

Seyed Mohammad Taghi AHMADI

## CURRICULUM VITAE

July 2024.2

**Name:** Seyed Mohammad Taghi AHMADI

**Specialty:** Concrete Dams Design and Dynamic Analysis, Earthquake Engineering, Fluid-Structure Interaction, Finite Element Analysis.

**Title:** Professor

**Department:** Civil & Environmental Engineering., Hydraulic Structures Division

**Academic Degrees:** Ph.D. C.E., M.Sc. C.E, B.S. St. E.

**Current Position:** **Faculty Member**

**Marital Status:** Married

**Date & Place of Birth:** June 6, 1955, Arak, Iran

**Office Address:** Faculty of Civil & Environmental Engineering, Tarbiat Modares University, P.O. Box 14115-397, Tehran, Iran,  
Tel. & Fax +98-21-8288-3326

**Work Contact Numbers:** Tel. & Fax +98-21-8288-3326

**Work Email:** mahmadi@modares.ac.ir

**Webpage:** [http://www.modares.ac.ir/pro/academic\\_staff/mahmadi](http://www.modares.ac.ir/pro/academic_staff/mahmadi)

**Google Scholar webpage:** <https://scholar.google.com/citations?hl=en&user=Bb-H5X8AAAAJ>

**Orcid ID=0000-0001-9179-3082**

**Scopus ID=57191246054**

## EDUCATION

**Ph.D.** March 1988  
Dept. Civil Engineering, Tohoku University, Sendai, Japan  
Thesis Title: New Method of Analysis for Arch Dam: Reservoir and Foundation Dynamic Interactions, and Static Joint Opening.

**M.S.** March 1985  
Dept. Civil Engineering, Tohoku University, Sendai, Japan  
Thesis Title: A Study of Static and Dynamic Behaviors of Arch Dam.

**B.S.** July 1979  
Structural Engineering Faculty, Sharif University of Technology, Tehran, Iran

**Language Ability:** English (fluent), Japanese (fair), German (limited), Arabic (limited)

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## **ACADEMIC EXPERIENCE**

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**Permanent Position:** Professor and Faculty in The Faculty of Civil & Environmental Engineering ,  
Tarbiat Modares University (since 1988)

**Graduate Lectures Given:** Finite Element Method I & II, Concrete Dams,  
Matrix Analysis of Structures, Fluid-Structure  
Interaction, Earthquake Engineering, Mechanics  
of Materials. (since 1988)

**Supervision on Academic dissertations: More than 45 MSc and 10 PhD in Iranian Universities.**

1988 to 1990 :  
Head of Civil Engineering Department at School of Engng., Tarbiat Modares University(T.M.U).

1988 to 1989 :  
Head of Technical Bureau of T.M.U.

1993 to 1994 :  
Research Deputy of School of Engineering

1996 to 1998 :  
Founder and Dean of Research Faculty (Pazhouhesh-kadeh) of Building and Housing.

1989 to 1993 :  
Member of Founders, & Charge de' Affair of the International Institute of Earthquake  
Engineering and Seismology

1994 to 1995 :  
Guest Professor to the Swiss Federal Institute of Technology (ETH) on Sabbatical Leave for  
Research on Nonlinear Dynamic Analysis of Arch Dam.

1995 to 1998 :  
Member of Scientific Research Council of Iran (Industry Committee).

2001 to 2002 :  
Head of Special Committee for Revising General Courses for Undergraduate Level for Universities  
in Tehran.

**1993 to 2004 :**  
**Member of Civil Engineering Committee of Supreme Council of Planning for Higher Education.**

1995 to 2000 :

Head of Hydraulic Structures Division in Civil Engineering Department.

**1995 to 2004 :**

**Chief Editor of Modares Technical & Engineering Journal, Tarbiat Modares University**

**1998 to 2010 :**

**Member of Research Council, International Institute of Earthquake Engineering and Seismology, Tehran, Iran.**

1999 to 2003 :

Vice-Chancellor for Academic Affairs, Tarbiat-Modares University.

**1990 to 1999 :**

**Member of Scientific Research Council of Iran (Earthquake Committee).**

2003 :

Guest Professor to the TU-Berlin on Joint Research project with Institute of Structural Engineering, Research on Arch Dam Shape Optimization.

**2003 to 2007 :**

**Head of Hydraulic Structures division, Civil Engineering Department, Tarbiat Modares Univ.**

**2003 to 2006 :**

**Member of Academic Publications Council, Tarbiat Modares University**

**2003 to 2007 :**

Members of the Board of Trustees, Research Faculty (Pazhouhesh-kadeh) of Building and Housing.

**2004 to 2008 :**

**Member of Provost Committee, Tarbiat Modares Univ.**

**2003 to 2008 :**

**Member of Provost Committee, International Institute of Earthquake Engineering and Seismology, Tehran, Iran.**

**2004 to date:**

**Member of editorial board of several Iranian Scientific Journals (Modares Civil Engineering, , Seismology and Earthquake Engineering, Int. Journal of Civil Engineering, Civil Engineering Infrastructures Journal, etc.)**

**2006 to 2010:**

Members of the Board of Trustees, **International Institute of Earthquake Engineering and Seismology.**

**2014 to 2021:**

**Chancellor of Tarbiat Modares University, Tehran, Iran**

**2024- date:**

**Associate member of Civil Engineering Branch, The Academy of Sciences of Iran.**

**2022-date:**

**Head of the Think Tank Room for Natural Disasters, The Academy of Sciences of Iran.**

**2024-date:**

**Head of Iranian Association of Earthquake Engineering.**

## **INDUSTRIAL AND PROFESSIONAL EXPERIENCE**

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**1978 to 1979 :**

Structural Engineering Supervisor at the site of heavy RC construction in cooperation with the Parjam General Contractor Co.

**1989 to 1990 :**

Senior supervisor on the dynamic and static analyses and structural design of Ostour Concrete Arch Dam (160 m. Height) to be built in Azarbayejan province of Iran, in cooperation with the Mahab-Ghodss Consultant Engineers (MG).

**1988 to 1993 :**

Senior supervisor on preliminary and final design Tange-Soleyman (Shahid-Rajaei) Concrete Arch Dam now under construction in Mazandaran Province in cooperation with the MG.

**1988 to 1993 :**

Consultant in the design and analysis of several concrete dams under or planned for construction as well as in the safety evaluation of existing dams in Iran, such as Karun-I, Karun-III, Dez, Tabarakabad, Taham, Ghir, Ilam, Tange-Douk, Barezou etc. in cooperation with the Mahab-Ghodss Consultant Engineers Co.

**1991-1994:**

Design Manager of two earth dams projects in the feasibility stage (Kalan dam with 40m. height, and Sang-e-Siah dam with 30m. height) in conjunction with the Mahsab-Gharb Consulting Engineers Co.

**1992:**

Head of Civil Design Checkers of the Karun-III Project (A 200m Concrete Arch Dam with a 2000MW Hydroelectric Power Plant).

**1990-1991 :**

Chief engineer in the dynamic verification analysis of 106 m. height Sefidroud buttress dam post earthquake rehabilitation design with special reference to hydrodynamic interaction and foundation radiation.

**1989 to 1994 and 1997 to date:**

Member of Technical Committee of Concrete Dams section in the Mahab-Ghodss Consulting Engineers, Tehran, Iran.

1995 to 1998 :

President of the Building and Housing Research Center; the National organization under the ministry of Housing and Urban Development.

**1997 to 2012:**

**Structural Design supervisor of the Karun-IV Project (A 240m Concrete Arch Dam with a 2000 MW Hydroelectric Power Plant). Mahab-Ghodss Consulting Engineers, Tehran, Iran.**

1995 to 1997 :

Head of the National Committee of Revising the Iranian Code for Seismic Resistant Design of Buildings (ISIRI Standard 2800).

**1997 to 2021 :**

**Member of the Council of National Building Regulation of Iran (NBRI) ; Ministry of Roads and Urban Development.**

1998 to 2003, and 2007 to 2010 :

Head of the Special Committee for the National Building Regulation of Iran (NBRI) Ch. 19 (Energy Saving in Buildings). Ministry of Roads and Urban Development.

**2002 to 2003 :**

**Head of Special Committee on “Quality Improvement of Building Material and Construction Technology”, Organization of Management and Planning of Iran.**

**1999 to 2008 :**

**Member of Technical Committee of BHRC (Building and Housing Research Center), Tehran, Iran.**

**1992 to 2005 :**

**Founder and member of Board of Directors of Mahsab-Gharb Consulting Engineers, Tehran, Iran.**

2001 to 2002 :

Founder and member of the “RD committee for Construction Technology” of Housing Investment Company, Tehran, Iran.

**2001 to 2008 :**

**Head of Steering Group for the National Program for Seismic Retrofit of Essential Buildings and Vital Facilities, and Infrastructures.**

**2002 to 2008:**

**Keynote lecturer of Technical Official Training Courses for Seismic Retrofit of Buildings, Organization of Management and Planning of Iran.**

**2002 to Date :**

**Member of the National Committee of Revising the Iranian Code for Seismic Resistant Design of Buildings (ISIRI Standard 2800).**

**2005 to 2013:**

**Structural Design Reviewer of the World Highest Concrete Dam; Bakhtiari Hydro-Project (A 315m Concrete Arch Dam with a 2000 MW Hydroelectric Power Plant).**

**2004-2006:**

**Member of the Engineering Jury Panel of the Khwarizmi International Award, Tehran, Iran.**

**2005-2006:**

**Member of the International Panel of Experts, Shahryar Arch Dam Project, Tablieh Construction Company, Tehran, Iran.**

**2007 to 2010 :**

**Head of the Special Committee for the National Building Code Chapter 21; Passive Defense Engineering for Buildings.**

**2010 to 2014:**

**Member of Research Council for Civil Infrastructures and Standardization, Technical Department of Municipality of Tehran City.**

**2017 :**

**Head of the specialized committee for National Report on Plasco Building fire Incident, Iranian Presidency Office.**

**2013 to 2021 :**

**Head of the Council of National Building Regulation of Iran (NBRI) ; Ministry of Roads and Urban Development.**

## **MEMBERSHIPS**

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- 1.Member of Iranian Association of Structural Engineers since 1989.**
- 2.Member of the Iranian National Committee on Large Dams since 1989.**
- 3. Member of the Japanese Association of Civil Engineers (1988-1993).**
- 4. Member of the Earthquake Research Institute EERI (1989-1994).**
- 5. Member of Founders of Iranian Association of Earthquake Engineering, since 1991.**
- 6. Member of the International Association of Computational Mechanics IACM,(1989-1996).**
- 7. Member of Iranian Construction Engineers Organization since 1995.**

## HONOURS

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1. 3<sup>rd</sup> rank in Structural Engineering freshmen of the nation-wide higher education entrance exam for Aryamehr (Presently Sharif) University of Technology, 1973.
2. Japanese Monbusho Scholarship Laureate for Graduate studies in Japan, 1982-1988.
3. Honored Faculty Member of The Year 1995, in Tarbiat Modares University
4. Honored Faculty Member of The Year 1997, in the Faculty of Engineering and Technology, Tarbiat Modares University.
5. Prize for Significant Contribution to the rehabilitation of the Sefid-Roud Dam (Analysis and Design tasks), 1991, from the Minister of Energy.
6. Prize for Distinct Paper in the 3rd Iranian Congress of Dam Construction (IRCOLD 1997), from the Minister of Energy.
7. Holder of Professional Engineer Degree (Grade 1), Tehran Building Engineers Organization , 1995.
8. President of The Iranian Association of Earthquake Engineering (2003 to 2006), and (2024- )

## PUBLICATIONS

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### A. Books and Technical Reports:

1. M. T. Ahmadi et al., "An Evaluation of Repair techniques for the Damaged Sefidroud Concrete Buttress Dam," Mahab-Ghodss Consultant Engineers Company, 1991.
2. M.T. Ahmadi, Lotfi V., Zakerzadeh N., "PARSHAPE; A Computer Program to Generate Parabolic Arch Dam," Mahab-Ghodss Consultant Engineers Co. 1988.
3. M.T. Ahmadi. Khoshrang, Gh., "A Finite Difference Program for Thermal Load Analysis of Concrete Arch Dams," MG Consultant Engineers Co., 1990.
4. M.T.Ahmadi, "Scientific Program for Structure Section Development," MG Consultant Engineers Co., 1991.
5. M.T.Ahmadi, F.Jafarzadeh(eds.), "The Manjil-Roudbar Earthquake of Khordad 31, 1369, Iran," Technical report 1, (Publication no. 70-91-1 in Persian), Int.Inst.Earthq.Engng.Seism, 1991
6. M.T. Ahmadi, Gharabaghi B., " A New Method of Analysis for the Dynamic Interaction of Dam-Reservoir using Euler-Lagrangian Approach," (Publication no. 72-93-1 in Persian) International Institute of Earthquake Engineering and Seismology, September 1993.

7. G.R.Graham, T.Yanagida (Authors), A.Fourogi, M.T. Ahmadi (Translators into Persian), "Roller Compacted Concrete for Gravity Dam; ICOLD Bulletin no.75", Int.Inst.Earthq. Engng.Seism., Tehran, 1995.
8. M.T.Ahmadi (ed.& head of revising committee), "Iranian Code for Seismic Resistant Design of Buildings- 2nd Revised Edition", BHRC Publication no 253, Tehran 1997.
9. M.R.Pourjafar, N.Nik-khah, M.T.Ahmadi, " An Illustrated Guide to the Iranian Code for Seismic Resistant Design of Buildings (ISIRI Standard 2800)", BHRC Publication no 245, Tehran 1997.
10. M. T. Ahmadi (ed.& head of the Assigned Committee), " Guidebook for Chapter 19 of Iranian Building Code; Savings in Building Energy Consumption, Vol. 1, Thermal Insulation of External Envelope," Ministry of Housing and Urban Planning, 1999, Tehran.
11. M.T.Ahmadi (head of Assigned Committee), " Chapter 19 of the Iranian Building Code (2nd ver.); Savings in Building Energy Consumption, Vol. 1, Thermal Insulation of External Envelope," Ministry of Housing and Urban Planning, 2002, Tehran.
12. V. Mirahsani, M.T. Ahmadi, and M. Haeri," Iranian design response spectrum," Building and Housing Research Center, Winter 2000, Tehran.
13. M. T. Ahmadi, M. Izadinia, " Nonlinear Dynamic Analysis of Concrete Arch Dams including Shear-Tensile failures," Scientific Research Council of Iran, 2003, Tehran.
14. M.T. Ahmadi, S. Mohammadi, Gh. Liaghat, and A. A. Tasnimi, "Terms of Reference for Devising National Code for Blast Load Resistant Structures, " (in Persian), Building and Housing Research Center, Tehran, Spring 2007.
15. M.T. Ahmadi, " Optimum Shape Seismic Design Software for Concrete Arch Dam," Technical Report Dam-84023, Iran Water Resource Management Company, 2010.
16. Experiences and Lessons Learnt on Seismic Retrofitting, (in Persian), Ahmadi M. T., Tahuni S. and Namayandeh- Niasar A. (editors), Winter 2011, IREMCO, Tehran, Iran.
17. M.T. Ahmadi, " Seismic Load Definition for Hydraulic Structures in Canyon Sites," Technical Report Dam-84..., Iran Water Resource Management Company, 2010.

۱۸. محمدتقی احمدی و همکاران، گزارش ملی پلاسکو، هیات ویژه گزارش ملی بررسی حادثه ساختمان پلاسکو، ریاست جمهوری، فروردین ۱۳۹۶

۱۹. محمدتقی احمدی و همکاران (کارگروه هدایت فنی تدوین) دستورالعمل‌های فنی بهسازی لرزه ای نسبی ساختمان‌های متداول شهر تهران (در ۳ جلد)، انتشار مشترک توسط مرکز تحقیقات راه، مسکن و شهرسازی، و سازمان پیشگیری و مدیریت بحران شهر تهران، چاپ اول مهرماه ۱۳۹۹

۲۰. محمدتقی احمدی، نرجس سلطانی، و احمد علی فخمی، " تحلیل قابلیت اطمینان سدهای بتنی قوسی با در نظرگیری عدم قطعیت‌های پی، " طرح تحقیقات کاربردی، شرکت سهامی مدیریت منابع آب ایران، وزارت نیرو، بهمن ۱۴۰۰



## **B. Papers in Journals:**

1. Ahmadi M. T., "SPRAD, Seismic Analysis Program for Fluid-Structure Radiative Systems, " Computers & Structures, 1989.
2. Ahmadi M. T., Razavi, S., "A Three-Dimensional Joint Opening Analysis of An Arch Dam, " Computers & Structures Vol. 44 No. 1/2, 1992.
3. M. T. Ahmadi, Khoshrang Gh., " Sefidrud Dam`s Dynamic Response to the Large Near-Field Earthquake of June 1990," J. of Dam Engineering, Vol.III, Issue 2, 1992.
4. M.T.Ahmadi, "Sefidroud dam Experience", Int. J. Water Resources Engng. vol.1, no.1, 1993.
5. M. T. Ahmadi, B. Nawaeenya, "Hydrodynamic Interaction Analysis of Dam-Reservoir Using Lagrangian Approaches", (in Persian) Int. J. of Engineering, Iran University of Science and Technology, Vol.6, no.1-b, 1995.
6. M. T. Ahmadi, S. A. Marashi, and A. A. Aghakoochak, "A Study of Joint-Opening on Concrete Dams Using Incremental Static Loading", (in Persian) Amirkabir J. of Science and Technology vol.9, no.33, 1997.
7. M. T. Ahmadi, " Changing the Steel Frame Design of Ordinary Buildings," (in Persian), Building and Housing News, Vol. 1 Winter 1997, BHRC, Iran.
8. M. T. Ahmadi, and N. Moghaddas, " Problems to Focus on When Building High Rise," (Translation from Bulletin of Tall Buildings & Urban Habitat into Persian), Building and Housing News, Vol. 2, No. 4, Spring 1998, BHRC, Iran.
9. J. Vaseghi-Amiri, M. T. Ahmadi, " Appropriate Constitutive Model for Nonlinear Dynamic Analysis of Concrete Gravity Dams Fracture Under Earthquake Effects," (in Persian), Int. J. of Engng., Vol.9 No. 3, Iran University of Science and Technology, 1998.
10. M.T. Ahmadi, J. Vaseghi-Amiri, "Fracture Models Assessment for Dynamic Analysis of Concrete Gravity Dams," (in Persian) Modares Technical and Engineering Journal, No.4, Spring 1998.
11. M. T. Ahmadi, M. Izadinia, and H. Bachmann, "A Discrete Crack Joint Model for Nonlinear Dynamic Analysis of Arch Dam," Computers and Structures, Vol. 79, No. 4, 2001, Pergamon Press.
12. M. Izadi-Nia and M. T. Ahmadi, " Vertical Contraction Joint Models for Nonlinear Dynamic Analysis of Concrete Arch Dams," (in Persian), Esteghlal Journal of Engineering, Vol. 19, No. 2, Winter 2001.
13. R. Sarraf-Mamoory, M. T. Ahmadi, T. Parhizkar, and S. B. Ahmadi, " The study of the effect of Particle Size and Weight Ratio of Ceramic Pigments on Compressive Strength of Colored Concrete," (in Persian), Modares Technical and Engineering Journal, No. 5, Fall 2001.

14. N. Khaji, M. T. Ahmadi, " An Efficient method for Dam-Reservoir Seismic interaction Analysis," Amirkabir journal of Science and Technology, Vol. 13, No. 50, Spring 2002.
15. M. T. Ahmadi, M. R. Mivehchi and A. Hajmomeni, " Ambient Vibration Tests of a Modern Arch Dam; Some Proposals for Method of Data Processing," Int. J. of Civil Engng., Iran University of Science and Technology, 2002.
16. M. T. Ahmadi, M. H. Sadaghyani, and H. A. Maghsudi-Shoorabi, " Numerical Analysis of Behavior of Jointed rock Mass of Concrete Arch Dam Abutments," (in Persian), Amirkabir Journal of Science and Technology, vol. 13, No.51, Summer 2002.
17. M. T. Ahmadi, Afsheen Kalantary, "Dynamic Modelling of Seismic Behavior of Elevated Water Tank Including Fluid-Structure Interaction," (in Persian), Modares Technical and Engineering Journal, Winter 2003.
18. M. R. Mivehchi, M. T. Ahmadi, and A. Haj-momeni, " Effective Techniques for Arch Dam Ambient Vibration Test: Application on Two Iranian Dams," J. Seimology and Earthquake Engineering, Summer 2003, Vol. 5, No.2, Int. Inst. Earthq. Engng. Seism., Tehran, Iran.
19. S. S. Emamzadeh, and M. T. Ahmadi , " Underwater Explosion Shockwave Propagation by Finite Element Method," (in Persian), J. of Marine Engineering, Iran, 2006.
20. A. H. Akhaveisi, and M. T. Ahmadi, " A New Thin Shell Flexural 4-Node Finite Element Based on Reissner-Mindlin Theory," (in Persian), Modares Technical and Engineering Journal, No. 27, Spring 2007.
21. Tajalli, F., Ahmadi, M. T., Moharrami, H., " A Shape Optimization Algorithm for Seismic Design of a Concrete Arch Dam," J. Dam Engineering, vol.18, issue 2, Sep 2007.
22. Tarinejad,R., Ahmadi, M. T., Mivehchi, M. R., Ahmadi, M. K., " Evaluation of Dynamic Properties of Concrete Arch Dam using Forced Vibration Test," (in Persian), Int. J. of Science & Technology, Amirkabir, Vol 18, No.66-c, Spring & Summer 2007.
23. Tarinejad,R., Ahmadi, M. T., Khaji, N., " Analysis of Topographic Amplification Effects on Canyon Sites using 3-D Boundary Element Method," J. Seimology and Earthquake Engineering, Spring & Summer 2007, Vol. 9, No. 1 & 2, Int. Inst. Earthq. Engng. Seism., Tehran, Iran.
24. Moradloo, J., Ahamdi, M. T., Vahdani, S., " Geometrically Nonlinear Dynamic Analysis of Concrete Arch Dams," (in Persian), Int. J. of Engng., Vol.19 No. 2, Iran University of Science and Technology, 2008.
25. Yazdani, S., Yazdani, M., Ahmadi, M. T., " Effect of Geometrical Properties of Discontinuities on Hydraulic Behavior of and Seepage in the Abutments of Concrete Arch Dam," (in Persian), J. of Hydraulics, vol. 3, no. 1, spring 2008.

26. Akbari, J., Ahmadi, M. T., Pahl, P. Y., " Shape Design of Concrete Arch Dams using Hermite Splines," (in Persian), Journal of Faculty of Engineering, vol. 42, no. 4, Tehran University, Aug. 2008.
27. Akbari, J., Ahmadi, M. T., " Shape optimization of concrete arch dams for dynamic load using mesh design velocity," J. Dam Engineering, June 2009.
28. Shekari M. R., Khaji, N., Ahmadi, M. T., " A Coupled BE-FE Study for Evaluation of Seismically Isolated Cylindrical Liquid Storage Tanks Considering Fluid-Structure interaction," J. Fluids and Structures, 2009.
29. Tajalli, F., Ahmadi, M. T., Moharrami, H., " Shape Optimization of Concrete Arch Dam to Enhance Seismic Performance," (in Persian), Modares Technical and Engineering Journal, 2009.
30. Khandan-Bakavoli, M., Ahmadi, M. T., Yazdani, M., " Study on the Effect of Seepage on Jointed Rocks in Abutments of Arch Dams," (in Persian), Int. J. of Science & Technology, Amirkabir, Issue 71, 2009.
31. Jilani, H., A. Bahreininejad, and M. T. Ahmadi, " Adaptive Finite Element Mesh Triangulation using Self-Organizing Neural Networks," Advances in Engineering Software, 40, 2009, pp.1097-1103.
32. Fallah-Ziarani M., A.A. Tasnimi, and M. T. Ahmadi, " Flexural RC Special Frame Performance Level Effects on Seismic Nonlinear Behavior of Beam-Middle Columns Connections," (in Persian) Sharif Civil Engineering Journal, 2-26 (2), pp.21-28, 2009.
33. Moradloo, J., Ahamdi, M. T., Vahdani, S., "Rigorous Nonlinear Dynamic Analysis of Concrete Arch," (in Persian), J. of Civil and Environmental Engineering, Vol.39, No. 4, University of Tabriz, 2009, pp.47-59.
34. Tarinejad, R., and Ahamdi, M. T., " Effective Algorithm for Non-Uniform Seismic Loading of Structures in a Canyon Site," (in Persian), J. of Civil and Environmental Engineering, Vol.39, No. 4, University of Tabriz, 2009, pp.1-12.
35. Karimi, I., Khaji, N., Ahmadi, M. T., and Mirzayee, M., " System Identification of Concrete Gravity Dams using Artificial Neural Networks based on a Hybrid Finite-Boundary Element Approach," Engineering Structures 32, 2010, pp.3583-3591.
36. Pirali P., Liaghat, Gh. H., and Ahmadi, M. T., " Viscoplasticity Coupled with Nonlocalized Damage for Incompatibilities due to Strain Softening," Mechanika, 86(6), 2010, pp. 17-23.
37. Ahamdi, M. T., Moradloo, J., Vahdani, S., "Nonlinear Dynamic Analysis of Concrete Arch Dams using Elasto-Plastic Concrete Models," (in Persian), J. of Civil and Surveying Engineering, Vol.44, No. 3, University of tehran, 2010, pp.303-315.

38. Mirzayee, M., N. Khaji, and M. T. Ahmadi, " A Hybrid Distinct Element-Boundary Element Approach for Seismic Analysis of Cracked Concrete Gravity Dam-Reservoir Systems," *Soil Dynamics and Earthquake Engineering*, 31, pp.1347-1356, 2011.
39. Yazdani, S., Yazdani, and M., Ahmadi, M. T., " Effect of Geometrical Properties of Discontinuities on Abutments Stability of Concrete Arch Dam," (in Persian), *Modares Civil Engineering Journal*, 11, no. 1, Spring 2011.
40. Akbari, J., M. T. Ahmadi, and H. Moharrami, " Advances in Concrete Arch Dams Shape Optimization," *Applied Mathematical Modelling*, 35, pp. 3316-3333, 2011.
41. Heidari, N., and M. T. Ahmadi," Advanced Analysis of Ambient and Cement Hydration Thermal Effects on a RCC Dam Considering Construction Schedule," (in Persian), *Modares Civil Engineering Journal*, 11(4), pp.29-41, Winter 2011.
42. Khodakarami M.I., N. Khaji, M. T. Ahmadi, "Modeling Transient Elastodynamic Problems using a Novel Semi-Analytical Method Yielding Decoupled Partial Differential Equations," *Comput. Methods Appl. Mech. Engrg.*, 213-216 (2012), pp183-195.
43. M Ghiasian, MT Ahmadi, "A novel 3D BE formulation for general multi-zone domains under body force loading," *Structural Engineering and Mechanics, An Int'l Journal* 48 (6), 775-789, 2013.
44. J Akbari, MT Ahmadi, P Yanpan, "Concrete Arch Dam Shape design using Hermitian Splines," *Journal of Algorithms and Computation* 42 (4), 407-417, 2013.
45. MT Ahmadi, M Haghani, "Suggested Estimating Method for Hydrodynamic Pressure to Seismic Design of Hydraulic Structure Gates in Adjacent To Dam Reservoir," *Modares Civil Engineering journal* 13 (2), 1-15, 2013.
46. A Ferdousi, ARM Gharabaghi, MT Ahmadi, MR Chenaghloou, ME Tabrizi, "Earthquake analysis of arch dams including the effects of foundation discontinuities and proper boundary conditions," *Journal of Theoretical and Applied Mechanics* 52 (3), 579-594, 2014.
47. R Tarinejad, MT Ahmadi, RS Harichandran, "Full-scale experimental modal analysis of an arch dam: The first experience in Iran," *Soil Dynamics and Earthquake Engineering* 61, 188-196, 2014.
48. SZ Hosseini, MT Ahmadi, "Seismic sensitivity evaluation of concrete buttress dams," *Modares Civil Engineering journal* 14 (2), 55-66, 2014.
49. M Ghiasian, MT Ahmadi, "Efficient 3D boundary element dynamic analysis of discontinuities," *Engineering Analysis with Boundary Elements* 50, 320-328, 2015.
50. SS Emamzadeh, MT Ahmadi, S Mohammadi, M Biglarkhani, " Dynamic adaptive finite element analysis of acoustic wave propagation due to underwater explosion for fluid-structure interaction problems," *Journal of Marine Science and Application* 14, 302-315, 2015.

51. R Tarinejad, K Falsafian, MT Aalami, MT Ahmadi, "Modal identification of Karun IV arch dam based on ambient vibration tests and seismic responses," *Journal of Vibroengineering* 18 (6), 3869-3880, 2016.
52. M Alijani Ardeshtir, B Navayi Neya, M Ahmadi, "Nonlinear analysis of concrete gravity dams under normal fault motion," *Journal of Structural and Construction Engineering* 3 (2), 133-155, 2016.
53. M Mansoori, MT Ahmadi, " Perimetral joint and pulvino effects on the behavior of arch dam built on weak rock foundation," *Sharif Journal of Civil Engineering*, 2016.
54. MT Ahmadi, M Amini Mazraeno, " EFFECT OF WATER PRESSURE INSIDE THE CRACKS ON THE BEHAVIOR OF CONCRETE GRAVITY DAMS UNDER FLOOD LOADING," *Sharif Journal of Civil Engineering* 33 (4.1), 23-37, 2018.
55. M A Jijani-Ardeshtir, B Navayi Neya, MT Ahmadi, " CONCRETE GRAVITY DAMS RESPONSE CONSIDERING ROTATING AND FIXED MULTIDIRECTIONAL SMEARED CRACK," *Sharif Journal of Civil Engineering* 33 (4.2), 25-35, 2018.
56. S Jafari, MT AHMADI, " EFFECT OF TENSILE STRENGTH CONSIDERING SIZE EFFECT AND LOADING RATE ON OPTIMUM DESIGN OF ARCH DAM," *SHARIF Journal of CIVIL ENGINEERING* 352 (12), 65-73, 2019.
57. M Alijani-Ardeshtir, BN Neya, M Ahmadi, " Comparative study of various smeared crack models for concrete dams," *Journal of the Croatian Association of Civil Engineers* 71 (4), 305-318, 2019.
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