

# Prof. Dr. Mehrdad Jalali

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## Research Impact Summary

- **Total Citations:** 1,376
- **H-index:** 21 (Overall), 14 (Since 2019)
- **i10-index:** 44 (Overall), 25 (Since 2019)

## I. Professional Experience

|                     | Period                   | Role                                                              | Institution/Organization                                                                                  | Location            |
|---------------------|--------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------------------|
| Academic Experience | <b>Oct 2024-Present</b>  | Professor of Artificial Intelligence                              | SRH University Heidelberg                                                                                 | Heidelberg, Germany |
|                     | <b>2022-Present</b>      | Editor, Materials Data Science and Artificial Intelligence sector | Elsevier                                                                                                  | London, England     |
|                     | <b>Jan 2020-Oct 2024</b> | Senior Data Scientist (E 14, level 5)                             | Institute of Functional Interfaces & Institute of Nanotechnology, Karlsruhe Institute of Technology (KIT) | Karlsruhe, Germany  |
|                     | <b>2002-2019</b>         | Associate Professor, Full-time Faculty Member                     | Department of Computer Science, Mashhad Azad University                                                   | Mashhad, Iran       |
|                     | <b>2018</b>              | Visiting Associate Professor                                      | Ryerson University                                                                                        | Toronto, Canada     |
|                     | <b>2014 - 2020</b>       | Lab Director                                                      | Knowledge Engineering Laboratory, Mashhad Azad University                                                 | Mashhad, Iran       |
|                     | <b>2012-2016</b>         | Head of the Department of Computer Science                        | Department of Computer Engineering, Mashhad Azad University                                               | Mashhad, Iran       |

|                         |           |                                              |                                                                  |                        |
|-------------------------|-----------|----------------------------------------------|------------------------------------------------------------------|------------------------|
| Non-Academic Experience | 2009-2010 | Knowledge Engineer and AI Software Developer | MIMOS Company (National Applied Research and Development Centre) | Kuala Lumpur, Malaysia |
|                         | 2018-2019 | Artificial Intelligence Consultant           | Nobaan (Medical Service)                                         | Mashhad, Iran          |
|                         | 2013-2018 | AI Consultant                                | MINA project at Mina Office (Low Code Platform)                  | Tehran, Iran           |

## II. Educational Background

| Period    | Degree                           | Major/Specialization                 | Institution/University                                                                  | Location               |
|-----------|----------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------|------------------------|
| 2006-2010 | Ph.D. in Computer Science        | Intelligent Computing                | Universiti Putra Malaysia (UPM), Faculty of Computer Science And Information Technology | Kuala Lumpur, Malaysia |
| 1998-2001 | Master in Computer Engineering   | Artificial Intelligence and Robotics | Department of Computer Engineering Science and the Research University of Tehran        | Tehran, Iran           |
| 1994-1998 | Bachelor in Computer Engineering | Computer Engineering                 | Department of Computer Engineering, Azad University                                     | Mashhad, Iran          |

## III. Research Projects and Grants

| Period       | Project/Grant Name                                                                                      | Role/Position                                           | Organization/Institute | Location |
|--------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------|----------|
| 2020-2023    | STREAM (Semantic Representation, Networking, and Curating Quality-Assured Material Data) – BMBF Project | Principle Project Member                                | KIT University         | Germany  |
| 2022-Present | FAIRmat (FAIR Data Infrastructure for Materials Science and Related Research Fields)- DFG Project       | Development Team                                        | KIT University         | Germany  |
| 2021-Present | Metadata MDMC – Helmholtz Association Project                                                           | Member of the Joint Lab Model and Data-Driven Materials | Helmholtz Association  | Germany  |

|                  |                               |                         |                                                |          |
|------------------|-------------------------------|-------------------------|------------------------------------------------|----------|
|                  |                               | Characterization (MDMC) |                                                |          |
| <b>2009-2010</b> | Automated Ontology Generation | Project leader          | Malaysian Institute of Microelectronic Systems | Malaysia |

#### IV. Technical Skills and Expertise

| Category                                                        | Skills/Tools                                                                                               |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Publication Management                                          | Extensive experience in manuscript handling, peer review, editorial decision-making, and journal strategy. |
| Programming Languages                                           | Python, R                                                                                                  |
| Machine Learning Frameworks                                     | TensorFlow, PyTorch                                                                                        |
| Natural Language Processing (NLP) & Large Language Models (LLM) | NLTK, GPT programming                                                                                      |
| Data Visualization and Analysis                                 | Gephi, RapidMiner, Weka                                                                                    |
| Ontology and Semantic Web                                       | Protégé                                                                                                    |

#### V. Advisory Roles and Student Mentorship

| Role              | Level of Students | Number of Students | Field of Study          |
|-------------------|-------------------|--------------------|-------------------------|
| Primary Advisor   | Ph.D. Students    | 10                 | Computer Science and AI |
| Primary Advisor   | Master's Students | 60                 | Computer Science and AI |
| Secondary Advisor | Ph.D. Students    | 5                  | Computer Science and AI |
| Secondary Advisor | Master's Students | 40                 | Computer Science and AI |

#### VI. Awards and Grants Received

| Year      | Type  | Title/Name                                                                                | Awarding Institution/Event Location                  |
|-----------|-------|-------------------------------------------------------------------------------------------|------------------------------------------------------|
| 2019      | Award | Best Researcher Award                                                                     | Azad University, Iran                                |
| 2007-2009 | Grant | Graduated Research Fellowship                                                             | UPM University, Malaysia                             |
| 2008      | Grant | Student Travel Grant                                                                      | International Data Mining Conference, Las Vegas, USA |
| 2009      | Award | Certificate of Merit for International Conference on Internet and Multimedia Technologies | San Francisco, USA                                   |
| 2011      | Award | Best Lecturer Award                                                                       | Mashhad Azad University, Iran                        |

#### VII. Research Interests and Activities

| Domain | Specific Research Interests/Activities |
|--------|----------------------------------------|
|--------|----------------------------------------|

|                                       |                                                                                                                                                                 |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Materials Data Science                | Materials Data Science, Material Big Data Science, Time series analysis in Material Science, Spectrum prediction with Deep learning, Predictive Modeling        |
| Large Language Modeling & Text Mining | Large Language Modeling, Text Mining, LLM in Electronic Lab Notebook                                                                                            |
| Big Data & Data Mining                | Big Data Mining, Social Mining, Graph Learning, Graph Mining in Material Science, Metadata Data Management in the field of Electron Microscopy and Spectroscopy |
| Machine Learning & Deep Learning      | Machine Learning in Material Science, Deep Learning, Long Short-Term Memory                                                                                     |
| Ontology & Semantic Web               | Ontology Engineering and Semantic Web                                                                                                                           |
| Network Analysis                      | Social Network Analysis in Different Disciplines                                                                                                                |
| Recommendation Systems                | Design of Recommender Engines, Point of Interest Recommendation Systems                                                                                         |

### VIII. Teaching Experience and Courses Offered

| Level of Students              | Course Name                   | Year Since Taught |
|--------------------------------|-------------------------------|-------------------|
| Postgraduate (MS)              | Data Analytics and Statistics | 2024-Present      |
| Postgraduate (MS & Ph.D.)      | Data Science                  | 2016-2019         |
| Postgraduate (MS & Ph.D.)      | Data Mining                   | 2010-2019         |
| Postgraduate (MS & Ph.D.)      | Web Mining and Web Search     | 2010-2019         |
| Postgraduate (MS & Ph.D.)      | Social Networks Analysis      | 2013-2019         |
| Postgraduate and Undergraduate | Semantic Web                  | 2011-2019         |
| Undergraduate                  | Artificial Intelligence       | 2002-2019         |
| Postgraduate (MS)              | Machine Learning              | 2011-2019         |
| Postgraduate and Undergraduate | Expert Systems                | 2011-2019         |
| Undergraduate                  | Introduction to Programming   | 2001-2006         |
| Undergraduate                  | Internet Engineering          | 2001-2006         |
| Undergraduate                  | Database Management Systems   | 2001-2006         |

### IX. Professional Service and Editorial Positions

| Time Frame   | Role         | Event/Organization                                                              | Location |
|--------------|--------------|---------------------------------------------------------------------------------|----------|
| 2022-Present | Editor       | Materials Today Communications, Materials Data Science and AI Section, Elsevier | England  |
| 2023-2024    | Guest Editor | Application of Large Language Modeling in Materials Science, Elsevier           | England  |

|                |                              |                                                                                          |             |
|----------------|------------------------------|------------------------------------------------------------------------------------------|-------------|
| 2021 - Present | Committee Member             | Deutsches Institut für Normung (DIN)                                                     | Germany     |
| 2020-2021      | Guest Editor                 | Special Issue "Social Networks Analysis and Mining",<br>Journal of Future Internet, MDPI | Switzerland |
| 2013-2015      | Editorial Board<br>Member    | International Conference on Computer and<br>Knowledge Engineering                        | Iran        |
| 2007-2009      | Academic Committee<br>Member | International Conference on Data Mining                                                  | USA         |
| 2007-2011      | Academic Committee<br>Member | International Conference on Information and<br>Knowledge Engineering                     | USA         |
| 2011           | Academic Committee<br>Member | International Conference Semantic Web and Web<br>Services                                | USA         |

#### x. **Publication Highlights:**

##### Book and book chapter:

1. Mehrdad Jalali, Rahele Quchannejad, *Web Mining, and Social Networking*, Azad University, 2020, (In Persian), ISBN:1623010964978
2. Soheila Abrishami, Mahmoud Naghibzadeh, Mehrdad Jalali: *Web Page Recommendation Based on Semantic Web Usage Mining*. Social Informatics, Edited by Aberer, Karl and Flache, Andreas and Jager, Wander and Liu, Ling and Tang, Jie and Guéret, Christophe, 12/2012; Springer Berlin Heidelberg., ISBN: 9783642353857
3. Mehrdad Jalali, Norwati Mustapha, Md Nasir B. Sulaiman, Ali Mamat: *OPWUMP: An Architecture for Online Predicting in WUM-Based Personalization System*. Advances in Computer Science and Engineering, 01/2009;

##### List of Papers in international journals and conferences:

1. Orth, André, Hawo Höfer, Alexei Nefedov, Mehrdad Jalali, Christof Wöll, and Markus Reischl. "ML-Based XPS Quantification Supported by Synthetic Dataset Generation." In *Current Directions in Biomedical Engineering*, vol. 10, no. 4, pp. 482-485. De Gruyter, 2024.
2. Jalali, M., Luo, Y., Caulfield, L., Sauter, E., Nefedov, A., & Wöll, C. (2024). Large language models in electronic laboratory notebooks: Transforming materials science research workflows. *Materials Today Communications*, 40, 109801.
3. Feriz, Azade, Mehrdad Jalali, and Yahya Forghani. "Enhancing CNN-LSTM neural networks using jellyfish search algorithm for pandemic modeling." *Concurrency and Computation: Practice and Experience* (2024): e8123.
4. Jalali, Mehrdad, AD Dinga Wonanke, and Christof Wöll. "MOFGalaxyNet: a social network analysis for predicting guest accessibility in metal–organic frameworks utilizing graph convolutional networks." *Journal of Cheminformatics* 15.1 (2023): 94.
5. Dalirinia, E., Jalali, M., Yaghoobi, M. *et al.* Lotus effect optimization algorithm (LEA): a lotus nature-inspired algorithm for engineering design optimization. *J Supercomput* (2024).
6. Jalali, M.; Mail, M.; Aversa, R.; Kübel, C., MSLE: An ontology for Materials Science Laboratory Equipment–Large-Scale Devices for Materials Characterization. *Materials Today Communications* **2023**, 105532.
7. Safavi, S.; Jalali, M.; Houshmand, M., Toward point-of-interest recommendation systems: A critical review on deep-learning Approaches. *Electronics* **2022**, 11 (13), 1998.

8. Safavi, S.; Jalali, M., DeePOF: A hybrid approach of deep convolutional neural network and friendship to Point-of-Interest (POI) recommendation system in location-based social networks. *Concurrency and Computation: Practice and Experience* **2022**, 34 (15), e6981.
9. Nia, R. G. N. N.; Jalali, M., RecMem: Time Aware Recommender Systems Based on Memetic Evolutionary Clustering Algorithm. *Computational Intelligence and Neuroscience* **2022**, 2022.
10. Jalali, M.; Tsotsalas, M.; Wöll, C., MOFSocialNet: Exploiting Metal-Organic Framework Relationships via Social Network Analysis. *Nanomaterials* **2022**, 12 (4), 704.
11. Ihsan, A. Z.; Fathalla, S.; Aversa, R.; Jalali, M.; Panighel, M.; Osmenaj, E.; Hofmann, V.; Sandfeld, S. In *Domain level ontology design: DISO and MDMC-NEP Provenance*, Helmholtz Metadata Collaboration| Conference 2022 (2022), Online, 05.10. 2022–06.10. 2022, 2022.
12. Ghouchan Nezhad Noor Nia, R.; Jalali, M.; Mail, M.; Ivanisenko, Y.; Kübel, C., Machine Learning Approach to Community Detection in a High-Entropy Alloy Interaction Network. *ACS omega* **2022**, 7 (15), 12978-12992.
13. Ghouchan Nezhad Noor Nia, R.; Jalali, M.; Houshmand, M., A Graph-Based k-Nearest Neighbor (KNN) Approach for Predicting Phases in High-Entropy Alloys. *Applied Sciences* **2022**, 12 (16), 8021.
14. Ghoochannejad Noornia, R.; Jalali, M., Evolutionary User Clustering Based on Time-Aware Interest Changes in the Recommender System. *Journal of Operational Research In Its Applications (Applied Mathematics)-Lahijan Azad University* **2022**, 19 (3), 1-15.
15. Tahmasbi, H.; Jalali, M.; Shakeri, H., A social recommender system based on matrix factorization considering dynamics of user preferences. *Signal and Data Processing* **2021**, 18 (1), 28-13.
16. Tahmasbi, H.; Jalali, M.; Shakeri, H., Modeling user preference dynamics with coupled tensor factorization for social media recommendation. *Journal of Ambient Intelligence and Humanized Computing* **2021**, 12, 9693-9712.
17. Tahmasbi, H.; Jalali, M.; Shakeri, H., TSCMF: Temporal and social collective matrix factorization model for recommender systems. *Journal of Intelligent Information Systems* **2021**, 56, 169-187.
18. Shahidi, S. M.; Shakeri, H.; Jalali, M., A semantic malware detection model based on the GMDH neural networks. *Computers & Electrical Engineering* **2021**, 91, 107099.
19. SAFAVI, S.; JALALI, M., A POI Recommendation Model According to the Behavior Pattern of Users Based on Friends List Using Deep Learning. **2021**.
20. Safavi, S.; Jalali, M., RecPOID: POI recommendation with friendship aware and deep CNN. *Future Internet* **2021**, 13 (3), 79.
21. Ravakhah, M.; Jalali, M.; Forghani, Y.; Sheibani, R., Balanced hierarchical max margin matrix factorization for recommendation system. *Expert Systems* **2021**, e12911.
22. Joseph, R.; Chauhan, A.; Eschke, C.; Ihsan, A.; Jalali, M.; Jäntschi, U.; Jung, N.; Shyam Kumar, C.; Kübel, C.; Lucas, C. In *Metadata schema to support FAIR data in scanning electron microscopy*, Supplementary Proceedings of the XXIII International Conference on Data Analytics and Management in Data Intensive Domains (DAMDID/RCDL 2021): Moscow, Russia, October 26-29, 2021. Ed.: A. Pozanenko, 2021; p 265.
23. Joseph, R.; Chauhan, A.; Eschke, C.; A., I.; Jalali, M.; Jäntschi, U. In *Metadata Schemas for FAIR Data in Materials Science: Scanning Electron Microscopy (SEM) Use Case*, Research Data Alliance Virtual Plenary 18 (2021), 2021.
24. Taherpour, M.; Jalali, M.; Shakeri, H. In *ECAT: an Enhanced Confidence-aware Trust-based recommendation system*, 2020 8th Iranian Joint Congress on Fuzzy and intelligent Systems (CFIS), IEEE: 2020; pp 180-185.
25. Ghorbanian, F.; Jalali, M. In *A Novel Hybrid Algorithm for Sentiment Analysis via Classifier Ensembles for Online Shops User Using User Generated Contents and Review*, Proceedings of the 2020 6th International Conference on Computing and Artificial Intelligence, 2020; pp 165-169.
26. Ghorbanian, F.; Jalali, M. In *A novel large-scale model for real time sentiment analysis using online shop reviews and comments*, Proceedings of the 2020 6th International Conference on Computing and Artificial Intelligence, 2020; pp 515-518.
27. Vazifehdan, M.; Moattar, M. H.; Jalali, M., A hybrid Bayesian network and tensor factorization approach for missing value imputation to improve breast cancer recurrence prediction. *Journal of King Saud University-Computer and Information Sciences* **2019**, 31 (2), 175-184.

28. Tayarani, N.; Jalali, M., Presenting a Novel Hybrid Approach of Text Mining Sentiment Analysis in Twitter Using CART Decision Tree. *Engineering Management and Soft Computing* **2019**, 5 (1), 210-227.
29. Nobahari, V.; Jalali, M.; Seyyed Mahdavi, S. J., ISoTrustSeq: a social recommender system based on implicit interest, trust and sequential behaviors of users using matrix factorization. *Journal of Intelligent Information Systems* **2019**, 52, 239-268.
30. Moezzi, S.; Jalali, M.; Forghani, Y., TWSVC+: Improved Twin Support Vector Machine-Based Clustering. *Ingénierie des Systèmes d'Information* **2019**, 463-471.
31. Barati, M.; Jalali, M.; Forghani, Y., Alternating optimization to solve penalized regression-based clustering model. *Expert Systems* **2019**, 36 (6), e12462.
32. Tahmasebi, J., Mehrdad, Shakeri, Hassan, A Temporal Recommendation System Based on Coupled Tensor Factorization. *Journal of Soft Computing and Information Technology* **2018**, 7 (2), 81-94.
33. Tahmasbi, H.; Jalali, M.; Shakeri, H. In *Modeling temporal dynamics of user preferences in movie recommendation*, 2018 8th international conference on computer and knowledge engineering (ICCKE), IEEE: 2018; pp 194-199.
34. Ghaemi, R.; Salami, H., Jalali, Mehrdad, Coping With the Loss of Quality of Job Future Predictors in Grid Computing Environments. *Journal of intelligent procedures in electrical technology* **2018**, 9 (35), 39-48.
35. Tahmasbi, H.; Jalali, M.; Shakeri, H., An Expert System for Heart Disease Diagnosis Based on Evidence Combination in Data Mining. *Journal of Health and Biomedical Informatics* **2017**, 3 (4), 251-258.
36. Rezaei, Z.; Jalali, M. In *Sentiment analysis on Twitter using McDiarmid tree algorithm*, 2017 7th International Conference on Computer and Knowledge Engineering (ICCKE), IEEE: 2017; pp 33-36.
37. Niat, R. H.; Jalali, M., A multiple model of perceptron neural network with sample selection through chicken swarm algorithm for financial forecasting. **2017**.
38. Moosavi, S. A.; Jalali, M.; Misaghian, N.; Shamshirband, S.; Anisi, M. H., Community detection in social networks using user frequent pattern mining. *Knowledge and Information Systems* **2017**, 51, 159-186.
39. Mahboob, V. A.; Jalali, M.; Jahan, M. V.; Barekati, P., Swallow: resource and tag recommender system based on heat diffusion algorithm in social annotation systems. *Computational Intelligence* **2017**, 33 (1), 99-118.
40. Faridani, V.; Jalali, M.; Jahan, M. V., Collaborative filtering-based recommender systems by effective trust. *International Journal of Data Science and Analytics* **2017**, 3, 297-307.
41. Mahdavi-Shahri, A.; Houshmand, M.; Yaghoobi, M.; Jalali, M. In *Applying an ensemble learning method for improving multi-label classification performance*, 2016 2nd International Conference of Signal Processing and Intelligent Systems (ICSPIS), IEEE: 2016; pp 1-6.
42. Shalforoushan, S. H.; Jalali, M. In *Link prediction in social networks using Bayesian networks*, 2015 The International Symposium on Artificial Intelligence and Signal Processing (AISP), IEEE: 2015; pp 246-250.
43. Rokni, M.; Jalali, M.; Moattar, M. H. In *A recommender system based on local topology features and message rate*, 2015 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2015; pp 276-280.
44. Pechaz, B.; Jahan, M. V.; Jalali, M. In *Malware detection using hidden Markov model based on Markov blanket feature selection method*, 2015 International congress on technology, communication and knowledge (ICTCK), IEEE: 2015; pp 558-563.
45. Minab, S. S.; Jalali, M.; Moattar, M. H. In *Online analysis of sentiment on Twitter*, 2015 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2015; pp 359-365.
46. Minab, S. S.; Jalali, M.; Moattar, M. H. In *A new sentiment classification method based on hybrid classification in Twitter*, 2015 international congress on technology, communication and knowledge (ICTCK), IEEE: 2015; pp 295-298.
47. Mashhadi, N. R.; Jalali, M.; Jahan, M. V. In *Inference of mobile users' social relationships using Bayesian belief network*, 2015 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2015; pp 232-240.

48. Khosravani, A.; Jalali, M. In *Recommending a method based on hybrid individual and group trust in collaborative filtering*, 2015 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2015; pp 92-97.
49. Jalali, M.; Moattar, M. In *Spam Detection In Social Networks: A Review*, Second International Congress on Technology, Communication and Knowledge (ICTCK 2015), 2015.
50. Eshraqi, N.; Jalali, M.; Moattar, M. H. In *Spam detection in social networks: A review*, 2015 international congress on technology, communication and knowledge (ICTCK), IEEE: 2015; pp 148-152.
51. Eshraqi, N.; Jalali, M.; Moattar, M. H. In *Detecting spam tweets in Twitter using a data stream clustering algorithm*, 2015 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2015; pp 347-351.
52. Barekati, P.; Jalali, M.; Jahan, M. V.; Mahboob, V. A., Extracting edge centrality from social networks using heat diffusion algorithm. *International Journal of Knowledge-based and Intelligent Engineering Systems* **2015**, *19* (2), 69-82.
53. Zolfaghari, V.; Jalali, M. In *Scalable ontology matching*, 2014 Iranian Conference on Intelligent Systems (ICIS), IEEE: 2014; pp 1-4.
54. Taherpour, M.; Shaken, H.; Mali, M. In *Improvement of recommender systems using confidence-aware trust*, 2014 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2014; pp 1-7.
55. Rostami, N. H.; Kheirkhah, E.; Jalali, M., An optimized semantic web service composition method based on clustering and ant colony algorithm. *arXiv preprint arXiv:1402.2271* **2014**.
56. Qofrani, E.; Jalali, M.; Kalani, M. R. In *The improvement of accuracy of gene expression data classification with gene ontology*, 2014 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2014; pp 1-5.
57. Pakari, S.; Kheirkhah, E.; Jalali, M., Web service discovery methods and techniques: A review. *Int. J. Comput. Sci. Eng. Inf. Technol* **2014**, *4* (1), 1-14.
58. Pakari, S.; Kheirkhah, E.; Jalali, M., A novel approach: A hybrid semantic matchmaker for service discovery in service oriented architecture. *International Journal of Network Security & Its Applications* **2014**, *6* (1), 37.
59. Naeen, H. M.; Jalali, M.; Naeen, A. M. In *A trust-aware collaborative filtering system based on weighted items for social tagging systems*, 2014 Iranian Conference on Intelligent Systems (ICIS), IEEE: 2014; pp 1-5.
60. Moosavi, S. A.; Jalali, M. In *Community detection in online social networks using actions of users*, 2014 Iranian Conference on Intelligent Systems (ICIS), IEEE: 2014; pp 1-7.
61. Minab, S. S.; Jalali, M. In *Online analyzing of texts in social network of Twitter*, 2014 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2014; pp 1-6.
62. Mehneh, S. F.; Toosi, J.; Jalali, M. In *An optimized approach for unbalanced big data categorizing using fuzzy clustering*, 2014 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2014; pp 1-4.
63. Maleki, N.; Jalali, M.; Jahan, M. V., Adaptive and non-adaptive data hiding methods for grayscale images based on modulus function. *Egyptian Informatics Journal* **2014**, *15* (2), 115-127.
64. Khosravani, A.; Farshchian, M.; Jalali, M. In *Introduction of synthetic and non-synthetic trust recommender models in collaborative filtering*, 2014 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2014; pp 1-9.
65. Jafari, M. H.; Tabrizi, G. T.; Jalali, M. In *Solving cold start problem in tag-based recommender systems using discrete imperialist competitive algorithm*, 2014 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2014; pp 1-7.
66. Isfahani, S.; Jalali, M. In *Review on social tagging systems*, First International IT congress. Communication and Knowledge, 2014.
67. Hesami Rostami, N.; Kheirkhah, E.; Jalali, M., An Optimized Semantic Web Service Composition Method Based on Clustering and Ant Colony Algorithm. *arXiv e-prints* **2014**, arXiv: 1402.2271.
68. Hasanzadeh, F.; Jalali, M.; Jahan, M. V. In *Detecting communities in social networks by techniques of clustering and analysis of communications*, 2014 Iranian Conference on Intelligent Systems (ICIS), IEEE: 2014; pp 1-5.

69. Garakani, M. R.; Jalali, M. In *A trust prediction approach by using collaborative filtering and computing similarity in social networks*, 2014 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2014; pp 1-4.
70. Faridani, V.; Jahan, M. V.; Jalali, M. In *Combining trust in collaborative filtering to mitigate data sparsity and cold-start problems*, 2014 4th International Conference on Computer and Knowledge Engineering (ICCCKE), IEEE: 2014; pp 233-238.
71. Besharati, A.; Jalali, M. In *Multiple sequence alignment using biological features classification*, 2014 International Congress on Technology, Communication and Knowledge (ICTCK), IEEE: 2014; pp 1-5.
72. Tagiabadi, E. K.; Jalali, M. In *Improve recommender systems using certain formulas and fuzzy concept networks*, The 5th Conference on Information and Knowledge Technology, IEEE: 2013; pp 236-241.
73. Soltanpoor, H.; Vafaeijahan, M.; Jalali, M., Graph-based image segmentation using imperialist competitive algorithm. *Advances in Computing* **2013**, 3 (2), 11-21.
74. Rostami, N. H.; Kheirkhah, E.; Jalali, M., Web services composition methods and techniques: A review. *International Journal of Computer Science, Engineering & Information Technology* **2013**, 3 (6), 10-5121.
75. Poorgholami, M.; Jalali, M.; Rahati, S.; Asgari, T. In *Spam detection in social bookmarking websites*, 2013 IEEE 4th International Conference on Software Engineering and Service Science, IEEE: 2013; pp 56-59.
76. Nozarian, S.; Jahan, M. V.; Jalali, M., An imperialist competitive algorithm for 1-d cutting stock problem. *International Journal of Information Science* **2013**, 3 (2), 25-36.
77. Molaei, E.; Jalali, M.; Vadiatzadeh, H., A Novel Algorithm for Privacy Preserving Distributed Data Mining. *International Journal of Computer Applications* **2013**, 76 (8).
78. Misaghian, N.; Jalali, M.; Moattar, M. H. In *Resource recommender system based on tag and time for social tagging system*, ICCCKE 2013, IEEE: 2013; pp 97-101.
79. Khosronejad, M.; Sharififar, E.; Torshizi, H. A.; Jalali, M., Developing a hybrid method of Hidden Markov Models and C5. 0 as a Intrusion Detection System. *International Journal of Database Theory and Application* **2013**, 6 (5), 165-174.
80. Sadeghi Hesar, A.; Tabatabaee, H.; Jalali, M., Monthly rainfall forecasting using bayesian belief networks. *International Research Journal of Applied and Basic Sciences* **2012**, 3 (11), 2226-31.
81. SADEGHI, H. A.; Tabatabaee, H.; JALALIAN, M., A Surface water evaporation estimation model using bayesian belief networks with an application to the Persian gulf. **2012**.
82. Sabetnia, E.; Jalali, M.; Asgari, T., An Approach to Resource Recommend by Using Tag and Semantic Concept in Social Tagging Systems. *International Review on Computers and Software* **2012**, 7 (5).
83. Riabe, H. R. A.; Vadeei, M. H.; Jalali, M., Determination Stock Investment Strategies Of Listed Companies In Iran Using Data Mining Techniques. *Far East Journal of Psychology and Business* **2012**, 8 (2), 12-26.
84. Mazinani, S. M.; Naderi, A.; Jalali, M. In *A tree-based reliable routing protocol in wireless sensor networks*, 2012 International Symposium on Computer, Consumer and Control, IEEE: 2012; pp 491-494.
85. Hesar, A. S.; Tabatabaee, H.; Jalali, M. In *Structure learning of Bayesian networks using heuristic methods*, Proc. of International Conference on Information and Knowledge Management (ICIKM 2012), 2012.
86. Azimiyani, F.; Kheirkhah, E.; Jalali, M., Classification of routing protocols in wireless sensor networks. *International Review on Computers and Software (IRECOS)* **2012**, 7 (4), 1614-1623.
87. Abrishami, S.; Naghibzadeh, M.; Jalali, M. In *Web page recommendation based on semantic web usage mining*, Social Informatics: 4th International Conference, SocInfo 2012, Lausanne, Switzerland, December 5-7, 2012. Proceedings 4, Springer Berlin Heidelberg: 2012; pp 393-405.
88. Saeedian, E.; Torshiz, M. N.; Jalali, M.; Tadayon, G.; Tajari, M. M. In *CFGA: Clustering wireless sensor network using fuzzy logic and genetic algorithm*, 2011 7th International Conference on Wireless Communications, Networking and Mobile Computing, IEEE: 2011; pp 1-4.
89. Nasrzadeh, S.; Gehasemlou, M.; Jalali, M. In *Multi-layer perceptrons and conventional adaptive filters for channel estimation in CDMA system*, Proceedings on the International Conference on Artificial Intelligence (ICAI), The Steering Committee of The World Congress in Computer Science, Computer ...: 2011; p 1.
90. Naserzadeh, S.; Jalali, M. In *Channel estimation and symbol detection in AWGN channel for new structure of CDMA signals*, 2011 Eighth International Conference on Information Technology: New Generations, IEEE: 2011; pp 1080-1081.

91. Maleki, N.; Jalali, M.; Jahan, M. V. In *An adaptive data hiding method using neighborhood pixels differencing based on modulus function*, International Conference on. Information Processing, Computer Vision, and Pattern Recognition (IPCV'11), Las Vegas, Nevada, USA, 2011.
92. Mahmoudi, E. V.; Sabetnia, E.; Torshiz, M. N.; Jalali, M.; Tabrizi, G. T. In *Multi-level fuzzy association rules mining via determining minimum supports and membership functions*, 2011 Second International Conference on Intelligent Systems, Modelling and Simulation, IEEE: 2011; pp 55-61.
93. Mahmoudi, E. V.; Aghighi, V.; Torshiz, M. N.; Jalali, M.; Yaghoobi, M. In *Mining generalized fuzzy association rules via determining minimum supports*, 2011 19th Iranian Conference on Electrical Engineering, IEEE: 2011; pp 1-6.
94. Kohi, A.; Jalali, M.; Ebrahimi, S. J., TAG RECOMMENDATION SYSTEM FOR SOCIAL ANNOTATION SYSTEM. *International Journal of Computer Science and Information Security* **2011**, 9 (8), 115.
95. Kohi, A.; Ebrahimi, S. J.; Jalali, M. In *Improving the accuracy and efficiency of tag recommendation system by applying hybrid methods*, 2011 1st International EConference on Computer and Knowledge Engineering (ICCKE), IEEE: 2011; pp 242-248.
96. Kenari, S. M. S.; Jahan, M. V.; Jalali, M. In *Multi-skill agents coalition formation under skill uncertainty*, 2011 International Symposium on Artificial Intelligence and Signal Processing (AISP), IEEE: 2011; pp 89-96.
97. Jalali, M.; Mustapha, N. In *Semantic Clickstream Mining*, Proceedings of the International Conference on Semantic Web and Web Services (SWWS), The Steering Committee of The World Congress in Computer Science, Computer ...: 2011; p 1.
98. Gavagsaz, E.; Naghibzadeh, M.; Jalali, M. In *Conceptual summarization using ontologies and nearest neighborhood clustering*, 2011 International Conference on Semantic Technology and Information Retrieval, IEEE: 2011; pp 1-6.
99. Fard, H. E.; Jahan, M. V.; Jalali, M. In *The effect of sample property on optimum search by quantum computing*, 2011 1st International eConference on Computer and Knowledge Engineering (ICCKE), IEEE: 2011; pp 12-17.
100. Chahkandi, V.; Jalali, M.; Mirshahi, M.; Hosseini, A. In *Feature Selection with Hybrid Mutual Information and Genetic Algorithm*, Proceedings of the International Conference on Data Science (ICDATA), The Steering Committee of The World Congress in Computer Science, Computer ...: 2011; p 1.
101. Ansari, A.; Jalali, M., A system for social network extraction of web complex structures. *International Journal of Computer Science and Information Security* **2011**, 9 (8), 67-75.
102. Mahmoudi, E. V.; Torshiz, M. N.; Jalali, M., Extracting Membership Functions Using ACS Method via Multiple Minimum Supports. *International Journal of Computer Science and Information Security* **2010**.
103. Jalali, M.; Mustapha, N.; Sulaiman, M. N.; Mamat, A., WebPUM: A Web-based recommendation system to predict user future movements (vol 37, pg 6201, 2010). *EXPERT SYSTEMS WITH APPLICATIONS* **2010**, 37 (10), 7295-7295.
104. Jalali, M.; Mustapha, N.; Sulaiman, M. N.; Mamat, A., WebPUM: A Web-based recommendation system to predict user future movements. *Expert Systems with Applications* **2010**, 37 (9), 6201-6212.
105. Mustapha, N.; Jalali, M.; Jalali, M., Expectation maximization clustering algorithm for user modeling in web usage mining systems. *European Journal of Scientific Research* **2009**, 32 (4), 467-476.
106. Mustapha, N.; Jalali, M.; Bozorgniya, A.; Jalali, M., Navigation Patterns Mining Approach based on Expectation Maximization Algorithm. *World Academy of Science, Engineering and Technology* **2009**, 50, 855-859.
107. Jalali, M.; Mustapha, N.; Sulaiman, M. N. B.; Mamat, A. In *OPWUMP: an architecture for online predicting in WUM-based personalization system*, Advances in Computer Science and Engineering: 13th International CSI Computer Conference, CSICC 2008 Kish Island, Iran, March 9-11, 2008 Revised Selected Papers, Springer Berlin Heidelberg: 2009; pp 838-841.
108. Jalali, M.; Mustapha, N.; Sulaiman, M. N.; Mamat, A. In *Towards Online Personalized Foreseeing System by New Approach through Web Usage Mining*, DMIN, 2009; pp 458-467.
109. Jalali, M.; Mustapha, N.; Sulaiman, M. N.; Mamat, A., A recommender system approach for classifying user navigation patterns using longest common subsequence algorithm. *American Journal of Scientific Research* **2009**, 4, 17-27.

110. Jalali, M.; Mustapha, N.; Mamat, A.; Sulaiman, M. N. B. In *A recommender system for online personalization in the wum applications*, Proceedings of the World congress on Engineering and Computer Science, 2009; pp 20-22.
111. Jalali, M.; Mustapha, N.; Sulaiman, N. B.; Mamat, A. In *A web usage mining approach based on lcs algorithm in online predicting recommendation systems*, 2008 12th International Conference Information Visualisation, IEEE: 2008; pp 302-307.
112. Jalali, M.; Mustapha, N.; Mamat, A.; Sulaiman, M. N. B. In *A new classification model for online predicting users' future movements*, 2008 International Symposium on Information Technology, IEEE: 2008; pp 1-7.
113. Jalali, M.; Mustapha, N.; Mamat, A.; Sulaiman, M. N. B. In *A new clustering approach based on graph partitioning for navigation patterns mining*, 2008 19th International Conference on Pattern Recognition, IEEE: 2008; pp 1-4.
114. Jalali, M.; Mustapha, N.; Mamat, A.; Sulaiman, M. N. In *LCS Based Classification Algorithm for Online Prediction in WUM Recommendation System*, International Conference on Internet Computing, 2008; pp 66-71.
115. Jalali, M.; Mustapha, N.; Sulaiman, N.; Mamat, A. In *An Architecture for Online Predicting in Web Usage Mining System*, The 2nd National Intelligent Systems And Information Technology Symposium, ISITS, 2007; pp 33-38.
116. Vejdani, E.; Sabetnia, E.; Niazi, M.; Jalali, M.; Tadayon, G., Multi-level Fuzzy Association Rules Mining via Determining Minimum Supports and Membership Functions.