



# Curriculum Vitae

**Sara Bardestani**

**Technical Expert, Technical Office, Development and Resource Management Vice-Chancellery, Bushehr University of Medical Sciences, Moallem St, Bushehr, IRAN**

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## 1. PERSONAL INFORMATION

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**Date of Birth:** February 20, 1985

**Place of Birth:** Bushehr, Iran

**Nationality:** Iranian

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**Marital Status:** Single

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## 2. EDUCATION

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- 1) **Master of Science:** Civil Engineering- Water Engineering, December 16, 2011, University of Sistan and Baluchestan, Zahedan, Iran (GPA: 16.44)  
Title of Master of Science Thesis: "Estimation of the depth-averaged velocity and shear stress distributions in triangular open channels by expert systems" (Supervisor: Dr. Mohammad Givvehchi).
- 2) **Bachelor of Science,** Civil Engineering, 2008, Persian Gulf University of Bushehr, Iran (GPA: 14.41)

## 3. RESEARCH INTERESTS

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- ◆ Water Resources and Environmental Systems Analysis and Planning
- ◆ Reservoir Water Quality Modeling
- ◆ Modern Optimization (e.g. HBMO, PSO, ...) and Simulation Techniques
- ◆ Application of Remote Sensing (RS) and GIS in Water Resources Management
- ◆ Sediment Transport around Hydraulic and Coastal structures
- ◆ Computational Fluid Dynamics in Hydraulic Engineering
- ◆ Hydraulic Design of Structures

#### 4. PROFESSIONAL EXPERIENCES

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- ◆ Technical Expert, Technical Office, Development and Resource Management Vice- Chancellery, Bushehr University of Medical Sciences, Moallem St, Bushehr, Iran, 2013–present.
- ◆ Investigator/Co-investigator/Supervisor in more than 15 research projects (2012-present)

#### 5. HONORS

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- ◆ Certificates of appreciation for the designing and supervision of the construction of Medical centers (2012).
- ◆ Certificates of appreciation for the designing and supervision of the construction of heart and cardio vascular hospital and Fertility and Infertility Center (2012).
- ◆ Certificate of participation at the Workshop of Fundamentals of Soft Computing Theory (2011).

#### 6. Reviewer of Conferences

- ◆ Conference of Indigenous Architecture Conference (2012)

#### 7. PUBLICATIONS

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##### **Books:**

- 1) Bardestani. S. Road pavement for undergraduate civil engineering students. 2011. Mehre Sobhan Publication. (In Persian)

##### **Journal Publications**

- 1) **Bardestani, S.**, Givehchi, M., Younesi, E., Sajjadi, Sh., Shamshirband, Sh., and Petkovic, D., “Predicting turbulent flow friction coefficient using ANFIS technique”, J. of Signal, Image and Video Processing, 2017, DOI: <https://doi.org/10.1007/s11760-016-0948-8> ., Accepted.
- 2) **Bardestani S.**, and Givehchi, M., “Prediction of the Velocity Contours in Triangular Channel with Non-uniform Roughness Distributions by Adaptive Neuro-Fuzzy Inference System”, J. of Water and Wastewater, 110, DOI: 10.22093/wwj.2017.1143.1 ., Accepted. (In Persian)
- 3) **Bardestani S.**, and Givehchi, M., “Adaptive Neuro-Fuzzy Computing Technique for Determining Turbulent Flow Friction Coefficient”, J. of Water and Wastewater, 2013, 86, 117-122., Accepted. (In Persian)

##### 7.1. **Conference Proceedings**

- 1) **Bardestani S.**, Emami, L., Heidari, E. and Hajyoni M. R., “State of the art on composite steel-timber structures: A sustainable technique in building construction including hospitals”,

*Proceedings of The 4th specialized congress and 1st international congress for hospital build & facility management*, December 10, Tehran, Iran, 2017.

- 2) Emami L., **Bardestani, S.**, Rahimi, Gh. and Ghotbi M. R., “A Comparative Study of LEED Standards and Chapter 19 of National Building Regulations in Iran for Water Treatment Facilities Based on Water Use”, *Proceedings of The 4th specialized congress and 1st international congress for hospital build & facility management*, December 10, Tehran, Iran, 2017.
- 3) **Bardestani, S.**, Givvehchi, M., “Prediction of the Velocity Contours in Triangular Channel by ANFIS”, *Proceedings of The 4th International Congress on Civil, Architectural and Urban Development*, December 27, Tehran, Iran, 2016.
- 4) **Bardestani, S.**, Ahmadi, E., “Analysis of buried pipelines subjected to strike-slip fault motion”, *Proceedings of The 1st National Conference on Seismology and Earthquake Engineering and Civil Engineering*, January 26, Azad University of Meybod, Iran, 2014.
- 5) **Bardestani, S.**, Khoda Bandehloo, A., “Numerical Analysis and Evaluation of Buried Pipeline Response to Strike-Slip Fault Motion”, *International Conference on Civil Engineering Architecture & Urban Sustainable Development*, December 18, Tabriz, Iran, 2013.
- 6) **Bardestani, S.**, Givvehchi, M., “The axial capacity of CFRP reinforced thin rectangular steel sections”, *Proceedings of The 7th National Congress on Civil Engineering*, May 7, University of Sistan and Baluchestan, Iran, 2013.
- 7) **Bardestani, S.**, Khoda Bandehloo, A., “A review of the seismic behavior of buried Pipeline”, *Proceedings of The 2nd National Crises Management Conference*, June 19, Tehran, Iran, 2012.
- 8) **Bardestani, S.**, Givvehchi, M., Madvar., H., R., “Estimation of Friction Coefficient in Pipes Using Fuzzy Systems”, *Proceedings of The 11th Iranian Conference on Fuzzy Systems*, July 5, University of Sistan and Baluchestan, Iran, 2011.
- 9) **Bardestani, S.**, Givvehchi, M., Madvar., H., R., “Shear stress and shear force modeling in open rectangular channels using Adaptive Neuro-Fuzzy Inference System (ANFIS)”, *Proceedings of The 6th National Congress on Civil Engineering*, April 26, Semnan University, Iran, 2011.

- 10) **Bardestani, S.**, Givchchi, M., Akbari., Gh., “Comparison of Artificial Neural Network Method and Sediment Scale Curve Method for Estimating Sediment Load in Shapour River”, *Proceedings of The 6th National Conference on Watershed Management in Iran and 4th National Conference on Erosion and Sediment*, April 27, Tarbiat Modares University, Iran, 2010.

## 8. TEACHING RECORDS

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### Undergraduate courses:

- 1) Engineering Hydrology, Civil Engineering Dept. Azad University of Bushehr and Azad University of Borazjan.
- 2) Engineering Water and Waste Water, Civil Engineering Dept. Azad University of Bushehr and Azad University of Borazjan.
- 3) Principles of Port Engineering, Civil Engineering Dept. Azad University of Bushehr and Azad University of Borazjan.
- 4) Hydraulics, Civil Engineering Dept. Azad University of Bushehr and Azad University of Borazjan.
- 5) Technical Language, Civil Engineering Dept. Azad University of Bushehr and Azad University of Borazjan.
- 6) Design of Concrete Structures, Civil Engineering Dept. Azad University of Bushehr and Azad University of Borazjan.
- 7) Design of Steel Structures, Civil Engineering Dept. Azad University of Bushehr and Azad University of Borazjan.
- 8) Construction Materials, Civil Engineering Dept. Payame Noor University of Bushehr.

## 9. MEMBERSHIP IN PROFESSIONAL SOCIETIES

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- ◆ American Society of Civil Engineers (ASCE)
- ◆ Construction Engineering Organization
- ◆ Iranian Fuzzy Systems Society
- ◆ Iran Watershed Association

## 10. RESEARCH PROJECTS (Main Investigator/Co-Investigator)

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- ◆ "Investigation of the Performance of Structural and Non-Structural Components of Buildings against Earthquakes and Providing Solutions, Case Study: Earthquakes in 2013 in Bushehr Province", Bushehr University of Medical Sciences, Bushehr, IRAN, 2013 (Co-investigator).

## 11. Work Experience

- Expert of Shiraz Koshk Saze Consultant-Structure Sector (2016-present)- Technical Engineer
- Expert of Narin Dej Apadana Consultant-Structure Sector (2012-2016)- Technical Engineer
- Expert of Technical Commission of Technical Office in Bushehr University of Medical Sciences (2013-present)
- Expert of Project Control Unit in the Management of the Technical Office of Bushehr University of Medical Sciences (2014)
- Supervisor of Bushehr Rural Development Unit of Bushehr Housing Foundation Authority, 2013–present.
- Member of the Founding Board of Zahed Pouyaye Zahedan Company (2012-2014)
- Teaching in Azad University of Bushehr- Civil Engineering Department (2013)
- Teaching in Payame Noor University of Bushehr- Civil Engineering Department (2013)
- Teaching in Azad University of Borazjan- Civil Engineering Department (2012-2013)

## 12. Software and Model Experiences

- 12.1. **Programming Software:** MATLAB
- 12.2. **Water resources planning:** WEAP
- 12.3. **Multi Criteria Decision Making Model and Software:** PROMETHEE and Fuzzy PROMETHEE model, TOPSIS model, AHP and Fuzzy AHP model, IDS<sup>1</sup> Software (evidential reasoning method)
- 12.4. **GIS:** Geographic Information System Software
- 12.5. **Remote Sensing:** ENVI Software (Image Analysis Software), Thematic Mapper
- 12.6. **Statistical Software:** SPSS, Minitab, Data analysis toolbox of Excel for Statistical works (Multiple Linear Regression, Random generation number and ...)
- 12.7. **Artificial Intelligent Models:** Artificial Neural Networks (ANNs: Including MLP, RBF, GRNN and PNN NNs), Support Vector Machines (SVMs including SVR and PSVM), M5P Decision Tree, Bayesian Networks (BN), K-Nearest Neighbor (KNN), Clustering.
- 12.8. **Optimization Model and Software:** Genetic Algorithm (GA and NSGA-II), Particle Swarm Optimization (PSO) and Honey Bee Mating Optimization (HBMO), LINGO Software, Optimization toolbox (Solver) of Excel for simple optimization problems.
- 12.9. **Water and Environmental Engineering Software:** MODFLOW, HEC-RAS, HEC-HMS, Flow-3D, Fluent
- 12.10. **Fuzzy Approach Soft computing Models:** Fuzzy Inference Systems, Fuzzy K-Nearest Neighbor (FKNN), Adaptive Neuro-Fuzzy Inference System (ANFIS), Fuzzy Clustering
- 12.11. **Structural Software:** ETABS (Construction Designing Software), SAFE (Foundation Designing Software), SAP(Structure Designing Software), TAKSA (Estimation of Construction Price)
- 12.12. **General Software:** Microsoft Office (Excel, Word and PowerPoint)

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<sup>1</sup> Intelligent Decision System (IDS) for Multiple Criteria Assessment

12.13. **Lab:** Measuring water velocity, quality, bed changes, using relevant equipment; AD, LDA, LBP, Sand Surface Meter, Water Velocimeter, etc

### 13. References

- Dr. Mohammad Givehchi

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- Dr. Hossein Riahi Madvar

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