

# MAJDI A. MAABREH, Ph.D.

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The Hashemite University  
Prince Al-Hussein bin Abdullah II College of Information Technology  
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## Professional Experience

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|---------------------------|---|
| September 2018 – Now      | <ul style="list-style-type: none"><li>• <b>Assistant professor, Department of Computer Information Systems. The Hashemite University, Jordan.</b></li></ul>   |
| Jan 2019 – August 2019    | <ul style="list-style-type: none"><li>• <b>Assistant professor of Computer Information Systems. (Tenure track), Southeastern Oklahoma State University. Oklahoma, USA.</b></li></ul>  |
| August 2014 – April 2018. | <ul style="list-style-type: none"><li>• <b>Teaching assistant at the Department of Computer Science. Western Michigan University.</b> Participated in teaching different graduate and undergraduate courses.</li></ul>  |
| August 2015 – April 2017. | <ul style="list-style-type: none"><li>• <b>Researcher at WiSe lab. Western Michigan University.</b> Protein search engines optimization using machine learning and parallel processing.</li></ul>   |
| May 2017 – December 2017  | <ul style="list-style-type: none"><li>• <b>Bioinformatics intern at Zoetis (Pfizer before 2012).</b> I worked on omics data analysis, data engineering, machine learning algorithms, and hyperparameters optimization.</li></ul>  |
| February 2005- March 2014 | <ul style="list-style-type: none"><li>• <b>Oracle applications developer.</b> Develop Oracle forms and reports in support of different university systems.</li><li>• <b>Systems analyst and database administrator.</b> Participated in building and supporting the paperless project in the university. Control the users' privileges and manage DB performance and backups.</li><li>• <b>Oracle applications testing and QA.</b> Test applications functionality, readability, and integrity. Participated in training new developers and the system's users.</li></ul> |

## Honors & Awards

- (1) **2018 All-University** Graduate Research and Creative Scholars Award. Mar. 2018  
Western Michigan University
- (2) **2018 Department-Level** Graduate Research and Creative Scholars Award. Mar. 2018  
Computer Science Department. Western Michigan University
- (3) College of Engineering and Applied Science, Western Michigan University. Dean office travel grants for graduate students. Oct. 2017
- (4) National Science Foundation (NSF)- Students Travel Grant Jan. 2017
- (5) College of Engineering and Applied Science, Western Michigan University. Dean office travel grants for graduate students. Sep. 2016
- (6) IEEE International Conference of High-Performance Computing and Simulation. IEEE HPCS. Student Travel Grant Jul. 2016
- (7) IEEE International Parallel and Distributed Processing Symposium. Student Travel Grant. May 2016
- (8) **Academic outstanding Award.** Mar. 2016  
Department of Computer Science, Western Michigan University.
- (9) Master's degree in CIS - **Highest GPA and ranked 1<sup>st</sup> of the graduates in the academic year 2012/2013. ( Yarmouk University Alumni Club).** Apr. 2013

## Publications

- 13 Darwish O., **Maabreh M.**, Karajeh O., Using a modified instruction count pass in source code classification. The 33<sup>rd</sup> International Conference on Advanced Information Networking and Applications (AINA-2019).
- 12 **Maabreh M.**, Irshid H., Gupta A., and Alsmadi I., A Multithreading and Hashing Technique for Indexing Target-Decoy Peptides Databases. Concurrency and Computation: Practice and Experience. Vol. 30, no. 9. 2018.
- 11 **Maabreh M.**, Qolomany B., Alsmadi I. and Gupta A. Deep vs. Shallow Learning-based Filters of MSMS Spectra in Support of Protein Search Engines. International Workshop on Deep Learning in Bioinformatics, Biomedicine, and Healthcare Informatics (DLB2H 2017) in conjunction with the IEEE International Conference on Bioinformatics and Biomedicine (IEEE BIBM 2017).
- 10 **Maabreh M.**, Gupta A. and Alsmadi I. Towards Centralized MS/MS Spectra Preprocessing: An Empirical Evaluation of Peptides Search Engines using Ground Truth

- Datasets. 17<sup>th</sup> International Conference on Bioinformatics and Bioengineering. IEEE BIBE 2017.
- 9) **Maabreh M**, Qolomany B., Gupta A., Springstead J. Optimizing Protein Search Engines using Particle Swarm Optimization. 17<sup>th</sup> International Conference on Bioinformatics and Bioengineering. IEEE BIBE 2017.
  - 8) **Maabreh M**, Qolomany B., Alsmadi I. and Gupta A. Deep Learning-based MSMS Spectra Reduction in Support of Running Multiple Protein Search Engines on Cloud. The 4th International Workshop on High-Performance Computing on Bioinformatics (HPCB 2017) in conjunction with the IEEE International Conference on Bioinformatics and Biomedicine (IEEE BIBM 2017).
  - 7) Qolomany B., **Maabreh M.**, Al-Fuqaha A., Gupta A., and Benhaddou D., Parameters Optimization of Deep Learning Models using Particle Swarm Optimization. IEEE IWCMC, 2017.
  - 6) **Maabreh M.**, Gupta A., and Saeed F., A Parallel Peptide Indexer and Decoy Generator for Crux Tide using OpenMP. Proceedings of Workshop on High-Performance Computing Systems for Biomedical, Bioinformatics and Life Sciences, International Conference on High-Performance Computing and Simulation (HPCS 2016), Innsbruck, Austria, July 2016.
  - 5) **MA Maabreh**, IM Alsmadi, MN Al-Kabi. “Improving the Sensitivity of Research Publication Indices Using Exponential Function and the Area under Curve”. International Journal of Hybrid Information Technology Vol. 7, issue (3), 2014.
  - 4) Awni Itradat, **Majdi Maabreh**, Amar Rayyan, Abed Aljawabreh, Muaffaq Imam. “Comparative Study of Internet Usage in Educational Institutes: The Jordanian Hashemite University as a Case Study”. The International Conference on Computing Technology and Information Management. pages 100-107, 2014.
  - 3) AH Wahbeh, MN Al-Kabi, **MA Maabreh**, IM Al-Smadi, EM Al-Shawakfa. “Studying and analyzing students web search behaviors within three Jordanian universities”. International Journal of Continuing Engineering Education and Life-Long Learning. Vol. 24, issue (3), 2014.
  - 2) **Majdi Maabreh**, Mohammed Al-Kabi, Izzat Alsmadi. “Query Classification and Study of University Students Search Trends”. Program: electronic library and information systems. Vol. 46, issue (2), 2012.
  - 1) **M Maabreh**, IM Alsmadi. “A Survey of Impact and Citation Indices: Limitations and Issues”. International Journal of Advanced Science and Technology, IJAST, Vol. 40, 2012,

*Please see my profiles on:*

- [https://scholar.google.com/citations?user=Y9\\_J5jAAAAAJ&hl=en](https://scholar.google.com/citations?user=Y9_J5jAAAAAJ&hl=en)
- <https://www.linkedin.com/in/majdi-maabreh-a7a256127>
- [https://www.researchgate.net/profile/Majdi\\_Maabreh](https://www.researchgate.net/profile/Majdi_Maabreh)

## Research Interests

Machine Learning, Big Data Analytics and Parallel Computing, Mass Spectrometry-based Proteomics.

**Current research projects:** (1) Cloud Computing and Big data Analytics. (2) Protein Search Engine Optimization using machine learning algorithms.

## Teaching Experience

<b>Assistant Professor ( Southeastern Oklahoma State University)</b>	
<ul style="list-style-type: none"> <li>Advanced Business Analysis ( online course on Data Analytics).</li> <li>Java Programming ( face-to-face class + online).</li> </ul>	Undergraduate
<b>Assistant Professor ( Hashemite University)</b>	
<ul style="list-style-type: none"> <li>Database systems.</li> <li>Security (Introduction to cryptography).</li> <li>Web Programming (HTML, CSS, JavaScript, PHP).</li> <li>Web Programming Lab.</li> </ul>	Undergraduate
<b>Teaching Assistant- Western Michigan University</b>	
<ul style="list-style-type: none"> <li>Android Programming</li> </ul>	Graduate
<ul style="list-style-type: none"> <li>Wireless Networks</li> </ul>	Graduate
<ul style="list-style-type: none"> <li>Operating Systems</li> <li>Cloud Computing</li> </ul>	Undergraduate Graduate
<ul style="list-style-type: none"> <li>Operating Systems</li> </ul>	Undergraduate
<ul style="list-style-type: none"> <li>Internet of Things</li> <li>Algorithms</li> </ul>	Graduate Graduate
<ul style="list-style-type: none"> <li>Operating Systems</li> <li>Computer Networks</li> </ul>	Undergraduate Graduate
<ul style="list-style-type: none"> <li>Machine Learning</li> <li>Computer Security and Info. Assurance</li> <li>Programming in C for Engineers</li> </ul>	Graduate Graduate Undergraduate

## Online/Teaching Tools

(1) Blackboard. (2) Moodle. (3) Office Mix. (4) MS Teams (5) Zoom (6) Google Classroom.

## Education

May 2014 – April 2018	Doctor of Philosophy, Computer Science. Western Michigan University.
July 2009- July 2012	Master of Science, Computer Information Systems. Yarmouk University, Jordan. <i>Rating 92.1%, Ranked 1<sup>st</sup> on all students who graduated in the academic year 2012/2013.</i>
August 2000- June 2004	Bachelor of Science, Computer Science. Yarmouk University, Jordan.

## Programming Languages/ Tools

C++, C, JAVA, Python.  
*HTML and CSS*  
*Parallel Programming Models: MPI and OpenMP.*  
Scripting languages: R, PHP, JavaScript.

## Languages

English and Arabic.

## References

Ajay Gupta, Ph.D. Department of Computer Science, Western Michigan University, MI, USA.  
[ajay.gupta@wmich.edu](mailto:ajay.gupta@wmich.edu)

James Springstead, Ph.D. Department of Chemical and Paper Engineering, Western Michigan University, MI, USA.  
[james.springstead@wmich.edu](mailto:james.springstead@wmich.edu)

Izzat Alsmadi, Ph.D. Department of Computer Science, University of Texas A&M, San Antonio, Texas, USA.  
[izzat.Alsyadi@tamusa.edu](mailto:izzat.Alsyadi@tamusa.edu)