

Dr. Salman Khodayifar

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Nationality: Iranian

Marital Status: Married

Date of Birth: 20/Feb/1982

Place of Birth: Khoy, Azerbaijan, Iran.



EDUCATION:

Ph.D. in Applied Mathematics (Operations Research (network flows)) University of Tehran, Tehran, Iran.
Thesis Title: Design of distribution/production networks in presence of distributed generation (DG).
2009-2013 GPA: 18.13/20.

M.Sc. in Applied Mathematics (Operations Research (network flows)) University of Tehran, Tehran, Iran.
2006-2008 GPA: 17.45/20.
Thesis Title: A fast parametric algorithm for maximum flow problem.

B.Sc. in Pure Mathematics, Faculty of science, University of Mohagheghe Ardabili, Ardabil, Iran.
2002-2006 GPA: 16.80/20.

HONORS and AWARDS:

- **Rank 2th/30**, in the overall GPA in B.Sc. (Top Student).
- **Rank 2th/13**, in the overall GPA in M.Sc. (Top Student).

JOURNAL PAPERS

- H. Salehi Fathabadi, S. Khodayifar, M. Raayatpanah "**Minimum Flow Problem on Dynamic Network Flows with Tim Varying Bounds**" *Applied Mathematical Modelling*, 2012; 36: 4414–4421. IF: 5.129, Q1.
- M. Raayatpanah, H. Salehi Fathabadi, B. Khalaj and S. Khodayifar "**Minimum cost multiple multicast network coding with quantized rates**" *Computer Networks*, 2013; 57: 1113–1123. IF: 4.474, Q1.
- M. Raayatpanah, H. Salehi Fathabadi, B. H. Khalaj, S. Khodayifar, P. M. Pardalos, "**Bounds on end-to-end statistical delay and jitter in multiple multicast coded packet networks**" *Journal of Network and Computer Applications*, 2014; 41: 217-227. If: 6.21. Q1.
- H. Salehi Fathabadi, S. Khezri ,S. Khodayifar "**A Simple Algorithm for Reliability Evaluation in Dynamic Networks with Stochastic Transit Times**" *Journal of Industrial and Production Engineering*, 2015; 1-13. Q2.
- Khodayifar, S., M. A. Raayatpanah, and P. M. Pardalos "**An accelerating Benders' decomposition approach to the integrated supply chain network design with distributed generation**" *Energy Systems*, 2018; 9(3), 647-667. Q2.

- Khodayifar, S., M. A. Raayatpanah, and P. M. Pardalos "**A polynomial time algorithm for the minimum flow problem in time-varying networks**" *Annals of Operations Research*, 2019; 279: 29-39. IF: 4.854. Q1.
- Salman Khodayifar , Mohammad A. Raayatpanah , Abbas Rabiee , Hamen Rahimian , and Panos M. Pardalos, **Joint Long-Term Distributed Generation Planning and Reconfiguration of Distribution Systems: A Benders' Decomposition Approach**" *Journal of Optimization Theory and Applications*, 2018; 179 (1): 283-310. IF: 2.249,Q1.
- S.khodayifar, M. A. Raayatpanah, A. Fouladi, **Optimal Coding Subgraph Selection under Survivability Constraint**, *Journal of Operational Research and Its Applications*, 2019; 16 (1) :11-28.
- S.khodayifar, M. A. Raayatpanah, A. Babalo, **An Accelerating Benders' Method for the Scheduling of Charging and Discharging of Electric Vehicles in Smart Grids**, *Journal of Operational Research and Its Applications*, 2020; 17 (2): 9-25.
- Salman Khodayifar, **Minimum Cost Multicommodity Network Flow Problem in Time-Varying Networks: by Decomposition Principle**, *Optimization letters*, 2019, 1-18. IF: 1.769. Q1.
- Mojtaba Mahmoudi, Mohsen Afsharchi, Salman Khodayifar, **Demand Response Management in Smart Homes Using Robust Optimization**, *Electrical power components and Systems*, 2020, 1-16.Q3.
- Bahram Sadeghi bigham, Fariba Noorizadeh, Salman Khodayifar, **A polynomial Time Algorithm for Big Data in a Special Case of Minimum Constraint Removal Problem**, *Evolutionary Intelligence*, 2020; 13 (2): 247-254. IF: 1.071, Q3.
- Emad Mirsadeghi, Salman Khodayifar, **Hybridizing Particle swarm Optimization with Simulated Annealing and Differential Evolution**, *Cluster Computing*, 2020, 1-29, IF: 1.809, Q3.
- Zohreh Hosseini Nodeh, Ali Babapour Azar, Rashed Khanjani, Salman Khodayifar, Panos Pardalos, **Joint chance constrained shortest path problem with Copula theory**, *Journal of Combinatorial Optimization*, 2020, 1-31, Accept, IF: 1.195, Q2.
- Rashed Khanjani, Salman Khodayifar, Panos Pardalos, **Copula Approach in Stochastic Geometric Programming**, *Journal of Global Optimization*, **81**, 435–468 (2021), IF: 2.207, Q1. 2021.
- M. Raayatpanah, S. Khodayifar, T. Weise, P. Pardalos, **A novel approach to subgraph selection with multiple weights on arcs**, *Journal of Combinatorial Optimization*, Accept, IF: 1.195, Q2. 2021.
- S. Khezri, S. Khodayifar "**A Joint chance-constrained multi-objective multi-commodity minimum cost network flow problem with copula theory**, *Computers and Operation Research*, Submitted.
- S. Khodayifar, S. Khezri "**Distributionally robust chance-constrained minimum cost multicommodity flow problem in time-varying networks**, *European Journal of Operational Research*, Submitted.

CONFERENCE PAPERS

- H. Salehi Fathabadi, M. Raayatpanah , S. Khodayifar "**The Multicommodity Flow Problem with Chebyshev Norm Cost Function**" Applied Mathematics conference, 19-21 Esfand, 1388 (March 10-12, 2010), Zahedan, Iran.
- H. Salehi Fathabadi, S. Khodayifar, M. Raayatpanah "**Constrained minimum flow problem**" 3rd International Conference of Iranian Operations Research Society May 5-6, 2010, University of Amirkabir, Iran.
- H. Salehi Fathabadi, M. Raayatpanah , S. Khodayifar "**Minimum cost flow problem with priority**" 3rd International Conference of Iranian Operations Research Society May 5-6, 2010, University of Amirkabir, Iran.
- H. Salehi Fathabadi, S. Khodayifar, M. Raayatpanah "**Minimum Flow Problem on Dynamic Generative Network Flows with Time Varying Bounds**" 1st International Conference on Operations Research and Optimization, January 26-28, 2011, IPM, Tehran, Iran.
- Y. Jafari, R. Maddahi, S. Khodayifar "**Evaluating the performance of multiple comparable queuing by using DEA**" 2nd National Conference on Data Envelopment Analysis August 4-5, 2010 Faculty of Sciences, Islamic Azad University of Rasht.
- S. Khodayifar, H. Salehi Fathabadi, , M. Raayatpanah, "**Reconfiguration of distributed/generation networks in Presence of Distributed Generation (DG): An application to electrical distribution network**" ECCO XXV, 25th Conference of European chapter on combinatorial optimization, April 26-28 (2012), Antalya, Turkey.
- Khodayifar, S., Raayatpanah, M. ,Shafie, E., "**Design and analysis of survivable multicommodity network flows: by decomposition algorithms**" The 7th International Conference of Iranian Operation Research Society, Semnan University, Iran, 1-2, (2014).
- Khodayifar, S., Raayatpanah, M. A., Gholami, M. "**A column generation method for multicommodity network flow problem in time varying networks**" The 9th International Conference of Iranian Operations Research Society, Shiraz University of Technology, Iran, (2016).
- Khodayifar, S., Farmanesh, L., Fouladi, A. "**Reconfiguration of Water Distributed-Generation Networks in presence of Distributed Generation (DG)**" The 9th International Conference of Iranian Operations Research Society, Shiraz University of Technology, Iran, (2016).
- Khodayifar, S. "**Some results on dynamic network flows**" International Conference on Mathematics and Mathematics Education (ICMME-2017), Harran University, Sanliurfa, Turkey, 11-13 May 2017, (2017).
- Khodayifar, S., "**Robust Optimization for Network Function Placement: Bertsimas- Sim Robust Optimization Approach**, 4th International Conference on Nonlinear Analysis and Optimization, IASBS, Znjnan, Iran. (2018).

- Khodayifar, S. " **A Possibility Programming Approach for Integrated Supply Chain Network Design with Distributed Generation**" International Conference on Mathematics and Mathematics Education (ICMME-2019), Selcuk University, Konya, Turkey, 11-13 July, (2019).

TEACHING EXPERIENCE:

- Advanced Optimization 1, 2
- Network Optimization
- Stochastic Optimization
- Dynamic Programming
- Numerical Linear Programming
- Special Topics in Optimization
- Location Theory
- Seminar

RESEARCH AND WORK EXPERIENCE:

- Data fusion and Kalman filter, Private Company, Tehran.
- Every Euclidean domain is not the ideal domain. (B.Sc's Research).
- Design of distribution systems in presence of Distributed Generation (DG) by Bender's decomposition: An application to electrical and communication networks.
- Copula Approach in Stochastic Geometric Programming, Joint Research Project IASBS with University of Florida

PARTICIPATION IN EDUCATIONAL SEMINARS:

- Third Workshop on Optimization and its Application. K.N.Toosi University of Technology, Tehran, Iran, May 17, 2011.

FIELDS OF INTEREST:

- Network design problems
- Dynamic network flows
- Stochastic Optimization
- Design of Distribution/Production systems
- Combinatorial optimization
- Integrated supply chain management
- Optimization in electrical networks
- Facility location problem
- Data Envelopment Analysis (DEA) in network flows

AFFILIATION:

- Iranian Operations Research Society.

LANGUAGES:

- Persian: Native
- Turkish: Mother Tongue
- English: Fluent

SKILLS AND ABILITIES:

- Experienced in a number of optimization software such as GAMS, MATLAB and SLAM (simulation software).
- Knowledge of Microsoft Office including Excel, Word, PowerPoint, Outlook, Latex.

HOBBIES:

- Badminton, Swimming, Hiking.

REFERENCES:

❖ **Dr. Hassan Salehi Fathabadi** (Ph.D. Supervisor)

Professor

School of Mathematics, Statistics and Computer Science, University College of Science, University of Tehran.

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