



Curriculum Vitae

Contact Information

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Date of the CV September 2025

Academic Employment

Sept. 2022 – Senior Researcher, Institute for Applied Computer Science (InfAI),
Mar. 2023 Leipzig, Germany

June 2016 – Department of Applied Mathematics, Faculty of Sciences and Modern
Present Technologies, Graduate University of Advanced Technology, Kerman,
Iran

Academic rank: Associate Professor

Education

Sept. 2010 – **Ph.D.**, Applied Mathematics (majoring in Numerical Analysis, Nu-
Jan. 2015 merical Linear Algebra, and Data Mining), Shahid Bahonar University
of Kerman, Kerman, Iran

Sept. 2006 – **M.Sc.**, Applied Mathematics (majoring in Optimization, and Numeri-
Sept. 2009 cal Linear Algebra), Shahid Bahonar University of Kerman, Kerman,
Iran

*Department of Applied Mathematics, Faculty of Sciences and Modern Technologies,
Graduate University of Advanced Technology, Kerman, Iran*

Sept. 2002 – **B.Sc.**, Applied Mathematics, Shahrood University of Technology,
Sept. 2006 Shahrood, Iran

———— Editorial Boards

Sept. 2023 – Journal of Intelligent & Fuzzy Systems
Present

———— Research Experience

● Machine Learning Models, Data Mining, and Bioinformatics Techniques:

- Deep/Traditional Non-Negative Matrix Factorization
- Feature Selection Problems, and Multi-Label Feature Selection Problems
- Manifold Learning and Graph Learning
- Community Detection
- Application of Machine Learning Methods for Predictive Cancer Diagnoses and COVID-19 Survival Rates
- Data Mining Algorithms to Predict Environmental Issues

● Mathematical Techniques for Reducing System Complexity:

- Mathematical Modeling
- Iterative Methods for Solving Large Sparse Matrix Equations
- Tensor Calculus and Sylvester Tensor Equations

———— Teaching Experience

June 2015 – Present: Department of Applied Mathematics, Graduate University of Advanced Technology

- Advanced Numerical Analysis
- Matrix Analysis
- Matrix Methods in Data Mining
- Numerical Methods in Linear Algebra
- Numerical Analysis
- Operation Research
- Topics on Numerical Analysis

*Department of Applied Mathematics, Faculty of Sciences and Modern Technologies,
Graduate University of Advanced Technology, Kerman, Iran*

Peer-Reviewed Journal Papers

Selected Papers in Machine Learning:

1. R. Sheikhpour, **F. Saberi-Movahed**, M. Jalili, K. Berahmand, Semi-Supervised Feature Selection with Concept Factorization and Robust Label Learning, Pattern Recognition Volume 172, Part A, April 2026, 112317.
2. Y. Hashemi-Nazari, A. Tajaddini, **F. Saberi-Movahed**, C. Moreira, F. Alonso-Fernandez, P. Tiwari, Robust Oblique Projection and Weighted NMF for Hyper-spectral Unmixing, Pattern Recognition, Volume 170, February 2026, 112029.
3. Y. Hashemi-Nazari, **F. Saberi-Movahed**, A. Tajaddini, C. Moreira, X. Ning, P. Tiwari, Simultaneous Outlier Detection and Elimination in Hyperspectral Unmixing via Weighted Non-Negative Matrix Tri-Factorization, Machine Learning, Volume 114, 2025.
4. R. Sheikhpour, M. Mohammadi, K. Berahmand, **F. Saberi-Movahed**, H. Khosravi, Robust Semi-Supervised Multi-Label Feature Selection Based on Shared Subspace and Manifold Learning, Information Sciences, Volume 699, May 2025, 121800.
5. H. Naser Assadi, F. Kyanfar, **F. Saberi-Movahed**, A. Salemi, Bilinear Self-Representation for Unsupervised Feature Selection with Structure Learning, Neuro-computing Volume 625, 7 April 2025, 129557.
6. N. Naseri, M. Eftekhari, **F. Saberi-Movahed**, M. Radjabalipour, L. A. Belanche, A Similarity Measure Based on Subspace Distance for Spectral Clustering, Neuro-computing, Volume 620, 1 March 2025, 129187.
7. K. Berahmand, **F. Saberi-Movahed**, R. Sheikhpour, Y Li, M Jalili, A Comprehensive Survey on Spectral Clustering with Graph Structure Learning, 2024, <https://arXiv preprint arXiv:2501.13597>.
8. P. Tiwari, **F. Saberi-Movahed**, S. Karami, F. Saberi-Movahed J. Lehmann, S. Vahdati, A Self-Representation Learning Method for Unsupervised Feature Selection Using Feature Space Basis, Transactions on Machine Learning Research, 2024.
9. **F. Saberi-Movahed**, B. Biswas, P. Tiwari, J. Lehmann, S. Vahdati, Deep Non-negative Matrix Factorization with Joint Global and Local Structure Preservation, Expert Systems With Applications, Volume 249, Part B, 1 September 2024, 123645.

10. M. Samareh Jahani, **F. Saberi-Movahed**, G. Aghamollaei, M. Eftekhari, P. Tiwari, Low-Redundant Unsupervised Feature Selection based on Data Structure Learning and Feature Orthogonalization, *Expert Systems With Applications*, 240 (2024), 122556.
11. H. Hasaniyeh, B. Ebrahimi, **F. Saberi-Movahed**, M. Eftekhari, Multi-label Feature Selection Method Based on Redundancy Minimization, *Applied and Basic Machine Intelligence Research*, 1 (2023) 16–28.
12. F. Saberi-Movahed, M. K. Ebrahimpour, **F. Saberi-Movahed**, et al., Deep metric learning with soft orthogonal proxies, 2023, <https://doi.org/10.48550/arXiv.2306.13055>.
13. S. Karami, **F. Saberi-Movahed**, P. Tiwari, P. Marttinen, S. Vahdati, Unsupervised Feature Selection based on Variance-Covariance Subspace Distance, *Neural Networks*, 166 (2023) 188–203.
14. M. Samareh Jahani, G. Aghamollaei, M. Eftekhari, **F. Saberi-Movahed**, Unsupervised Feature Selection Guided by Orthogonal Representation of Feature Space, *Neurocomputing*, 516 (2023) 61–76.
15. K. Berahmand, M. Mohammadi, **F. Saberi-Movahed**, Y. Li, Y. Xu, Graph Regularized Nonnegative Matrix Factorization for Community Detection in Attributed Networks, *IEEE Transactions on Network Science and Engineering*, 2022.
16. **F. Saberi-Movahed**, M. Rostami, K. Berahmand, S. Karami, P. Tiwari, M. Ousalah, S. S Band, Dual Regularized Unsupervised Feature Selection Based on Matrix Factorization and Minimum Redundancy with Application in Gene Selection, *Knowledge-Based Systems*, 11 September 2022, 109884.
17. F. Saberi-Movahed, M. Mohammadifard, A. Mehrpooya, M. Rezaei-Ravari, K. Berahmand, M. Rostami, S. Karami, M. Najafzadeh, D. Hajinezhad, M. Jamshidi, F. Abedi, M. Mohammadifard, E. Farbod, F. Safavi, M. Dorvash, N. Mottaghi-Dastjerdi, S. Vahedi, M. Eftekhari, **F. Saberi-Movahed**, H. Alinejad-Rokny, S. S Band, I. Tavassoly, Decoding Clinical Biomarker Space of Covid-19: Exploring Matrix Factorization-based Feature Selection Methods, *Computers in Biology and Medicine*, 5 April 2022, 105426.
18. A. Mehrpooya, **F. Saberi-Movahed**, N. Azizizadeh, M. Rezaei-Ravari, F. Saberi-Movahed, M. Eftekhari, I. Tavassoly, High Dimensionality Reduction by Matrix

- Factorization for Systems Pharmacology, Briefings in Bioinformatics, 23(1), bbab410, 2022.
19. Mahla Mokhtia, Mahdi Eftekhari, **Farid Saberi-Movahed**, Dual-manifold Regularized Regression Models for Feature Selection based on Hesitant Fuzzy Correlation, Knowledge-Based Systems, Volume 229, 11 October 2021, 107308.
 20. M. Rezaei, M. Eftekhari, **F. Saberi-Movahed**, Regularizing Extreme Learning Machine by Dual Locally Linear Embedding Manifold Learning for Training Multi-Label Neural Network Classifiers, Engineering Applications of Artificial Intelligence, Volume 97, January 2021, 104062.
 21. M. Rezaei, M. Eftekhari, **F. Saberi-Movahed**, ML-CK-ELM: An efficient Multi-layer Extreme Learning Machine using Combined Kernels for Multi-label classification, Scientia Iranica, 27 (6), 3005–3018, 2020.
 22. M. Mokhtia, M. Eftekhari, **F. Saberi-Movahed**, Feature Selection Based on Regularization of Sparsity based Regression Models by Hesitant Fuzzy Correlation, Applied Soft Computing, Volume 91, June 2020, 106255.
 23. M. Mokhtia, M. Eftekhari, **F. Saberi-Movahed**, Proposing a Method for Regression Based on Feature Extraction and Hesitant Fuzzy Sets, Electronic Industries, 10 (4), 87-98, 2020.
 24. **F. Saberi-Movahed**, M. Najafzadeh, A. Mehrpooya, Receiving More Accurate Predictions for Longitudinal Dispersion Coefficients in Water Pipelines: Training Group Method of Data Handling using Extreme Learning Machine Conceptions, Water Resources Management, 34, 529-561, 2020.
 25. **F. Saberi-Movahed**, M. Eftekhari, M. Mohtashami, Supervised Feature Selection by Constituting a Basis for the Original Space of Features and Matrix Factorization, International Journal of Machine Learning and Cybernetics, 11, 1405-1421, 2020.
 26. M. Dehtaghi Zadeh, **F. Saberi-Movahed**, M. Eftekhari, Feature Selection Method based on Subspace Learning and Factorization of Basis Matrix for DNA Micro-Array Datasets, Iranian Journal of Biomedical Engineering, 13 (3), 223-234, 2019.
 27. M. Najafzadeh, **F. Saberi-Movahed**, GMDH-GEP to Predict Free Span Expansion Rates Below Pipelines Under Waves, Marine Georesources & Geotechnology, 37 (3),

375–392, 2019.

28. M. Najafzadeh, **F. Saberi-Movahed**, S. Sarkamaryan, NF-GMDH Based Self-Organized Systems to Predict Bridge Pier Scour Depth under Debris Flow Effects, *Marine Georesources & Geotechnology*, 36 (5), 589–602, 2018.

Selected Papers in Applied Mathematics:

1. A. Tajaddini, **F. Saberi-Movahed**, Xian-Ming Gu, M. Heyouni, On Applying Deflation and Flexible Preconditioning to the Adaptive Simpler GMRES Method for Sylvester Tensor Equations, *Journal of the Franklin Institute*, 361 (2024) 107268.
2. **F. Saberi-Movahed**, A. Tajaddini, M. Heyouni, L. Elbouyahyaoui, Some Iterative Approaches for Sylvester Tensor Equations, Part I: A Tensor Format of Truncated Loose Simpler GMRES, *Applied Numerical Mathematics*, 172, 428-445, 2022.
3. **F. Saberi-Movahed**, A. Tajaddini, M. Heyouni, L. Elbouyahyaoui, Some Iterative Approaches for Sylvester Tensor Equations, Part II: A Tensor Format of Simpler Variant of GCRO-Based Methods, *Applied Numerical Mathematics*, 172, 413-427, 2022.
4. A. Tajaddini, G. Wu, **F. Saberi-Movahed**, N. Azizi-Zadeh, Two New Variants of the Simpler Block GMRES Method with Vector Deflation and Eigenvalue Deflation for Multiple Linear Systems, *Journal of Scientific Computing*, 86 (9), 2021.
5. L. Elbouyahyaoui, M. Heyouni, A. Tajaddini, **F. Saberi-Movahed**, On Restarted and Deflated Block FOM and GMRES Methods for Sequences of Shifted Linear Systems, *Numerical Algorithms*, 87, 1257–1299, 2021.
6. M. Heyouni, **F. Saberi-Movahed**, A. Tajaddini, A Tensor Format for the Generalized Hessenberg Method for Solving Sylvester Tensor Equations, *Journal of Computational and Applied Mathematics*, Volume 377, 15 October 2020, 112878.
7. M. Heyouni, **F. Saberi-Movahed**, A. Tajaddini, On Global Hessenberg Based Methods for Solving Sylvester Matrix Equations, *Computers & Mathematics with Applications*, 77, 77–92, 2019.
8. F.P.A. Beik, **F. Saberi-Movahed**, S. Ahmadi-Asl, On the Krylov Subspace Methods

*Department of Applied Mathematics, Faculty of Sciences and Modern Technologies,
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Based on Tensor Format for Positive Definite Sylvester Tensor Equations, Numerical Linear Algebra with Applications, 23, 444–466, 2016.

9. M. Mohseni Moghadam, A. Rivaz, A. Tajaddini, **F. Saberi-Movahed**, Convergence Analysis of the Global FOM and GMRES Methods for Solving Matrix Equations $AXB = C$ with SPD Coefficients, Bulletin of the Iranian Mathematical Society, 41 (4), 981–1001, 2015.

Conference Papers

1. H. Naser Assadi, F. Kyanfar, **F. Saberi-Movahed**, A. Salemi, Self-Representation Unsupervised Feature Selection based on Non-negative Matrix Factorization, The First International Conference on Machine Learning and Knowledge Discovery (MLKD 2024), Amirkabir University of Technology, December 18–19, 2024.
2. M. Eftekhari, **F. Saberi-Movahed**, A. Mehrpooya, Supervised Feature Selection via Information Gain, Maximum Projection, and Minimum Redundancy, in Proceeding of the 10th Seminar on Linear Algebra and its Applications, Shahid Bahonar University of Kerman, Kerman, 2020.
3. B. Ebrahimi, M. Eftekhari, **F. Saberi-Movahed**, Multi-label Feature Selection via Feature Correlation, Minimum Redundancy and Sparsity Regularization, Bojnourd, Iran, 2019.
4. M. Mohseni Moghadam, A. Rivaz, A. Tajaddini, **F. Saberi-Movahed**, New Convergence Results for the Conjugate Gradient method, in Proceeding of the 7th Seminar of Numerical analysis and its applications, Kerman, Iran, 2018.
5. F.P.A. Beik, **F. Saberi-Movahed**, FOM-BTF: Full Orthogonalization Method based on Tensor Format, in Proceeding of the 5th Seminar of Numerical analysis and its applications, Rafsanjan, Iran, 2014.
6. A. Tajaddini, **F. Saberi-Movahed**, Convergence Results for Generalized Conjugate Gradient Method for the Matrix Equation $AXB = C$, in Proceeding of the 7th Seminar on Linear Algebra and its Applications, Mashhad, Iran, 2014.
7. A. Rivaz, **F. Saberi-Movahed**, Some Applications of T -Matrices in Symmetric Positive Definite Matrices, 6th Seminar on Linear Algebra and its Applications, Arak, Iran, 2011.
8. **F. Saberi-Movahed**, M. Neyestani, M.A. Yaghoubi, Combining a Feasible Method

with the Penalty Function in PSO Algorithm and its Application in Constrained Optimization Problems, 40th Annual Iranian Mathematics conference, Sharif University of technology, Tehran, Iran, 2008.

Book

1. M. Eftekhari, A. Mehrpooya, **F. Saberi-Movahed**, Vicenc Torra, How Fuzzy Concepts Contribute to Machine Learning, 2022, Accepted for Publication in Springer International Publishing–Studies in Fuzziness and Soft Computing.

Journal Review Activity

Reviewer for: Mathematical Reviews, Information Processing and Management, Information Fusion, Journal of Ethnopharmacology, Expert Systems with Applications, Journal of Computational and Applied Mathematics, Knowledge-Based Systems, Scientific Reports, Briefings in Bioinformatics, IEEE Transactions on Computational Social Systems, Decision Analytics Journal, IEEE Transactions on Knowledge and Data Engineering, IEEE Transactions on Neural Networks and Learning Systems, Decision Analytics Journal, Physica A, Computers in Biology and Medicine, Artificial Intelligence Review, International Journal of Environmental Research and Public Health, Applied Mathematics and Computation, Symmetry, Finnish Journal of eHealth and eWelfare, Sustainability, BMC Research Notes, Bulletin of the Iranian Mathematical Society, American Institute of Mathematical Sciences, and Iranian Journal of Numerical Analysis and Optimization.

Honors

- 2018 Selected paper among 150 papers in the 7th Seminar on Numerical Analysis and its Applications, Shahid Bahonar University of Kerman, Kerman, Iran
- 2015 First Rank Student at Shahid Bahonar University of Kerman in all Graduate (Ph.D.) Students of Applied Mathematics

- 2010 First Rank in Ph.D. Entrance Exam of Applied Mathematics, Numerical Analysis, Shahid Bahonar University of Kerman
- 2009 First Rank Student at Shahid Bahonar University of Kerman in all Graduate (Master) Students of Applied Mathematics

Invited Talks

- Feb. 2024 Department of Applied Mathematics, Graduate University of Advanced Technology, Kerman, Iran
Talk: *Dimensionality Reduction Methods and Several Associated Research Topics*
- Jan. 2021 Department of Applied Mathematics, Faculty of Mathematics and Computer, Shahid Bahonar University of Kerman, Kerman, Iran
Talk: *Applied Mathematics and Machine Learning*
- Dec. 2020 Institute of Science and High Technology and Environmental Sciences, Graduate University of Advanced Technology, Kerman, Iran
Talk: *The Importance of Dimensionality Reduction Methods in Data Mining*

Professional Services

- Dec. 2020 - Head of Department of Applied Mathematics, Faculty of Sciences and
Oct. 2022 Modern Technologies, Graduate University of Advanced Technology, Kerman, Iran.
- Jan. 2021 I presented the workshop entitled: The Workshop of Machine Learning, Department of Applied Mathematics, Faculty of Mathematics and Computer, Shahid Bahonar University of Kerman, Kerman, Iran.
- Sep. 2019 I presented the workshop entitled: The First Workshop of Applied Mathematics in Machine Learning and Data Mining, Department of Applied Mathematics, Graduate University of Advanced Technology, Kerman, Iran.

June 2015 – I have been presenting the workshop entitled: Workshop of $\text{\LaTeX}$ and
Present Xepersian, Department of Applied Mathematics, Graduate University
of Advanced Technology, Kerman, Iran.

Nov. 2015 I presented the workshop entitled: First Workshop of $\text{\LaTeX}$ and
Xepersian, Department of Applied Mathematics, Shahid Bahonar
University of Kerman, Kerman, Iran.

Mentoring and Advising

June 2015 – I am currently serving as Co-Advisor to two PhD students, and I have
Present served as Advisor/Co-Advisor for 15 master students.

2023 – **Hossein Naser Asadi**, *Title of thesis: Unsupervised feature selection
by Bilinear form representation.*

2023 – **Shokouh Mohebbi**, *Title of thesis:*

2023 – **Hamidreza Arbabi**, *Title of thesis:*

2019 – 2023 **Mahsa Samareh Jahani**, *Title of thesis: The effect of orthogonality
on the dimensionality reduction problem.*

2023 – **Narjes Rezanejad**, *Title of thesis: .*

2021 – 2024 **Mohsen Amiri Hanzaei**, *Title of thesis: Dual graph regularization
and sparsity-based non-negative matrix factorization with application
in image datasets.*

2020 – 2022 **Mehdi Atashkar**, *Title of thesis: A review of some feature selection
methods based on subspace learning and matrix factorization and
their application in cancer microarray datasets.*

2019 – 2021 **Ebrahim Ghajari**, *Title of thesis: Unsupervised feature selection
based on using the regularized graph in matrix factorization.*

2019 – 2021 **Atefeh Salari Jaeini**, *Title of thesis: Unsupervised feature selection
by matrix factorization and inner product-based regularizer.*

2018 – 2020 **Haniyeh Emad-ol-Eslami**, *Title of thesis: The application of di-
mensionality reduction methods into the GMDH method for selection
of effective input variables.*

- 2018 – 2020 **Reza Ghaderi**, *Title of thesis: Improvement of filtering partial descriptions in GMDH method and its applications in water engineering.*
- 2017 – 2018 **Hakimeh Hasaniyeh**, *Title of thesis: Embedded multi-label feature selection method based on manifold learning and sparsity regularization.*
- 2016 – 2017 **Atena Bagheri**, *Title of thesis: Non-Hermitian iterative methods for solving linear systems.*
- 2016 – 2017 **Mahla Dehtaghi Zadeh**, *Title of thesis: Proposing an unsupervised feature selection method based on matrix algebra.*
- 2015 – 2016 **Fatemeh Abdolrezaei**, *Title of thesis: Global Krylov subspace methods for image restoration.*
- 2014 – 2015 **Azam GolGolzadeh**, *Title of thesis: Deflated and augmented global Krylov subspace methods for matrix equations.*
- 2019 – 2020 **Mohammad Rezaei**, *Title of thesis: Proposing a multi label learning method using Extreme Learning Machine.*
- 2019 – 2020 **Mahla Mokhtia**, *Title of thesis: Proposing hesitant fuzzy models for regression and classification.*
- 2018 – 2019 **Behzad Ebrahimi**, *Title of thesis: Multi-label feature selection via minimizing the redundancy, maximum the correlation between the selected features and the labels and sparsity regularization.*
- 2018 – 2019 **Maryam Gheisari**, *Title of thesis: Joint feature selection and subspace learning.*
- 2016 – 2017 **Fatemeh Samadi**, *Title of thesis: A characterization of inner product spaces related to the p -angular distance.*

Memberships

- 2024 Member of Iranian Mathematical Society
- 2024 Member of Executive Committee of the 22nd Iranian Conference on Fuzzy Systems, Graduate University of Advanced Technology, Kerman, Iran

- 2021 IEEE Membership, Member number: 98366967
- 2021 Member of Publication Committee of 52nd Annual Iranian Mathematics Conference, Shahid Bahonar University of Kerman, Kerman, Iran
- 2020 Member of Publication Committee of 10th Seminar on Linear Algebra and its Applications, Shahid Bahonar University of Kerman, Kerman, Iran
- 2018 Member of Scientific Committee of 7th Seminar on Numerical Analysis and its Applications, Shahid Bahonar University of Kerman, Kerman, Iran
- 2018 Member of Publication Committee of 7th Seminar on Numerical Analysis and its Applications, Shahid Bahonar University of Kerman, Kerman, Iran

Technical Skills

Programming Matlab, Python (Numpy, SciPy, PyTorch, Scikit-learn, and Tensorflow)
 Software $\text{\LaTeX}$, XePersian

References

1. Prof. Abbas Salemi Parizi, Director, Mahani Mathematical Research Center, Shahid Bahonar University of Kerman, Kerman, Iran
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2. Prof. Mahdi Eftekhari, Department of Computer Engineering, Shahid Bahonar University of Kerman, Kerman, Iran
 Email: m.eftekhari@uk.ac.ir, mahdi.eftekhari591@gmail.com
3. Dr. Prayag Tiwari, Assistant Professor, Department of Computer Science, Halmstad University, Sweden
 Email: prayag.tiwari@halmstad.se, prayag.tiwari@ieee.org
4. Prof. Mohammed Heyouni, L.M.P.A, Université du Littoral Côte d'Opale, 50 rue F. Buisson BP. 699, F-62228 Calais Cedex, Dunkirk, France

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5. Dr. Iman Tavassoly, Physician-Scientist working on Precision and Quantitative Medicine and Scientific Director of C2i Genomics, Manhattan, New York, United States

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