Nasim Nasrabadi

Faculty of Mathematical Science and Statistics, Department of Mathematics

University of Birjand

Birjand, Iran

Curriculum Vitae

Personal Information:

- **Surname:** Nasrabadi
- **First Name:** Nasim
- **Date of Birth:** 6 September, 1982
- **Nationality:** Iranian
- **Email:** nasimnasrabadi@birjand.ac.ir, nasrabadinasim@gmail.com
- **Language:** Persian (Mother Tongue), English (Fluently)
- **Marital Status:** Married (to Hassan Alizadeh, Veterinarian)
- **Children:** Saba (2013) and Sadra (2020)

Current Position:

- Assistant Professor, Department of Mathematical Science and Statistics, University of Birjand, Oct 2010- present.

Previous work experiences:

International Level:

- Researcher, Department of Business Technology, Aalto University (formerly Helsinki School of Economics), Helsinki, Finland, Nov. 2008- July 2009.

- Visiting Researcher, Department of Business Technology, Aalto University (formerly Helsinki School of Economics), Helsinki, Finland, Summer 2012, Summer 2016, Summer 2017.

National Level:

- Administrator for Research Affairs, Department of Mathematics, University of Birjand, 2010-2013.

- Dean of the Office for Development Exceptional Talents, University of Birjand, Birjand, Iran, 2013-2014.

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- Administrator for Postgraduate Affairs, Department of Mathematics, University of Birjand, 2016-2020.

- Deputy Director of Department of Mathematics, University of Birjand, 2020-now.

Research interests:

- Data Envelopment Analysis (DEA)
- Multiple Criteria Decision Making
- Inverse Optimization

Education:

- Ph.D. Degree in Applied Mathematics, Operations Research, Department of Mathematics, *Kharazmi University of Tehran* (Formerly *Teacher Training University of Tehran*), Tehran, Iran, February 2005-October 2010, Average: 18.46.

  - ➢ Supervisor: Professor G.R. Jahanshahloo
  - ➢ Advisor: Professor Pekka Korhonen
  - ➢ Thesis's title: Some Models for Efficiency Analysis

- M.Sc. Degree in Applied Mathematics, Operations Research, Department of Mathematics, *Kharazmi University of Tehran* (Formerly *Teacher Training University of Tehran*), Tehran, Iran, October 2003- February 2005, Average: 17.93.

  - ➢ Supervisor: Professor G.R. Jahanshahloo

- B.Sc. Degree in Applied Mathematics, Operations Research, Department of Mathematics, *Kharazmi University of Tehran* (Formerly *Teacher Training University of Tehran*), Tehran, Iran, October 2000- October 2003, Average: 16.84.
- Pre-university in Mathematical Science, *National Organization for Development of Exceptional Talents (NODET, also known as SAMPAD),* Birjand, Iran 1999-2000, Average: 19.67.

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- Diploma in Mathematical Science, *National Organization for Development of Exceptional Talents (NODET, also known as SAMPAD)*, Birjand, Iran 1996-1999, Average: 19.29.

Projects:

- Doing BSc project on "Graph Algorithms", *Kharazmi University of Tehran* (Formerly *Teacher Training University of Tehran*), Tehran, Iran, 2003.

  ➢ Supervisor: Professor E. Babolian

- Doing MSc research on "An Introduction to Artificial Neural Networks", *Kharazmi University of Tehran* (Formerly *Teacher Training University of Tehran*), Tehran, Iran, 2004.

  ➢ Supervisor: Professor G.R. Jahanshahloo

- Doing additional research on "Multi-component Efficiency Measure and Global Malmquist Productivity Index", *Kharazmi University of Tehran* (Formerly *Teacher Training University of Tehran*), Tehran, Iran, 2005.

  ➢ Supervisor: Professor G.R. Jahanshahloo

- Doing additional research on "Fuzzy Multi Criteria Shortest Path Problem", *Kharazmi University of Tehran* (Formerly *Teacher Training University of Tehran*), Tehran, Iran, 2006.

  ➢ Supervisor: Professor G.R. Jahanshahloo

Awards:

- Outstanding high school graduate award, NODET, Birjand, Iran, 1996- 2000.
- Rank 185 in the entrance exam of universities among about 1,500,000 students, Iran, 2000.
- Awarding a scholarship from Institute for Studies Theoretical Physics and Mathematics (IPM), Iran, 2000-2002.
- Awarding a scholarship for an abroad research visit from Ministry of Science, Research and Technology (MSRT), Iran, 2008.

- Awarding a scholarship from Ministry of Science, Research and Technology (MSRT) during BSc, MSc and PhD as an Exceptional Talented Student, 2000-2010.

Memberships:

- Member of Iranian Mathematical Society, 2008- present.
- Member of Iranian Operations Research Society, 2013- present.

Referee for Scientific Journals:

- European Journal of Operations Research
- Iranian Journal of Fuzzy Systems
- Journal of Operations Research Society
- Operational Research

Other Qualifications:

- Professional in Maple, Gams, Mathematica, Latex.
- Familiar with MatLab, Python, R.
- Passing MCHE exam with score 63 (2008).
- Passing IELTS exam with score 6.5 (2018).

Publications:

Book:

Principles of Multi Criteria Decision Making (In Persian), ISSN: 978-600-96346-6-8. (March 2018)

International Journal Papers:

1. "Efficiency analysis to incorporate interval scale data", A. Dehnokhalaji, P.J. Korhonen, M. Köksalan, N. Nasrabadi, J. Wallenius, *European Journal of Operations Research* 207(2), 1116-1121 (2010). (IF=6.363)

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2. "Convex cone-based partial order for multiple criteria alternatives", A. Dehnokhalaji, P.J. Korhonen, M. Köksalan, N. Nasrabadi, J. Wallenius, *Decision Support Systems* 51(2), 256-261 (2011). (IF=6.969)

3. "Resource allocation to improve the performance of system", N. Nasrabadi, A. Dehnokhalaji, N.A. Kiani, P.J. Korhonen, J. Wallenius, *Annals of Operations Research* 196(1), 459-468 (2012). (IF=4.854)

4. "Characterizing a subset of the PPS maintaining the reference hyperplane of the radial projection point", N. Nasrabadi, A. Dehnokhalaji, M. Soleimani-damaneh, *Journal of the Operational Research Society* 65, 1876-1885 (2014). (IF=2.175)

5. "Constructing a strict total order for alternatives characterized by multiple criteria: an extension", A. Dehnokhalaji, P. J. Korhonen, M. Köksalan, N. Nasrabadi and J. Wallenius, *Naval Research Logistics* 61, 155-163 (2014). (IF=1.806)

6. "A lexicographic radial projection onto the efficient frontier in Data Envelopment Analysis", P. J. Korhonen, A. Dehnokhalaji and N. Nasrabadi, *European Journal of Operational Research* 265(3), 1005-1012 (2018). (IF=6.363)

7. "A stepwise benchmarking approach to DEA with interval scale data", N. Nasrabadi, A. Dehnokhalaji, P.J. Korhonen and J. wallenius, *Journal of the Operational Research Society* 70 (6), 954-961 (2019). (IF=2.175)

8. "A Sequence of targets towards a common best practice frontier in DEA", N. Nasrabadi, *Journal of Industrial Engineering International 15*(4), 695-707. (IF=3.37)

9. "Using Convex Preference Cones in Multiple Criteria Decision Making and Related Fields", N. Nasrabadi, A. Dehnokhalaji, Pekka Korhonen and J. Wallenius, Journal of Business Economics 89(6), 699-717 (2019). (IF=3.32)

10. "Robustness of efficiency scores in data envelopment analysis with interval scale data", N. Nasrabadi, A. Dehnokhalaji, Pekka Korhonen and J. Wallenius, *European Journal of Operational Research* 297(3), 1151-1161 (2022). (IF=6.363)

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National Journal Papers:

1. "Determining the best performance time period of a system", A. Dehnokhalaji, N. Nasrabadi, N. A. Kiani, *International Journal of Industrial Mathematics* 1(1), 13-18 (2009).

2. "A Value Efficiency-Based Target Setting Approach in Data Envelopment Analysis" (In Persian), N. Nasrabadi, *Journal of New Researches in Mathematic* 5 (17), 51-72 (2019).

3. "Dual Frontiers in Non-convex Data Envelopment Analysis: Efficiency and In-efficiency Assessment and Stability Analysis" (In Persian), N. Nasrabadi, S. Ayati, *Journal of New Researches in Mathematics*, Accepted.

4. "Introduction to Data Envelopment Analysis and its application in the oil industry" (In Persian), E. Hosseinzadeh, N. Nasrabadi and J. Tayyebi, QuRTERLY *Journal of Industrial Technology Development* 20(47), 29-40 (2022).

Conference Papers:

1. N. Nasrabadi and A. Dehnokhalaji, An Application of Global Malmquist Productivity Index in DEA, ICNAAM 2006, Crete, Greece.
2. A. Dehnokhalaji and N. Nasrabadi, A Non-radial Ranking Model in the Case of Outputs, ICNAAM 2006, Crete, Greece.
3. N. Nasrabadi and A. Dehnokhalaji, *A Measure for Determining the Best Performance Time Period of a System*, 38th Iranian Mathematics Conference, Zanjan University, Iran, Sep. 2007.
4. Dehnokhalaji and N. Nasrabadi, *A Non-radial Ranking method based on both inputs and outputs*, 38th Iranian Mathematics Conference, Zanjan University, Iran, Sep. 2007.
5. N. Nasrabadi and A. Dehnokhalaji, *Cost Efficiency in Network DEA*, 1st International Conference of Iranian Operations Research Society, Kish Island, Iran, Jan. 2008.
6. Dehnokhalaji and N. Nasrabadi, *Investigating the relationship between GDEA and FDH models*, 1st International Conference of Iranian Operations Research Society, Kish Island, Iran, Jan. 2008.
7. Dehnokhalaji and N. Nasrabadi, *Choosing Weights from a Lexicographic MOLP model in DEA*, 39th Iranian Mathematics Conference, Kerman University, Sep. 2008.

8. N. Nasrabadi and A. Dehnokhalaji, *Network DEA: Efficiency Evaluation of DMUs Considering Their Complex Internal Structure*, 39th Iranian Mathematics Conference, Kerman University, Sep. 2008.
9. N. Nasrabadi and A. Dehnokhalaji, *Measuring Efficiency in Two Delivery Time Systems*, 16th Young OR Conference, Warwick University, Mar. 2009.
10. Dehnokhalaji and N. Nasrabadi, *Resource Reallocation Based on Performance Improvement*, 16th Young OR Conference, Warwick University, Mar. 2009.
11. N. Nasrabadi and A. Dehnokhalaji, *Efficiency Analysis to Incorporate interval Scale Data*, International Conference on Operations Research and Optimization, Institute for Research in Fundamental Sciences, Tehran, Iran, Jan. 2011.
12. N. Nasrabadi and A. Dehnokhalaji, *Benchmarking in Dealing with Interval Scale Data*, Pre Conference of Multiple Criteria Decision Making, Aalto University, Helsinki, Finland, Jun 2011.
13. N. Nasrabadi and A. Dehnokhalaji, *A DEA-Based Allocation of Labors in a Chain of Supermarkets using GAMS*, 2nd World Conference on Information Technology, Antalya, Turkey, Nov. 2011.
14. N. Nasrabadi and A. Dehnokhalaji, *Partial Ordering of Alternatives: A Non-Radial Preference Measure*, 21st International Symposium on Mathematical Programming, TU Berlin, Germany, Aug. 2012.
15. N. Nasrabadi and A. Dehnokhalaji, *Benchmarking in DEA with Interval Scale Data*, 43rd Annual Iranian Mathematics Conference, University of Tabriz, Tabriz, Iran, Sep. 2012.
16. N. Nasrabadi and A. Dehnokhalaji, *A Slack-Based Preference Measure for Partial Ordering of Alternatives*, 2nd International Conference on Operations Research and Optimization, University of Tehran, Tehran, Iran, Jan. 2013.
17. N. Nasrabadi and A. Dehnokhalaji, *Finding a Benchmark Path in DEA with Interval Scale Data*, 44th Annual Iranian Mathematics Conference, Ferdowsi University of Mashhad, Mashhad, Iran, Sep. 2013.
18. N. Nasrabadi, *How to append a new alternative in an existing total order?*, 7th Conference of Iranian Operations Research Society, Semnan University, Semnan, Iran, May 2014.
19. N. Nasrabadi and M. Javanmard, *An improved interactive cone contraction approach for mixed-integer multi-criteria optimization problems*, 7th Conference of Iranian Operations Research Society, Semnan University, Semnan, Iran, May 2014.
20. N. Nasrabadi, *Efficency Analysis in two-stage network DEA: A slack-based measure*, 8th Conference of Iranian Operations Research Society, Ferdowsi University of Mashhad, Mashhad, Iran, May 2015.

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21. N. Nasrabadi and M. Jamali, *An improved interactive evolutionary algorithm based on a weighted achievement scalarizing function*, 46th Annual Iranian Mathematics Conference, University of Yazd, Yazd, Iran, Sep. 2015.
22. N. Nasrabadi, H. Khorashadizadeh and M.Aman, *Solving multi-objective optimization problems using an interactive evolutionary algorithm based on value function with a limited number of decision making calls*, 46th Annual Iranian Mathematics Conference, University of Yazd, Yazd, Iran, Sep. 2015.
23. N. Nasrabadi and H. Khorashadizadeh, *An improved interactive evolutionary algorithm for multi-objective optimization*, 8th Conference of Iranian Operations Research Society, Shiraz University of Technology, Shiraz, Iran, May 2016.
24. N. Nasrabadi and A. Dehnokhalaji, *Stability region for maintaining efficiency in DEA with interval scale data*, 8th Conference of Iranian Operations Research Society, Shiraz University of Technology, Shiraz, Iran, May 2016.
25. N. Nasrabadi, *A well-defined efficiency measure for dealing with interval scale data*, 47th Annual Iranian Mathematics Conference, Kharazmi University, Karaj, Iran, Sep. 2016.
26. N. Nasrabadi and R. Shoja,*Value efficiency in non-convex data envelopment analysis*, 47th Annual Iranian Mathematics Conference, Kharazmi University, Karaj, Iran, Sep. 2016.
27. N. Nasrabadi and M. Zeraatkar, *A common benchmarking model in DEA under the assumption of variable returns to scale*, 48th Annual Iranian Mathematics Conference, Hamadan University, Hamadan, Iran, Sep. 2017.
28. N. Nasrabadi, A Rank Ordering Procedure in value efficiency analysis, 49th Annual Iranian Mathematics Conference, Iran University of Science and Technology, Tehran, Iran, Sep. 2018.
29. N. Nasrabadi, Value efficiency analysis: Some theory, 10th National Conference on Data envelopment Analysis, Kharazmi University, Tehran, Iran, Sep. 2018.
30. N. Nasrabadi and S. Ayati, Dual Frontiers in interval non-Convex DEA, 12th International Conference of Iranian Operations Research Society, Babolsar, Iran, May 2019.
31. N. Nasrabadi, S. Ayati, Solving Infeasibility in Analyzing Dual frontiers in DEA for Interval Data**,** 11th National Conference on Data envelopment Analysis, Shiraz, Iran, Sep. 2019.
32. N. Nasrabadi, A Two-Step Benchmarking Approach in Value Efficiency Analysis, 51st Annual Iranian Mathematics Conference, University of Kashan, Kashan, Iran, Feb. 2021.
33. N. Nasrabadi, Dealing with interval scale data in DEA, 17th Iranian Internation Industrial Enginering Conference, Ferdowsi University of Mashhad, Mashhad, Iran, Feb. 2021.

34. N. Nasrabadi, An incentive-based model for resource allocation in DEA, The First International Conference on Mathematics and its Applications, Shahid Chamran University of Ahvaz, Ahvaz, Iran, Aug 2021.
35. N. Nasrabadi, A mixed-integer programming model for performance analysis of units with interval scale data, The First International Conference on Mathematics and its Applications, Shahid Chamran University of Ahvaz, Ahvaz, Iran, Aug 2021.

Supervisor to MSc Students:

1. "A general method for determining the set of all efficient solutions and redundant objective functions in linear vector maximum problem", by Samira Zamini, Nov. 2012, Islamic Azad University of Birjand.
2. "On the number of criteria needed to decide Pareto optimality", by Fahime Shayani, Jan. 2013, Islamic Azad University of Birjand.
3. "Solving multi-criteria optimization problem employing cone contraction and reference point methods", by Moslem Javanmard, Sep. 2014, University of Birjand.
4. "Assessing alternatives in multi attribute decision making using an interval judgement matrix", by Mehdi Moradi, Sep. 2015, Islamic Azad University of Birjand.
5. "A method for multiple criteria ranking using a set of additive value function", by Mahin Azadmehr, Sep. 2015, Islamic Azad University of Birjand.
6. "Solving multi-criteria optimization problem employing as interactive evolutionary algorithm with a fixed number of decision maker calls", by Haniyeh Khorashadizadeh, Jan. 2016, University of Birjand.
7. "A preference-based evolutionary algorithm for multi-objective optimization", by Mahnaz Jamali, Jan. 2016, University of Birjand.
8. "Non-convex value efficiency model in data envelopment analysis", by Razieh Shoja, Jan. 2017, University of Birjand.
9. "Benchmarking in data envelopment analysis considering the decision maker's preferences and presenting a common benchmarking model", by Mahdieh Zeraatkar, Jan. 2018, University of Birjand.
10. "The weighted additive distance function in data envelopment analysis and its properties", by Fatemeh Dallakeh, Jan. 2018, University of Birjand.
11. "Dual frontiers in non-convex data envelopment analysis", by Sheyda Ayati, Sep. 2019, University of Birjand.
12. "A productivity index based on the least distance to the efficient frontier in data envelopment analysis", by Sahar Neghabi, Feb. 2020, University of Birjand.

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Advisor to PhD Students:

1. "Efficient algorithms for special cases of inverse network flow problems, inverse maximum flow and inverse minimum cut problems", by Elham Ramezani, Ongoing, University of Birjand.

Membership in PhD Dissertation Committees (Examiner):

1. "Consideration and extension of inverse network flow problems", by Javad Tayyebi, Feb. 2015, University of Birjand.
2. "Solving fuzzy multi-objective game problems using multi objective optimization methods", by Hamid Bigdeli, May 2016, University of Birjand.
3. "Solving time delay optimal control problems using orthogonal functions", by Akram Kheirabadi, Nov. 2019, University of Birjand.
4. "Solving some classes of fuzzy multi-objective optimization problems", by Fatemeh Fayyaz, Sep. 2019, University of Birjand.
5. "Solving discrete optimal control problems by modal series", by Manijeh Hassanabadi, Feb. 2020, University of Birjand.

Teaching Experiences:

- High School: Geometry I, Geometry II.
- Graduate: Calculus I, Calculus II, Differential equations, Fundamentals of Mathematics, Discrete Mathematics, Principles of Combinatorics, Combinatorics and Applications, Linear Optimization, Operations Research, Aspects in Applications of Mathematics.
- Post-graduate: Advanced Linear Optimization, Advanced Nonlinear Optimization, Algorithms and Computation, Multi Objective Optimization, Numerical Computations.

Teaching Feedback Scores* (The most recent ones):

- **January 2022** (Total Score: 18.48)
    1. Mathematics & its application in management (Score: 18.20, #(Students)=30)
    2. Differential Equations (Score: 18.76, #(Students)=24)

- **September 2021** (Total Score: 19.43)
    3. Linear Optimization (Score: 19.47, #(Students)=15)
    4. Differential Equations (Score: 18.90, #(Students)=40)

5. Some Aspects in Optimization, with emphasize on DEA (Score: 19.93, #(Students)=6)

- **January 2021** (Total Score: 18.79)
  6. Advanced Nonlinear Optimization (Score: 18.66, #(Students)=8)
  7. Differential Equations (Score: 19.19, #(Students)=20)
  8. Differential Equations (Score: 18.57, #(Students)=47)

- **January 2020** (Total Score: 18.78)
  9. Some Aspects in Financial Mathematics, with emphasize on Optimization (Score: 18.93, #(Students)=5)
  10. Differential Equations (Score: 18.63, #(Students)=36)

(*Scores are given out of 20)

Academic Referees:

- **Esmaeel Bobolian**, Professor
  Department of Mathematics, Kharazmi University, Tehran, Iran
  Email: babolian@khu.ac.ir
  Phone: +98 912 130 0842

- **Kristiaan Kerstens**, Professor
  IESEG School of Management, Lille, France
  Email: k.kerstens@ieseg.fr
  Phone: +33 320545892

- **Pekka Korhonen**, Professor
  Department of Information and Service Economy
  School of Business, Aalto University, Helsinki, Finland
  Email: Pekka.Korhonen@aalto.fi
  Work phone: +358 50 4091 918
  Personal phone: +358 50 3836 191

- **Jyrki Wallenius**, Professor
  Department of Information and Service Economy
  School of Business, Aalto University, Helsinki, Finland
  Email: Jyrki.Wallenius@aalto.fi
  Phone: +358 40 3538 100