

# Curriculum Vitae

## Resume:

**Name:** Amjad W. Hawash, Associate Professor.

**Date and Place of Birth:** Feb. 10<sup>th</sup> 1971, Nablus, Palestine.

**Fields of Interests:** Networking, Information Retrieval, Web Computation, Programming Languages, Object Oriented Analysis and Design using UML and Booch Notations, Distributed Applications, Software Project Management, Parallel Processing, Dealing with Huge Data, Ontologies.

**Current Position:** Faculty member in Computerized Information System Dept. / The Faculty of Engineering and Information Technology / An-Najah N. University. / Nablus / Palestine.

## PERSONAL INFORMATION

**Name:** Amjad W. Hawash.

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**Date of Birth:** Feb. 10<sup>th</sup> 1971.

**Nationality:** Palestinian.

**Gender:** Male.

**Marital Status:** married - 4 children.

## EDUCATION and Academic History:

- 2015 Philosophy Degree (PhD) in Computer Science from Sapienza University of Rome “LaSapienza” with a very good rank.
- 2006 Master (M.sc.) in Computer Information Systems from Yarmouk University, Irbid/Jordan with grade **86.6%**.
- 1996 Bachelor (B.sc.) in Computer Science from An-Najah N. University, Nablus/Palestine with grade **82.9%**.
- 1992 Diploma in Computer Science from Arab Community College, Amman/Jordan with grade **80.9%**.
- 1989 Elementary Education, Scientific Branch with grade **92.2%**.

## RESEARCH:

### During Master Degree:

1. Shawakfa, E. and Hawash, A. 2010. CISCONF: A Tool for the Automatic Configuration of Cisco Routers. Abhath Al-Yarmouk, 19 (107 - 136), pp. 107-136. Available at: [http://journals.yu.edu.jo/aybse/Issues/basic\\_V19\\_N1.pdf](http://journals.yu.edu.jo/aybse/Issues/basic_V19_N1.pdf).

### After Master:

1. Hawash, A. 2011. Integrating Heterogeneous Health Information Stored in Diverse Databases by Analyzing their Metadata and Generating a Guide for

- Queries Evaluation. International Journal for Information Technology and Network Application, 1.
2. Hawash, M.; Perkowski, M.; Bleiler, S.; Caughman, J.; Hawash, A., "Reversible Function Synthesis of Large Reversible Functions with No Ancillary Bits Using Covering Set Partitions," Information Technology: New Generations (ITNG), 2011 Eighth International Conference on , vol., no., pp.1008,1013, 11-13 April 2011 doi: 10.1109/ITNG.2011.174
  3. Hawash, M., Abdalhaq, B., Hawash, A. and Perkowski, M. 2011. "Application of Genetic Algorithm for Synthesis of Large Reversible Circuits using Covered Set Partitions", paper presented at The Fourth IEEE International Symposium on Innovation in Information Communication Technology (ISIICT 2011), Amman/Jordan, November.

#### **During PhD:**

1. Avola, D.; Bottoni, P.; Hawash, A., "Using ontologies for users-groups matching in an annotation system," Computer Science and Information Technology (CSIT), 2013 5th International Conference on , vol., no., pp.38,44, 27-28 March 2013 doi: 10.1109/CSIT.2013.6588755.
2. Hawash, A. 2013. "Introducing Groups to an Annotation System", CHIItaly2013, Trento/Italy, August. Trento. (Doctoral Consortium).
3. Avola, D., Bottoni, P. and Hawash, A. 2013. "Groups-Users Matching in an Annotation System Using Ontologies (Class Match Measure)", CHIItaly2013, Trento/Italy, August. Trento. (Poster).
4. Avola, D.; Bottoni, P.; Hawash, A., "Users-groups matching in an annotation system: Ontological and URL relevance measures," Computer Science and Information Technology (CSIT), 2014 6th International Conference on, vol., no., pp.100,109, 26-27 March 2014 doi: 10.1109/CSIT.2014.6805986.
5. Avola, D.; Bottoni, P.; Hawash, A., "Users-groups matching in an annotation system: Ontological and URL relevance measures," Jordanian Journal of Applied Science (JJAS)- ISSN 1605-2587.
6. Hawash, A. "Introducing Groups to an Annotation System: Design Perspective",EICS2014, CNR Rome, Italy, June 17-20, 2014. (Doctoral Consortium).
7. Avola, D.; Bottoni, P.; Hawash, A., "Relevance Measures for the Creation of Groups in an Annotation System", The 20th International Conference on Distributed Multimedia Systems, DMS 2014, Wyndham Pittsburgh University Center, Pittsburgh, USA, August 27 - August 29, 2014.
8. Avola, D.; Bottoni, P.; Hawash, A., "Supporting Group Collaboration in an Annotation System", "Journal of Visual Languages and Computing", 2014.

#### **After PhD:**

1. Amjad Hawash, Kamal Irshaid, "Automating the Creation of Arabic Ontologies: A Preliminary Study", "The 4th Palestinian International Conference on Computer and Information Technology (PICCIT 2015), At Palestine/Hebron", 2015.

2. Matteo Antico, Danilo Avola, Paolo Bottoni, Amjad Hawash, Kamen Kanev, Franceso Parisi Presicce, "An Interactive Tool for Sketch-Based Annotation", "Inter-Academia 2015, 14th International Conference on Global Research and Education", JJAP Conf. Proc. 4, 011604 (2015).
3. Matteo Antico, Danilo Avola, Paolo Bottoni, Amjad Hawash, Kamen Kanev, Franceso Parisi Presicce, "An Interactive Tool for Sketch-Based Annotation", "JAPANESE JOURNAL OF APPLIED PHYSICS", Japan, 2015. **(Impact Factor 1.471)**
4. Danilo Avola, Paolo Bottoni, Amjad Hawash, Supporting group collaboration in an annotation system, Journal of Visual Languages & Computing, Volume 41, 2017, Pages 22-40, ISSN 1045-926X, <https://doi.org/10.1016/j.jvlc.2017.04.004>. (Indexed in Scopus) **(Impact Factor 1.88)**
5. Ahmad Awad, Baker Abdalhaq, Amjad Hawash, Douglas Johnson, "A Comparative Analysis of Binary Decision Diagram Reordering Algorithms for Reversible Circuit Synthesis," 2018 IEEE Symposium Series on Computational Intelligence (SSCI), 2018, pp. 104-111, doi: 10.1109/SSCI.2018.8628765. **(Indexed in IEEEXplore & Scopus).**
6. Amjad Hawash, Ahmed Awad, Baker Abdalhaq, "Towards Reducing Reversible Circuit Synthesis Time," 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT), 2019, pp. 538-543, doi: 10.1109/JEEIT.2019.8717492. **(Indexed in IEEEXplore & Scopus).**
7. Mohammad Eshtayeh, Jalal Morar, Ameer Baghdadi, Amjad Hawash. "Reducing Ambulances Arrival Time to Patients," 2019 2nd International Conference on new Trends in Computing Sciences (ICTCS), 2019, pp. 1-6, doi: 10.1109/ICTCS.2019.8923066. **(Indexed in IEEEXplore & Scopus).**
8. Thaer Thaher, Baker Abdalhaq, Ahmed Awad, and Amjad Hawash. Whale optimization algorithm for traffic signal scheduling problem. Intelligent Computing Paradigm and Cutting-edge Technologies, pages 167–176, Cham, 2020. Springer International Publishing.
9. Baker Abdalhaq, Ahmed Awad, Amjad Hawash, "A Swarm based Binary Decision Diagram (BDD) Reordering Optimizer for Reversible Circuit Synthesis," 2020 15th Design & Technology of Integrated Systems in Nanoscale Era (DTIS), 2020, pp. 1-6, doi:10.1109/DTIS48698.2020.9081221. **(Indexed in IEEEXplore and Scopus).**
10. Hawash, Amjad; Awad, Ahmed; Abdalhaq, Baker. 2020. "Reversible Circuit Synthesis Time Reduction Based on Subtree-Circuit Mapping" Applied Sciences 10, no. 12: 4147. <https://doi.org/10.3390/app10124147>. **(Indexed in Scopus) (Impact Factor 2.217)**
11. Abdalhaq, Baker; Awad, Ahmed; Hawash, Amjad. 2020. "Reversible Logic Synthesis Using Binary Decision Diagrams With Exploiting Efficient Reordering Operators". Journal of IEEE Access. 8, pp: 1-16. **(Indexed in Scopus) (Impact Factor 3.745)**

12. Qossay Ismail, Osama Saleh, Mohammed Hashayka, Ahmed Awad, Amjad Hawash, Othman Othman. 2020. Improve the Firewall Accuracy By using Dynamic Ontology. In The 4th International Conference on Future Networks and Distributed Systems (ICFNDS) (ICFNDS '20). Association for Computing Machinery, New York, NY, USA, Article 16, 1–5.  
DOI:<https://doi.org/10.1145/3440749.3442607> (ACM Digital Library) **(Indexed in Scopus).**
13. Enas Asmar, Saja Salahat, Farah Zubdeh, Amjad Hawash. 2021. "Enhancing Users Collaboration By Vocal Annotations," 2021 18th International MultiConference on Systems, Signals & Devices (SSD), 2021, pp. 845-851, doi: 10.1109/SSD52085.2021.9429432. **(Indexed in IEEEExplore & Scopus).**
14. Baker Abdalhaq, Ahmed Awad, Amjad Hawash. A fast Binary Decision Diagram (BDD)-based reversible logic optimization engine driven by recent meta-heuristic reordering algorithms, Microelectronics Reliability Journal, Volume 123, 2021, 114168, ISSN 0026-2714, <https://doi.org/10.1016/j.microrel.2021.114168>. **(Indexed in Scopus) (Impact Factor 1.535)**
15. Saber Modallal, Mamoon Hasan, Amjad Hawash. Fuzzy Logic based Recommendation System: Crafts to Clients Suggestion. 2021 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT). September 28-29, 2021. **(Indexed in IEEEExplore & Scopus)**
16. Noor Dabeek, Rama Jaber, Yara Bsharat, Amjad Hawash, Baker Abdalhaq. Visualizing Ruwah Related Data By Interactive Graph. 2021 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT). September 28-29, 2021. **(Indexed in IEEEExplore & Scopus)**
17. Tariq Abd Alhady, Ismail Haj Yousef, Yazan Abd Alrahman, Amjad Hawash. B2C Mapping Based On A Fuzzy Logic Recommender System. 2021 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT). September 28-29, 2021. **(Indexed in IEEEExplore & Scopus)**
18. Ahmed Awad, Amjad Hawash and Baker Abdalhaq, "A Genetic Algorithm (GA) and Swarm Based Binary Decision Diagram (BDD) Reordering Optimizer Reinforced with Recent Operators," in IEEE Transactions on Evolutionary Computation, doi: 10.1109/TEVC.2022.3170212. **(Indexed in IEEEExplore)(Impact Factor 11.554)**
19. Aisha Basheer, Sara Alawneh, Tala Bostami, Suhad Daraghmeah and Amjad Hawash, "Mapping Arabic Text Studying Material With The Most Suitable Student Grade", in 2022 ASU International Conference in Emerging Technologies for Sustainability and Intelligent Systems (ICETISIS) - Computing & IT, Bahrain, June 22, 2022. **(indexed in IEEEExplore & Scopus).**
20. Zeina Tanbour, Doha Khodarieh, Hadeel Odeh and Amjad Hawash, "Forming Software Development Team: Machine-Learning Approach" in 2022 ASU

- International Conference in Emerging Technologies for Sustainability and Intelligent Systems (ICETISIS) - Computing & IT, Bahrain, June 22, 2022. **(indexed in IEEEXplore & Scopus).**
21. Sada Riad, Mariam Wazani, Aleen Abu Zant and Amjad Hawash, “Leukemia Detection Algorithms: A Comparative Study” in 2022 ASU International Conference in Emerging Technologies for Sustainability and Intelligent Systems (ICETISIS) - Computing & IT, Bahrain, June 22, 2022. **(indexed in IEEEXplore & Scopus).**
  22. Jana Alhasan, Shahd Sulaiman, Batool Barham and Amjad Hawash, “Automating Arabic Tags Creation for Annotating Web Contents”, in 2022 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT) - 10 Informatics, Bahrain, November 20-21, 2022. **(indexed in IEEEXplore & Scopus).**
  23. Aseel Abdalnabi, Suhad Daraghme and Amjad Hawash, “Fuzzy logic in suggesting the appropriate university major for students according to their preferences”, in 2022 International Conference on Computer Engineering, Network, and Intelligent Multimedia (CENIM), Indonesia, November 22, 2022. **(indexed in IEEEXplore & Scopus).**
  24. Mohammad Smadi, Mohammad Hawash, Omar Daqqa, Amjad Hawash and Ahmed Awad, “A New Annotation System for Dynamic Web Pages Driven by NLP”, in 2022 International Conference on Computer Engineering, Network, and Intelligent Multimedia (CENIM), Indonesia, November 22, 2022. **(indexed in IEEEXplore & Scopus).**
  25. Zaina Taha, Roaa Ghanem and Amjad Hawash, “Enhancing Deaf and Dumb Collaboration by Video Annotations”, in the 2nd International Conference on Scientific and Academic Research ICSAR 2023, Turkey, March 14, 2023. Indexed in “European Journal of Science and Technology”, Turkey.
  26. Areej Sawwan and Amjad Hawash, “A Dynamic Ontological Framework for Bukhari Ahadith”, in the The First International Conference & Expo on Innovation and Sustainability in Engineering & Technology, Palestine, Nablus, June 14, 2023.
  27. Ismael Jabr, Yanal Salman, Moatasem Shqair and Amjad Hawash, “Simulated Penetration Testing And Attack Automation Using Deep Reinforcement Learning”, in the The First International Conference & Expo on Innovation and Sustainability in Engineering & Technology, Palestine, Nablus, June 14, 2023.
  28. Dyaa Al-Dein Tummazeh, Manar Eyad Harb, Yara Sholi, Ahmed Awad and Amjad Hawash, “Ontological-based Intrusion Detection System (IDS): A Comparative Study”, in the 2023 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT), Bahrain, Nov. 20, 2023. **(indexed in IEEEXplore & Scopus).**
  29. Baker Abdalhaq, Amjad Hawash and Ahmed Awad, “Diversity Enforced Genetic Algorithm (GA) for Binary Decision Diagram (BDD) Reordering”, in Applied

Soft Computing, doi: <https://dx.doi.org/10.2139/ssrn.4457235>, (**Indexed in ScienceDirect**), (**Impact Factor: 8.7**).

30. Ismael Jabr, Yanal Salman, Moatasem Shqair and Amjad Hawash, "Penetration Testing and Attack Automation Simulation: Deep Reinforcement Learning Approach", in An-Najah University Journal for Research - A (Natural Sciences), Palestine, Nablus, 2024. Volume: 39. <https://doi.org/10.35552/anjr.a.39.1.2231>
31. Jana Taha, Ramah Hawash, Ahmed Awad, Amjad Hawash, "Content and Activity Based Friends Suggestion in an Annotation System", 2024 INTERNATIONAL CONFERENCE ON INNOVATION AND INTELLIGENCE FOR INFORMATICS, COMPUTING, AND TECHNOLOGIES, Bahrain, 17-19 November 2024. (**indexed in IEEEExplore & Scopus**).
32. Shah Hamdan, Salma Ibrahim, Amjad Hawash, "Measuring the Matches Between University Courses: Ontological Comparison-Based Approach", 2024 INTERNATIONAL CONFERENCE ON INNOVATION AND INTELLIGENCE FOR INFORMATICS, COMPUTING, AND TECHNOLOGIES, Bahrain, 17-19 November 2024. (**indexed in IEEEExplore & Scopus**).
33. Sanabel Sultan, Duaa Dabeek, Shahid Awwad, Amjad Hawash, "Computer Networks Educational System: Annotation-Based Learning", 2024 INTERNATIONAL CONFERENCE ON INNOVATION AND INTELLIGENCE FOR INFORMATICS, COMPUTING, AND TECHNOLOGIES, Bahrain, 17-19 November 2024. (**indexed in IEEEExplore & Scopus**).
34. Raghad Alia, Islam Msalam, Amjad Hawash, "Content-Based Recommendation System for Craft Owners Based on User Preferences and Availability", 2024 INTERNATIONAL CONFERENCE ON INNOVATION AND INTELLIGENCE FOR INFORMATICS, COMPUTING, AND TECHNOLOGIES, Bahrain, 17-19 November 2024. (**indexed in IEEEExplore & Scopus**).

#### **Ongoing Research:**

1. Baker Abdalhaq, Amjad Hawash, "Ruwah Graph Construction by Extracting Hadith Narrations from Arabic Historical Texts", "Journal of Natural Language Engineering", under review process.
2. Amjad Hawash, Danilo Avola, Paolo Bottoni, "Fuzzy Measures for Recommendation of Group Membership in an Annotation System", to be submitted.

#### **EMPLOYMENT HISTORY:**

1. System Administrator and Programmer at Zaytona Soft (ISP). 1996-2003 (full time), Nablus/Palestine.
2. Teacher in An-Najah Community College in Computer Systems Dept. 1997-1998 (part time), Nablus/Palestine.

3. Teacher in Galaxy for Training for Diploma students. 2001-2002 (part time), Nablus/Palestine.
4. Network Administrator, Web builder and programmer in Tariq Almahaba Radio Station. 2000-2001 (part time), Nablus.
5. Instructor at An-Najah N. University, Faculty of Information Technology, CIS Dept.
6. Assistant Professor at An-Najah N. University, Faculty of Engineering and Information Technology, CIS Dept.

### **Scholarships:**

1. MCSE course funded by ANERA (American Near East Refugee Aid) and supervised by An-Najah N. University.
2. I participated (scholarship) in a web computing training course hold in Royal Scientific Society (Amman/Jordan), funded by the Japanese Ministry of Foreign Affairs, and administered by JAICA corporation, from July till October 2004. Project: Multinational Hotel Reservation System, using JAVA and Oracle.
3. PhD scholarship funded by Erasmus Mundus Lot-3 Program to get PhD degree from Sapienza University of Rome / Italy. Started at 10/2011 and ended at 8/2014.

### **EXPERIENCES:**

1. Teaching:  
Teaching Computer Sciences related courses, Graduation Projects tester and examiner for last year bachelor students. Teaching master courses for the program “Advanced Computing”. Mastering Master Thesis. Teaching “Mobile software development” for the master students in the Geomatix master program. Working with GIS related data in terms of Database Design, Database Management Systems (MySQL, Firebase, Oracle), Data Visualization.
2. System Administrator, installer and configure for Windows OS and Linux including most of used services like: DNS, SMTP, VPN, POP3, Web Servers, and others.
3. Network Builder and maintainer for LANs, WANs that use different communications media like Leased Lines, Digital Lines, and Wireless. Also I have an experience in configuring Cisco routers, including routing tables, security issues and communication purposes.
4. Programmer and Systems Developer: using different programming Languages such as Visual Basic, Visual C++, C# and Java, Python. Also using scripting Languages like VBScript, JSP, ASP and PHP for Data Base, and communication applications.
5. Good experience in designing and building distributed applications using JAVA programming language by remote methods invocation (RMI).
6. Configuring Video and Audio stream servers for Internet streaming.

**LANGUAGES:**

- Arabic :Native Language.
- English : Very good (reading, writing and conversation) TOEFL 567.
- Italian: few word necessary for daily life.