



# Touraj Nikazad

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## Personal Information

- Marital status: Married (one daughter)
- Nationality: Iranian
- Date of Birth: 5/24/1970
- Place of Birth: Tehran, Iran

## Education

- PhD, thesis on "Algebraic Reconstruction Methods", Mathematics Department, Scientific Computing Division, Linköping University, Linköping, Sweden. ( June 10, 2008)
- Swedish Licentiate, thesis on "The Use of Landweber Algorithm in Image Reconstruction", Mathematics Department, Scientific Computing Division, Linköping University, Linköping, Sweden. ( June 12, 2007)
- M.Sc, Applied Mathematics, thesis on Wavelet Functions and Their Applications in Differential Systems, Iran University of Science and Technology (*IUST*), Tehran, Iran (1993-1996) .
- B.Sc, Applied Mathematics, Mazandaran University, Babolsar, Iran (1988-1992) .

## Professional Experience

- Lecturer of Mathematics, Behshahr University (Branch of the Iran University of Science and Technology) Tehran, Iran (1996-2001)
- Lecturer of Mathematics, Payam Noor University, Ghazvin, Iran (1996-1997)
- Academic member of Mathematics Department, Iran University of Science and Technology, Tehran, Iran (1996-2004)
- programming with Mathematica and Matlab software
- programming with SNARK93 software

## Research Interests

- Image reconstruction techniques
- Iterative methods for linear systems  
(Large, SPARSE, Ill-posed)
- Stopping rules

**Teaching  
Experience**

**Courses taught:**

- Calculus I, II and III
- Numerical Analysis I and II
- Mathematical Analysis I , II and III
- Ordinary Differential Equations
- Partial Differential Equations

**Graduate Courses**

- Advanced Operational Research I
- Advanced Numerical Analysis
- Applied Functional Analysis
- Numerical Solution of PDEs
- Numerical Methods in Linear Algebra
- Real Analysis I
- Differential Operators of Mathematics and Physics
- Finite Element Method
- Nonlinear Optimization, Equations and Least Squares
- Numerical Solution of PDEs, initial value problems
- Matrix Computations
- Iterative Methods for Sparse Linear Systems
- Eigenvalue Problems for Dense and Sparse Matrices
- Rank-Deficient and Discrete ill-Posed Problems
- Image Deblurring
- Writing Scientific Software + FORTRAN 77
- Computational inverse problems in tomography

**Awards and  
Honors**

- Received the "Outstanding Teaching Award" of the academic year 1999-2000 **IUST**
- Ranked second in M.Sc between 15 students
- Ranked 7<sup>th</sup> in Graduate Entrance Exam held nationwide between more than 5000 contestants.

**Journal papers**

1. K. Ivaz, T. Nikazad, "Free Boundary Problem With Kinetic Function", The International Journal of Applied Mathematics, Bulgaria, 6, No. 3, 2001, 235-241.
2. K. Maleknejad, H. Mesgarani and T. Nikazad, "Wavelet-Galerkin Solutions For Fredholm Integral Equations of The Second Kind", International Journal of Engineering Science, Number 5, Vol. 13, Fall 2002, 75-80

3. K. Ivaz, T. Nikazad, "An inverse solidification of pure substance problem in two dimensions". *Appl. Math. Lett.* 18 (2005), No. 8, 891--896.
4. Y. Censor, T. Elfving, G. T. Herman and T. Nikazad, "On Diagonally-Relaxed Orthogonal Projection Methods". *SIAM Journal on Scientific Computing (SISC)* 30, (2008), Issue 1, 473--504.
5. T. Elfving and T. Nikazad, "Stopping Rules for Landweber type Iteration". *Inverse problems* 23 (2007), No. 4, 1417--1432.
6. T. Elfving and T. Nikazad, "Some properties of ART-type reconstruction algorithms" accepted for publication in "Mathematical Methods in Biomedical Imaging and Intensity-Modulated Radiation Therapy (IMRT)", Y. Censor, M. Jiang and A.K. Louis, Editors, Edizioni della Normale, Pisa, Italy, 2008.
7. T. Elfving and T. Nikazad, "Some block-iterative methods used in image reconstruction" submitted.
8. T. Elfving and T. Nikazad, "Semi-convergence and choice of relaxation parameters in Landweber type algorithm (ongoing).

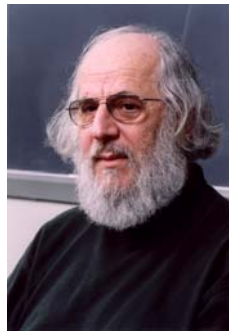
**Conferences  
Papers**

1. T. Nikazad, K. Ivaz, "Wavelet Functions", 2<sup>nd</sup> International Conference on Applied Mathematics. IUST, Iran-Tehran, Oct. 25-27, 2000
2. T. Nikazad, K. Ivaz, "Wavelet-Galerkin Solution of the Periodic Problems", 2<sup>nd</sup> International Conference on Applied Mathematics. IUST, Iran-Tehran, Oct. 25-27, 2000
3. T. Nikazad, K. Ivaz, "Wavelet-Galerkin Solution for the Inhomogeneous Sturm-Liouville Problems", Submitted to The First International Seminar on Graph, Combinatorics, Computational Algorithms and Applications, Amirkabir University of Technology Tehran, Iran (Tehran Polytechnique). (and was admitted Feb. 2001)
4. T. Nikazad, "Wavelet and Numerical Integration", 19<sup>th</sup> Biennial Conference on Numerical Analysis, University of Dundee, Scotland, U. K. 26-29 June, 2001.
5. T. Nikazad, "Wavelet-Galerkin Solution for the Linear Second-Order Differential Equation with Variable Coefficients", 33<sup>rd</sup> Iranian Mathematics Conference, Department of Mathematics, Ferdowsi University, Mashhad, Iran, Aug 30-Sep 02, 2002

**Professional  
memberships**

- Iranian Mathematical Society
- SIAM student member

## References



Distinguished Professor Gabor T. Herman,  
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The Graduate Center, CUNY, New York.

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Professor Yair Censor,  
Department of Mathematics,  
University of Haifa,  
Mount Carmel, Haifa 31905, Israel.

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