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Department of Industrial Engineering, Istinye University, Istanbul, Turkey

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Erfan Babae Tirkolae

Assistant Professor

Educational Data

2015 - 2019, Mazandaran University of Science and Technology
Ph.D., Industrial Engineering

2012 - 2014, Isfahan University of Technology
M.Sc., Industrial Engineering

2008 - 2012, Isfahan University of Technology
B.Sc., Industrial Engineering

Teaching Experiences

Oct 2020 - Present, Istinye University

- MCDM
- Operations Research

Jan 2020 - Jul 2020, Damghan University

- Facility Layout Planning and Design
- Operations Research
- Engineering Economics

Jan 2016 - Jul 2020, University of Science and Technology of Mazandaran

- Probability Theory
- Operations Research
- Advanced Operations Research
- Facility Layout Planning and Design
- Engineering Economics

Jan 2019 - Jan 2020, Mazandaran University of Science and Technology

- Maintenance Planning
- Engineering Economics

Jan 2016 - Jul 2016, University College of Rouzbahan

- Maintenance Planning

Jan 2014 - Jan 2018, Payam Noor University-Sari and Babol centers

- Time and Motion Study
- Quality Control
- Industrial Engineering English
- Engineering Economics
- Management Information Systems

Sep 2012 - Jul 2014, Isfahan University of Technology

- Supply Chain Management
- Engineering Economics

Work Experiences

Sep 2016 - Jul 2018, Farasanat Shomal Company

- Quality Assurance Expert
- Training Expert

Sep 2016 - Jul 2018, Beshel Motor Industries

- Quality Assurance Expert
- Training Expert



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Jul 2012 - Jul 2014, Sardasaz Novin Industries

- Production Planning Expert

Research Interests

- Supply Chain Management
- Production Planning
- Mathematical Modeling
- Waste Management
- Transportation and Routing
- Artificial Intelligence

Personal Interests

Electronic keyboard, Piano, Iranian Tar and Setar, Singing, Swimming, Gymnastics, Taekwondo, Bodybuilding, Fishing, Multimedia Software

Training Courses

- Knowledge Management, *IMQ*, 2018
- SPC, *IMQ*, 2017
- Principles of Management and Supervision, *IMQ*, 2017
- ISO 9001:2015, *Sapco- Iran Khodro*, 2017
- IATF 16949: 2016, *Sapco- Iran Khodro*, 2017
- TPM, *IMQ*, 2017
- PSA requirements (Peugeot-Citroën), *Saipa*, 2017
- Process Audit, *Sapco- Iran Khodro*, 2016
- Logistic Requirements, *Sapco- Iran Khodro*, 2016
- Customer Requirements, *Sapco- Iran Khodro*, 2016

Languages

Persian

- Native language

English

- Professional (Translate- Writing- Reading- Speaking), *IELTS Certification*

Computer Skills

- Microsoft Office
- LINGO
- Catia
- Minitab
- GAMS
- Microsoft Visio
- MSP
- MATLAB
- Photoshop

Editorial Boards

1. Editorial Advisory Board member of *Management Decision* (ISSN: 0025-1747). ISI indexed journal- Emerald Group Publishing,
2. Editorial Board member of *International Journal of Supply and Operations Management (IJSOM)* (Online ISSN: 2383-2525, Print ISSN: 2383-1359). Scopus indexed journal- Kharazmi University,
3. Editor of *Journal of Computer Science (JCS)*, (Online ISSN: 1552-6607, Print ISSN: 1549-3636). SCOPUS indexed Journal- Science Publications,
4. Editorial Board member of *Journal of Industrial Engineering and Management Studies (JIEMS)*, (Online ISSN: 2476-3098, Print ISSN: 2476-308X). ISC indexed journal- Iran Center for Management Studies,
5. Managing Editor and Editorial board member of *International Journal of Applied Optimization Studies (IAOS)*, (ISSN: 2645-4327).



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Guest Editorial Boards

1. Weber, G. W., Tirkolaee, E. B. and Goli, A. (2020). Application of Optimization Algorithms in Engineering Manufacturing. *Journal of Computer Science*, (Online ISSN: 1552-6607, Print ISSN: 1549-3636). SCOPUS indexed Journal- Science Publications,
2. Tirkolaee, E. B., Goli, A. and Mirjalili, S. (2021). Circular Economy Application in Designing Sustainable Medical Waste Management Systems. *Environmental Science and Pollution Research*, ISI indexed Journal- Springer,
3. Tirkolaee, E. B., Goli, A., Golpîra, H. and Gonzalez, E. S. (2021). Sustainable Global Supply Chain Management: From an International Perspective. *Sustainability*, (ISSN: 2071-1050). ISI indexed Journal- MDPI,
4. Goli, A., Tirkolaee, E. B. and Gonzalez, E. S. (2021). Machine Learning in Sustainable Industrial Development. *Mathematical Problems in Engineering*, (ISSN: 1563-5147). ISI indexed journal- Hindawi,
5. Weber, G. W., Goli, A. and Tirkolaee, E. B. (2021). Computational Performance Analysis based on Novel Intelligent Methods: Exploration and Future Directions in Production and Logistics. *Foundations of Computing and Decision Sciences*, (ISSN: 0867-6356). ISI indexed journal- Poznań University of Technology,
6. Tirkolaee, E. B., Goli, A. and Malmir, B. (2021). Recent advances of solutions algorithms for logistics routing problems. *Logistics*, (ISSN: 2305-6290). ISI indexed journal- MDPI,
7. Goli, A., Tirkolaee, E. B. and Kumar, A. (2021). Application of Multi-Criteria Decision-Making Methodologies in the Industry. *Journal of Applied Research on Industrial Engineering*, (ISSN: 2676-6167). ISC indexed journal.

Reviewer Boards

1. Reviewer in *Journal of Cleaner Production (JCLEPRO)*, (ISSN: 0959-6526). ISI indexed Journal- Elsevier,
2. Reviewer in *Computers and Industrial Engineering (CAIE)*, (ISSN: 0360-8352). ISI indexed Journal- Elsevier,
3. Reviewer in *Applied Soft Computing (ASOC)*, (ISSN: 1568-4946). ISI indexed Journal- Elsevier,
4. Reviewer in *Information Sciences*, (ISSN: 0020-0255). ISI indexed Journal- Elsevier,
5. Reviewer in *Waste Management*, (ISSN: 0956-053X). ISI indexed Journal- Elsevier,
6. Reviewer in *Renewable & Sustainable Energy Reviews*, (ISSN: 1364-0321). ISI indexed Journal- Elsevier,
7. Reviewer in *Energy*, (ISSN: 0360-5442). ISI indexed Journal- Elsevier,
8. Reviewer in *IEEE Transactions on Fuzzy Systems*, (ISSN: 1063-6706). ISI indexed Journal- IEEE,
9. Reviewer in *IEEE Transactions on Industrial Informatics*, (ISSN: 1551-3203). ISI indexed Journal- IEEE,
10. Reviewer in *IEEE Access*, (ISSN: 2169-3536). ISI indexed Journal- IEEE,
11. Reviewer in *International Journal of Production Research (IJPR)*, (ISSN: 00207543, 1366588). ISI indexed Journal- Taylor & Francis,

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12. Reviewer in *Annals of Operations Research (ANOR)*, (Online ISSN: 1572-9338, Print ISSN: 0254-5330). ISI indexed Journal- Springer,
13. Reviewer in *PLOS ONE*, (ISSN: 1932-6203). ISI indexed Journal- PLOS,
14. Reviewer in *Artificial Intelligence Review*, (ISSN: 1573-7462). ISI indexed Journal- Springer,
15. Reviewer in *Expert Systems with Applications*, (ISSN: 0957-4174). ISI indexed Journal- Elsevier,
16. Reviewer in *Swarm and Evolutionary Computation*, (ISSN: 2210-6502). ISI indexed Journal- Elsevier,
17. Reviewer in *Journal of the Operational Research Society (JORS)*, (Print ISSN: 0160-5682, Online ISSN: 1476-9360). ISI indexed Journal- Taylor & Francis,
18. Reviewer in *Optimization*, (Print ISSN: 0233-1934 Online ISSN: 1029-4945). ISI indexed Journal- Taylor & Francis,
19. Reviewer in *Technological Forecasting and Social Change*, (ISSN: 0040-1625). ISI indexed Journal- Elsevier,
20. Reviewer in *Environmental Science and Pollution Research (ESPR)*, (Print ISSN: 0944-1344, Online ISSN: 1614-7499). ISI indexed Journal- Springer,
21. Reviewer in *Research in Transportation Economics*, (ISSN: 0739-8859). ISI indexed Journal- Elsevier,
22. Reviewer in *Research in Pattern Recognition Letters*, (ISSN: 0167-8655). ISI indexed Journal- Elsevier,
23. Reviewer in *Research in Operations Management Research*, (ISSN: 1936-9743). ISI indexed Journal- Springer,
24. Reviewer in *Central European Journal of Operations Research (CEJOR)*, (Print ISSN: 1435-246X, Online ISSN: 1613-9178). ISI indexed Journal- Springer,
25. Reviewer in *International Journal of Energy Research (IJER)*, (ISSN: 1099-114X). ISI indexed Journal- Wiley,
26. Reviewer in *Journal of Ambient Intelligence and Humanized Computing (AIHC)*, (Print ISSN: 1868-5137, Online ISSN: 1868-5145). ISI indexed Journal- Springer,
27. Reviewer in *SIMULATION: Transactions of the Society for Modeling and Simulation International*, (Print ISSN: 0037-5497, Online ISSN: 1741-3133). ISI indexed Journal- SAGE,
28. Reviewer in *Journal of Heuristics*, (ISSN: 1572-9397). ISI indexed Journal- Springer,
29. Reviewer in *Journal of Enterprise Information Management*, (ISSN: 1741-0398). ISI indexed Journal- emerald,
30. Reviewer in *Journal of Environmental Informatics*, (ISSN: 1726-2135). ISI indexed Journal- ISEIS,
31. Reviewer in *Journal of Applied Statistics*, (Print ISSN: 0266-4763, Online ISSN: 1360-0532). ISI indexed Journal- Taylor & Francis,
32. Reviewer in *Transportation Journal*, (ISSN: 0041-1612). ISI indexed Journal- THE PENNSYLVANIA STATE UNIVERSITY PRESS,
33. Reviewer in *International Journal of Logistics Management*, (ISSN: 0957-4093). ISI indexed Journal- emerald,
34. Reviewer in *Environment, Development and Sustainability*, (ISSN: 1573-2975). ISI indexed Journal- Springer,
35. Reviewer in *Environmental Engineering and Management Journal*, (ISSN: 1843-3707). ISI indexed Journal- Technical University Gheorghe Asachi Iasi,

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36. Reviewer in *Sādhanā*, (ISSN: 0973-7677). ISI indexed Journal- Springer,
37. Reviewer in *Journal of Industrial and Management Optimization (JIMO)*, (ISSN: 1547-5816). ISI indexed Journal- AIMS,
38. Reviewer in *Computer Modeling in Engineering & Sciences (CMES)*, (ISSN: 1526-1506). ISI indexed Journal- Tech Science Press,
39. Reviewer in *Geo-spatial Information Science*, (ISSN: 1467-8640). ISI indexed Journal- Taylor & Francis,
40. Reviewer in *Applied Intelligence*, (ISSN: 1573-7497). ISI indexed Journal- Springer,
41. Reviewer in *Computational Intelligence (COIN)*, (ISSN: 1467-8640). ISI indexed Journal- Wiley,
42. Reviewer in *Mathematical Problems in Engineering (MPE)*, (Print ISSN: 1024123X, Online ISSN: 15635147). ISI indexed Journal- Hindawi,
43. Reviewer in *KSCE Journal of Civil Engineering*, (Online ISSN: 1976-3808, Print ISSN: 1226-7988). ISI indexed Journal- Springer,
44. Reviewer in *Wireless Personal Communications*, (Online ISSN: 1572-834X, Print ISSN: 0929-6212). ISI indexed Journal- Springer,
45. Reviewer in *Baltic Journal of Management*, (ISSN: 1746-5265). ISI indexed Journal- emerald,
46. Reviewer in *Production and Manufacturing Research*, (ISSN: 2169-3277). ISI indexed Journal- Springer,
47. Reviewer in *Journal of Environmental and Public Health*, (ISSN: 1687-9805). ISI indexed Journal- Hindawi,
48. Reviewer in *International Journal of Industrial Engineering: Theory, Applications and Practice*, (ISSN: 1943-670X). ISI indexed Journal,
49. Reviewer in *The Journal of Dynamics and Games (JDG)*, (Online ISSN: 2164-6074, Print ISSN: 2164-6066). ISI indexed Journal- AIMS,
50. Reviewer in *Advances in Fuzzy Systems*, (Online ISSN: 1687-711X, Print ISSN: 1687-7101). ISI indexed Journal- Hindawi,
51. Reviewer in *International Journal of Innovation and Technology Management (IJITM)*, (Online ISSN: 1793-6950, Print ISSN: 0219-8770). ISI indexed Journal,
52. Reviewer in *Journal of the Operations Research Society of China (JORC)*, (Online ISSN: 2194-6698, Print ISSN: 2194-668X). ISI indexed Journal- Springer,
53. Reviewer in *Foundations of Computing and Decision Sciences*, (Online ISSN: 2300-3405, Print ISSN: 0867-6356). ISI indexed Journal,
54. Reviewer in *International Journal of Grid and Utility Computing (IJGUC)*, (Online ISSN: 1741-8488, Print ISSN: 1741-847X). ISI indexed Journal – Inderscience,
55. Reviewer in *Numerical Algebra, Control and Optimization (NACO)*, (Online ISSN: 2155-3289, Print ISSN: 2155-3297). ISI indexed Journal – AIMS,
56. Reviewer in *International Journal of Value Chain Management (IJVCM)*, (Online ISSN: 1741-5365, Print ISSN: 1741-5357). ISI indexed Journal – Inderscience,
57. Reviewer in *International Journal of Industrial Engineering Computations (IJIEC)*, (Online ISSN: 1923-2934, Print ISSN: 1923-2926). ISI indexed Journal- Growing Science,
58. Reviewer in *Management and Production Engineering Review (MPER)*, (Online ISSN: 1923-2934, Print ISSN: 1923-2926). ISI indexed Journal- Polish Academy of Sciences,

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59. Reviewer in *International Journal of Mathematical, Engineering and Management Sciences (IJMEMS)*, (ISSN: 2455-7749). ISI indexed Journal- IJMEMS, India,
60. Reviewer in *Current Research in Nutrition and Food Science Journal (CRNFS)*, (Online ISSN: 2082-1344, Print ISSN: 2080-8208). ISI indexed Journal,
61. Reviewer in *Mathematical Foundations of Computing (MFC)*, (Online ISSN: 2577-8838). ISI indexed Journal,
62. Reviewer in *Baghdad Science Journal (BSJ)*, (Online ISSN: 2411-7986, Print ISSN: 2078-8665). ISI indexed Journal,
63. Reviewer in *IEEE Transactions on Emerging Topics in Computational Intelligence*, (ISSN: 2471-285X). IEEE Computational Intelligence Society,
64. Reviewer in *Journal of Industrial Engineering International (JIEI)*, (ISSN: 1735-5702). Scopus indexed Journal – Springer,
65. Reviewer in *Transportation Research Interdisciplinary Perspectives*, (ISSN: 2590-1982). Scopus indexed journal- Elsevier,
66. Reviewer in *International Journal of Business Intelligence and Data Mining (IJBIDM)*, (Online ISSN: 1743-8195, Print ISSN: 1743-8187). Scopus indexed journal-Inderscience,
67. Reviewer in *International Journal of Public Sector Performance Management (IJPSPM)*, (Online ISSN: 1743-8195, Print ISSN: 1743-8187). Scopus indexed journal-Inderscience,
68. Reviewer in *Journal of Optimization in Industrial Engineering (JOIE)*, (Online ISSN: 1741-105X, Print ISSN: 1741-1041). Scopus indexed Journal,
69. Reviewer in *International Journal of Supply and Operations Management (IJSOM)*, (Online ISSN: 2383-2525, Print ISSN: 2383-1359). Scopus indexed Journal- Kharazmi University,
70. Reviewer in *Journal of Computer Science (JCS)*, (Online ISSN: 1552-6607, Print ISSN: 1549-3636). Scopus indexed Journal- thescipub,
71. Reviewer in *International Journal of Industrial Engineering and Management (IJIEM)*, (Online ISSN: 2683-345X, Print ISSN: 2217-2661). Scopus indexed Journal- University of Novi Sad,
72. Reviewer in *International Journal of Project Organisation and Management (IJPOM)*, (Online ISSN: 1740-2905, Print ISSN: 1740-2891). Scopus indexed Journal-Inderscience,
73. Reviewer in *Cleaner Engineering and Technology*, (ISSN: 12666-7908). Elsevier,
74. Reviewer in *Journal of Industrial Engineering and Management Studies (JIEMS)*, (Online ISSN:) 2476-3098, Print ISSN: 2476-308X). ISC indexed Journal,
75. Reviewer in *Journal of Applied Research on Industrial Engineering (JARIE)*, (ISSN: 2538-5100). ISC indexed Journal,
76. Reviewer in *Journal of Industrial and Systems Engineering (JISE)*, (ISSN: 1735-8272). ISC indexed Journal,
77. Reviewer in *International Journal of Industrial Engineering and Production Research (IJIIEPR)*, (Online ISSN: 2345-363X, Print ISSN: 2008-4889). ISC indexed Journal,
78. Reviewer in *Journal of Renewable Energy and Environment (JREE)*, (Online ISSN: 2423-7469, Print ISSN: 2423-5547). ISC indexed Journal,
79. Reviewer in *International Journal of Cognitive Computing in Engineering (JREE)*, (ISSN: 2666-3074). DOAJ indexed Journal-Elsevier,



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80. Reviewer in *Journal of Engineering Sciences and Design*, (ISSN: 1308-6693). TR-Dizin indexed Journal-YAYINCI PUBLISHER,
81. Reviewer in *Iranian Journal of Operations Research (IJOR)*, (ISSN: 2008-1189). ISC indexed Journal,
82. Reviewer in *Journal of International Journal of Research in Industrial (IJRIE)*, (ISSN: 1925-7805). ISC indexed Journal,
83. Reviewer in *Engineering Journals*, (ISSN: 0976-4860),
84. Reviewer in *Journal of Modeling in Engineering*, (ISSN: 2538-5097). ISC indexed Journal in Persian,
85. Reviewer in *Journal of Decisions and Operations Research (DMOR)*, (ISSN: 2008-4854). ISC indexed Journal in Persian.

Accomplishments

- “Speaker at Statistics Probability Operational Research seminars (SPOR2021)”, “Just-in-Time Energy-Aware Flow Shop Scheduling Problem With Outsourcing Option, Human Factors and Stochastic Demand”, Atilim University, Turkey,
- “Speaker at 2nd International Conference on Challenges and New Solutions in Industrial Engineering and Management and Accounting”, “Fuzzy Mathematical Programming and Self-Adaptive Artificial Fish Swarm Algorithm for Just-in-Time Energy-Aware Flow Shop Scheduling Problem with Outsourcing Option”, Damghan University, Iran,
- “Speaker at International Conference on Logistics and Supply Chain Management (LSCM2020)”, “Designing an Efficient Optimization System to Maximize the Total Value of Reverse Logistics in Waste Management with cars”, Kharazmi University, Iran,
- “Ph.D. award winner-top doctoral thesis” in “International Conference on Logistics and Supply Chain Management (LSCM2020)”, Kharazmi University, Iran,
- “Top peer reviewer” and “Excellent reviewer” recognition by Publons,
- “Outstanding reviewer” recognition by Journal of Cleaner Production since 2017,
- Thesis supervisor/advisor of BS.c and MS.c. students since 2016,
- Member of the Young and Elite Research Club (*Islamic Azad University*) since 2018,
- Authenticated elite from the *Iran’s National Elites Foundation* since 2019,
- Organizing committee member of international conferences; “Waste Management and Recycling2018” in Spain, “Catalysis2019” in Italy,
- Scientific committee member of international conferences; “AI2SD’2019 in Morocco”, “ICoSNIKOM2019 in Indonesia”, “Manufacturing2019 in Poland”, “CMES2019 in Turkey”, “LSCM2020 in Iran”, “AI2SD’2020 in Morocco”, “ICMTEA2020 in India”, “ICCNIEMA2021 in Iran”, “PMCM2021 in China”, “ISIE2021 in Japan”, “1st National Conference on Optimization and New Solution Methods2021 in Iran”

Grant Projects

- Sustainable Aggregate Production Planning using Multi-Criteria Decision-Making, Mathematical Modeling and Machine Learning, 2020-2022, MSRT-TUBITAK.



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Papers - ISI

1. Tirkolae, E. B., Dashtian, Z., Weber, G. W., Tomaskova, H., Soltani, M., and Mousavi, N. (2021). An integrated decision-making approach for green supplier selection in an agri-food supply chain: Threshold of robustness worthiness. *Mathematics* (Accepted),
2. Khakbaz, A., and Tirkolae, E. B. (2021). A sustainable hybrid manufacturing/remanufacturing system with two-way substitution and WEEE directive under different market conditions. *Optimization* (Accepted),
3. Tirkolae, E. B., and Aydin, N. S. (2021). A sustainable medical waste collection and transportation model for pandemics. *Waste Management & Research* (in press),
4. Goli, A., Tirkolae, E. B., and Aydin, N. S. (2021). Fuzzy Integrated Cell Formation and Production Scheduling considering Automated Guided Vehicles and Human Factors. *IEEE Transactions on Fuzzy Systems* (in press),
5. Tomaskova, H., and Tirkolae, E. B. (2021). Using a Process Approach to Pandemic Planning: A Case Study. *Applied Sciences*, 11(9), 4121.
6. Tirkolae, E. B., Abbasian, P., and Weber, G. W. (2021). Sustainable fuzzy multi-trip location-routing problem for medical waste management during the COVID-19 outbreak. *Science of the Total Environment*, 756(20), 143607,
7. Alinaghian, M., Tirkolae, E. B., Dezaki, Z. K., Hejazi, S. R., and Ding, W. (2021). An Augmented Tabu Search Algorithm for the Green Inventory-Routing Problem with Time Windows. *Swarm and Evolutionary Computation*, 60, 100802,
8. Lotfi, R., Yadegari, Z., Hosseini, S. H., Khameneh, A. H., Tirkolae, E. B., and Weber, G. W. (2021). A Robust Time-Cost-Quality-Energy-Environment Trade-off with Resource constrained in Project Management: A Case Study for a Bridge Construction Project. *Journal of Industrial and Management Optimization* (in press),
9. Goli, A., Tirkolae, E. B., Weber, G. W. (2021). An Integration of Neural Network and Shuffled Frog-Leaping Algorithm for CNC Machining Monitoring. *Foundations of Computing and Decision Sciences*, 46(1), 27-42,
10. Tirkolae, E. B., Goli, A., and Weber, G. W. (2020). Fuzzy Mathematical Programming and Self-Adaptive Artificial Fish Swarm Algorithm for Just-in-Time Energy-Aware Flow Shop Scheduling Problem with Outsourcing Option. *IEEE Transactions on Fuzzy Systems*, 28(11), 2772-2783,
11. Tirkolae, E. B., Aydin, N. S., Ranjbar-Bourani, M., and Weber, G. W. (2020). A robust bi-objective mathematical model for disaster rescue units allocation and scheduling with learning effect. *Computers and Industrial Engineering*, 149, 106790,
12. Tirkolae, E. B., Goli, A., Faridnia, A., Soltani, M., and Weber, G. W. (2020). Multi-objective optimization for the reliable pollution-routing problem with cross-dock selection using Pareto-based algorithms. *Journal of Cleaner Production*, 276(10), 122927,
13. Kropat, E., Weber, G. W., and Tirkolae, E. B. (2020). Foundations of semialgebraic gene-environment networks. *Journal of Dynamics and Games*, 7(4), 253,

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14. Sangaiah, A. K., Goli, A., Tirkolaee, E. B., Ranjbar-Bourani, M., Pandey, H. M., and Zhang, W. (2020). Big Data-Driven Cognitive Computing System for Optimization of Social Media Analytics. *IEEE Access*, 8, 82215-82226,
15. Tirkolaee, E. B., Mahdavi, I., Esfahani, M. M. S., and Weber, G. W. (2020). A robust green location-allocation-inventory problem to design an urban waste management system under uncertainty. *Waste Management*, 102, 340-350,
16. Tirkolaee, E. B., Mahdavi, I., Seyyed Esfahani, M. M., and Weber, G.-W. (2020). A hybrid augmented ant colony optimization for the multi-trip capacitated arc routing problem under fuzzy demands for urban solid waste management. *Waste Management and Research*, 38(2), 156-172,
17. Tirkolaee, E. B., Mardani, A., Dashtian, Z., Soltani, M., and Weber, G. W. (2020). A novel hybrid method using fuzzy decision making and multi-objective programming for sustainable-reliable supplier selection in two-echelon supply chain design. *Journal of Cleaner Production*, 250(2), 119517,
18. Tirkolaee, E. B., Hadian, S., Weber, G. W., and Mahdavi, I. (2020). A robust green traffic-based routing problem for perishable products distribution. *Computational Intelligence*, 36(1), 80-101,
19. Mardani, A., Kannan, D., Hooker, R. E., Ozkul, S., Alrasheedi, M., and Tirkolaee, E. B. (2020). Evaluation of green and sustainable supply chain management using structural equation modelling: A systematic review of the state of the art literature and recommendations for future research. *Journal of Cleaner Production*, 249, 119383,
20. Golpîra, H., and Tirkolaee, E. B. (2019). Stable Maintenance Task Scheduling: A Bi-Objective Robust Optimization Model. *Computers and Industrial Engineering*, 137, 106007,
21. Tirkolaee, E. B., Goli, A., Pahlevan, M., and Kordestanizadeh, R. M. (2019). A robust bi-objective multi-trip periodic capacitated arc routing problem for urban waste collection using a multi-objective invasive weed optimization. *Waste Management and Research*, 37(11), 1089-1101,
22. Goli, A., Tirkolaee, E. B., and Soltani, M. (2019). A robust just-in-time flow shop scheduling problem with outsourcing option on subcontractors. *Production and Manufacturing Research*, 7(1), 294-315,
23. Sangaiah, A. K., Tirkolaee, E. B., Goli, A., and Dehnavi-Arani, S. (2019). Robust optimization and mixed-integer linear programming model for LNG supply chain planning problem. *Soft Computing*, 1-21,
24. Tirkolaee, E. B., Goli, A., Hematian, M., Sangaiah, A. K., and Han, T. (2019). Multi-objective multi-mode resource constrained project scheduling problem using Pareto-based algorithms. *Computing*, 101(6), 547-570,
25. Mostafaeipour, A., Qolipour, M., Rezaei, M., and Tirkolaee, E. B. (2019). Investigation of off-grid photovoltaic systems for a reverse osmosis desalination system: A case study. *Desalination*, 454, 91-103,
26. Goli, A., Tirkolaee, E. B., Malmir, B., Bian, G. B., and Sangaiah, A. K. (2019). A multi-objective invasive weed optimization algorithm for robust aggregate production planning under uncertain seasonal demand. *Computing*, 1-31,



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27. Tirkolae, E. B., Abbasian, P., Soltani, M., and Ghaffarian, S. A. (2019). Developing an applied algorithm for multi-trip vehicle routing problem with time windows in urban waste collection: A case study. *Waste Management and Research*, 37(1-suppl), 4-13,
28. Tirkolae, E. B., Mahmoodkhani, J., Bourani, M. R., and Tavakkoli-Moghaddam, R. (2019). A Self-Learning Particle Swarm Optimization for Robust Multi-Echelon Capacitated Location–Allocation–Inventory Problem. *Journal of Advanced Manufacturing Systems*, 18(04), 677-694,
29. Tirkolae, E. B., Alinaghian, M., Hosseinabadi, A. A. R., Sasi, M. B., and Sangaiah, A. K. (2019). An improved ant colony optimization for the multi-trip Capacitated Arc Routing Problem. *Computers and Electrical Engineering*, 77, 457-470,
30. Tirkolae, E. B., Hosseinabadi, A. A. R., Soltani, M., Sangaiah, A. K., and Wang, J. (2018). A hybrid genetic algorithm for multi-trip green capacitated arc routing problem in the scope of urban services. *Sustainability*, 10(5), 1366,
31. Tirkolae, E. B., Mahdavi, I., and Esfahani, M. M. S. (2018). A robust periodic capacitated arc routing problem for urban waste collection considering drivers and crew's working time. *Waste Management*, 76, 138-146,
32. Tirkolae, E. B., Goli, A., Bakhsi, M., and Mahdavi, I. (2017). A robust multi-trip vehicle routing problem of perishable products with intermediate depots and time windows. *Numerical Algebra, Control and Optimization*, 7(4), 417-433.

Papers- Scopus, ISC, etc.

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