

Mohammad Ali Goudarzi, PhD.

Associate Professor of International Institute of Earthquake Engineering and Seismology (IIEES)-Tehran-Iran- Structural Research Center- Lifelines Section

E-mail: m.a.goudarzi@iiees.ac.ir

Goudarzi.ma@gmail.com

Education

PhD, Civil Engineering- Structural Engineering, KNT University of Technology, Civil Engineering Department, (Tehran-Iran). 2009

Dissertation: "Seismic Behavior of Liquid Storage Tanks by Considering Effects of the Large Amplitude Sloshing Motion"

MSc, Civil Engineering -Structural Engineering, Amirkabir University, Civil Engineering Department, (Tehran, Iran) (2003)

Dissertation: "Shear Stress Analysis in Corrugated Web Beams"

BSc, Civil Engineering, K.N.Toosi University of Technology, Tehran, Iran, 2001

Academic Experience

Sabbatical, University of Stuttgart, Stuttgart, Germany, Institute of Hydraulic Engineering, 2008,
Research Subject: *Performing Shaking Table Tests for Evaluation of Liquid Storage Tanks Seismic Behavior*

Sabbatical, University of California Irvine, 2016,
Research Subject: *Seismic Analysis of floating roof storage tank*

Teaching Experience

Course Subjects:

Finite Element Analysis,

Earthquake Engineering,

Dynamic of Structures,

Seismic Design of Special Structures,

Introduction of Earthquake Engineering,

Analysis of Structure 1 and 2, Statics

Professional Course of Structural Simulation Using FEM Software

Introduction to Seismic Analysis of Sewer System

Seismic behavior of Special Structures

Honors & Awards

- Won a Gold Medal from International Inventions Fair (INPEX) hosted by USA in 2015.
- Full PhD. scholarship award by Iranian Ministry of Science
- 34th Khwarizmi International Award – AFRA SYSTEM- (High Frequency Movement Recording Based on Multi-positioning in a Single Frame-AFRA System), Developers: Hossein Jahankhah, Mohammad Ali Goudarzi, Mohammad Mahdi Kabiri

Patents

- **“VERTICALLY ISOLATING OF LIQUID STORAGE TANKS AGAINST SEISMIC LOADS”**
2014, PCT Application Number: IB2014061302” M.R.Nikoomanesh, **M.A.Goudarzi**,
Financially Supported by IIEES (Contract Number 7534, Project Code 606), Publication
Number: WO/2019/081964, Publication Date 02.05.2019, International Application
No. PCT/IB2017/056623, International Filing Date 25.10.2017
- **Estimating a displacement sequence of an object**
Inventors: Hossein Jahankhah, **Mohammad Ali Goudarzi**, Mohammad Mahdi Kabiri
Publication date: 2021/1/21
Patent office: US
Application number: 17062996
- **“Method of Seismically Protected Liquid Storage Tanks”**
2009, Application Number: 388090123, Registration number: 62262, Iranian Intellectual
Property Organization, **M.A.Goudarzi**, Financially Supported by IIEES, (Contract Number
7538, Project Code 651)

Journal publications:

Patch loading capacity for sinusoidal corrugated web girders MR Nikoomanesh, MA Goudarzi Thin-Walled Structures 169, 108445	2021
Estimating a displacement sequence of an object H Jahankhah, MA Goudarzi, MM Kabiri US Patent App. 17/062,996	2021
Experimental Investigation of Sloshing Wave Effects on a Fixed Roof Rectangular Storage Tank P Nouraei Danesh, M Kabiri, MA Goudarzi Journal of Seismology and Earthquake Engineering 18 (1), 23-32	2020
Evaluating 3D earthquake effects on sloshing wave height of liquid storage tanks using finite element method MA Goudarzi, SR Sabbagh-Yazdi Journal of Seismology and Earthquake Engineering 10 (3), 123-136	2020

- Seismic design loads of cylindrical liquid tanks with insufficient freeboard** 2020
MA Goudarzi, M Moosapoor, MR Nikoomanesh
Earthquake Spectra 36 (4), 1844-1863
- Experimental and numerical evaluation of shear load capacity for sinusoidal corrugated web girders** 2020
MR Nikoomanesh, MA Goudarzi
Thin-Walled Structures 153, 106798
- Numerical and experimental evaluation of sloshing wave force caused by dynamic loads in liquid tanks** 2019
MM Kabiri, MR Nikoomanesh, PN Danesh, MA Goudarzi
Journal of Fluids Engineering 141 (11)
- An Experimental Study of Insufficient Free Board Effect on Fixed-Roof Cylindrical Tank Seismic Loads** 2019
M Moosapoor, MM Yousefi, MA Goudarzi
Journal of Seismology and Earthquake Engineering 21 (3), 13-30
- An innovative isolation system for improving the seismic behaviour of liquid storage tanks** 2019
MR Nikoomanesh, M Moeini, MA Goudarzi
International Journal of Pressure Vessels and Piping 173, 1-10
- Vertical Isolation of Seismic Loads in Aboveground Liquid Storage Tanks** 2019
M Moeini, MR Nikomanesh, MA Goudarzi
Journal of Seismology and Earthquake Engineering 21 (1), 45-53
- Vertical Isolation of Seismic Loads in Aboveground Liquid Storage Tanks** 2019
M Moeini, MR Nikomanesh, MA Goudarzi
Journal of Seismology and Earthquake Engineering 21 (1), 45-53
- Fragility curves for baffled concrete cylindrical liquid-storage tanks** 2019
H Hajimehrabi, F Behnamfar, AK Samani, MA Goudarzi
Soil Dynamics and Earthquake Engineering 119, 187-195
- Applicability of Mass-Spring Models for Seismically Isolated Liquid Storage Tanks** 2019
A Kalantari, MR Nikoomanesh, MA Goudarzi
Journal of Earthquake and Tsunami 13 (01), 1950002
- Seismic damage criteria for a steel liquid storage tank shell and its interaction with demanded construction material** 2018
M Moeini, MA Goudarzi
Bulletin of the New Zealand Society for Earthquake Engineering 51 (2), 70-84
- An Innovative Roof Shape in Liquid Storage Tanks to Reduce Dynamic Sloshing Effects** 2018
P Nouraeidanesh, MM Kabiri, MA Goudarzi
Journal of Applied Fluid Mechanics 11 (1), 127-136

- Reduction of seismic sloshing in floating roof liquid storage tanks by using a Suspended Annular Baffle (SAB)** 2017
M Hosseini, MA Goudarzi, A Soroor
Journal of Fluids and Structures 71, 40-55
- Numerical investigation of a vertically baffled rectangular tank under seismic excitation** 2016
MA Goudarzi, PN Danesh
Journal of Fluids and Structures 61, 450-460
- Designing isolator installation system under the wall of liquid storage** 2016
MG Mohammad Reza NIKOOMANESH, TAFRESHI Shahriyar TAVOUSHI
- Using Base Isolation Method to Mitigate the Seismic Response of Liquefied Natural Gas (Text in Persian)** 2016
SRK Mohammad Ali Goudarzi* , Parviz Rafati
bulletin of earthquake science and engineering 3 (2), Pages 89-100
- Numerical evaluation of hydrodynamic damping due to the upper mounted baffles in real scale tanks** 2015
MA Goudarzi, P Farshadmanesh
Soil Dynamics and Earthquake Engineering 77, 290-298
- Seismic design of a double deck floating roof type used for liquid storage tanks** 2015
MA Goudarzi
Journal of Pressure Vessel Technology 137 (4)
- AN EXPERIMENTAL INVESTIGATION OF A RECTANGULAR TANK FREEBOARD ON THE IMPACT ROOF PRESSURE** 2015
M KABIRI, PN DANESH, MA GOUDARZI
- New design method to evaluate the seismic stress of single deck floating roof for storage tanks** 2015
MA Goudarzi
Earthquake Spectra 31 (1), 421-439
- USING BASE ISOLATION METHOD TO MITIGATE THE SEISMIC RESPONSE OF LIQUEFIED NATURAL GAS** 2015
MALI GOUDARZI, P RAFATI, KS ROSTAM
BULLETIN OF EARTHQUAKE SCIENCE AND ENGINEERING 2 (3), 89-100
- Attenuation effects of a single deck floating roof in a liquid storage tank** 2014
M Ali Goudarzi
Journal of Pressure Vessel Technology 136 (1)
- THE DYNAMICAL BEHAVIOR OF RESERVOIRS WITH SEISMIC ISOLATION SYSTEM BY FINITE ELEMENT METHOD** 2014
N MOHAMMADREZA, TT SHAHRYAR, G MOHAMMADALI
Spectrum: A Journal of Multidisciplinary Research 3 (12), 180-191
- Proposing a new technique to enhance thermal performance and** 2013

- reduce structural design wind loads for natural drought cooling towers
MA Goudarzi
Energy 62, 164-172
- Seismic behavior of a single deck floating roof due to second sloshing mode 2013
MA Goudarzi
Journal of Pressure Vessel Technology 135 (1)
- Numerical Investigation of a Horizontally Baffled Rectangular Tank Subjected to Seismic Excitation 2013
HR Babaali, MA Goudarzi, F Jafariye
JOURNAL OF SEISMOLOGY AND EARTHQUAKE ENGINEERING 15 (34), 183-193
- Investigation of nonlinear sloshing effects in seismically excited tanks 2012
MA Goudarzi, SR Sabbagh-Yazdi
Soil Dynamics and Earthquake Engineering 43, 355-365
- Analytical and experimental evaluation on the effectiveness of upper mounted baffles with respect to commonly used baffles 2012
MA Goudarzi, SR Sabbagh-Yazdi
Ocean Engineering 42, 205-217
- Contraction of a Single Deck Floating Roof Due to the Seismic loads 2012
MA Goudarzi
15 (WCEE) world conference on Earthquake Engineering
- Effects of modeling strategy on computational wind pressure distribution around the cooling tower's 2011
MA Goudarzi, SR Sabbagh-Yazdi
Wind and Structures 14 (1), 81
- Investigation of sloshing damping in baffled rectangular tanks subjected to the dynamic excitation 2010
MA Goudarzi, SR Sabbagh-Yazdi, W Marx
Bulletin of Earthquake Engineering 8 (4), 1055-1072
- Seismic analysis of hydrodynamic sloshing force on storage tank roofs 2010
MA Goudarzi, SR Sabbagh-Yazdi, W Marx
Earthquake Spectra 26 (1), 131-152
- Numerical assessment of seismic safety of liquid storage tanks and performance of base isolation system 2010
MA Goudarzi, S Alimohammadi
Structural engineering and mechanics: An international journal 35 (6), 759-772
- Numerical investigation of interference effects on wind flow around a group of cooling towers including wind ribs effects 2010
MA Goudarzi, SR Sabbagh-Yazdi
Journal of Civil and Environment Engineering (Amirkabir) 41 (2), 105-114
- Effect of turbulent modeling on computed wind pressure load over cooling towers with base structures and comparison with VGB Guide- 2010

line

KMA GOUDARZI, YSR SABAGH
CIVIL ENGINEERING INFRASTRUCTURES JOURNAL (CEIJ)(JOURNAL OF
FACULTY OF ...

Numerical investigation on accuracy of mass spring models for
cylindrical tanks under seismic excitation 2009

MA Goudarzi, YSR SABAGH
International Journal of Civil Engineering 7 (3), 190-202

Modeling wind ribs effects for numerical simulation external pressure
load on a cooling tower of KAZERUN power plant-IRAN 2008

MA Goudarzi, SR Sabbagh-Yazdi
Wind Struct 11 (6), 479-496

Nonlinear Analysis of Plate Girders with Corrugated Web 2008

MA Goudarzi, M Yahyai
Amirkabir Journal of Civil Engineering 18 (67), 11-19

Shear Stress Analysis of Corrugated Web Girders for Bridges 2007

BB M. A. Goudarzi Khoygani , M.A. Rajaie
Journal of Transportation Research (ISSN 2008-3351) 4 (1), Page 41

Using of lumped element model for numerical study of dynamical
treatment of the tanks equipped with seismic isolator system

MRN Manesh, ST Tafreshi, MA Goudarzi

Recent Conference Papers

1- Contraction of a Single Deck Floating Roof Due to the Seismic loads

MA Goudarzi, 2012

15 (WCEE) world conference on Earthquake Engineering

2- Solution of Internal and External Wind Induced Pressure for a Single Cooling Tower
in KAZERUN Power Plant (IRAN)

S.R .Sabbagh-Yazdi, M.A. Goudarzi, 2009

6th IASME/WSEAS International Conference on FLUID MECHANICS and AERODYNAMICS

3- An Experimental Investigation of a Rectangular Tank Freeboard on the Impact Roof
Pressure

M.M .Kabiri, P.N. Nouraei, M.A. Goudarzi, 2015

7th International Conference on Seismology and Earthquake Engineering

4- Experimental Evaluation of Code Provisions of a for Hydrodynamic Wall Pressure of
a Rectangular Storage Tank

M.M.Kabiri, P.N.Nouraei, M.A. Goudarzi, 2015

7th International Conference on Seismology and Earthquake Engineering

Grants and Projects

* Title: "Evaluating Rehabilitation Methods for Tehran Concrete Water Storage Tanks"
Agency: Tehran Province Water and Wastewater Company, M.A. Goudarzi, Hossein Jahankhah(2018-2021)

* Title: "Providing 4th Edition and related commentary of Iranian Seismic Design Code for Petroleum Facilities and Structures"
Agency: Ministry of Petroleum Department of Engineering, Research & Technology, M.A. Goudarzi, (2021- present)

* Title: "Structural Health Monitoring of Tehran Tabiat Bridge"
Agency: Nosazy AbasAbad Company
M.A. Goudarzi, (2019- present)

* Title: Optimization and Designing of FRP panel Type Liquid Storage Tanks
Agency: FTC, M.A. Goudarzi, (2013-2015)

* Title: Proposing an effective method to reduce the Seismic Stress in Floating Roof Storage Tank, Agency: INSF (Iranian National Science Foundation)
M.A.Goudarzi, Contract Number 89003753, (2010-2011)

* Title: "Reduction of seismic hazard in liquid storage tanks by considering large Sloshing Motion"
Agency: NIOC (National Iranian Oil Company)
PI: M.A.Goudarzi (Ph.D. Research Grant), S.R.Yazdi. Contract Number 81-86029, (2007-2010)

* Title: "Evaluation of seismic stress in floating roof storage tanks"
Agency: National Iranian Oil Products Distribution Company (NIOPDC)
PI: M.A.Goudarzi, S.R.Yazdi, Contract Number 16/8807. (2008-2009)

* Title: "Developing New Method to Reduce the Adverse Effects of Wind on the Thermal Performance of a Cooling Tower"
Agency: MAPNA Group
PI: M.A.Goudarzi, S.R.Yazdi (2009-2011), Contract Number: Rd-88-33

* Title: "Investigation of the reduction methods of wind flow adverse effects on thermal performance of a natural drought cooling tower"
Agency: Boland Paye Co,
PI: M.A.Goudarzi, S.R.Yazdi (2006-2008)

* Title: "Designing and lunching of corrugated web beam production line in ISP Co"
Agency: Isfahan Steel Profile Co,
PI: M.A.Goudarzi, (2013-2015),

* Title: Research Project Founded by IIEES (International Institute of Earthquake Engineering and Seismology)

1-Title: Numerical Investigation of Seismic Behavior of the Floating Roof Storage Tank.

PI: **M.A.Goudarzi**, (2011-2012), Contract Number 7521, Project Code:502

2-Title: Numerical Investigation of Sloshing Impact Force on the Fixed Roof of Liquid Storage Tanks,

PI: **M.A.Goudarzi**, (2014-2015), Contract Number 7530, Project Code:568

3-Title: Redistribution of hydrodynamic pressures in liquid storage tanks due to the existence of fixed roof,

PI: **M.A.Goudarzi**, (2014-2015), Contract Number 7539, Project Code:652

4-Title: Nonlinear Seismic Analysis of a Single Deck Floating Roof Due to the Sloshing Motion

PI: **M.A.Goudarzi**, (2011-2012), Contract Number 7522, Project Code:510

5-Title: An Innovative Technique for Seismically Isolating the Liquid Storage Tanks

PI: **M.A.Goudarzi**, (2014-2015), Contract Number 7534, Project Code:606

6-Title: Reduction of a Seismic Stress in a Floating Roof by the limitation of Sloshing Motion.

PI: **M.A.Goudarzi**,, Mahmmmod Hoseini (2013-Present), Contract Number 7531, Project Code:593

7-Title: Investigation of Upper Mounted Baffle effects on suppressing of the Sloshing Effects in Liquid Storage Tanks

PI: **M.A.Goudarzi**, (2011-2012), Contract Number 7512, Project Code:543

8-Title: Reduction of Elephant foot buckling stress in the Shell of steel Liquid tanks

PI: **M.A.Goudarzi**, (2015-Present), Contract Number 7538, Project Code: 651

9- Title: Experimental Investigation of Liquid Impact Forces on the Roof of Liquid Storage Tanks.

PI: **M.A.Goudarzi**, (2014-2016), Contract Number 7533, Project Code: 605

Graduate Advisees

PhD Students

Mojtaba Moosapoor (Advisor), 2013 - present
Amir Hossein Soroor (Co Advisor), 2012-2018
Mohammad Reza Nikomanesh (Advisor), 2014 – present
Morteza Moeni (Advisor), 2012- 2018
Mohammad Mehdi Kabiri ((Advisor),2019-present

MS Students

R. Khosravi(Advisor), 2018
Mohammad Kabiri (Advisor), 2014
Poya Noraei Danesh (Advisor), 2014
Farshid Jafariye, (Co Advisor), 2014
Pegah Farshad Manesh, (Co Advisor), 2011

Editorial

Reviewer of :

Thin-Walled Structures (Elsevier)
Earthquake Engineering and Engineering Vibration (Springer),
Earthquake Engineering and Structural Dynamic (Springer),
Bulletin of Earthquake Engineering (Springer),
International Journal of Heat and Mass Transfer (Elsevier),
Wind and Structure (Techno-Press),
Journal of Seismology and Earthquake Engineering (IIEES),
International Journal of Civil Engineering (ISU),
Journal of Civil Engineering (SR),
Structures and Buildings (ICE),
Journal of Porous Media

Book Chapters and Technical Reports

M.A. Goudarzi , Tehran Code of Seismic design of Sewer System –Chapter 3 of “
Seismic Design of Sewer Pipe Lines” 2015 (In Persian)

M.A. Goudarzi , Tehran Code of Seismic design of Sewer System –Chapter 6 “
Seismic Design of Special Structures in Sewer Systems ” 2015 (In Persian)

M.A.Goudarzi , Technical Report “ Provisions for designing of the Corrugated Web
Beams” 2013 (In Persian)

M.A.Goudarzi, “Investigation of Dynamic Behavior of Floating Roof Storage Tank and
Proposing Proper Seismic Provisions” 2013, IIEES Report.

M.A.Goudarzi, Seismic Analysis of Double Deck Floating Roof Storage Tanks .
2015, IIEES Report.

M.A.Goudarzi , Numerical and Analytical Investigation of Upper Mounted Baffle
effects on Suppressing the Sloshing Effects in Liquid Storage Tanks, 2014, IIEES
Report.

M.A.Goudarzi , M.M.Kabiri, Numerical Investigation of Sloshing Impact Force on the Liquid Storage Tank Roofs, 2015, IIEES Report.

M.A.Goudarzi , P.N.Danesh, Experimental Investigation of Liquid Impact Forces on the Roof of Liquid Storage Tank, 2015,IIEES Report.

M.A.Goudarzi , A Technique for Seismically Isolating the Liquid Storage Tanks
PI: Mohammad Ali Goudarzi, 2013, IIEES Report.