability and Resilience Aspects, Proceedings of the 7<sup>th</sup> Structural Engineers World Congress (SEWC2019), Istanbul.
- 244. <u>Haidarbaigi</u> Shademaneh, Peyman Homami, **Mahmood Hosseini**, The Effective Philosophy for Seismic Rehabilitation of Cylindrical Masonry Towers, Case: Tughrul Tower, Proceedings of the 7<sup>th</sup> Structural Engineers World Congress (SEWC2019), Istanbul.
- 245.Yazdeli, M.D. and Hosseini, M., Modeling and investigation of the floor isolation effect and application of yielding dampers by nonlinear dynamic analysis, The 8<sup>th</sup> Int'l Conf. on Earthquake Eng. and Seismology (SEE-8), IIEES, Tehran, Iran, May 2019.
- 246. Azimi Vaziri, Mohammad, Mahmood Hossein and Mehmet Cemal Geneş, "Creating a type of controlled soft story by using hardening springs for upgrading the seismic behavior of multistory buildings", 14<sup>th</sup> International Congress on Advances in Civil Engineering (ACE), Yıldız Technical University, Istanbul, Turkey, September 2021.
- 247. **Hosseini**, Mahmood; Almotasim Billah Alabeidy and Mehmet Cemal Geneş, Seismic Retrofit of Low- and Mid-Rise RC Buildings by Encasement Technique, ICE'22 International Conference on İstanbul and Earthquake, Istanbul Aydın University, Turkey, March 04 2022.
- 248.Mona Zaeyoun, Mahmood **Hosseini** and Heniyeh Okhovat, On Application of Flexible Architecture and Earthquake-Resilient Structures in Creation of Multi-Purpose Self-Help Neighborhood Centers for Post-Earthquake Emergencies, to be presented in the 15<sup>th</sup> Advances in Civil Engineering Conference (ACE-2023), EMU, Famagusta, North Cyprus, September 2023.
- 249.Amir Amirbeygloo and Mahmood **Hosseini**, The effect of foundations uplift on the seismic behavior of multi-story moment frames regular RC buildings, to be presented in the 15<sup>th</sup> Advances in Civil Engineering Conference (ACE-2023), EMU, Famagusta, North Cyprus, September 2023.
- 250.Mahmood Hosseini, Yasamin O. Izadkhah and Peyman Pir-Ata, Resilience in Construction Industry and Its Role in Upgrading the Quality of Post-Earthquake Sheltering and Reconstruction, to be presented in the 15<sup>th</sup> Advances in Civil Engineering Conference (ACE-2023), EMU, Famagusta, North Cyprus, September 2023.
- 251.Samira Yazdani1, Mahmood Hosseini2[0000-0003-3142-4087], Masoud Nekooei3Using Vertical Seismic Isolation by Dividing the Building's Structure into Interactive Parts, to be presented in the 15<sup>th</sup> Advances in Civil Engineering Conference (ACE-2023), EMU, Famagusta, North Cyprus, September 2023.

# INVITED TALKS AND PRESENTATIONS AT SHORT COURSES, SEMINARS AND WORKSHOPS (most recent first):

- Earthquake-Resilient Structural Systems for Buildings, in the 1<sup>st</sup> Global Civil Engineering Conference Kuala Lumpur, **Malaysia**, July 2017.
- Emergency Management in Lifeline Systems Subjected to Earthquakes (in Persian), in a 3-day Training Workshop on Management of Natural Disasters, Mashhad, Oct. 2014.
- Tehran Earthquake (in Persian), in a Side Seminar of Tehran International Building Fair, July 2013.
- Creation of Repairable Buildings in Seismic Areas (in Persian) in Iranian Society of Structural Design Engineers, 2012.
- Neighborhood Self-Aid Plan in Disasters and Its Pre-requisites, National Workshop of BNCU, Dhaka, **Bangladesh**, Nov. 2009.
- Structural Aspects of Earthquake Risk Mitigation Iranian Experience, National Workshop of BNCU, Dhaka, **Bangladesh**, Nov. 2009.
- Seismic Vulnerability of Lifelines and Industrial Facilities (in Persian), Presented in a Short Course, Entitled "Principles of Disaster Risk Management", held by IIEES, Dec. 2007.
- Upgrading Preparedness against Earthquake Crisis (in Persian), Presented in a Short Course, Entitled "Principles of Disaster Risk Management", held by IIEES in 1-5 December 2007.
- Seismic Risk and the Role of Health Sector in Its Reduction (in Persian), Presented in the 9<sup>th</sup> Monthly Seminar of "Professional Group for Health in Disasters, University of Tehran, Apr. 2006.
- Regional Disaster Risk Management: Possibilities and Challenges, in IIEES-UNESCO Workshop on "Earthquake: Education, information, Access", IIEES, Tehran, Dec. 2005.
- Health Care Centers and Disaster Mitigation: Architectural, Structural, and Emergency Management Issues, International Conference on Earthquake Engineering: Earthquake Engineering in 21st Century to Mark 40 Years of IZISS – Skopje, <u>Macedonia</u>, 27 August-1 September 2005.
- Disaster Risk Management in Mega Cities with Special Attention to Southwest Asia1st Conference on "Crisis and Disaster Management in Global Changes", Manamah, **Bahrain**, May 2005.
- Earthquake Disaster Management in Megacities (in Persian), in a UNDP-supported Workshop on Regional Project for Natural Disasters Risk Reduction Management, Mashhad, Aug. 2004.

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- Seismic Evaluation of Nonstructural Elements of Buildings, Short Courses held by the Management and Planning Organization of Iran and Iranian Earthquake Engineering Association, 2003-. (several times a year)
- The Role of Urban Planning and Design in Seismic Risk Mitigation, Seminar presented at Department of Architecture, School of Architecture and Applied Arts, Cornell University, USA, April 2002.
- Earthquake Considerations in Architectural and Urban Design, Presented in School of Architecture, University of Illinois at Urbana-Champaign, USA, March 2002.
- Seismology and Earthquake Engineering Research in Iran, Seminar presented at School of Civil and Environmental Engineering, **Cornell University**, USA, September 2001.
- Seismic Behavior of Structures and Principals of Dynamic Analysis of Structures, Short Course held by IIEES for consulting engineers, 2000.

### PROFESSIONAL EXPERIENCE:

Licensure as a Registered Professional Engineer (PE) with Senior Rank by Iran Construction Engineering Organization (IRCEO)

# **Professional Engineering Works (oldest first):**

- Civil and Structural Design, Andiss Consulting Engineers, 1985-88:
  - Design of Borujen fish farm, including water supply facilities, r/c canals and pools, warehouses, residential building, access road, and other related structures.
  - Design of Shahid Beheshti Education Center Building, with r/c space frames and having a total area of 1000 m2 approximately.
  - Design of Kalardasht fish farm, including intake, r/c canals and pools, warehouses, laboratory building, residential building, access road, and other related structures.
- Design of several multi-story residential buildings, with steel or r/c structures.
- Structural Drawings Check and Design Review and Modification, Engineering Office of Iranian Fisheries Corporation, 1988-1991:
  - Marvdasht fish farm.
  - Bandar Abbas quay,
  - Yasooj fish farm,
  - Shahid Rajaii Port breakwater,
  - Agh-Ghala fish farm,
- Consultancy on various 'Seismic Retrofit Projects' in Tehran Shaloodeh Consulting Engineers, 2003-2006, with regard to:
  - Shahid Chamran Hospital
  - College of Literature, University of Tehran
  - Faculty of Electrical Eng., Sharif University of Tehnology
  - Third Tower of Esteghlal Hotel
- Design check of the East Trans-country Gas Line (of Iran) crossing the Miamey seismic fault in Pars Consulting Engineers, 2007
- Supervision of various 'Seismic Retrofit Projects' in Behsazeh Andishan Arya Consulting Firm, and also IIEES, 2006-2019, with regard to:
  - Shiraz, Bojnoord, and Tabriz Petrochemical Plants
- Ministry of Agriculture
- Organization of Development and Renovation of Schools (of Iran), in various provinces, including Khorasan Razavi and Northern Khorasan, Golestan, Mazandaran, Guilan, West Azerbaijan, Kohgilooyeh and Boirahmad, Tehran and Semnan
- Ministry of Science, Research and Technology (various university buildings)

## **Teaching** (most recent first):

- 1. Statics (CIVL211), Advanced Structural Analysis (CIVL442), and Sustainability in Building Construction (CIVL575), Department of Civil Engineering, Faculty of Engineering, **Eastern Mediterranean University (EMU)**, Spring 2022.
- 2. Statics (CIVL211), Earthquake Resistant Design of Structures (CIVL477), and Capstone Projects (CIVL401&402), Department of Civil Engineering, Faculty of Engineering, **EMU**, Fall 2021.

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- 3. Statics (CIVL211), Introduction to Structural Dynamics (CE473), and Capstone Projects (CIVL401&402), Department of Civil Engineering, Faculty of Engineering, EMU, Spring 2021.
- 4. Statics (CIVL211) and Earthquake Resistant Design of Structures (CIVL477), Department of Civil Engineering, Faculty of Engineering, EMU, Fall 2020.
- 5. Statics (CIVL211) Structural Dynamics (CIVL570), Department of Civil Engineering, Faculty of Engineering, **EMU**, Spring 2020.
- 6. Statics (CIVL211) and Seismic Assessment of Existing Buildings (CIVL577), Department of Civil Engineering, Faculty of Engineering, **EMU**, Fall 2019.
- 7. Structural Mechanics (CIVL343), Civil Engineering, Faculty of Engineering, EMU, Summer 2019.
- 8. Fundamentals of Earthquake Engineering in Architecture, **Shahid Beheshti University**, Tehran, 2019-.
- 9. Fundamentals of Earthquake Engineering in Architecture, **Pars University** of Architecture and Art, Tehran, 2016-.
- 10. Theory of Elasticity and Plasticity, M.Sc. Program in Structural Engineering, **Dubai Branch of the Islamic Azad University (IAU)**, September 2014-2015.
- 11. Finite Element Method, M.Sc. Program in Structural Engineering, **Dubai Branch of the IAU**, September 2014-2015.
- 12. Modern Structures, Ph.D. Program in Architecture, **Dubai Branch of the IAU**, February 2014-2015.
- 13. Advanced Design of Concrete Structures, M.Sc. Program in Structural Engineering, **Dubai Branch of the IAU**, February 2014-2015.
- 14. Advanced Design of Steel Structures, M.Sc. Program in Structural Engineering, **Dubai Branch of the IAU**, February 2014-2015.
- 15. Advanced Building Systems, Graduate Program in Architecture, North Tehran Branch of the, IAU February 2013 to February 2014.
- 16. Advanced Construction Techniques, Graduate Program in Architecture, North Tehran Branch of the, IAU February 2013 to February 2014.
- 17. Modern Structures, Graduate Program in Architecture, North Tehran Branch of the IAU, February 2012-February 2013.
- 18. Fundamentals of Earthquake Engineering in Architecture, Graduate Program in Architecture Technology, School of Architecture, **University of Tehran**, 2006-. (every other semester)
- 19. Lifeline Earthquake Engineering, Graduate Program in Earthquake Engineering, Civil Engineering Department, School of Engineering, **University of Tehran**, 2005.
- 20. Seismic Vulnerability Analysis, Graduate Program in Engineering Management of Disasters, School of Environmental Engineering, **University of Tehran**, 2005.
- 21. Urban Facilities in Disasters, Graduate Program in Engineering Management of Disasters, School of Environmental Engineering, **University of Tehran**, 2004-2005.
- 22. Modern Structures, Doctorate Program in Architecture, Science and Research Branch of the IAU, 2003-2007. (every other semester)
- 23. Structural Concepts, School of Architecture, College of Architecture and Urban Design, Cornell University, USA, 2002.
- 24. Earthquake Considerations in Architectural and Urban Design, Graduate Program, College of Architecture and Urban Design, **Cornell University**, USA, 2002.
- 25. Finite Element Method, Graduate Program in Structural Engineering, South Tehran Branch of the IAU, 1999-.

- 26. Matrix Structural Analysis, Graduate Program in Structural Engineering, **Shahid Rajaii University**, 1998.
- 27. Advanced Structural Dynamics, Graduate, **IIEES** and Science and Research Branch of the **IAU**. 1997-.
- 28. Advanced Engineering Mathematics, Graduate Program in Structural Engineering, South Tehran Branch of the **IAU**, 1992-1993.
- 29. Earthquake Engineering, Graduate, Program in Structural Engineering, South Tehran Branch of the IAU, 1992-.
- 30. Dynamics of Structures, Graduate Program in Structural Engineering, South Tehran Branch of the IAU (1992-), IIEES (1996-), and Shahid Rajaii University (1998).
- 31. Statics, Undergraduate, IAU, 1994-1996.
- 32. Earthquake Engineering, Undergraduate, Central Tehran Branch of the IAU, 1991-1996.
- 33. Dynamics of Structures, Undergraduate, Central Tehran Branch of the IAU, 1991-1994.
- 34. Structural Analysis II, Undergraduate, Central Tehran Branch of the IAU, 1991-1996.
- 35. Structural Analysis I, Undergraduate, Central Tehran Branch of the IAU, 1991-1996.

# **Summary of Research Works (oldest first):**

Up to now, I have been either the Main Researcher or a Contributor to more than 75 research projects, including around 30 in IIEES, more than 35 in IAU, and 10 in other universities. These projects can be categorized in 5 main groups as follow (number of projects at each category are mentioned under each main topic along with the corresponding start dates of the first one in each category):

- 1. Seismic assessment and upgrade of existing, and design of future lifeline systems (including transmission lines, distribution networks as well as related special structures such as bridges, towers, dams, tanks and reservoirs, waterfront structures and also industrial facilities in refineries and power generation plants, electric substations, petrochemical plants, and so forth) and proposing risk management model for them *more than twenty projects*, *started from 1995*, *of which the two last ones are ongoing*
- 2. Improvement of seismic analysis and evaluation methods and seismic design and retrofit techniques (including seismic isolation and passive control) of various building systems, including steel, r/c and masonry *twenty five projects*, 1998-2010
- 3. Disaster education for increasing public awareness and development of a seismic safety culture and more effective risk communication *eight projects*, 2000-2006
- 4. Inclusion of regional and urban earthquake risk mitigation and disaster management strategies in urban planning and design as well as architectural design seven projects, 2006-2015
- 5. Innovative structural systems and materials for creation of earthquake-resilient buildings with sustainable architecture (including self-sufficiency in water and energy) more than fifteen projects, started from 2010, of which the three last ones are ongoing

## **Administration (oldest first):**

- Head of the Lifeline Earthquake Engineering Department, International Institute of Earthquake Engineering and Seismology (IIEES), December 1991-2017.
- Head of the Hydraulic Structures Group, Civil Engineering Dept., Graduate School, Tehran South Branch of the Islamic Azad University (IAU), December 1996- June 2001.
- Director of Graduate Studies Program, IIEES, July 1996-October 1998.

- Director of Structural Engineering Research Center, International Institute of Earthquake Engineering and Seismology (IIEES), September 2002 July 2004.
- Project Manager, Sub-regional Initiative for Disaster Risk Management in Southwest and Central Asia, A Regional Program at **UNDP** (Iran Office), July 2004-February 2005.
- Vice-President of Planning and Development, International Institute of Earthquake Engineering and Seismology (IIEES), February 2005 March 2007.
- Vice-President of Research and Technology, International Institute of Earthquake Engineering and Seismology (IIEES), March 2007 September 2007.

# **PAST ACADEMIC OCCUPATIONS (oldest first):**

- Assistant Professor in Civil Engineering Department, School of Engineering, Central Tehran Branch of the Islamic Azad University (IAU), December 1991 March 1996.
- Part-time Faculty Member at Structural Engineering Research Center, International Institute of Earthquake Engineering and Seismology (IIEES), December 1991 March 1996.
- Assistant Professor at Structural Engineering Research Center, International Institute of Earthquake Engineering and Seismology (IIEES), March 1996 March 2004.
- Associate Professor at Structural Engineering Research Center, International Institute of Earthquake Engineering and Seismology (IIEES), March 2004 June 2019.
- Associate Professor at Department of Civil Engineering, Faculty of Engineering, Eastern Mediterranean University (EMU), Famagusta, North Cyprus, June 2019 August 2021.

# **RESEARCH INTERESTS:**

- Earthquake-resilient buildings and repairable structures, combined with sustainable architecture (including self-sufficiency in water and energy), which can be usable quickly, even after major earthquakes and other extreme events
- Structural dynamics, especially seismic response analysis of nonlinear systems by both deterministic and stochastic approaches.
- Aseismic analysis and design of building systems, including steel, r/c and masonry
- Lifeline earthquake engineering, including the seismic design as well as seismic evaluation and retrofit of various lifeline systems subjected to different earthquake hazards like ground shaking, landslide, fault displacement, liquefaction, and tsunamis.
- Aseismic analysis and design of special structures such as bridges, towers, dams, tanks and reservoirs, waterfront structures and also industrial facilities.
- Urban planning and architectural and urban design in earthquake prone areas
- Risk mitigation and disaster management strategies
- Vibration isolation and absorption

### **TEACHING INTERESTS:**

- Dynamics of Structures (Basic and Advanced), with emphasis on problems in simplified models and quick dynamic analysis, with application to Seismic Analysis of Structures
- Earthquake Engineering (including Lifeline Earthquake Engineering), with emphasis on seismic response analysis and fundamentals of reliable seismic design, particularly innovative design for creating "repairable buildings", and disaster-avoiding design

- Advanced and Modern Structural Systems, with emphasis on using structure as architecture
- Structural Mechanics and Analysis (including Basic, Matrix and Finite Element Analyses), with emphasis on the basic concepts of structural behavior
- Statics, with emphasis on the physical facts based on which "engineering knowledge" is established
- Natural Hazards Considerations in Architectural and Urban Design, with emphasis on Flexible and Multi-purpose Architecture

# COOPERATION WITH NATIONAL AND INTERNATIONAL JOURNALS:

# Member of Editorial Board in:

- International Journal of Seismology and Earthquake Engineering and (JSEE)
- Bulletin of Earthquake Science and Engineering (BESE)

## **Invited as a Reviewer by:**

- Iranian Journal of Science and Technology
- Ferdowsi Civil Engineering Journal
- Civil Engineering Infrastructures Journal
- The Structural Design of Tall and Special Buildings
- Journal of Soil Dynamics and Earthquake Engineering
- World Journal of Engineering
- International Journal of Steel Structures
- Engineering Journal
- Smart Structures and Systems, An International Journal
- Archives of Civil and Mechanical Engineering
- Structural Durability & Health Monitoring
- Earthquake Spectra
- Shock and Vibration
- Tunneling and Underground Space Technology
- Advances in Civil Engineering
- Asian Journal of Civil Engineering
- International Journal of Disaster Risk Reduction
- Engineering Structures
- International Journal of Advanced Structural Engineering
- Structure and Infrastructure Engineering
- Thin-Walled Structures
- Bulletin of Earthquake Engineering
- Steel and Composite Structures, An International Journal
- International Journal of Steel Structures
- Earthquake Engineering and Engineering Vibrations
- Natural Hazards
- Earthquakes and Structures, An International Journal
- Journal of Steel Structures & Construction
- KSCE Journal of Civil Engineering
- .....

# **MEMBERSHIPS** (oldest first):

- Iranian Society of Structural Design Engineers, 1992-.
- Iranian Society of Civil Engineers (ISCE), 1994-, (Head of Structure and Earthquake Committee since 1997, and Vice-President during 2011-2018).
- Center for Nuclear Power Plant Structures, Equipment and Piping, North Carolina State University, 1994-1998.
- Iranian Earthquake Engineering Association (IEEA), 1995-, (Head of Membership Committee during 1999 2001 and Vice-President during 2006-2008).
- International Center for Disaster Mitigation Engineering (INCEDE), 1995-2000.
- Iranian Society of Structural Engineers (ISSE), 1995-.
- Center for Rebuilding Sustainable Communities after Disasters University of Massachusetts **Boston**, 2015-.
- American Society of Civil Engineers (ASCE), 2017-.
- American Institute of Architects (AIA), 2017-2018.

# **PERSONAL:**

- Born on Dec. 22, 1960 – Excellent Health (Thanks God),

Height: 184 cm (6 ft and ½ inch),

Weight: 93 kgf (205 lbs)

- Married with children: one daughter born in July 1994 and two sons (twins) born in March 1997
- Interested in poetry, traveling, and some sports (volleyball, ...)