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## **EDUCATION**

**Ph.D. Optimization Approach in the Seidel Matrix Eigenvalues, Tarbiat Modares University, 2016**

**M.Sc. A New Optimal Guidance for Home Missile, Sharif University, 2001**

**B.Sc. Fixed Point Theorem in Real Function, Ferdowsi University of Mashhad, 1999**

## **RESEARCH INTERESTS**

- Optimization
- Graph and Matrix Theory
- Numerical Methods
- Optimal Control
- Nano Science

## **AWARDS AND HONORS**

- 4th rank of Master's degree in 1999 and 13th Student Olympiad

## **PUBLICATIONS**

### **Journal Papers**

- Chebyshev finite difference method for a nonlinear system of second-order boundary value problems, App. Math. and Comp., 192(2) (2007), 586–591.
- Upper and lower bounds for the power of eigenvalues in Seidel matrix J. Appl. Math. Informatics. 33 (2015) 627–633.
- Seidel-Estrada index Journal of Inequalities and Applications (2016) 2016:120

### **Conference Papers**

- Energy of some nanotori, Conference of Nano, Korea 2007.
- A Numerical Method for Computing Energy of Two Infinite Classes of Fullerenes 2th SCWMC Iran 2009.
- A Numerical Method for Computing Energy of Nanotorus 2th SCWMC Iran 2009.
- An upper bound for modified Seidel-energy and Haemers conjecture. 7th Operation research, Iran 2013.
- A new approach to numerical method to calculate the energy of fullerene, ICNN Iran 2014.
- An upper and lower bound for  $s(G)$  by K.K.T method, 7th SCWMC Iran 2015.
- Seidel eigenvalues and some properties, The 9th Conference on the Groups Theory, Iran, Kashan, 1395
- Calculation of bending of beams and networks based on numerical optimization and finite difference methods, International Conference on Architecture and Mathematics, Kashan, 1396.
- The stability of beams, columns and structures of a future, International Conference on Architecture and Mathematics, Kashan, 1396.
- A modified conjugate gradient method to calculate the stability index structures, 11th International Conference on Operations Research Iran, Kermanshah, 1397.
- Fast algorithms for solving optimization problems, 11th International Conference on Operations Research Iran, Kermanshah, 1397.

### **Books**

- Ordinary Differential Equations, Fanavaran (Shaar) Publishing, Tehran, 2007.
- Computer Science Basics and Pascal Programming, Fanavaran (Shaar) Publishing, Tehran, 2009.

## **GRADUATE AND UNDERGRADUATE COURSES**

- Calculus 1, 2 , 3,
- Differential equations,
- Numerical analysis 1, 2,
- Operations research 1, 2,
- Linear and Nonlinear Optimization,
- Computer Basics,
- C and Pascal Programming,
- Discrete Mathematics,
- Mathematical Analysis 1,
- Numerical linear algebra.
- **Master's:**
- Advanced linear optimization 1
- Nonlinear optimization
- Matrix computing

## **COMPUTER SKILLS**

Introduction to programming languages,  
C, C++, Pascal, Java,  
Computer ACDL,  
Matlab,  
Mathematica,  
Latex.

## **LANGUAGE SKILLS**

English,