CURRICULUM VITAE

Mohsen Kohrangi

EDUCATION

ROSE School, IUSS Pavia, Italy
Ph.D. Graduate School of Understanding and Managing the Extremes (UME), 2016
Ph.D. Program in Earthquake Engineering and Engineering Seismology

ROSE School, Pavia, Italy/***University of Patras***, Patras, Greece
M. Sc degree in Earthquake Engineering & Engineering Seismology (MEEES), 2010

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran
M. Sc. degree in Civil Engineering, Earthquake, March 2009

Azad University of Najafabad, Isfahan, Iran
B. Sc. in Civil Engineering, July 2006

DISSERTATION

Ph.D. Thesis
"*Beyond Scalar Intensity Measures for seismic risk assessment*"
The study is focused on investigation of innovative solutions to increase the accuracy of probabilistic seismic risk assessment.
- Development and application of vector probabilistic seismic hazard analysis program to be used in probabilistic seismic demand analysis and building-specific loss estimation.
- Development of advanced record selection approach based on conditional spectrum based method conditioning on alternative intensity measures.
- Development of a methodology for consideration of the site-to-site variability in seismic portfolio loss estimation in record selection and incorporation of fragility functions.

M. Sc. Thesis
ROSE School (2010)
"*Seismic Assessment of a 15-storey RC Building, AltoRio, Damaged in the Earthquake of Chile, 2010*"
Investigating the likely reasons for the damage of the case study structure and examining if the available codes and the current analysis tools are capable of addressing the observed event.

M. Sc. Thesis
- Amirkabir University of Technology (2008)
- "*Seismic Performance of Friction Damped Steel Structures in Near-Field Earthquakes*"
- Developing a performance based seismic design method for design of steel structures equipped by frictional bracing systems as well as introducing a method to optimize the corresponding sliding strength of the friction device; with consideration of the *Fling* and *Directivity* effects, in near-field events.

LANGUAGES
Persian, English • Italian (fluent) and Portuguese (Basic)

RELATED COURSE WORK
- ***ROSE SCHOOL***, Pavia, Italy,
Seismic Design of Prefabricated Concrete and Timber Structures, Numerical Methods in Structural Engineering, Displacement-based Design of Bridges, Earthquake Geotechnical Engineering, Nonlinear Seismic Analysis of structures, Fundamentals of Seismic Design, Seismic Design of Foundations, Seismic Design of Masonry Structures, Performance based earthquake engineering for tall buildings, Reliability analysis.

- ***University of Patras***, Patras, Greece

Experimental Methods in Earthquake Engineering, Advanced Material and Seismic Retrofit, Static and Dynamic Soil-Structure Interaction, Structural Dynamics and Earthquake Engineering

- ***Amirkabir University of Technology***, Tehran, Iran

Advanced Engineering Mathematics, Dynamics of Structures, Earthquake Resistant Building Design, Finite Element Methods, Earthquake Engineering, Soil Dynamics, Risk Analysis of Structures against Earthquake, Advanced Steel Structures

HONORs

- Postdoctoral grant for three years 2016-2019, IUSS-Pavia, Italy.
- Research grant for one year at Technical University of Isfahan, National Elites Foundation (2016-2017).
- PhD grant, full scholarship, IUSS-Pavia, Italy (2012-2015).
- One year research fellowship at IST, Lisbon, Portugal (2011-2012) on the project of 'Nonlinear Static Methods for the Assessment/Design of 3D irregular structures', *task5 which intends to compare different nonlinear static procedures on the irregular structures: buildings and bridges. www.3disp.org.*
- Research collaboration at EUCENTRE, Pavia, Italy (2011) on the project of "Seismic vulnerability of European RC frame buildings".
- 2009 *Third-Country Full Scholarship,* Masters in Earthquake Engineering and Engineering Seismology Program (MEEES) by the European Union.
- Ranked 171 in the country-wide entrance exam to the university, for the Civil and Environmental Engineering Major, Iran, August 2006.

JOURNAL PAPER

1. de Quevedo Inarritu PG, Kohrangi M, Bazzurro P (2024). Damage assessment of unreinforced masonry buildings incorporating damage accumulation. Earthquake Engineering & Structural Dynamics. DOI: 10.1002/eqe.4106

2. Damiani A, Poggi V, Chiara Scaini, Kohrangi M, Bazzurro P (2023). Impact of the Uncertainty in the Parameters of the Earthquake Occurrence Model on Loss Estimates of Urban Building Portfolios. Bulleting Seimological Society of America. DOI: 10.1785/0220230248

3. Mario A. Salgado-Gálvez, Mario Ordaz, Benjamín Huerta Garnica, Osvaldo Garay, Carlos E. Avelar Frausto, Ettore Fagà, Mohsen Kohrangi, Paola Ceresa, Zacharias Fasoulakis. (2023) Development of a regionally consistent and fully probabilistic earthquake risk model for Central Asia. DOI: 10.5194/nhess-2023-137.

4. de Quevedo Inarritu PG, Sipcic N, Alvarez L, Kohrangi M, Bazzurro P (2023).A closer look at hazard-consistent ground motion record selection for building-specific risk assessment: Effect of soil characteristics and accelerograms' scaling. Earthquake Engineering & Structural Dynamics. DOI: 10.1177/87552930231173713

5. Alvarez L, de Quevedo Inarritu PG, Sipcic N, Kohrangi M, Bazzurro P (2023). Hazard-consistent simulated earthquake ground motions for PBEE applications on stiff soil and rock sites. Earthquake Engineering & Structural Dynamics. DOI: 10.1002/eqe.3987

6. Spillatura A, Vamvatikos D, Kohrangi M, Bazzurro P (2023). Harmonizing Seismic Performance via Risk Targeted Spectra: State of the art, dependencies, and implementation proposals. Earthquake Engineering & Structural Dynamics. DOI: 10.1002/eqe.3941

7. Garcia de Quevedo Inarritu P, Sipcic N, Alvarez L, Kohrangi M, Bazzurro P (2023). A closer look at hazard-consistent ground motion record selection for building-specific risk assessment: Effect of soil characteristics and accelerograms' scaling. Earthquake Spectra. DOI: 10.1177/87552930231173713

8. Kohrangi M, Bakalis K, Triantafyllou G, Vamvatsikos D, Bazzurro P (2023). Hazard consistent record selection procedures accounting for horizontal and vertical components of the ground motion: Application to liquid storage tanks. Earthquake Engineering & Structural Dynamics 52(1). Doi: 10.1002/eqe.3813

9.   Gil-Martín LM, Hdz.-Gi L, Kohrangi M, Menéndez E, Hernández-Monte E (2022), Fragility Curves for Historical Structures with Degradation Factors Obtained from 3D Photogrammetry. Heritage 5(4):3260-3279. Doi: 10.3390/heritage5040167

10. Vanderburg L, Kohrangi M, Bazzurro P, Vamvatsikos D (2022) A risk-based evaluation of direct displacement based design. Bulletin of Earthquake Engineering. DOI: 10.1007/s10518-022-01447-3

11. Kohrangi M, Safaei H, Danciu L, Tajmir-Riahi H, Ajalloeian R, Bazzurro P (2022) Site specific probabilistic seismic hazard model for Isfahan, Iran: estimates and uncertainties Bulletin of Earthquake Engineering doi:10.1007/s10518-022-01373-4

12. El Jisr H, Kohrangi M, Lignos DG (2022) Proposed nonlinear macro-model for seismic risk assessment of composite-steel moment resisting frames Earthquake Engineering & Structural Dynamics 51:1180-1200 doi:https://doi.org/10.1002/eqe.3610

13. Šipčić N, Kohrangi M, Papadopoulos AN, Marzocchi W, Bazzurro P (2022) The Effect of Seismic Sequences in Probabilistic Seismic Hazard Analysis Bulletin of the Seismological Society of America doi:10.1785/0120210208

14. Kondratenko A, Kanyilmaz A, Castiglioni CA, Morelli F, Kohrangi M (2021) Structural performance of automated multi-depth shuttle warehouses (AMSWs) under low-to-moderate seismic actions. Bulletin of Earthquake Engineering. DOI: 10.1007/s10518-021-01193-y

15. Odabasi O, Kohrangi M, Bazzurro P (2021) Seismic collapse risk of reinforced concrete tall buildings in Istanbul Bulletin of Earthquake Engineering 19:6545-6571 doi:10.1007/s10518-021-01188-9

16. Odabasi Ö, Kohrangi M, Bazzurro P (2021). Tall buildings in Turkey, their characteristic structural features and dynamic behavior. Bulletin of Earthquake Engineering. DOI: 10.1007/s10518-021-01067-3.

17. Spillatura A, Kohrangi M, Bazzurro P, Vamvatsikos D (2021). Conditional Spectrum Record Selection Faithful to Causative Earthquake Parameter Distributions. Earthquake Engineering & Structural Dynamics. DOI: 10.1002/eqe.3465

18. Kohrangi M, Bazzurro P, Vamvatsikos D (2021). Seismic risk assessment for Isfahan. Part I: Exposure and Vulnerability. Bulletin of Earthquake Engineering. DOI: 10.1007/s10518-020-01036-2

19. Kohrangi M, Bazzurro P, Vamvatsikos D (2021). Seismic risk assessment for Isfahan. Part II: Hazard analysis and risk assessment. Bulletin of Earthquake Engineering.10.1007/s10518-020-01037-1

20. Kohrangi M, Kotha SR, Bazzurro P (2020). Impact of Partially non-ergodic Site-specific Probabilistic Seismic Hazard on Risk 2 Assessment of Single Buildings. DOI: 10.1177/8755293020938813.

21. Papadopoulos AN, Kohrangi M, Bazzurro P (2020). Main-shock consistent ground motion record selection for aftershock sequences. Earthquake Engineering and Structural Dynamics. 2020; 49: 754–771. https://doi.org/10.1002/eqe.3263.

22. Kohrangi M, Papadopoulos AN, Bazzurro P, Vamvatsikos D (2020). Correlation of spectral acceleration values of vertical and horizontal ground motion pairs. Earthquake Spectra. https://doi.org/10.1177/8755293020919416.

23. Kohrangi M, Vamvatsikos D, Bazzurro P (2020). Multi-level conditional spectrum-based record selection for IDA. Earthquake Spectra. https://doi.org/10.1177/8755293020919425.

24. Vamvatsikos D, Bakalis K, Kohrangi M, Pyrza S, Castiglioni CA, Kanyilmaz A, Morelli F, Stratan A, D'Aniello M, Calado L, Proença JM, Degee H, Hoffmeister B, Pinkawa M, Thanopoulos P, Vayas I (2020). A risk-consistent approach to determine EN1998 behaviour factors for lateral load resisting systems. Soil Dynamics and Earthquake Engineering. https://doi.org/10.1016/j.soildyn.2019.106008.

25. Kohrangi M, Danciu L, Bazzurro P (2019). Comparison between outcomes of the 2014 Earthquake Hazard Model of the Middle East (EMME14) and national seismic design codes: The case of Iran. Soil. Soil Dynamics and Earthquake Engineering. https://doi.org/10.1016/j.soildyn.2018.07.022

26. Farag MMN, Mehanny SSF, Kohrangi M, Vamvatsikos D, Bakhoum MM (2019). Precast beam bridges with a buffer-gap-elastomeric bearings system: uncertainty in design parameters and randomness in ground records. ASCE Journal of Bridge Engineering, 24(5): 04019034. DOI: 10.1061/(ASCE)BE.1943-5592.0001396.

27. Kohrangi M, Bazzurro P, Vamvatsikos D (2019). Conditional spectrum bidirectional record selection for risk assessment of 3D structures using scalar and vector IMs. Earthquake Engng Struct Dyn. 48: 1066–1082. https://doi.org/10.1002/eqe.3177.

28. Kohrangi M, Vamvatsikos D, Bazzurro P (2019). Pulse-like versus non-pulse-like ground motion records: Spectral shape comparisons and record selection strategies. Earthquake Engng Struct Dyn. 2019; 48: 46– 64. https://doi.org/10.1002/eqe.3122.

29. Kohrangi M, Danciu L, Bazzurro P (2018). Comparison between outcomes of the 2014 Earthquake Hazard Model of the Middle East (EMME14) and National Seismic Design Codes: The case of Iran. Journal of Soil Dynamics and Earthquake Engineering. DOI: 10.1016/j.soildyn.2018.07.022.

30. Papadopoulos A, Kohrangi M, Bazzurro P (2018), Correlation of Spectral Acceleration Values of Mainshock-Aftershock Ground Motion Pairs, Earthquake Spectra.

31. Bakalis K, Kohrangi M, Vamvatsikos D (2018). Seismic intensity measures for liquid storage tanks. Earthquake Engineering and Structural Dynamics. DOI: 10.1002/eqe.3043.

32. Kohrangi M, Kotha SR, Bazzurro P (2017). Ground-motion models for average spectral acceleration in a period range: direct and indirect methods. Bulletin of Earthquake Engineering.

33. Orumiyehei A., Kohrangi M, Bazzurro P (2017). Seismic Performance of 3-D Infilled and Bare Frame RC Building Models using Average Spectral Acceleration. Procedia Engineering. 199(Supplement C): 3558-3563.

34. Kohrangi M, Bazzurro P, Vamvatsikos D (2017). Site dependence and record selection schemes for building fragility and regional loss assessment. Earthquake Engineering and Structural Dynamics. DOI: 10.1002/eqe.2876.

35. Kohrangi M, Bazzurro P, Vamvatsikos D, Spillatura A (2017). Conditional Spectrum based ground motion record selection using average spectral acceleration. Earthquake Engineering and Structural Dynamics. DOI: 10.1002/eqe.2873.

36. Kohrangi M, Vamvatsikos D, Bazzurro P (2017) Implications of IM selection for seismic Loss Assessment of 3D Buildings, Earthquake Spectra, doi: http://dx.doi.org/10.1193/112215EQS177M.

37. Kohrangi M, Bazzurro P Vamvatsikos, Vamvatsikos D (2016). Vector and Scalar IMs in Structural Response Estimation, Part I: Hazard Analysis. Earthquake Spectra: August 2016, Vol. 32, No. 3, 1507-1524. doi: http://dx.doi.org/10.1193/053115EQS080M.

38. Kohrangi M, Bazzurro P Vamvatsikos, Vamvatsikos D (2016). Vector and Scalar IMs in Structural Response Estimation, Part II: Building Demand Assessment. Earthquake Spectra: August 2016, Vol. 32, No. 3, 1525-1543. doi: http://dx.doi.org/10.1193/053115EQS081M.

39. Kohrangi M, Bento R, Lopes M (2014) Seismic performance of irregular bridges—comparison of different nonlinear static procedures, Struct Infrastruct Eng, 1–19.

JOURNAL PAPER UNDER REVIEW

CONFERENCE PAPER

1. Tsarpalis D, Karaferi E, Kohrangi M, Vamvatsikos D, Zeppos J (2024). A MESOECONOMIC RESILIENCE FRAMEWORK FOR REGIONAL SEISMIC ASSESSMENT STUDIES. 18th World Conference on Earthquake Engineering, Milan, Italy.

2.   Karaferi E, Kohrangi M D Andrea Spillatura, Tsarpalis D, Vamvatsikos (2024). SEISMIC RISK, DIRECT, AND INDIRECT LOSSES FOR THE HISTORIC CITY OF RHODES. 18th World Conference on Earthquake Engineering, Milan, Italy.

3.   Damiani A, Poggi V, Scaini C, Kohrangi M, Bazzurro P (2024). Assessing the impact of uncertainties in seismic risk models on portfolio loss estimate. 18th World Conference on Earthquake Engineering, Milan, Italy.

4.   Grajales-Ortiz C, Vamvatsikos D, Melissianos V, Bakalis K, Kohrangi M, Bazzurro P (2024). RELATIONSHIPS BETWEEN EARTHQUAKE-INDUCED DAMAGE AND MATERIAL RELEASE FOR LIQUID STORAGE TANKS. 18th World Conference on Earthquake Engineering, Milan, Italy.

5.   Bazzurro P, Šipčić N, Garcia P, Odabaşı Ö, Yucel B, Kohrangi M, Papadopoulos AN (2024). Modeling Clustered Seismicity Risk: if not now, when? 18th World Conference on Earthquake Engineering, Milan, Italy.

6.   Šipčić N, de Quevedo Inarritu PG, Alvarez L, Kohrangi M, Bazzurro P (2024). ADVANCES IN THE SEISMIC HAZARD AND RISK ASSESSMENT OF NUCLEAR POWER PLANTS. 18th World Conference on Earthquake Engineering, Milan, Italy.

7.   Šipčić N, de Quevedo Inarritu PG, Alvarez L, Kohrangi M, Bazzurro P (2022). A preliminary evaluation of using hazard-consistent real and simulated ground motions for structural response assessment. 3rd European Conference on Earthquake Engineering and Engineering Seismology. Bucharest, Romania

8.   Papadopoulos, A., Kohrangi, M., and P. Bazzurro (2019), Aftershock ground motion record selection: a novel main-shock consistent approach. COMPDYN 2019- 7th ECCOMAS Thematic Conference on Computational Methods in St ructural Dynamics and Earthquake Engineering. At: Crete, Greece.

9.   O'Reilly GJ, Kohrangi M, Bazzurro P, Monteiro R (2018). Intensity Measures for the Collapse Assessment of Infilled RC Frames. 16ECEE 2018, Thessaloniki, Greece.

10. Margnelli A, Kohrangi M, Giaralis A, Vamvatsikos D (2018). Influence of non-stationary frequency content of recorded ground motions to seismic demand of multi-sotry structures via the wavelet based alpha index. 16ECEE 2018, Thessaloniki, Greece.

11. Kohrangi M., Vamvatsikos D., Bazzurro P. (2018). Conditional Spectrum based record selection for nonlinear dynamic analysis of 3D structural models. 16ECEE 2018, Thessaloniki, Greece.

12. Kohrangi M., Vamvatsikos D., Bazzurro P. (2018). The role of spectral shape and pulse period for record selection in the near field. Proceedings of the 11th National Conference in Earthquake Engineering, Los Angeles, CA.

13. Kohrangi M., Vamvatsikos D., Bazzurro P. (2018). Multi-level conditional spectrum-based record selection for IDA. Proceedings of the 11th National Conference in Earthquake Engineering, Los Angeles, CA.

14. Spillatura, A., Vamvatsikos, D., Bazzurro, P., Kohrangi, M. (2017). Issues in Harmonization of Seismic Performance via Risk Targeted Spectra. 13th International Conference on Applications of Statistics and Probability in Civil Engineering, ICASP13, at: Seoul, South Korea.

15. Kohrangi, M., Vamvatsikos D., Bazzurro, P. "A record selection methodology for vulnerability functions consistent with regional seismic hazard for classes of buildings", WCEE 2017, Santiago, 9-13 January 2017.

16. Kohrangi, M., Sullivan. TJ. Calvi, J. M, "Seismic Assessment of AltoRio Building Collapsed in the Recent Earthquake of Chile, 2010", WCEE 2012, Lisbon

17. Kohrangi. M, Bento. R, Lopes. M, "Evaluation of Nonlinear Static Procedures for Seismic Assessment of Irregular Bridges", WCEE 2012, Lisbon

18. Sousa, R., Eroğlu, T., Kazantzidou-Firtinidou, D., Kohrangi, M., Sousa, L., Pinho, R. and Nascimbene, R., "Effect of different modelling assumptions on the seismic response of RC structures", WCEE 2012, Lisbon.

19. Sousa, R., Eroğlu, T., Kazantzidou-Firtinidou, D., Kohrangi, M., Sousa, L., Pinho, R. and Nascimbene, R., "Reliability of Nonlinear Static Analysis for Seismic Assessment of Irregular RC Buildings", WCEE 2012, Lisbon.

20. Kohrangi. M, Taghikhani. T, Tehranizade. M. "Seismic Performance of Friction Damped Steel Structures in Near-field Earthquakes", ICOSSAR 2009, Osaka 13-17 September, 2009.

REPORTS AND BOOK CHAPTERS

1. Kohrangi M, Papadopoulos A, Kotha SR, Vamvatsikos D, Bazzurro P. Earthquake Catastrophe Risk Modeling, Application to the Insurance Industry: Unknowns and Possible Sources of Bias in Pricing (2021).

2. Odabaşi Ö, Kohrangi M, Fagà E, Bazzurro P. Consequence Functions for Seismic Risk Assessment A review of consequence modelling state-of-practice for ERM-CH – Module D (2021). DOI: 10.3929/ethz-b-000416778.

3. De Quevedo Inarritu PG, Sipcic N, Kohrangi M, Bazzurro P. Effects of Pre-existing Damage on Fragility of URM and RC Frame Buildings. DOI: 10.1007/978-3-030-73932-4_2. In book: Energy-Based Seismic Engineering.

Co-adviser for M.Sc and Ph.D theses

1. Nevena Šipčic: Seismic risk assessment for RC buildings including earthquake sequences. PhD thesis (2023).

2. De Quevedo Inarritu PG: Seismic risk assessment for URM buildings including earthquake sequences. PhD thesis (2023).

3. Nevena Šipčic: Seismic risk assessment for RC buildings including earthquake sequences. PhD thesis (2023).

4. Başar Yücel: Comparison of Different Damage-to-Loss Procedures Applied to Site-specific Reinforced Concrete Moment-Resisting Frame Structures. MSc Thesis (2022).

5. Georgios Triantafyllou: Does the vertical component of ground motion matter for Seismic Risk Assessment? Two illustrative cases. MSc Thesis (2021).

6. Besim Yukselen: Use of Machine Learning Algorithms to Predict the Response of High-Rise Building for Probabilistic Loss Assessment. MSc Thesis (2021).

7. Omer Odabasi: Probabilistic Seismic Risk Analysis of High-Rise Buildings: Critical Considerations in Site-Specific and Regional Applications. PhD thesis (2020).

8. Luke van der Burg: Performance assessment of direct displacement design. MSc Thesis (2020).

9. Enes Veliu: Effect of accelerogram filtering on linear and nonlinear structural response. MSc Thesis (2018).

10. Andrea Spillatura: From record selection to risk targeted spectra for risk based assessment and design. PhD Thesis (2018).

11. Alejandro Garro Espinoza. Cost-benefit evaluation of post-tensioned rocking-dissipative concrete buildings. MSc Thesis (2017).

12. Amirhossein Orumiyehei: Developing an analytical framework based on bi-directional excitation Incremental Dynamic Analysis to generate fragility curves for regular and irregular 3D infilled frame of RC building models. MSc Thesis (2016).

13. Nevena Šipčic: Effects of Pre-existing damage on fragility of RC frame building. MSc Thesis (2016).

14. Andrea Spillatura: Overview and Harmonization of Existing Vulnerability Functions for Italy. MSc Thesis (2014).

TEACHING EXPERIENCE

1. Lecturer of "Seismic portfolio risk assessment" at University of Pavia. October 2021-2023.

2. Teaching Assistant for the course of "Seismic Risk Assessment", at ROSE School/UME School, March 2014. Instructors: Prof. Paolo Bazzurro, Prof. Dimitrios Vamvatsikos and Prof. Mario Martina.

EXPERIENCE AS PEER-REVIEWER For
- Journal of Earthquake Engineering and Structural Dynamics
- Journal of Earthquake Spectra
- Bulletin of Earthquake Engineering
- Journal of Earthquake Engineering and Engineering Vibration
- Journal of Constructional Steel Research
- Journal of Earthquake Engineering
- Journal of risk analysis
- Journal of Scientia Iranica
- Journal of structural concrete
- International Journal of Disaster Risk Reduction
- Journal of Earthquake and Tsunami

INVITED LECTURES
- University of Isfahan
- International Institute of Earthquake Engineering and Seismology

INDUSTRY EXPERIENCE

Catastrophe Risk Modeler consultant
Risk Engineering + Design, Pavia, Italy
- Earthquake Insurance product for Europe
- World Bank: Strengthening the Resilience of Public Facilities in Pacific islands of Samoa, Tonga and Vanuatu (Earthquake, tropical cyclone, flood, volcanic eruptions)
- World Bank: Country level early warning system for Samoa and Tonga
- World Bank: Multi-hazard risk assessment for central Asia
- Earthquake risk modelling for Kazakhstan
- CCRIF: Catastrophe risk modeling for public utilities (electricity network, water network) in Caribbean countries
- CCRIF: Catastrophe risk modeling for Caribbean countries (Earthquake + flood + hurricanes)
- Vulnerability analysis of timber structures
- Early earthquake warning for residential gas pipe distribution
- Seismic risk modeling of fire sprinkler systems
- National seismic risk model for Switzerland
- HYPERION: Improved resilience and sustainable reconstruction of historic areas

Structural Engineer
Dynasys Consulting Engineers, Tehran, Iran (2007-2009), under the supervision of senior structural engineer, Ali A. Taheri Behbahani.
- Earthquake resistant design of an 8-storey reinforced concrete hospital located in Tehran.
- Earthquake resistant design of a 3-storey reinforced concrete hospital located in Pakdasht.
- Earthquake resistant design (phase-1 report) of a 7-Storey reinforced concrete complex (Mahtab), located in Tehran.
- Design of two-storey RC frame parkings (Haj va Ziarat educational complex), located in Tehran.

Espadana Consulting Engineers, Iran, Isfahan (2006)
- Seismic Design of connections of a 10-story moment resisting frame structure located in the city of Isfahan

Seismic hazard analysis consultancy
- Team leader for site specific seismic hazard analysis of Isfahan urban area, Isfahan municipality
- Member of hazard analysis and technical integration team for site-specific PSHA for Namakhvani Dam, Georgia. SSHAC Level 2 study.