Mansoor Rezghi

Curriculum Vitae

Mansoor Rezghi
Assistant Professor
Department of Computer Science
Tarbiat Modares University

Education

2004-2009	**Phd**, *Applied Mathematics*, Tarbiat Modares University, Tehran- Iran. **Thesis:**Regularization and Preconditioning of Large Scale ill-conditioned Problems
2001-2004	**Msc**, *Applied Mathematics*, Tarbiat Modares University, Tehran- Iran. **Thesis:**
1998-2001	**Bsc**, *Applied Mathematics*, Shahid Beheshti University, Tehran-Iran. optimization

Work Experience and Awards

2012-Present	**Assistant Professor**, *Department of Computer Science, Tarbiat Modares University, Tehran Iran*.
2011-2012	**Nonresident Researcher**, *Institute for Research in Fundamental Science (IPM), Tehran Iran*.
2009-2012	**Assistant Professor**, *Department of Mathematics, Sahand University of Technology, Tabriz-Iran*.
2008	**Research visitor**, *Department of Scientific Computing*, Linkoping University, Linkoping, Sweden.

Project

2011-2012	Tensor Based Methods for Three Dimensional Image Restoration Problems, IPM
2012-2014	Matrix and Inverse Problems in Image Deblurring, Supported by Iran National Science Foundation (INSF), (Grant No. 88001060).
2013	Conceptual design of an architecture for data processing Based on the model of cloud computing, **Project supervisor**, IRANDOC

Journal Publication

- M. Amirmazlaghani, M. Rezghi, H. Amindavar, A novel robust scaling image watermarking scheme based on Gaussian Mixture Model, Expert Systems with Applications, 42(2015), pp. 1960-1971
- M.Rezghi, S. M. Hosseini, and L. Elden, Best Kronecker Product Approximation of The Blurring

Operator in Three Dimensional Image Restoration Problems, SIAM Journal on Matrix Analysis and Applications, 35(2014), pp. 1086-1104

- M. Rezghi, A. Abulkasim, Noise-free principal component analysis: An efficient dimension reduction technique for high dimensional molecular data, Expert Systems with Applications, 41(2014), pp. 7797-7804.
- M. Nasiri, M. Rezghi, and B. Minaei, A new recomander system based on tensor factorization, Journal of operational Research and its applications, 11(2014), pp. 57-64.
- M. Nasiri, B. Minaei, and M. Rezghi, Fuzzy dynamic tensor decomposition algorithm for recommender system, 2014, pp. 52-55.
- M. Yazdani, M.Rezghi, Analysis of free stresses in a cross-ply Composite plate by applying shooting method. Modares Mechanical Engineering, 13 (2013), pp.1-11.
- M. Abdi, M. Hosseini, M. Rezghi, A novel weighted support vector machine based on particle swarm optimization for gene selection and tumor classification, Computational and Mathematical Methods in Medicine, (2012).
- Mansoor Rezghi, Lars Elden, Diagonalization of Tensors with Circulant Structure., Linear Algebra and its Applications, 435(2011), pp. 422-447.
- Mansoor Rezghi, S. M. Hosseini, Lanczos based preconditioner for ill-posed problems, Computing (Springer), 88 (2010), pp. 79-96.
- Mansoor Rezghi, S. M. Hosseini, A new variant of L-Curve for Tikhonov regularization, Journal of Computational and Applied Mathematics, 231 (2009), pp. 914-924
- Mansoor Rezghi, S. M. Hosseini, An ILU Preconditioner for Nonsymmetric positive definite matrices by using the Conjugate Gram-Schmidt process, Journal of Computational and Applied Mathematics, 188 (2006), pp. 150-164.
- Mansoor Rezghi, Lars Elden, Diagonalization of circulant Tensors with application to image restoration. Techreport LiTH-MAT-R-2008-10-SE, Linkoping University .

Conference Publication

- M. Khademlou, M. Rezghi, Integrated Single Image Super Resolution Based on Sparse Representation, AISP 2015, Mashhad-Iran.
- Z. Sharifi, M. Rezghi, M. Nasiri, A new algorithm for solving data sparsity problem based-on Non negative matrix factorization in recommender systems, ICCK 2014
- A. Tavakoli, M. Rezghi, Content based image boundary Conditions for image restoration, CSICC 2014, Tehran-Iran.
- N. Binesh, M. Rezghi, A new similarty measure for extraction information from social networks and imprive te community detection and recommandation results, IKT 2014.
- M. Yousefi, M. Rezghi, NMF method in face recognition, PRIA2013, March 6-8, 2013.
- N. Binesh, M. Rezghi, Nonnegative matrix factorization for knowledge discovery in social networks, IKT2013, Shiraz, Iran.
- N. Binesh, M. Rezghi, Nonnegative matrix factorization as a Fuzzy clustering method with a new evaluation method, IFSC2013, Gazvin, Iran.
- M. Yousefi, M. Rezghi, Nonnegative Matrix factorization and its Application in Handwriting Digite Recognition, 43rd Annual Iranian Mathematics Conference, August 27-30, 2012, Tabriz-Iran.
- M. Rezghi, A Note on fast decomposition of Circulant Tensors with application on image denoising, TDA 2010, September 13-17, 2010, Monopol, Bari, Italy.
- M. Rezghi, S. M. Hosseini, Regularized preconditioner for ill-posed problems by bidiagonalization

process with application in image restoration. Accepted in 2009 International Conference on Preconditioning Techniques for Scientific and Industrial Applications. August 2009, Hong Kong

○ M. Rezghi, Fast image restoration with a Tensor framework, Workshop: Inverse Problems and Applications, December 16, 2008, Norrkoping, Sweden.

○ M. Rezghi. S. M. Hosseini, Improved NRIF preconditioner for Nonsymmetric positive definite linear systems, Accepted in 2007 International Conference on Preconditioning Techniques for Large Sparse Matrix Problems in Scientific and Industrial Applications, July 9-12, 2007, Touluse, France .

Theses

Phd   Regularization and Preconditioning of Large Scale Discrete Ill-posed Problems

Msc   A Preconditioner Based on Conjugate Gram-Schmidt for Solving Large Sparse Linear Systems

Research Interests

- Scientif Computing
  ○ Large scale sparse linear systems, preconditioning, krylove subspace methods,Ě Structured matrices
- Tensor decomposition
- Computational InverseProblem

- Image Processing
  ○ Sparse Representation, Inverse Problem and Matrix Computation Techniques in Imaging
- Pattern Recognition and Data Mining
  ○ Sparse representation in recognition, Matrix and Tensor Techniques in Data Mining and Social Networks

Teaching Experience

B.Sc. Courses

- Introductory Numerical Analysis, Linear Programming, Discrete Mathematics, Graph Theory , Advanced Computer Programming

M.sc. Courses

- Data Mining, 2015.
- Computational Image Processing, 2015, 2011.
- Advanced Computational Soaftware: (Case Study in Optimization), 2014.
- Pattern Recognition, 2012, 2014.
- Technology of Sparse Linear Systems, 2014.
- Theory of Computer Science, 2012-2014.
- Advanced Theory of Computation, 2012.
- Matrix Computation, 2010,2012.
- Numerical Methods for ODE, 2009,2011.
- Network Flows, 2009

Computer skills

Intermediate	Java, Octave, R, Python, Weka(Data mining)
Advanced	C++, MATLAB, Fortran

Languages

Persian	**Native**	
Azari	**Native**	
English	**Intermediate**	*Conversationally fluent*
Swedish	**Basic**	*Basic words and phrases only*

Msc Students

Graduate

2015	**M.khademlou**, *Image super resolution via sparse representation.*.
2015	**R.Feiz**, *Compuattional inverse problem techniques in color image restoration*.
2015	**A. Restghar**, *A tensor frameworck for highdimensional data analysis*.
2014	**A.Tavakoli**, *Content Based Boundary Conditions in Image Restoration*.
2014	**R.Arjomand**, *Collaborative Filtering Recommender Systems*.
2013	**N.Binesh**, *Matrix and Spectral Methods in Social Networks Analysis.*.
2013	**A.Ziaei**, *Randomized Approach for Boolean Satisfiability Problem*.
2012	**N. Ebrahimpour**, *Total variation regularization on image restoration* .
2012	**M. Yousefi**, *Nonnegative matrix factorization and its application in Data mining* .

Current

A.Ghaseminia, *A multilevel method for dimension reduction and Complex Network Analysis*.

A. Fazllolahi, *Soacial Network- Based Recommander systems*.

F.Ghanbari, *Face recognition via spars representation approach*.

G. Hashemi, *Imgae Restoration based on norm one regularization*.