

CV .MOHAMMAD JAVAD MONEM

Last up Date: 5 July. 2016

1-Personal Information

Name: Mohammad Javad Monem
Date of Birth: 30/December/1959
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Address: Department of Irrigation Infra-structures, Faculty of Agriculture,
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2-Educational records

B.Sc.	Shiraz University	Irrigation	1986
M.Sc.	I.H.E	Land and Water Development	1990
Ph.D.	University of Calgary	Water Resources Engineering	1996

3-Occupation and Professional Experiences

Assistant Professor University of Tarbiat Moddarres, from 1375-1383
Associate Professor University of Tarbiat Moddarres from 1383- till now
Head of International Research Program for Irrigation and Drainage, Iran Regional Node, from 2010-till now
General Director, Ministry of Power, Iran Water Resources Management Co. Office of Standards and Technical Criteria from 1999-2004.

4- Scientific Associations' Membership

Iranian National Committee of Irrigation and Drainage

5- Research Interests.

Mathematical Modeling of Irrigation Networks
Performance Evaluation of Irrigation Networks
Management and operational Optimization of Irrigation Networks
Irrigation Networks Rehabilitation, Modernization and Automation

6- Published Papers.

1) Application of Simulation Technique for Improving the Performance of Irrigation Conveyance Systems.

- M.J.Monem, D.H.Manz, Iranian Journal of Water Resources Engineering, Vol.2, No.1, Winter 1994, PP. 1-22.
- 2) Determination the Most Appropriate Water Distribution Option in Irrigation Network(Case study of Ghoori-Chai Irrigation Network) S. Koochekzadeh, M.J.Monem, S. Kasbdooz, Journal of Iranian Agricultural Science, Vol. 30, No. 2, 1378, PP. 369-378.
 - 3) Performance Evaluation of Irrigation Networks Using Data Envelopment Analysis, M.J.Monem, M.R. Alirezaei, E. Salehi, Accepted for publication, Journal of Agricultural and Natural Resources Science and Technology, Vol. 6, No.4, Winter 1381. pp.11-25
 - 4) Application of fuzzy technique for Performance Evaluation of Irrigation Systems, S.A.Heydarian, H.Fardad, M.J.Monem, A.M.Liaghat, A.Ghaheeri, M.Teshnehlal, Journal of Water and Wastewater, Consulting Engineers of Design and Research in Water and Waste water, No. 47, Fall 1382, PP. 2-11.
 - 5) Performance Optimization of Irrigation Canals using SA, S. A. Mohseni Movahed, **M. J. Monem**, Journal of Science Free University, No. 44, Summer 1381. pp. 3565-3575.
 - 6) Application of Water Balance Model for design of furrow irrigation system, S.A.A. Saderdinni, A.H. Nazemi, **M.J.Monem**, Journal of Agriculture Science, Tabriz University, No. 1, Vol. 13, 1382, pp. 37-50.
 - 7) Development and Calibration of Hydraulic Relations of Deflection-meter for Discharge measurement in Irrigation Canals, **M. J. Monem**, J. M. V. Samani, E. Mehrabi, Journal of Agricultural Engineering Research Agricultural Engineering Research Institute, No. 14, Vol. 4, Spring 1383, PP. 19-36.
 - 8) Performance Evaluation and Improvement of Eight Iranian Irrigation Networks Using Sensitivity Analysis On Data Envelopment Analysis (DEA), M.J.Monem, H. Ghodousi, Journal of Agricultural Science and Natural Resources, Gorgan University of Agriculture, No. 1, Vol. 11, Spring 1383, PP. 69-77.
 - 9) Application of Fuzzy Logic for performance Evaluation of Irrigation networks, S.A.Heydarian. H.Fardad, **M. J. Monem**, A.Ghaheeri, A.M.Liaghat, and M.Teshnehlal, Journal of Agricultural engineering Research, Technical and Agricultural Engineering Research Institute, Vol. 4, No. 17, Winter 1382, PP. 47-64.
 - 10) Application of Simulated Annealing (SA) Techniques for Optimal Water Distribution in Irrigation Canals, **M. J. Monem**, R. Namdarian, Journal of Irrigation and Drainage, Vol. 54, No. 1, 2005, PP. 365-373.
 - 11) Investigation of Unsteady Flow Behaviour under the situation of Demand Variation and Introducing Appropriate Operational Instruction (Case study E1R1 Canal of Dez Irrigation Network), **M. J. Monem**, A. Emadi, and H. Ghodoosi, Journal of Agricultural engineering Research, Technical and Agricultural Engineering Research Institute, Vol. 6, No. 24, 1384, PP. 79-93.

- 12) Surge Irrigation Optimization Using Tabu Search Method, , S.A.A. Saderdinni, **M. J. Monem**, A. H. Nazemi, Journal of Iranian Agricultural Research, Vol. 37, No. 1, 1385, PP. 117-129.
- 13) Development the Mathematical Model of BIVAL Downstream Control System, **M. J. Monem**, J. Mamizadeh, Journal of Hydraulics, Vol. 1, No. 2, Winter 1384, PP. 1-13.
- 14) Performance Evaluation of Irrigation networks using Fuzzy Logic, Case Study maroon Network, **M. J. Monem**, J. Khorrami, S.A. Heydarian, Modarress Engineering and technical Journal, Special Civil Engineering Issue, Spring 1385, (Accepted)
- 15) Introducing a New Mathematical Model for the Evaluation and Optimization of Irrigation Canal Performance, S. A. Mohseni Movahed, **M. J. Monem**, Journal of Agricultural and Natural Resources Science and Technology, Vol. 11, No. 2, Summer 1386, PP.13-26.
- 16) Simulation of Canal Control-Gates Operations Using Hydrodynamic Model, D. Farsadizadeh, Y. Hassanzadeh, **M. J. Monem**, Journal of Faculty of Eng., Vol. 32, No. 3 (Civil Eng.), Spring 2006, PP. 29-39.
- 17) Investigation of ICSS Hydrodynamic Model in Experimental Canal for Simulation of Unsteady Flow for Canal Control Systems, D. Farsadizadeh, **M. J. Monem**, Y. Hassanzadeh, Journal of Agricultural Science, Vol. 16, No. 1, 2006, PP. 147-159.
- 18) Performance evaluation module for Irrigation Systems Using Fuzzy Method, S.A.Heydarian, **M. J. Monem**, H.Fardad, A. Ghaheeri, A.M.Liaghat, M.Teshnehlab, Journal of Agricultural Science and Natural Resources, Vol. 12, No.1, April-May 2005, PP. 93-103.
- 19) Functionality Assessment of Irrigation Networks by Using Benchmarking Method, J.Jalily, J. Jebeli, H. Ghamarnia, **M. J. Monem**, Journal of Agricultural Engineering Research, Vol. 7, No. 29, Winter 2007, P. 71-88.
- 20) Optimal Water Delivery Scheduling in Irrigation Canal Using Genetic Algorithm, **M. J. Monem**, M.R. Najafi, S. Khoshnavaz, Journal of Iran Water Resources Research, Vol. 3, No. 1, spring 2007, PP. 1-11.
- 21) Quantifying Operational Performance of Irrigation Canals in Response to Demand Variation Using Hydrodynamic Model and Analysis of Unsteady Flow, **M. J. Monem**, H. Ghodousi, A. Emadi, Jour. of Agricultural Research, Vol. 6, No. 3, Fall 2006, PP. 17-29.
- 22) Performance Evaluation Indicators for Structural and operational Characteristics of Irrigation Networks, F. Pasyar, **M. J. Monem**, Jour. Of Agricultural Engineering Research, Vol. 9, No. 1, Spring 2008, PP. 15-30.
- 23) Development of Decision Support System to Evaluate and Improve the Performance of Irrigation and Drainage Networks, M. Khalkhali, **M. J. Monem**, K. Ebrahimi, , Jour. Of Agricultural Engineering Research, Vol. 9, No. 1, Spring 2008, PP. 125-140.
- 24) Optimization of Observation Well Network for the Estimation of Ground Water Balance Using Double Water Table Fluctuation Method, N. Ganji Khoramdel, K. Mohammadi, **M. J. Monem**, Jour. Of Water and Soil (Agricultural Science and Technology), Mashhad Ferdowsi University, Vol. 22, No. 2, 2008, PP. 358-370.

- 25) Development of Downstream Fuzzy Control System for Irrigation Canals, **M. J. Monem**, M. S. Kiapasha, Jour. Of Hydraulics, Vol. 3, No. 4, Winter 2009, PP. 13-26.
- 26) Development and Evaluation of an Upstream Fuzzy Control System Model for Irrigation Canals, **M. J. Monem**, M. S. Kiapasha, Iranian Water Research Journal, Vol. 3, No. 4, Summer 2009, PP. 41-50.
- 27) Application of PSO Method for Optimal Water Delivery in Irrigation Networks, **M. J. Monem**, M.A. Noori, Iranian Jour. Of Irrigation and Drainage, Vol. 4, No. 1, Spring 2010, PP. 73-82.
- 28) Developing Computer Model for Performance Assessment of Pressurized Irrigation Conveyance and Distribution Systems (PAPIS) Using Classical Approach, P. Mahdavi, **M. J. Monem**, Iranian Jour. Of Irrigation and Drainage, Vol. 4, No. 1, Spring 2010, PP. 67-72.
- 29) Extracting Physical Homogenous Regions Out of the Irrigation Networks Using Fuzzy Clustering Method, S. M. Hashemy, **M. J. Monem**, Journal of Hydroinformatics , 2010,(Accepted)
- 30) Optimal Operation of Irrigation Canals, Under Conjunctive Use of Surface and Ground Wter, A. Emadi, **M. J. Monem**, K. Mohammadi, Jour. Of Agricultural Engineering Research, Vol. 11, No. 3, Fall 2010, PP. 27-40.
- 31) Syatems Dynamics Model to Assess Irrigation Networks Modernization, M. Vaez Tehrani, **M. J. Monem**, A. Bagheri, Jour. of Agricultural Engineering Research, Vol. 11, No. 4, 2011, PP. 35-56.
- 32) Facilitation of Operation and Maintenance Activities of the Irrigation Networks using K-means Clustering Method; A case study of Ghazvin Irrigation Network, S. M. Hashemy, **M. J. Monem**, Jour. of Irrigation and Drainage, Vol. 61, No.1, Feb. 2012, PP. 31-38.
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- 35) Evaluation of Fuzzy Automatic Control System and Comparison of two Rule bases for pivot weir, Reza Nowrasteh, **M. J. Monem**, Jour. Of Hydraulics, Vol. 6, No. 3, Fall 2011, PP. 1-12.
- 36) Construction and Evaluation of BIVAL Automatic Control System for Irrigation Canals in Laboratory Flume, K. Shahverdi, **M. J. Monem**, Jour. of Irrigation and Drainage, Vol. 61, No. 2, Apr. 2012, PP. 201-207.
- 37) Development and test of Mathematical Model of Automatic Pivot Weir with PID Algorithm, Z. Hosein Zadeh, **M. J. Monem**, Jour. Of Iran Soil and Water Research, Vol. 43, No. 3, 2012, PP. 87-94.
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- 39)"Analyzing Structural and Non-Structural Options to Improve Utility of Irrigation Areas Using a System Dynamics Approach M. Vaez Tehrani, , A. Bagheri, **M. J. Monem**, S. Khan Journal of Irrigation and Drainage, Vol. 61, No. 4, PP. 604-621, 2012.

- 40) Improvement the Main Irrigation Canal Operation Using In-Line Storage Strategy with the aid of Model Predictive Control System (MPC), S. M. Hashemy, **M. J. Monem**, P. J. Van Overloop, Iranian Jour. Of Irrigation and Drainage, Vol. 6, No. 4, Winter 2012, PP. 342-352.
- 41) Using In-Line Storage in Automatic Control Systems for Upgrading Operation Process of the main Irrigation Canal (Case Study of Main Canal of Dez Network), S. M. Hashemy, **M. J. Monem**, S. Isapoor, Jour. of Hydraulics, Vol7, No. 3, Winter 2012, PP. 1-14.
- 42) A System Dynamics Approach to Model Rehabilitation of Irrigation Networks (Case study: Qazvin Irrigation Network, Iran), M. V. Tehrani, **M. J. Monem**, A. Bagheri, Jour. Of Irrigation and Drainage, Vol. 62, No. 2, PP. 193-207, 2013.
- 43) Application of an In-Line Storage Strategy to Improve the Operational Performance of Main Irrigation Canals Using Model Predictive Control, S. M. Hashemy, **M. J. Monem**, J. M. Maestre, and P. J. Van Overloop, ASCE Journal of Irrigation and Drainage Engineering. 10, 1061, 1943-4774, 2013.
- 44) Using Inline Reservoir Operational Strategy to Improve Dez Main Irrigation Canal Performance, S. M. Hashemy, **M. J. Monem**, S. Isapoor, and P. J., Van Overloop, Jour. of Irrigation and Drainage, Vol. 62, No. 2, PP. 458-467, 2013.
- 45) Development of Performance Evaluation Model of Pressurised Irrigation Networks (NPAPIS), S. Piri, **M. J. Monem**, F. Hasanpoor, Iranian Irrigation and Drainage Jour., Vol. 6, No. 3, Fall 2012, PP. 196-205 .
- 46) Development of Mathematical Model of CARDD control System for Irrigation Canals and its integration with ICSS model and testing it with ASCE test cases, **M. J. Monem**, S. P. Ahmadpanah, Jour. of Agricultural and Natural Resources, Science and Technology, Water and Soil Science, Vol. 16, No. 61, Fall 2012, PP. 15-29
- 47) Development of Performance Evaluation of Automatic Control Systems for Irrigation Networks, F. Sadeghi, **M. J. Monem**, Iranian Jour. Of Water and Soil Research, Vol. 44, No. 2, Summer 2013, PP. 142-135.
- 48) Integrated Stepwise Approach for Optimal Water Allocation in Irrigation Canals, A. Kanooni, **M. J. Monem**, Jour. of Irrigation and Drainage., Vol. 63, No. 1, , PP. 12-21, 2014.
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- 50) Spatial and Temporal Investigation of Salt Intrusion in Estuary Rivers Using COHERENCE Model: Case Study of Bahmanshir River, S. P. Pirnia, J. M. V. Samani, **M. J. Monem**, Jour. of Water and Irrigation Management, Vol.3, No. 1, Summer 2015, PP. 13-27.
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- 52) Development of Multi-Attribute Decision Making Model for Selection of Automatic Water Measurement Systems in Irrigation Networks, Z. Hoseinzadeh, **M. J. Monem**, N. Nahavandi, Jour. of Water and Irrigation Management, Vol.4, No. 2, Fall 2015.
- 53) Tuning of PID Controller for Water Level Control Using Genetic Algorithm, S. Jamali, **M. J. Monem**,

Iranian Jour. of Irrigation and Drainage, Vol. 3, No. 8, Sep. 2015, PP. 581-590.

54) Simulation-Optimization of Irrigation Networks Performance Under Different Operations Using Ants Colony Algorithm, **M. J. Monem**, H. Ghodoosi, Iranian Jour. of Irrigation and Drainage, Vol. 4, No. 8, Winter 2014, PP. 654-663.

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56) Application of Association Rules to infer Relationships Between Physical Parameters and Operational Indices of Irrigation Networks, (Case Study of Ghazvin Irrigation Network), V. Ghadbeigi, **M. J. Monem**, S. M. Hashemi, Iranian Jour. of Irrigation and Drainage, Vol. 9, No. 1, Feb. 2015, PP. 44-53.

57) Optimal Design of Groundwater Monitoring Network Using Particle Swarm Optimization Meta Heuristic Method, N. Ganji. Khorramdel, F. Kikhaei, K. Mohammadi. **M. J. Monem**, Jour. of Hydraulics, Vol. 10, No. 1, Spring 2015, PP. 25-35.

58) Application of Re-Enforcement Learning Method for Determination of On-Request Operational Instruction and Optimal Water Distribution, K. Shahverdi, **M. J. Monem**, M. Nili, Iranian Jour. of Soil and Water Research, 2015, Vol. 46T No. 1, Summer 2015, PP. 283-291.

59) Development of Mathematical Model of Re-enforcement Learning Algorithm for Automation of Slide Gates Check Structures in Canals, K. Shahverdi, M. J. Monem, Jou. Of Soil and Water (Agricultural Science and Technology) Vol. 29, No. 4 PP. 828-837.

60) Fuzzy SARSA Learning of Operational Instructions to Schedule Water Distribution and Delivery, K. Shahverdi, **M. J. Monem**, M. Nili Ahmadabadi, Jour. of Irrigation & Drainage, 2016.

61) Development of a Simple Rating Equation for Pivot Weirs with Different Side Contractions, N. Sheikh Rezazadeh Nikoo, **M. J. Monem**, Jour. of Water and Soil, Ferdowsi University of Mash-Had, Vol. 30, No. 1, Spring 2016, PP. 52-62.

62) Performance Evaluation of Water Distribution in Main Canal of Kowsar Irrigation Network with Upstream and Downstream Automatic Control, S. Nikmehr, A. Parvaresh Rizi, **M. J. Monem**, Iranian Water Research Jour., 2015, (Accepted)

63) Estimation of Flow Equation and Discharge Coefficient for Lopac Gates under Submerged Condition, F. Yosefvand, **M. J. Monem**, M. R. Kavianpoor, Iranian Water Research Jour..2015, (Accepted)

64) Extraction of flow Rate Equation under Free and Submerged Flow Conditions in Pivot Weirs with the Different Side Contractions, N. Sheikh Rezazadeh Nikou, **M. J. Monem**, K. Safavi, Jour. of Irrigation & Drainage Engineering, ASCE, 2016. (Accepted).

65) Extraction of Submerged Discharge Equation and Discharge Coefficient for Pivot Weir, with Different Side Contractions, N. Sheikh Reza Zadeh Nikoo, **M. J. Monem**, K. Safavi, Jour. Of Irrigation and Drainage, 2015 (In Persian Accepted)

66) Experimental and Analytical Evaluation of Discharge Coefficient of Lopac Gate for Submerged Condition, F. Yosofvand, **M. J. Monem**, M. R. Kavianpoor, Jour. Of Irrigation and Drainage, Vol. 9, No. 5, Winter 2015,

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67) Water Allocation and Delivery Scheduling In Irrigation Networks, A. Kanooni, **M. J. Monem**, Jour. Of Irrigation and Drainage, 2015 (In Persian , Accepted).

68) Determining Different Hydraulics and Operational Conditions of Lopac Gate and Development its Mathematical Model in Accordance with Boundary Conditions of Hydrodynamic Model, R. Naghaei, **M. J. Monem**, S. M. Hashami, Jour. Of Irrigation and Drainage, 2016 (In Persian Accepted)

69) Development of Mathematical Model of LOPAC Gate in Accordance with the ICSS Hydrodynamic Model, R. Naghaei, **M. J. Monem**, Jour. Of Irrigation & Drainage Engineering, ASCE, 2016, (Accepted)

70) Comparing the Performance of FSL and Traditional Operation Methods for On-Request Water Delivery in Aghili Network, Iran, H. Savari, **M. J. Monem**, K. Shahverdi, Jour. Of Irrigation & Drainage Engineering, ASCE, 2016, (Accepted)

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7 –Conference Papers.

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2) Sediment Transprot Analysis in Fluvial Rivers Using HEC-6 Model, **M. J. Monem**, Third River Engineering Conference, Ahvaz., 1994, PP.161-162.

3) Theoretical Models, Standards, Quantification, and Application of Mathematical Models for Performance Evaluation of Irrigation and Drainage Systems. **M. J. Monem**, Proceedings of Technical Workshop on Performance Evaluation of Irrigation and Drainage Systems, Iranian National Committee of Irrigation and Drainage 30th Bahman1997, PP.79-80.

4) Application of Mathematical Model for Performance Optimization of Irrigation Networks Using Genetic Algorithm/ **M. J. Monem**, 1st. Iranian Hydraulic Conference, 2-4 Sep. 1997, PP.308-309.

5) Performance Optimization of Irrigation Networks Using Genetic Algorithm, **M. J. Monem**, 1st Conference of Optimization and its Applications, Mashhad 17-19 Nov. 1998, PP.45.

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7) Methods for Performance Evaluation of Irrigation Networks, **M. J. Monem**, Proceedings of Technical Workshop on Performance Evaluation of Irrigation and Drainage Systems, Iranian National Committee of Irrigation and Drainage, 27 Jan. 2000. PP.7-20.

8) Testing Mathematical Model ICSS With Real Condition of Irrigation Canal, **M. J. Monem**, 2nd Iranian Hydraulic Conference, Tehran, 16-18 Nov. 1999, PP.119-126.

9) Theoretical and Computer Model for Performance Evaluation of Irrigation and Drainage Systems, A.Ghaheiri, **M. J. Monem**, H.Gharavi, N.Bothan, A.Zolfaghari, M.Ehsani, A.Poorzand. 10th Seminar of Irrigation National Committee of Irrigation and Drainage, Tehran 2000, PP.143-154.

10) Performance Evaluation of Ghazvin Irrigation Network Using PAIS Model, **M. J. Monem**, A.Ghaheiri, A. Badzahr, H.Gharavi, N.Borhan, A.Zolfaghari, E.Sabeti, M.Ehsani, 10th Seminar of Iranian National Committee Of Irrigation and Drainage, Tehran 1379, PP155-167.

11) Hydraulic Design of Deflection Meter for Discharge Measurement, **M. J. Monem**, G.Shirinzadeh, International Conference of Hydraulic Structures, Kerman 2-3 May 2001, PP. 1013-1021.

12) Evaluation of Two Dimensional Mathematical Model for Simulation of Flow Pattern Around Groynes in River Meander Using Physical Model; **M. J. Monem**, F.Rabei, 3rd Iranian Hydraulic Conference, Tehran 6-8 Nov. 2001, PP. 29-136.

13) Research Experiences of Irrigation Canal Management **M. J. Monem**, Technical Workshop on Water Resources Management The University of Tarbiat Modarress, Tehran 18 Feb. 2002.

14) Development of Optimal Water Distribution Schedule for Irrigation Systems Using Simulated Annealing Techniques, **M. J. Monem**, R. Namdarian, 5th. International Conference on Hydroinformatics, Cardiff 1st – 5th July 2002, UK.

15) Optimal Water Distribution Schedule for Irrigation Systems Using Simulated Annealing Techniques. **M. J. Monem**, A.Ghaheiri, R. Namdarian, The 8th Congress of International Commission on Irrigation and Drainage, Montreal, Canada, 20-28 July, 2002..

- 16) Performace Evaluation of Irrigation Networks' Operating Companies using Data Envelopment Analysis (DEA), M. R. Alirezaei, B. Arabi, **M. J. Monem**, 1st National Conference on Performance Management 16-17 Oct. 2002, Tehran, Faculty of Management, Tehran University, PP. 19-36.
- 17) Development of Mathematical Model of Amil Hydraulic Structure, **M. J. Monem**, A. Massah, 4th Iranian Hydraulic Conference 21-23 Oct. 2003, Shiraz, Iran, PP. 239-247.
- 18) Application of Fully Hydrodynamic Model for Simulation of Surge Irrigation, S. A. A. Sadreddini, **M. J. Monem**, A. H. Nazemi, 4th Iranian Hydraulic Conference 21-23 Oct. 2003, Shiraz, Iran, PP. 259-267
- 19) Application of 2D mathematical model for Flow Simulation in Hamidieh Diversion Dam's Reservior, and Comparison of mathematical Turbulrnt Model's Error with Physical Model Measurements, M. Abolghasemi, **M. J. Monem**, , 4th Iranian Hydraulic Conference, 21-23 Oct. 2003, Shiraz, Iran, PP. 721-727.
- 20) Development of Mathematical Model for Neyrpic Module Intake Structures, **M. J. Monem**, A. Massah, 11th Conference of Iranian National Committee on Irrigation and Drainage, 24-26 Dec. 2003, Tehran, Iran, PP. 607-619.
- 21) Introduction of ICSS-DOM Model for Performance Evaluation and Operation Optimization of Irrigation Canals, S. A. Mohseni-Movahed, **M. J. Monem**, 11th Conference of Iranian National Committee on Irrigation and Drainage, 24-26 Dec. 2003, Tehran, Iran, PP. 95-109.
- 22) Performance Evaluation and Classification, and Introducing practical improvement options of Irrigation Networks Using DEA, **M. J. Monem**, H. Ghodoosi, 4th Technical Workshop on Performance Evaluation of Irrigation and Drainage Systems, 19 Nov. 2004, Tehran, Iranian National Committee on Irigation and Drainage, PP. 145,156.
- 23) Fuzzy logic for Managerial Performance Evaluation of Irrigation Networks, **M. J. Monem**, J. Khorrami, S. A. Heydari-yan, , 4th Technical Workshop on Performance Evaluation of Irrigation and Drainage Systems, 19 Nov. 2004, Tehran, Iranian National Committee on Irigation and Drainage, PP. 109-121.
- 24) Operational Guidance for Reducing Conveyance Losses in Canals With Respect to Demand Variations, A. Emadi, **M. J. Monem**, H. Ghodousi, 19th Congress on Irrigation and Drainage, International Commission on Irrigation and Drainage, Beijing, China, 10-18 September 2005.

- 25) Use of Hydrodynamic Model for Assessing Operational Lossess and Improveing Operation Efficiency in Irrigation Canals, H.Ghodousi, **M. J. Monem**, A. Emadi, 19th Congress on Irrigation and Drainage, International Commission on Irrigation and Drainage, Beijing, China, 10-18 September 2005.
- 26) Introducing Constant Volume Downstream Control System (BIVAL) for Irrigation Canals, J. Mamizadeh, **M. J. Monem**, Proceedings of 5th Iranian Hydraulic Conference, Faculty of Engineering, The University of Shahid Bahonar Kerman, 8-10 Nov. 2005.
- 27) Simulation and analysis of Unsteady Flow in Irrigation Canals for quantification of Operational Losses and introducing Appropriate Operational Instruction, A. Emadi, **M. J. Monem**, H. Ghodousi, Proceedings of 5th Iranian Hydraulic Conference, Faculty of Engineering, The University of Shahid Bahonar Kerman, 8-10 Nov. 2005.
- 28) Application of Hydrodynamic Models for Performance Evaluation of Irrigation Canals Under Demand Variation Condition, H. Ghodousi , **M. J. Monem**, A. Emadi, Proceedings of 5th Iranian Hydraulic Conference, Faculty of Engineering, The University of Shahid Bahonar Kerman, 8-10 Nov. 2005.
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- 30) Performance Evaluation of Mahabad Irrigation and Drainage Network, Using Developed Data Bank, A. Shokat Naghadeh, K. Mohammadi, **M. J. Monem**, , Proceedings of National Conference on Management of Irrigation and Drainage Networks, Shahid Chamran University, Ahvaz, Faculty of water Science Engineering, 2-4 May 2006, PP. 1569-1576.
- 31) Priority of Water Distribution in Irrigation Networks base on ON-Demand System, A. Zamanzadeh, B. Ghahraman, **M. J. Monem**, K. Davari, Proceedings of National Conference on Management of Irrigation and Drainage Networks, Shahid Chamran University, Ahvaz, Faculty of water Science Engineering, 2-4 May, 2006, PP.1182-1191.
- 32) Analysis of Water Distribution in Irrigation Canals and Introducing Influencing Parameters on Operational Performance, F. Pasyar, **M. J. Monem**, Proceedings of Regional Gathering of Technical and Engineering Research Experiences Exchange, Kermanshah, 9 Nov. 2006.
- 33) Introducing Decision Support System for Performance Evaluation and Improvement of Irrigation and Drainage Networks, M. Khalkhali, **M. J. Monem**, K. Ebrahimi. Technical Workshop of Management, Operation, and Maintenance of Irrigation and Drainage Networks, National Committee of Irrigation and Drainage, Tehran, 4, Jan., 2007, PP. 1-12.
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- 101) Investigation the Archy-Types of Automation Application in Irrigation Networks From Authorities Point of View Using System Dynamics Approach, S. Z. Moosavi, Z. Hoseinzadeh, **M. J. Monem**, 6th National Vocation on Watershed and Water and Soil Management, Bahonar University, Kerman, 18-19 Feb, 2014.
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- 106) Development of Mathematical Model of Re-Enforcement Learning Algorithm for Automation of Flat Silde Gate Regulator in Irrigation Canals, K. Shahverdi, **M. J. Monem**, 4th National Vocation of Irrigation and Drainage Networks Management, Shahid Chamran University, Ahvaz, 25-27 Feb. 2014.
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- 111) Extracting Operational Instructions for Irrigation Canals Using FSL Algorithm (Case study: Dez Irrigation Network, Iran), K. Shahverdi, **M. J. Monem**, 22nd ICID Congress, Gwangju, Rep. of Korea, 14-20 Sep. 2014.

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- 116) Improving Flexibility or decreasing Water Consumption? Where is the Balancing Point? **M. J. Monem**, Technical Vocation on Investigation of Water Delivery and Irrigation Methods Development Policies in Iran, Agricultural Technical and Engineering Institute, Karaj, 3-4 Dec. 2014.
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- 120) Extracting Rating Curves of Pivot Weirs with Different Side Contractions, N. Sheikh Rezazadeh Nikoo, **M. J. Monem**, K. Safavi, A. N. Ziaei, 1st Iranian Irrigation and Drainage Congress, Ferdowsi University, Mash-Had, 13-14 May 2015.
- 121) Evaluation the Functioning of Two Baffle Neyrpic Gate Type XX2 Manufactured in Iran Compared to Standard Gate, H. Noori, P. Hahgihatjoo, **M. J. Monem**, S. M. Razavi Nabavi, 1st Iranian Irrigation and Drainage Congress, Ferdowsi University, Mash-Had, 13-14 May 2015.
- 122) Comparison of Lopac Gate and Flat Slide Gate in Irrigation Canals Under ASCE Standard Test Cases, S. Sadeghi, **M. J. Monem**, 1st Iranian Irrigation and Drainage Congress, Ferdowsi University, Mash-Had, 13-14 May 2015.
- 123) Comparison of Automated Control Systems for Main Canal of Qazvin Irrigation Network, Z. Hosseinzadeh, **M. J. Monem**, 26th ERC, & 66th EIC, ICID Congress, Montpellier, France, 11-16 Oct. 2015.

9. Research Projects.

- 1) Preparation of Hydrodynamic Simulation Model ICSS for its Application in Iranian Irrigation Networks, National Research Project.

- 2) Performance Evaluation of Irrigation Networks, Using Mathematical Model and Field Investigation, and Developing a Mathematical Model for their Optimal Operation, National Research project.
- 3) Verification of ICSS Mathematical Model With Real Situation, Applied Research, The University of Tarbiat Moddarress.
- 4) Determination of Performance Evaluation Framework for Irrigation Networks, Applied Resources Project, Water Resources Management Organization.
- 5) Stepwise Rehabilitation study of WID Irrigation Network in Calgary, Canada.
- 6) Study and Design of Measurement Structures for Improving Water Delivery in EID Irrigation Network, Calgary, Canada.
- 7) Iranian River Training System Optimization, Applies Research Office, Iranian Water Resources Management Co. 2008.
- 8) Management of Unsteady Flow in Main Canals of Irrigation Networks and Resolving Related Hydraulic and Managerial Problems, Applies Research Office, Iranian Water Resources Management Co. 2008.
- 9) Terms of Services for flood Control Works, Office of Standards and Technical Criteria, Iranian Water Resources Management Co. 2008.
- 10) Terms of Services for Wetlands and lakes' Delineation, Office of Standards and Technical Criteria, Iranian Water Resources Management Co. 2009.
- 11) Terms of Services and Guideline for Performance Evaluation of Pressurized and Low Pressure Main Systems of Irrigation Networks, Office of Standards and Technical Criteria, Iranian Water Resources Management Co. (Continued).
- 12) Instruction for Preparing Technical Flood Report, Office of Standards and Technical Criteria, Iranian Water Resources Management Co. 2009.
- 13) Development of On-Request Delivery Systems in Irrigation Networks Using Re-Reinforcement Learning Method (Case Study Dez Network) Applies Research Office, Iranian Water Resources Management Co. 2014.

10- Books

- 1) Translation of " Rapid Appraisal Process RAP and Benchmarking Explanation and tools", 2001, Charls, M. Burt, By Working Group of Performance evaluation of Irrigation and Drainage systems, Iranian National Committee of Irrigation and Drainage, 2006, H. Gharavi, E. Farhadi, N. Borhan, A. Ghaheeri, M. Ehsani, D.

Bahrehdar, M. Esna-ashari, M.J. Monem.

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3) Principles, Modelling, and Delineation of Wetlands, 2011, **M. J. Monem**, M. Naseri, M. Bagherzadeh Karimi, PP. 187.

4) Translation of "The Irrigation Sector Shift from Construction to Modernization, What is Required for Success?" Dr. Charles M. Burt, 2011. As IRNCID Publication No. 158, 2013.

11- Topic of Theses under my Supervision :

a) M.Sc.

1) Evaluation and Application of 2-Dmodel for Simulation of Flow Pattern Around Groynes in River Miander, Faraz Rabei Ghlami.

2) Performance Evaluation of Irrigation Networks Using Data Envelopment Analysis (DEA), Ebrahim Salehi Taleshi.

3) Developing Performance Evaluation Model Using Combined Methods of Classical Approach and Rapid Appraisal, Ali Abbas Badzahr.

4) Optimal Water Delivery Schedule Using SA, Case study, Varamin Irrigation Network, Reza Namdarian.

5) Design and Study of Delfection Mater for Discharge Measurment, Ghader Shirinzadeh.

6) Performance Improvement of Irrigation Networks Using Sensitivity Analysis in DEA Models, Hessam Ghodousi.

7) Developing Mathematical Models of Control Systems, Neyrpic, Amil, Avis, Avio, and P+PR for Irrigation Canals, Alireza Massah.

8) Development of Optimal Water Delivery Schedule Model for Irrigation Canals using Genetic Algorithm. Saeb Khoshnavaz.

- 9) Calibration of Deflection-Meter for Canals with Different Cross sections and testing its field's application
Ensieh Mehrabi.
- 10) Performance Evaluation of Irrigation Networks using Fuzzi Logic, Case Study: Behbahan Irrigation
Network, Jamshid Khorrami.
- 11) Development of Mathematical Model for Neyrpic, Amil, Avis, Avio, P+PR, and BIVAL Control systems
In Irrigation Canals, Jafar Mami-Zadeh.
- 12) Development of Decision Support System for Performance Evaluation and Improvement of Irrigation
Networks, Masomeh Khalkhali. 1384.
- 13) Definition and quantification of physical and operational performance indicators for irrigation canals using
hydrodynamic models, Farzad Pasyar, 1384.
- 14) Development of Mathematical Model for Fuzzy Control System In Irrigation Canals, M.S. Kiapasha, 2006.
- 15) Management Evaluation and Improvement of Reservoirs in Operation of irrigation Networks, H.
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- 16) Evaluation and Ranking of 4 units of Moghan Irrigation Network using Classical Approach, A.Ahmadi
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- 17)Development of Water Delivery Scheduling Model For Irrigation Networks Using PSO optimization
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- 18) Development of Performance Evaluation Model for Pressirized Irrigation Networks, using Classical
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- 19) Performance analysis of Irrigation Networks Using Classic and Fuzzy Clustring Method (Case Study
Ghazvin Irrigation Network), S.M. Hashemi Shahedani, 2007.
- 20)Optimal Design of Pressurized Irrigation Water Distribution Networks Using PSO Optimization Method, B.
Sami Kashkooli. 2007.
- 21) Development and Test of Mathematical Model of CARDD Automatic Control System for Irrigation Canals,
S. P. Ahmadpanah, 2007.
- 22) Design and development of Mathematical and Physical Model of Automatic Pivot Weir and testing its
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- 23) Construction and Test of Automatic Control System of Irrigation Canals Using PID and BIVAL Algorithm

At Laboratory Model. K. Shahverdi, 2008.

24) Development and Completion of Performance Evaluation of Pressurized Irrigation Network (PAPIS) Model, Case Study of Mianeh, Aidoghmoosh, S. Piri, 2008.

25) Application of System Dynamics Approach for Modernization of Irrigation Networks by Quantifying Relevant Functions From Efficiency Point of View, Case Study: Ghazvin Irrigation Network, A. Hatam, 2009.

26) Construction and Evaluation of Fuzzy Automatic Control System for Irrigation Canals at Laboratory Scale, R. Nowrasteh, 2010.

27) Optimal Water Distribution and Delivery Scheduling In Irrigation Networks Under Drought condition, Case Study of Ghazvin Irrigation Network, M. Mohammadkhani, 2010.

28) Study the Condition of Check Structures in the Main Irrigation Canals, and Introducing Improvement Options and Appropriate Structures, Case Study of Foomanat Irrigation Network, S. M. Safavi, 2010.

29) Water Delivery Scheduling in Irrigation Networks Under Drought Condition (Case Study Ghazvin Irrigation Network) M. Mohammad Khani, 2010.

30) Improvement of Irrigation Networks From Process Indicators Point of View Using System Dynamics Approach, Case Study Foomant Irrigation Network, S. Shabani Koorka, 2011.

31) Development of Performance Evaluation of Automatic Control Systems in Irrigation Networks, F. Sadeghi, 2011.

32) Development of Intelligent Model for Determination of Classical PID Control Coefficients in Irrigation Canals linked with ICSS Model, 2011.

33) Data Mining for Recognition of Performance Patterns of Irrigation Networks and Management Operational Improvement, V. Ghadbeigi, 2011.

34) Extraction the Hydraulic Equations of Pivot Weir with Different side Contractions and Completion of its Mathematical Model, N. Sheikh Rezazadeh Nikoo, 2011.

35) Recognition the Archy-Types of Automation Application in Ghazvin Irrigation Network Using System Dynamics Approach, S. Z. Moosavi Hasani, 2012.

36) Experimental Study of Hydraulics and Operational Conditions on Performance of Lopac Gate, F. Yosefvand, 2013.

37) Development of Mathematical Model of Lopac Gate linked with ICSS Model, R. Naghaei, 2013.

38) Testing the Application of Lopac Gate in Irrigation Canal and its Comparison to Other Conventional Structures Using ICSS Mathematical Model, S. Sadeghi, 2013.

39) Experimental Study of One Baffle Nyrpic Gates for Improvement of Their Flow Delivery Uniformity, H. Noori, 2013.

40) Evaluation Performance of Gotvand Irrigation and Drainage System with MASSCOTE, S. Rahmati, 2014.

41) Classification of Iranian Irrigation Networks based on Problems of Control Structures and introducing Common Improvement Options for Their Performance Improvement, F. Karimi, 2014.

b) Ph.D.

1) Development of a mathematical Model for Optimization of Hydraulic Performance of Irrigation Canal Using Simulated Annealing and Determining Relative Value of Performance Indicators, S. A. Mohseni Moovahhed, 2004.

2) Stepwise Performance Evaluation of Irrigation Networks Under Different Management Systems Using Fuzzy Logic. S. A. Hydarian. 2005.

3) Optimization of Surge Irrigation Using Tabu Search, S. A. A. Sadreddini, 2005.

4) Optimal Control of Canal Systems using Numerical Optimization Methods, D. Farsadi-Zadeh, 2006.

5) Development of Mathematical Model for Optimum Management of Irrigation Canals under Conjunctive Use of Surface and Ground water conditions, A. Emadi. 2006.

6) Development of Mathematical Model for Comprehensive management of Unsteady flow in Irrigation Canals, H. Ghodoosi.2006.

7) Model Development for Irrigation Networks Rehabilitation, Using System Dynamics Approach, M. Vaez Tehrani, 2010,

8) Optimal Operation of In-Line Reservoirs in Main Irrigation Canals Usin Model Predictive Control, S. M. Hashemi Shahedani, 2011.

9) Development of An Integrated Optimal Water Allocation and Distribution Model at Different Levels of Irrigation Networks, A. Kanooni, 2011.

10) Development of Decision Support System for Irrigation Networks Automation Using Combined Multi Criterion Decision Making and System Dynamics (Case Study of Ghazvin Irrigation Network) Z. Hosseinzadeh, 2011.

11) Development of On-Request System in Irrigation Networks Using Re-Enforcement Learning Method, (Case Study of Dez Network), K. Shahverdi, 2012.

12) Development The Basis of On-request Method In Irrigation Networks and Introducing Their Suitable operation Using Optimization Methods Neural Networks, H. Savari, 2014.

12- Topics of Theses Under my Co-Supervision:

a) M.Sc.

- 1) Determination of Optimal Water Distribution for Irrigation Networks Using Hydrodynamic Model and Multi-objective Analysis (Case study of Gnoori - Cha: Irrigation Network). Shahram Kasbdooz, 1379.
- 2) Performance Evaluation of Mahabad Irrigation and Drainage Network Using Dveloped Data Bank. Ahmad Shokat Naghadeh, 1380.
- 3) Flood Routing Over and Through Submerged Rock Fill Dams, Korosh Ghaderi, 1381.
- 4) Comparison of Mathematical Model for Flood Routing in Several Rock Fill Detention Dams, Behzad Kalagar Naft Chali 1382.
- 5) Performance Evaluation of Irrigation Systems Using Benchmarking Method and Determining Relative Value of Indicators, Jalal Jalili 1383.
- 6) Investigation of Performance Evaluation in Ministry of Energy, and Introducing Appropriate Evaluation System for Operational Management of Irrigation Systems, Ahmad Poorzand 1378.
- 7) Design and Evaluation of Irrigation Networks for On-Demand Systems, Case Study Design of Kharajoo Chai Irrigation Network using Coupam model. Azin Zamanzadeh, 1385
- 8) Application of Genetic Algorithm for Optimal Design of Damping Reservoir, Conveyance Conduit, and Penstock in Hydro Electric Power Stations, Sadegh Haghighi poor, 1386.
- 9) Application of Genetic Algorithm for Optimal Estimation of Roughness Coefficient for Old Pipes in Pressurized Systems Using Inverse Solution. Maryam Shahbazi, 1386.
- 10) Water Level Management in Controlled Drainage Systems with the Purpose of Decreasing Water Consumption and Nitrogen in Outflows, A. Najafi Siahroodi, 2009.
- 11) Assessment of Coherence Model to Determine the Spatial and Temporal Salinity Intrusion Pattern in Bahmanshir River, S. P. Pirnia, 2010.

b) Ph.D

- 1) Optimal Design of Groundwater Monitoring Network Using PSO Optimization Technique, N. Ganji Khoramdel, 2007.
- 2) Optimization of Water Allocation in Some parts of Karkheh Water Shed Based on Environmental Stability Indices, A. H. Eizad Dosstdar, 2011.
- 3) Re-Design of Irrigation Canals Based on On-Demand and Automatic Systems, S, Nikmehr, 2012.

13- Lectures

- B.Sc. 1) Design of Irrigation Networks.
 2) Design of Diversion Dams.
- M.Sc. 3) Open Channel Hydraulics,
 4) Computer Application in Water Related Subjects,
 5) Design of Control Structures
 6) Design of Small Dams
 7) Computer Programming
 8) Design of Irrigation Networks
 9) Management of Irrigation Networks
- Ph.D. 10) Principles of Evaluation of Irrigation and Drainage Projects.
 11) Computational Hydraulics,
 12) Optimization of Irrigation Networks
 13) Design of Diversion Structures

14- References

- 1) Dr. Peyman Badiei, Faculty of Civil Engineering, Tehran University.
- 2) Dr. Abbas Afshar, Faculty of Civil Engineering, University of Science and Technology.
- 3) Dr. Salah Koochekzadeh, Faculty of Irrigation, Tehran University.

15- Other Activities

- 1) Director of Monitoring and Evaluation Council for Faculty of Agriculture and Member of Monitoring and Evaluation Council for the University of Tarbiat Moddarress.
- 2) Director of Standard Council , Office of Standards and Technical Criteria, Water Resources Management Organization Ministry of Energy.
- 3) Irrigation and Drainage Technical Advisory for The Scholarship Department of The Ministry of Science, Research and Technology.
- 4) Director of Irrigation and Drainage Technical Committee, For The Office Of The Research and Scientific Supports, Water Resources Management Organization, Ministry of Energy.
- 5) Member of Irrigation and Drainage Technical Committee for the Office of Standard and Technical Criteria, Water Resources Management Organization, Ministry of Energy.
- 6) Head of Hydro-Informatic Department, Water Engineering Research Center, The University of Tarbiat Moddarress.
- 7) Member of Executive Board of Iranian National Committee of Irrigation and Drainage, from Oct. 2010 till now.
- 8) Head of International Research Program For Irrigation and Drainage Iranian Regional Node, Affiliated to ICID. From 2011 till Now.
- 9) Member of Editorial Board of Journal of Irrigation and Drainage, The Journal of the International

Commission on Irrigation and Drainage, from 2011 till Now.

10) Member of Technical Committee of Energy and Water, Renewable Energy Technology Development Headquarter, Science and Technology Secretary of President, from 2012 till Now.

11) Member of Editorial Board of Journal of Engineering Applied Research on Irrigation and Drainage Structures from Aug. 2015 till Now.