

CURRICULUM VITAE  
**Hamed Hamidi Jamnani**

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Personal Information:

- Profession: Assistant Professor (since 2014)
- University Degree: Ph.D.
- Date of Birth: August 17, 1981
- Languages: Persian, English
- Address-1: School of Civil Engineering,  
Babol Noshirvani University of Technology  
E-mails: [h.hamidi@nit.ac.ir](mailto:h.hamidi@nit.ac.ir)  
[civhamidi@gmail.com](mailto:civhamidi@gmail.com)
- Address-2: Polyhedral Structures Laboratory (PSL),  
Pennovation Center,  
University of Pennsylvania, PA 19146



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Education & Academic Qualifications:

- Postdoctoral Research Fellow, University of Pennsylvania, USA. (18)
- Associate Visiting Scholar, University of Pennsylvania, USA. (17)
- Visiting Research Scholar, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland. (12)
- Ph.D., Civil Engineering (Earthquake Eng.), Iran University of Science & Technology. (14)
- M.Sc., Civil Engineering (Earthquake Eng.), Iran University of Science & Technology. (07)
- B.Sc., Civil Engineering, University of Mazandaran, Technical Faculty (known as Babol Noshirvani University of Technology, since 2006). (03)

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Thesis:

- Ph.D.: *The Study of Static Offset on the Response Spectra in Near Source Sites Using Probabilistic Method. (Feb 2014; Excellent)*
- M.Sc.: *The Effect of Analysis Methods on the Response of Steel-Braced Framed Buildings for Seismic Retrofitting. (Feb 2007; Excellent)*

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Research Interests:

- Earthquake Engineering & Nonlinear Dynamic Problems
- Performance-Based Seismic Design and IDA
- Analysis and Design of Tall Buildings
- Seismic Retrofitting of Structures
- Synthesizing Strong Motion & Inversion Solution
- Seismic Hazard Analysis
- Three-Dimensional Graphical Statics (novel geometric method of structural design in three dimensions)

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Academic Experiences:

- Babol Noshirvani University of Technology, *Faculty Member*:

B.Sc. Level Teaching	<i>Statics; Dynamics; Technical English; Structural Analysis-II; Earthquake &amp; Wind Eng;</i>
M.Sc. Level Teaching	<i>Tall Buildings; Soil Dynamics; Research Methodology;</i>
Ph.D. Level Teaching	<i>Performance Based Seismic Design of Structures;</i>

- Guest Professor/Lecturer:

<b>University/Institute</b>	<b>Level</b>	<b>Course (s)</b>
Iran University of Science & Technology, (2008-10)	B.Sc. Level Teaching	<i>Dynamics;</i>
	Teacher Assistant (B.Sc./M.Sc.)	<i>Earthquake Engineering; Seismic Retrofitting of Structures;</i>
University of Mazandaran, (2010-11)	B.Sc. Level Teaching	<i>Loading; Earthquake Engineering;</i>
Aryan Institute of Science & Technology, (2010-17)	B.Sc. Level Teaching	<i>Dynamics; Earthquake &amp; Wind Eng;</i>
	M.Sc. Level Teaching	<i>Earthquake Engineering; Tall Buildings; Soil Dynamics;</i>
Tabari University of Babol, (2013-15)	B.Sc. Level Teaching	<i>Earthquake &amp; Wind Eng;</i>
	M.Sc. Level Teaching	<i>Dynamics of Structures; Earthquake Engineering;</i>
Pardisan Institute of Higher Education, (2014)	M.Sc. Level Teaching (Architecture)	<i>Modern Structures;</i>
Babol University of Medical Sciences, (2017)	B.Sc. Level Teaching (Environmental Health Engineering)	<i>Statics &amp; Mechanics of Materials</i>

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## Selected Publications (Papers):

### A. **Journals-English:**

- [13] Soleimani R, Khosravi H and Hamidi, H. Substitute Frame and Adapted Fish-Bone Model: Two Simplified Frames Representative of RC Moment Resisting Frames. *Engineering Structures*, (*in review*).
- [12] Hamidi H, Khosravi H and Soleimani R. Fling-step ground motions simulation using theoretical-based Green's function technique for structural analysis. *Soil Dynamics and Earthquake Engineering*, 2018; 115, 232-245.
- [11] Hamidi H, Farokhzadeh F and Shamekhi Amiri M. Structural investigation of height - irregular- steel braced structures against progressive collapse. *Journal of Engineering Science and Technology*. 2018; 13(6), 1621-1635.
- [10] Hamidi Jamnani H, Vaseghi Amiri J and Rajabnejad H. Energy distribution in RC shear wall-frame structures subject to repeated earthquakes. *Soil Dynamics and Earthquake Engineering*. 2018; 107, 116-128.
- [9] Hamidi Jamnani H, Abdollahzadeh Gh and Faghimaleki H. Seismic Fragility Analysis of Improved RC Frames Using Different Types of Bracing. *Journal of Engineering Science and Technology*. 2017; 12(4), 913-934

- [8] Mosleh A, Hamidi H, Nicknam A, Jara J, Varum H. Seismic Vulnerability assessment of concrete railway bridge using nonlinear analyses. *Journal of Structural Engineering and Geo-Techniques*. 2016; 6(2):41-9.
- [7] Khaloo A, Khosravi H, Hamidi Jamnani H. Nonlinear interstory drift contours for idealized forward directivity pulses using "modified fish-bone" models. *Advances in Structural Engineering*. 2015; 18 (5): 603-627
- [6] Faghihmaleki H, Abdollahzadeh Gh, Hamidi Jamnani H. Effect of Structure Height in Seismic Fragility Curves. *Amiemt Journal*, 2014; 2 (6):498-503
- [5] Nicknam A, Hosseini A, Hamidi Jamnani H, Barkhordari MA. Investigation of fling-step effect on the selected structures subjected to the simulated Fandoqa near source strong motion. *Journal of Vibroengineering*. 2014; 16:15-30.
- [4] Nicknam A, Barkhordari MA, Hamidi Jamnani H, Hosseini A. Probable Contribution of fling-step effect on the response spectra at near source site. *Journal of Vibroengineering*. 2014; 16:334-40.
- [3] Nicknam A, Hosseini A, Hamidi Jamnani H, Barkhordari MA. Reproducing fling-step and forward directivity at near source site using of multi-objective particle swarm optimization and multi taper. *Earthquake Engineering and Engineering Vibration*. 2013; 12:529-40.
- [2] Nicknam A, Barkhordari MA, Hamidi Jamnani H, Hosseini A. Compatible seismogram simulation at near source site using Multi-Taper Spectral Analysis approach (MTSA). *Journal of Vibroengineering*. 2013; 15:626-38.
- [1] Ghodrati Amiri G, Hamidi Jamnani H, Ahmadi H. The effect of analysis methods on the response of steel dual-system frame buildings for seismic retrofitting. *International Journal of Engineering-Transactions B: Applications*. 2009; 22:317.

**B. Journals-Persian:**

- [4] Hamidi H, Packdaman J, Jahani E and Rajabnejad H. The Assessment and Comparison of Tall Buildings with Outrigger and Belt Truss Systems Using Fragility Curves, *Journal of Structural and Construction Engineering (JSCE)*, 2017, (*in press*).
- [3] Heidary B, Tavakoli H.R, Hamidi H and Rahgozar R, The Effect of Lateral Load Pattern on Optimum Location of Outrigger and Belt Truss in Tall Buildings, *Civil Engineering Journal of Ferdowsi University of Mashhad*, 2016, (*in press*).
- [2] Nicknam A, Akbarpour A, Mosleh A, Hamidi H. Seismic Evaluation of RC Railway Bridge Using Nonlinear Static Analysis, *Journal of ACI, Iran Chapter*, Vol. 11, 2009.
- [1] Ghodrati Amiri G, Mohebi B, Hamidi Jamnani H. Investigating Deterioration Effect of Hysteresis Loops in Nonlinear Static Analysis of Intermediate RC Moment Frame, *Amirkabir Journal of Science & Technology*, vol. 41. No. 1, 2009.

**C. Conferences-English:**

- [1] Ghodrati Amiri, G., Hamidi Jamnani, H. and Khorasani, M. Asian Pacific Symposium on Structural Reliability and Its Application, June 18-20, 2008, Hong Kong University of Science and Technology. "Vulnerability Study of Steel-Braced Frame Buildings in Iran".
- [2] Ghodrati Amiri, G., Emadi, A. and Hamidi Jamnani, H. 3<sup>rd</sup> International Conference on Concrete and Development, April 2009, BHRC, Tehran, Iran. "Performance Investigation of RC Short Columns Retrofitted with FRP Composites in Passive and Active States".

- [3] Ghodrati Amiri, G., Hamidi Jamnani, H. and Emdadi, A. The Second Official International Conference of International Institute for FRP in Construction for Asia-Pacific Region. 9-11 December, 2009, Seoul, Korea. "The Effect of FRP Composites on Strengthening and Retrofitting of RC Short Columns".
- [4] Nicknam A, Mosleh A, Hamidi Jamnani H. The Twelfth East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-12), Hong Kong Special Administrative Region, China, 24-26 January 2011. "Seismic Performance Evaluation of Urban Bridge Using Static Nonlinear Procedure, Case Study: Hafez Bridge".
- [5] Hamidi Jamnani H, Hosseini A, Issa MA, Nicknam A. 2<sup>nd</sup> International Conference On Performance-Based Design In Earthquake Geotechnical Engineering, Italy 2012, "Structural performance using theoretical-based synthetic waveform with respect to the site soil conditions".
- [6] Hamidi Jamnani H, Karbassi A, Lestuzzi P. NZSEE Annual Conference, Wellington, New Zealand 2013. "Fling-step effect on the seismic behaviour of high-rise RC buildings during the Christchurch earthquake".

**D. Conferences-Persian:**

- [1] Nicknam A, Hosseini A, Hamidi Jamnani H. 8<sup>th</sup> International Conference on Civil Engineering, May 2009, Shiraz, Iran, "The effect of changing base level on seismic behavior of steel braced & moment frame buildings".
- [2] Nicknam A, Hamidi Jamnani H, Mosleh A. 5<sup>th</sup> National Conference on Civil Engineering, May 2010, Mashad, Iran, "Seismic Investigation of RC Bridge Using Nonlinear Dynamic Analysis".
- [3] Nicknam A, Hamidi Jamnani H, Hosseini A. 6<sup>th</sup> International Conference on Seismology and Earthquake Engineering, May 2011, Tehran, Iran, "Near Field Earthquake Simulation Using GA Method".
- [4] Nicknam A, Hosseini A, Hamidi Jamnani H. 1<sup>st</sup> International Conference on Urban Construction in the Vicinity of Active Faults (ICCVAF), September 2011, Tabriz-Iran. "Aftershock Probabilistic Seismic Hazard Analysis of high seismicity zones".
- [5] Hamidi Jamnani H, Faghihmaleki H and Gholampour S. Seismic Retrofitting of RC Buildings Using X-Bracing System with Presentation of Fragility Curves. 8NCCE, May 2014, Babol, Iran.
- [6] Ghodrati Amiri G, Razavian A, Hamidi Jamnani H and Mohamadzadeh V. 6<sup>th</sup> National Conference on Concrete, Oct 2014, Tehran, Iran. "Damage analysis of RC frame buildings with shear walls using nonlinear static procedure".
- [7] Mahjoor M, Jahani E and Hamidi Jamnani H. 2<sup>nd</sup> International Congress on Structure, Architecture & Urban Development, Tabriz, 2014. "Determining the reliability of steel moment frames subjected to seismic excitation"
- [8] Hasanpour E, Vaseghi Amiri J and Hamidi Jamnani H. 1<sup>st</sup> National Conference on Civil Engineering and Sustainable Development, 2014, Iran. The effect of intermediate stiffeners on seismic behavior of steel shear walls subjected to near and far-field earthquakes.
- [9] Tavakol HR, Donyadar A and Hamidi Jamnani H. 1<sup>st</sup> National Conference on Structural Engineering, Jan 2015, Tehran, Iran. The effect of permanent displacement on seismic response of RC frames designed based on direct displacement and 2800 conventional method.
- [10] Ahamadi A, Hamidi Jamnani H and Ghodrati Amiri Gh. 7<sup>th</sup> International Conference on Seismology and Earthquake Engineering, May 2015, Tehran, Iran. The effect of torsion on nonlinear behavior of mid-rise shear wall RC buildings.
- [11] Abdollahzadeh Gh, Hamidi Jamnani H and Azarbonyad F. 2<sup>nd</sup> Conference on Seismology & Earthquake Engineering in Alborz Province, Oct 2015, Iran. The investigation of story drift ratio on RC buildings equipped with DCFP Isolators against near and far-field earthquakes.

- [12] Abdollahzadeh Gh, Hamidi Jamnani H and Azarbonyad F. 2<sup>nd</sup> Conference on Seismology & Earthquake Engineering in Alborz Province, Oct 2015, Iran. The study of Energy Distribution in RC buildings equipped with DCFP Isolators subjected to near and far-field earthquakes.
- [13] Naghipour M, Hamidi H and Fallah S. 10<sup>th</sup> National Congress on Civil Engineering, April 2017, Tehran, Iran. The Evaluation of Response Modification Factors of Steel Structures with Zipper Elements.
- [14] Mahboubidoust M, Naghipour M, and Hamidi H. 10<sup>th</sup> National Congress on Civil Engineering, April 2017, Tehran, Iran. Performance evaluation of Buckling Restrained Brace members consist of core with corrugated plate.
- [15] Hamidi H, Vaseghi Amiri J and Kianejad S A. 10<sup>th</sup> National Congress on Civil Engineering, April 2017, Tehran, Iran. Seismic Response of Tall EBF Steel Structures Subjected to Permanent Techtronic Displacement.
- [16] Vaseghi Amiri J, Hamidi H and Abbaszadeh Amirdehi MA. 3<sup>rd</sup> Comprehensive Conference on Urban Management, Jan 2018, Tehran, Iran. Effect of non-linear dampers for vibration control of connected building structures.
- [17] Ardeshiri A, Vaseghi Amiri J and Hamidi H. 2<sup>nd</sup> National Conference on Applied Research in Structural and Construction Engineering, March 2018, Tehran, Iran. Effect of Strong Motion Duration on Steel Structures Equipped with Friction Damper.
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#### Peer Review Participation:

- Mechanics of Advanced Materials and Structures (MAMS)
  - Earthquake Engineering and Engineering Vibration (EEEEV)
  - KSCE Journal of Civil Engineering (KSCE)
  - International Journal of Civil Engineering (INCE)
  - International Journal of Engineering (IJE)
  - Journal of Engineering Science and Technology (JESTEC)
  - Journal of Civil Engineering and Architecture (JCEA)
  - Journal of Rehabilitation in Civil Engineering (JRCE)
  - Sharif Journal (*Persian*)
  - Journal of Steel and Structures (*Persian*)
  - Civil Eng. Journal, Ferdowsi University of Mashad (*Persian*)
  - Journal of Modeling in Engineering (*Persian*)
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#### Supervised/Advised Dissertations and Theses (Selected):

##### A. **Supervised:**

- Evaluation of collapse capacity of eccentric steel braced structures using risk-targeted technique. (*MSc, in progress*)
- The effect of ground motion record selection on fragility analysis of concrete gravity dams. (*MSc, in progress*)
- Modified fishbone model: Presenting a simplified MDOF model for considering degradation in moment frames. (*MSc, Sep/2018*)
- The effect of Strong-Motion Duration on steel structures equipped with friction dampers. (*MSc, Feb/2018*)

- Effect of Nonlinear Connecting Dampers for Vibration Control of Connected Building Structure at Near-fault Regions. (MSc, Jan/2018)
- Nonlinear response of steel shear wall subjected to fling-step at near source sites. (MSc; Jan/2017)
- The effect of fling-step on the seismic response of tall EBF building at near source sites. (MSc; Jan/2017)
- Brace type effect in progressive collapse of steel frames in presence of transient loading. (MSc; Aug/2016)
- The study of steel structures equipped with viscous dampers against fling-step effect. (MSc; Mar/2018)
- Effects of fire loading on steel self-centering beam-column connection. (MSc; Feb/2017)
- Seismic Performance of Zipper Braced Steel Frame Made of YLP. (MSc; Feb/2017)
- The effect of ground motion duration on seismic performance of steel structures equipped with FPS Isolators. (MSc; Sep/2016)
- Seismic Response of Irregular Steel Frames Equipped With FPS Isolator. (MSc; Sep/2016)
- Performance evaluation of base-isolators in seismic retrofitting of steel buildings. (MSc; Sep/2016)
- The assessment of tall buildings with outrigger and belt truss systems using fragility curves. (MSc; Sep/2016)
- Performance evaluation of seismic dampers based on elliptic EADAS LYP steel braced in the frame. (MSc; Sep/2016)
- Energy distribution of eccentric braced steel frames subjected to forward directivity effect. (MSc; Sep/2016)
- Nonlinear behavior of eccentric braced steel frames subjected to repeated earthquakes. (MSc; Sep/2016)
- Seismic retrofitting of irregular mid-rise steel buildings using LYP steel yielding damper. (MSc; Sep/2016)
- Evaluation of seismic damages of steel moment frames retrofitted with base isolators using fragility curves. (MSc; Aug/2016)
- Seismic and economical investigation of composite shear walls compared with other conventional shear walls in high-rise structures. (MSc; Jul/2016)
- Determination of displacement amplification factor (Cd) for AAC masonry wall system using IDA analysis. (MSc; Jul/2016)
- The Effect of Forward Directivity on Seismic Response of Tall Buildings Using Incremental Dynamic Analysis. (MSc; Jan/2016)
- Seismic evaluation of steel structures retrofitted with ADAS dampers regarding different seismic zones. (MSc; Dec/2015)
- Evaluation of plan-irregular steel frame structures equipped with viscous damper against progressive collapse. (MSc; Oct/2015)
- Seismic Evaluation of Steel Tanks for Oil Storage Considering Different Failure Modes. (MSc; Aug/2015)
- Investigating the effect of torsion in nonlinear behavior of common RC buildings with shear wall. (MSc; May/2015)
- Seismic performance of tall buildings equipped with outrigger system against permanent tectonic deformation considering soil-structure interaction. (MSc, in progress)

**B. Advised:**

- Development of Equivalent Nonlinear Static Analysis under Seismic Sequences for Concrete buildings. (PhD, in progress)

- The effect of rotating ground motions on seismic demand of multi-span bridges. (*MSc, in progress*)
- The effect of forward directivity on the seismic behavior of RC moment frames designed based on PBPD method. (*MSc, in progress*)
- The effect of fling-step on the seismic behavior of steel moment frames designed based on PBPD method. (*MSc, in progress*)
- Development of fragility curves for medium ductility steel moment frames subjected to multiple earthquakes. (*MSc, in progress*)
- The use of damper in multi-span bridge equipped with DCFP isolator at near source site. (*MSc, in progress*)
- The Evaluation of response modification factors of steel structures with zipper element. (MSc, Sep/2017)
- Evaluation of a Self-Centering Beam-Column Connection with Friction Damper. (MSc, Sep/2017)
- The effects of near-fault ground motions on tall buildings using outrigger Belt truss. (MSc; Sep/2016)
- Parametric study of buckling restrained brace members consist of sinusoidal core plate (MSc, Feb/2017)
- Energy distribution in stories of dual system structures with concrete shear wall under the effect of repeated earthquakes. (MSc; Jan/2016)
- Effect of Near-Fault Ground Motions Directivity Effects on  $C_d$  coefficient in Steel Frame Structures with Dual System. (MSc, Fall/2016)
- Determination of interconnected stresses of concrete-layer and analysis of effective parameters. (MSc, Nov/2015)
- Determining the reliability of seismic loading on steel moment frames using Monte Carlo Technique in performance based design. (MSc, Aug/2015)

#### Honors & Skills:

- Keynote Speaker entitled “The Study of near Source Effects on Response Spectra”, 8<sup>th</sup> National Congress on Civil Engineering, May 2014, Babol, Iran.
- Invited Lecturer, Regional Seminar of “Design Requirements for Tall Buildings, Structural Division”, Ghaemshahr Engineers Center, Jan 2017.
- 1<sup>st</sup> Ranked Student, Scientific Competition Held at Student Conference of Civil Engineering, University of Mazandaran, May 2004.
- Chairman, First National Congress of Concrete, NIT, May 2018, Babol Noshirvani University of Technology.
- Civil Eng. Faculty Representative in the University WEB Council, (2017-18)
- Member of Concrete Secretariat, Babol Noshirvani University of Technology, since 2016.
- Official Certification of Seismic Retrofitting of Existing Buildings, approved by Iranian Earthquake Engineering Association (IEEA, 2008).
- Developing Software entitled “*Tarabari TIM v1.3*”, “calculation of Travel Interchange Matrix, using Newton's method in Transportation”, B.Sc. project, (2001).
- MATLAB, C, VC++,
- SAP2000, ETABS, SAFE, Perform 3D
- Opensees, IDARC, Seismostruct
- Seismosignal, Crisis, Seisrisk, Deepsoil

- Rhino-Grasshopper, AutoCAD
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#### Fellowship/Award:

- **École Polytechnique Fédérale de Lausanne (EPFL), Switzerland (2012)**  
*Merit-Based Scholarship for Visiting Researcher by MSRT*
  - **Babol Noshirvani University of Technology (2010)**  
*Fellowship Award as Committed University Professor.*
  - **Iran University of Science & Technology (2008)**  
*Scholarship*  
*Ranked among 5 top students for PhD program.*
  - **Iran University of Science & Technology (2004)**  
*Scholarship*  
*Ranked among 2 percent of 11,000+ attendants in National Graduate Entrance Exam.*
  - **University of Mazandaran (1999)**  
*Scholarship*  
*Ranked among 1 percent of 300,000+ attendants in National Undergraduate Entrance Exam.*
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#### Professional Membership:

- Iranian Bridge Engineering Association (IBEA)
  - Iranian Earthquake Engineering Association (IEEA)
  - Iranian Construction Engineers Organization
  - Iranian National Committee on Large Dams (IRCOLD)
  - Commission of Research & Education (Engineers Center, Qaemshahr)
  - Central Council for Conferences Decision Making, NIT.
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#### Work Experiences:

- Consulting Engineers, Expert Engineer; Behmansaz Sabz Pars Co., (2006-07)
- Consulting Engineer for *vulnerability assessment of vital railway bridges of Iran (north-west division, 2006-08).*
- Inter-university research cooperation entitled "*Retrofitting & Fortification of Steel Structures Subjected to Earthquake*", (2008).
- Consulting Engineers, Expert Engineer; Seismic Retrofitting of *Tehran International Fair, Hall 8&9,* (2008-10).
- Expert Engineer for *Seismic retrofitting of residential and commercial buildings,* (Since 2008).
- Consulting Engineer for Seismic Hazard Analysis of Tehran's central municipality building, (2008-09).
- PE-IR, Iranian Construction Engineers Organization (Board of Engineers), Province of Tehran/Mazandaran, (Since 2009).
- Consulting Engineers, Expert Engineer; Seismic Retrofitting of the 12-story building of *Bank of Sanat-O-Madan,* (2011).
- Expert Engineer for *rehabilitation and design of industrial structures (SAIPA group),* 2011.
- Technical consultant/officer of construction company (Sabrah Pey Tabarestan Co., Since 2011)



- Official Instructor for Iran-PE upgrade programs, (Since 2017),
- Scientific Advisor of SACE, NIT (2016-2017).
- Research Project Manager. *Cost comparison of the design of high and mid-rise steel and concrete buildings*, Mazandaran Board of Engineers, (2017).
- Controller of structural detailing maps, Qaemshahr Board of Engineers, (2018).