

CV

Personal details

Name	Seyed Amir Hossein
Sure name	Hashemi
Date of birth	16.09.1981
Gender	Man
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Education / academic qualifications

Ph.D.	2008-09 - 2014-08
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Science and Research Branch, Iran

Project title: Development of Attenuation Relationship for Damage Spectra for braced steel Frame Structures with neural network and harmony search methods

Supervisor: G.Ghodrati Amiri

Key Research Features:

- Neural network application to structure design and predict structure damage
- Harmony search method application in structure design
- ML application in damage attenuation relationship in structure design
- Damage prediction by intelligent methods in structure
- Combination of prediction and optimization of ML for attenuation relationship development

M.Sc.	2003-09 - 2006-02
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Shahrood University of Technology

Project title: Optimizing 3D frames structure joist direction using GA

Supervisor: V. R Kalat Jari

Key Research Features:

- Genetic Algorithm application for joist direction optimization in structure
- Structure weight minimization by ML method
- Computer programming base on GA and structure optimization by Visual Basic

B.Sc.	1999-09 - 2003-09
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(QIAU) - Degree: Bachelor civil engineering

Professional Experience

<i>Professional Experience</i>	
Courses Taught	<ol style="list-style-type: none">1. Concrete & Steel structure design2. Design and construction management of building structures and urban elements3. Design and management of high performance concrete production4. Seismic hazard analysis in urban area (SHA)5. Application of artificial intelligence in optimizing the design of structures

Professional experience	<ol style="list-style-type: none"> 1. Structure Analyzer Qazvin Construction Engineering Organization (QCEO) 2. Construction manager (QCEO) 3. Seismic hazard analyzer 4. Head of Structural Research Group of (QCEO) -2008-2016 5. Member of the Board of (QCEO)-2015-2018 6. Member of concrete laboratories control committee of (QCEO) -2007-2016 7. Member of Qazvin Governor's Building Materials Working Group - 2008 8. Controller of structural drawings in (QCEO) -2007 9. Design and supervision of more than 20 structures (Iran) – 2004- present 10. Referee of concrete competitions (QIAU) – 2008 11. Member of the Board of Concrete Laboratory – 2013-2019
Supervised	<p>8 Ph.D. Theses from 2016 to present</p> <ol style="list-style-type: none"> 1. Predicting the strength of polymer-modified thin-layer asphalt with fuzzy logic(supervisor)-completed 2. Mouth brooding fish algorithm for cost optimization of reinforced concrete one-way ribbed slabs(Advisor))-completed 3. The effect of polymer types on optimization of engineered cementitious composite(supervisor) 4. Improving the thermal performance and strength properties of mortar containing airgel using nano-silica compounds(supervisor) 5. Investigation of cracking behavior of roller concrete containing fibers under mixed loading mode(Advisor) 6. Intelligence and optimization of energy consumption in residential buildings taking into account the sense of users(Advisor) 7. Study of the effect of acidic destructive media on the adhesion of self-compacting concrete to lightweight concrete substrates(Advisor) 8. Determination of maximum allowable length change in Pozzlane fiber concretes in alkaline media in order to control the alkaline-silica reaction of aggregates(Advisor) <p>Over 20 M.Sc. from 2014 to present (supervisor)-completed</p> <ol style="list-style-type: none"> 1. Psychological examination and stability of self-compacting mortars containing chemical additives and thickeners with fuzzy logic 2. Investigation of Mechanical Properties and Effect of Impact on Self-Compacting Concrete Containing Recycled Aggregates and Polypropylene Fiber 3. Stability evaluation of self-compacting mortars containing chemical additives and thickeners with fuzzy logic 4. Neural Network Approach in Assessment of Fiber Concrete Impact Strength 5. ML model for evaluating impact fracture energy and compressive strength of glass fiber reinforced concrete 6. Investigation of the effect of recycled PET particles on the properties of self-compacting concrete in fresh and hardened state 7. Effect of super plasticizers on strength of self-compacting concrete in different temperature conditions 8. Investigation of chloride <i>ion</i> permeability on self-compacting concrete containing recycled aggregates and propylene fibers 9. Evaluation and prediction of the effect of Nano silica on concrete water adsorption using artificial neural network

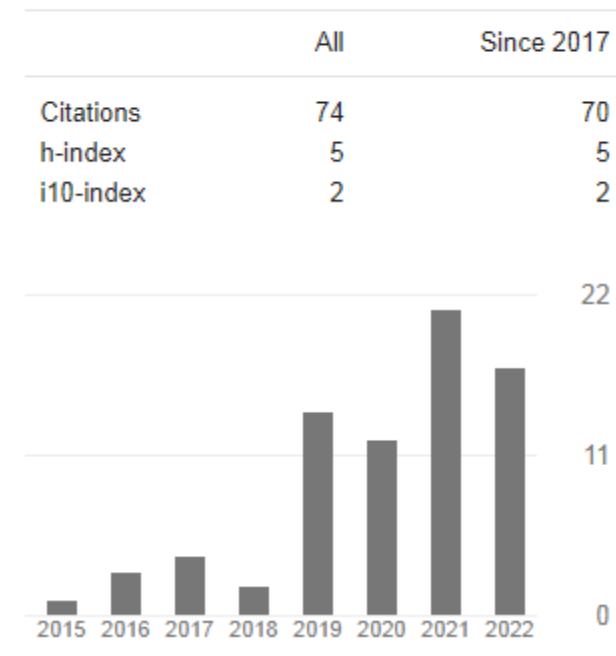
	10. Manage the vulnerability of structures using the decision tree algorithm 11. Effect of preload on the final strength of concretes containing steel fibers 12. Investigation of compressive strength of self-curing lightweight concrete using polyethylene glycol ... 13. Damage prediction in regular steel buildings using tree decision making algorithm 14. Investigation of the effect of different treatments on mechanical properties and durability of self-compacting concrete containing rock powder using the tree decision making method 15. Prediction of concrete durability indices containing nano-silica and super-plasticizer using artificial neural network method 16. Estimation of the use of water reducing materials to achieve specific efficiency in concrete mixing design using artificial neural networks 17. Investigation of the effect of copper overburden as a fine-grained alternative on compressive strength and efficiency in self-compacting concrete 18. Prediction of compressive strength of older ages and water absorption of concrete with soft computing (Case study: Mining and materials of Qazvin) 19. Predicting the duration of strong ground motion using neural network method 20. The effect of using waste sand casting produced in Iran to produce self-compacting concrete containing rock powder 21. Investigation of the effect of metakaolin and polypropylene fibers on the strength parameters of pozzolanic concrete 22. Investigation of the microsilica and polyglycell effect on processing of concretes prepared from mines in Alborz 23. Investigation of coarse to fine grain ratio in fresh and hardened properties of self-compacting concrete
BOS Member	1. Member of Board-Of-Studies in Qazvin Construction Engineering Organization (QCEO). 20014-2017Member of structure engineering commission in (QIAU)
Organized	Conference on “Civil and Environmental Engineering” from 23st May 2015 to 25rd May 2015
Contributions in academic seminars and courses	Civil and Environmental Engineering Conference Seminar on technology and new building materials Course of computer modeling
Invited Seminars and Guest Lectures	Earthquake engineering seminar Building meeting seminar New material in performance concrete (one part of new material course)
Management and organizational	Organize some science seminar and workshop at (QIAU) and (QCEO)

Project / research experience

Intelligent concrete	2008
Scope / workload: Intelligent exothermal Nano-concrete with high thermal conductivity source: QIAU	
Qazvin earthquake risk analysis	2012
Scope / workload: Earthquake risk map of Qazvin source: QCEO	
Concrete building quality estimation	2013
Scope / workload: Comparison between the quality of concrete buildings and its design source: QCEO	
Impact effect on fiber concrete	2014
Scope / workload: mechanical property and impact effect on fiber concrete Source: QIAU-CRC	
Architectural considerations in the design of concrete buildings (book base)	2019
Scope / workload preparing a book to acquaint architects with mixed design and concrete buildings Source: QIAU Influence of Polypropylene- Fiber on the Mechanical properties of self-compacting-concrete with Recycled Aggregates	

Publications / Scientific productions

Cited by



Journals	Conferences	Book Chapter	Citations
30	13	3 in review progress	70

2021 TO 2022

- [Temperature Optimization of Small Smart Residential Buildings Using Fuzzy Inference Rules Considering User Comfort](#) 2022
Y Daneshvar, M Sabzehparvar, SAH Hashemi
Journal of Civil and Environmental Engineering
- [Effect of freeze and thaw cycle on the mechanical properties of engineered cementitious composites with un-oiled fibers containing liquid and solid polymers](#) 2022
H Azadmanesh, SAH Hashemi, SH Ghasemi
Journal of Composite Materials, 00219983211038623
- [Reduce Energy Consumption by Optimizing Temperature and Enforcing Smart Rules in Residential Buildings](#) 2021
Y Daneshvar, M Sabzehparvar, SAH Hashemi
Journal of Applied Dynamic Systems and Control 4 (2), 95-104
- [Intelligent and Optimal Control of Air Conditioning Systems by Achieving Comfort and Minimize Energy](#) 2021
Y Daneshvar, M Sabzehparvar, SAH Hashemi
Journal of Applied Dynamic Systems and Control 4 (2), 41-53
- [Search for the Best Architectural Models in Neural Network for Modeling Normalized Mechanical Parameters of Concrete](#) 2021
SAH Hashemi, A Ameli, SMJ Shafiei Shalke, ES Hashemi
Journal of Transportation Research 18 (3), 41-60
- [Energy Efficiency of Small Buildings with Smart Cooling System in the Summer with Using BMI](#) 2021
Y Daneshvar, M Sabzehparvar, SAH Hashemi
Asas Journal 23 (63), 45-56
- [The assessment of fragility curves of the Application of diagonal and chevron viscous damper in steel structures using a metaheuristic algorithm for modification of ground motions](#) 2021
D Sedaghat Shayegan, A Lork, SAH Hashemi
Journal of Structural and Construction Engineering 7 (Special Issue 4), 100-115

Before 2020

1. **2020-Type** Investigation of vulnerability of steel columns filled with concrete against different explosion scenarios
2. **2020-Type**: journal paper **Title**: Development of designs for RCC mixtures with waste material, A Ameli, EP Karan, SAH Hashemi **Publishing**: International Journal of Pavement Engineering.
3. **2020-Type**: journal paper **Title**: Optimum Cost Design of Reinforced Concrete Slabs Using Mouth Brooding Fish Algorithm ,DS Shayegan, A Lork, SAH Hashemi **Publishing**: Journal of Applied Engineering Sciences.
4. **2020-Type**: Journal paper **Title**: Influence of Polypropylene- Fiber on the Mechanical properties of self-ompacting-concrete with Recycled Aggregates, S.A.H.Hashemi , M. Shakibaei , Somaye. Asadi , E.S.Hashemi **Publishing**: Magazine of Civil Engineering (Acceptance) .

5. **2020-Type:** Journal paper **Title:** Energy efficiency of small buildings with smart cooling system in the summer, Yazdan Daneshvar , Majid Sabzehparvar , Seyed Amir Hossein Hashemi **Publishing:** Journal: Frontiers in Energy (Acceptance) .
6. **2020-Type:** journal paper **Title:** Risk Analysis, Assessment, and Management of Polymer-Modified Thin-Layer by a Failure Mode and Effects Analysis Method, A Ameli, EP Karan, SAH Hashemi **Publishing:** Journal of Transportation Research .
7. **2019-Type:** Journal paper **Title:** Mouth brooding fish algorithm for cost optimization of reinforced concrete one-way ribbed slabs, D Sedaghat Shayegan, A Lork, SAH Hashemi **publishing:** international journal of optimization in civil Engineering .
8. **2019-Type:** journal paper **Title:** The assessment of fragility curves of the Application of diagonal and chevron viscous damper in steel structures using a metaheuristic algorithm for modification of ground motions, ,DS Shayegan, A Lork, SAH Hashemi **Publishing:** JSCE .
9. **2019-Type:** journal paper **Title:** Mechanical Properties and Performance of Roller Compacted Concrete (RCC) Containing High Volume of Fly Ash, Crumb Rubber and Nano Silica using Response Surface Method, A Ameli, EP Karan, SAH Hashemi **Publishing:** Journal of Transportation Research; 16(4): 63-74. .
10. **2019-Type:** journal paper **Title:** The 4-Point Bending Test Results Analysis of Notched Roller Compacted Concrete (RCC) Mixture Beams Containing Reclaimed Asphalt Pavement and Crumb Rubber, A Ameli, EP Karan, SAH Hashemi **Publishing:** Journal of Transportation Research; 16(2): 165-188 .
11. **2018-Type:** journal paper **Title:** The Effect of Using Waste Materials on Mechanical Performance of RCC, A Ameli, EP Karan, SAH Hashemi **Publishing:** Journal of Transportation Research; 15(2): 271-296. .
12. **2018-Type:** journal paper **Title:** Neural Network Approach in Assessment of Fiber Concrete Impact Strength, ANSARI YASIN, HASHEMI SEYED AMIR HOSSEIN **Publishing:** JOURNAL OF CIVIL ENGINEERING AND MATERIALS APPLICATION DECEMBER 2017 , Volume 1 , Number 3; Page(s) 88 To 97..
13. **2018-Type:** journal paper **Title:** Investigation of mechanical and durability properties of lightweight, A Soleimani, SAH Hashemi **Publishing:** Journal of Structural Engineering and Geotechnics, 8 (1), 55-67, .
14. **2018-Type:** journal paper **Title:** Predicting the strength of polymer-modified thin-layer asphalt with fuzzy logic, A Zehtabchi, SAH Hashemi, S Asadi **Publishing:** Construction and Building Materials.
15. **2018-Type:** journal paper **Title:** Study the relative contribution of materials, reinforcement and concrete layers at different levels of cyclic deformation of masonry walls reinforced with shotcrete, E Hashemi, AS Moghadam , Nader K. A. Attari SAH Hashemi **Publishing:** Journal of Structural and Construction Engineering; 5(2): 22-39. doi: 10.22065/jsce.2017.69697 .1016 .
16. **2018-Type:** journal paper **Title:** Calibration of layered element characteristics to model the cyclic behavior of shotcrete unreinforced masonry walls, E Hashemi, AS Moghadam , Nader K. A. Attari SAH Hashemi **Publishing:** Bulletin of Earthquake Science and Engineering ; 5(2): 22-39. doi: 10.22065/jsce.2017.69697 .1016 .
17. **2015-Type:** Journal paper **Title:** Steel Buildings Damage Classification by damage spectrum and Decision Tree Algorithm, SAH Hashemi, G Ghodrati Amiri, F Hamed **Publishing:** Journal of Rehabilitation in Civil Engineering 3-1 - 24-42 .
18. **2014-Type:** Journal paper **Title:** Seismic risk analysis of steel-MRFs by means of fragility curves in high seismic zones, EN Farsangi, FH Rezvani, M Talebi, SAH Hashemi **Publishing:** Advances in Structural Engineering.
19. **2014-Type:** Journal paper **Title:** Developing the attenuation relation for damage spectrum in X-braced steel structures with neural network, SAH Hashemi, GG Amiri, B Mohebi, F Hamed **Publishing:** JVE.

20. **2008-Type:** conference paper **Title:** The mathematical explanation of genetics algorithm method for optimizing structures, SAH Hashemi, E Hashemi **Publishing:** Excellence in Concrete Construction through Innovation.
21. **2008-Type:** conference paper **Title:** Study and comparison between numerical and mathematical method for optimizing structures, SAH Hashemi, E Hashemi **Publishing:** Excellence in Concrete Construction through Innovation.
22. **2008-Type:** conference paper **Title:** Intelligent exothermal Nano-concrete with high thermal conductivity and designing and performing the automatic road temperature monitoring system, J Poursharifi, SAH Hashemi, H Shirmohamadi, M Feizi **Publishing:** Excellence in Concrete Construction through Innovation.
23. **2008-Type:** conference paper **Title:** Optimizing 3D structure frames using GA, SAH Hashemi **Publishing:** Excellence in Concrete Construction through Innovation **Degree:** Master.

Ict experience

Software/programming language	Skill level	Application
Visual Basic	Intermediate	Computer language Programming
Matlab	Good	Many ML toolboxes
CSA-Product (Etabs ,Sap, Safe)	Good	Leaner and non-leaner concrete structure design, concrete slab design
Open Sees	Good	Leaner and non-leaner concrete structure design, concrete slab design
Ansys	Intermediate	Finite element modeling
Abaqus	Intermediate	Finite element modeling
Microsoft office	Good	Word, Exel, Powerpoint ...
WekA	Good	Seismic hazard analysis
Autocad	Intermediate	Drawing

Other Activities

Reviewer of the manuscript in: Journal of **Structural and Construction Engineering (JSCE)**, *Journal of Seismology and Earthquake Engineering*

Languages: English -Verbal skills: Good knowledge, written skills: Good knowledge-Persian: Native