

## BASSAM H. HAMMO



King Hussein School of Computing Sciences  
Department of Software Engineering  
Princess Sumaya University for Technology  
Amman, Jordan  
[b.hammo@psut.edu.jo](mailto:b.hammo@psut.edu.jo)

## EDUCATIONAL BACKGROUND

Ph.D. Computer Science, DePaul University, Chicago, IL	2002
Ms. Computer Science, Northeastern Illinois University, Chicago, IL	1993
Bs. Computer Science, Jordan University, Jordan	1987

## CAREER PROFILE

Track record of excellence in administration, research and teaching with over 20 years of teaching experience and ten years of multi-industrial experience. Senior Quality Assurance Engineer experienced in the successful development and release of many industrial products in the United States. Proven skills in software testing, development, analysis and documentation. Solid communication and interpersonal skills coupled with international experience and multicultural background. Reliable, well organized, react positively to pressure, committed to quality work and superior jobs performance. Bi-lingual, Arabic and English.

## PROFESSIONAL EXPERIENCE

### A. Administration & Teaching Experience

Princess Sumaya University for Technology, Amman Jordan <b>Prof. Sabbatical leave from the University of Jordan</b>	Sept 2021 – Current
University of Jordan, Amman Jordan (Full Professor)	Sept 2016-Sept 2021
University of Jordan, Amman Jordan (Full Professor) <b>Dean</b> of King Abdullah II School of Information Technology	Sept 2016-Sept 2018
Princess Sumaya University for Technology, Amman Jordan <b>Assoc. Prof. Sabbatical Leave from the University of Jordan</b>	Sept 2014 – Sept 2015
University of Jordan, Amman Jordan <b>Deputy Dean, head of graduate studies committee</b>	Sept 2012 – May 2014
King Saud University, Riyadh SA ( <b>Assoc. Prof. Unpaid Leave from UoJ</b> ) <b>Head of graduate parallel program committee, member of ABET committee</b>	Sept 2010 – July 2012
University of Jordan, Amman Jordan <b>Chairman</b> of the Computer Information Systems Department	Sept 2008 – Sept 2010
University of Jordan, Amman Jordan <b>Assistant Dean for Computer Labs Affairs</b>	Sept 2004 – Sept 2006
University of Jordan, Amman Jordan (Assistant Professor)	Sept 2003
University of Robert Morris, Chicago, IL Senior Computer Science Lecturer	Nov 1997 – Aug 2003
DePaul University, Chicago, Illinois Teaching Assistant, School of Computer Science	Mar 1994 – Jun 1996

## B. Work Experience

Classified Ventures (Chicago Tribune), Chicago, IL, USA. <u>Sr. Quality Assurance Analyst, Appartments.com, Cars.com</u>	Oct 1998 – Nov 2002
CCC Information Services, Chicago, IL, USA. <u>Quality Assurance Analyst, Server Re-Engineering Group</u>	May 1997 – Oct 1998
CCH Inc. (Wolters Kluwer Business) Chicago, Illinois, USA. <u>Quality Assurance Analyst, Electronic Production Group</u>	Aug 1995 – May 1997
MCI Telecommunications, Chicago, Illinois, USA. <u>LAN Administrator, Internal Communication Group</u>	Nov 1994 – Jun 1995
Jordan Computer Center, Amman, Jordan <u>Software Developer</u>	Dec 1989 – Aug 1992

## TAUGHT COURSES

### A. Undergraduate Courses

Natural Language Processing  
Human Computer Interaction  
Database Management Systems  
Distributed Databases  
Object Oriented Programming Languages (Java)  
Software Engineering

### B. Graduate Courses

Advanced Topics in Natural Language Processing  
Advanced Topics in Databases  
Advanced Topics in Data Mining

## SUPERVISION OF PHD & MASTER STUDENTS

No.	Year	Title
1.	2021	An Attention-Based Transformer Model for Arabic Image Captioning (PhD)
2.	2021	A Hybrid Approach for Breast Cancer Recurrence Prediction: A Case Study from KHCC/Jordan (PhD)
3.	2020	Towards Building Real-Time Adaptive Machine Learning Model for the Classification of COVID-19 Questions in Arabic (PhD)
4.	2020	Cyberbullying Detection in Arabic Tweets: Corpus Construction and System Development (PhD)
5.	2020	A Framework and Apparatus for Clustering Arabic Text Documents Based-On the Bond Energy Algorithm (PhD)
7.	2020	Exploring Non-Human Traffic in Online Digital Advertisements: Analysis and Prediction (PhD)
8.	2017	Extracting Information from Arabic-Based Controlled Text Domains Assisted by Description Logic (PhD)
9.	2017	Enhancing the Performance of Association Rule-Based Classifiers Applied on Selected Gold Standard Datasets (PhD)
10.	2020	A Fully Annotated Dataset for Jordanian Children with Cerebral Palsy: Construction, Cleansing, and Preparation for Machine (MS)
11.	2018	The Design and Implementation of an Analytical System for Tracking Chronic Diseases in Jordan
12.	2017	Storyboard Creation Based on Text Extraction and Image Annotation
13.	2017	Towards an Improvement of Arabic Root Extraction Techniques
14.	2016	Classification of Beta Thalassemia Using Data Mining Techniques
15.	2016	Towards Building a Prophetic Ontology Based on Quran and Hadith
16.	2013	Towards Multithreaded Sliding Window to Improve Exact Pattern Matching Algorithms in Searching Text Documents
17.	2013	Internationalization of Weka: Towards a Multilingual Toolkit
18.	2013	The Design and Implementation of a Conversational Agent for Arabic Learning Environment
19.	2013	Improving Web Search Using Semantic Web Crawler
20.	2013	Designing and Developing XML-Based Semantic Concordance on Arabic Historical Principle Corpus

21.	2013	The Design and Implementation of an Arabic Question Answering System Based on the Universal Networking Language (UNL)
22.	2010	Investigating The Impact Of Using Latent Semantics In Bilingual (Arabic- English ) Text
23.	2010	Investigating The Syntactical Structure Of Arabic Sentences
24.	2010	Extracting N-gram Phrases from Tagged Arabic Corpus
25.	2010	An Investigation of Techniques to Optimize Spam Filtering
26.	2009	Investigating Text Categorization Techniques Using Arabic Corpus
27.	2009	Toward Developing Tools For Arabic Corpus
28.	2009	Extracting Emotional Expressions From Unstructured Text Based On Emotion-Ontology
29.	2009	Using Mutation Testing To Generate Test Cases For Exception Handling Coverage In SQL Database
30.	2008	Arabic Webpage Classification Based On Fuzzy Association
31.	2008	Knowledge Discovery In AI-Hadith Using Text Classification Algorithm
32.	2007	Experimenting With Automatic Summarization Of Arabic Text
33.	2007	Applying Text Mining Algorithms For Knowledge Discovery On The Holy Quran Text
34.	2006	Investigating Dual Domain Watermarking In HIS Color Model
35.	2006	Arabic Voice-Based Information Retrieval
36.	2006	A computer-Based System for Classifying Human Chromosomes and Detecting Early Deficiencies

## PUBLICATIONS

Authors	Title	Publication	V	N	PP	Y
Shannag, Fatima; <b>Hammo, Bassam H,</b> Hossam Faris	The Design and Construction of a Fully Annotated Arabic Corpus for Cyberbullying Detection	<b>Under Review.</b> The International journal of Information Processing and Management				<b>2021</b>
Abrar Al-Sowi, <b>Bassam Hammo,</b> Nihad AlMasri, Hossam Faris, Fatima Al-Qwaqzeh	Exploring Multiple Feature-Dataset of Children with Cerebral Palsy for Machine Learning Classification: Data Compilation Challenges of Cases from Jordan	<b>Under Review.</b> The Egyptian Informatics Journal				<b>2021</b>
Almahmoud, Sawsan; <b>Hammo, Bassam;</b> Al- Shboul, Bashar; Obeid, Nadim;	A hybrid approach for identifying non-human traffic in online digital advertising	The international journal of Multimedia Tools and Applications	<b>In press</b>			<b>2021</b>
Tantawi, I.K., Abushariah, M.A.M. & <b>Hammo, B.H.</b>	A deep learning approach for automatic speech recognition of The Holy Qur'an recitations.	International Journal of Speech Technology <a href="https://doi.org/10.1007/s10772-021-09853-9">https://doi.org/10.1007/s10772-021-09853-9</a>	<b>In press</b>			<b>2021</b>
Almahmoud, Rana; <b>Hammo, Bassam;</b> Faris, Hossam;	A Modified Bond Energy Algorithm with Fuzzy Merging and its Application to Arabic Text Document Clustering	International journal of Expert Systems with Applications	159		113598	<b>2020</b>
Al-Thwaib, Eman; <b>Hammo, Bassam H;</b> Yagi, Sane;	An academic Arabic corpus for plagiarism detection: design, construction and experimentation	International Journal of Educational Technology in Higher Education	17	1	1-26	<b>2020</b>
Aljarah, I.; Hijazi, N.; Faris, H.; Qaddoura, R.; <b>Hammo, B.;</b> Abushariah, M.; Alfawareh, M.;	Intelligent detection of hate speech in Arabic social network: A machine learning approach	International journal of Information Science			1-19	<b>2020</b>
Mohammad Fasha, <b>Bassam Hammo,</b> Nadim Obeid, Jabir Widian	<u><a href="#">A Hybrid Deep Learning Model for Arabic Text Recognition</a></u>	International Journal of Advanced Computer Science and Applications	11	8	1-11	<b>2020</b>
Majdi Ahed, <b>Bassam H Hammo,</b> Mohammad AM Abushariah	An Enhanced Twitter Corpus for the Classification of Arabic Speech Acts	International Journal of Advanced Computer Science and Applications	11	3	207-215	<b>2020</b>
Almahmoud, Sawsan; <b>Hammo, Bassam;</b> Al- Shboul, Bashar;	Exploring Non-Human Traffic in Online Digital Advertisements: Analysis and Prediction	International Conference on Computational Collective Intelligence			663-675	<b>2019</b>

A. Alzaqebah, B. Smadi and <b>B. H. Hammo</b>	Arabic Sentiment Analysis Based on Salp Swarm Algorithm with S-shaped Transfer Functions	<i>11<sup>th</sup> International Conference on Information and Communication Systems (ICICS)</i>			179-184	<b>2020</b>
N. Al-Milli and <b>B. H. Hammo</b>	A Convolutional Neural Network Model to Detect Illegitimate URLs	<i>11<sup>th</sup> International Conference on Information and Communication Systems (ICICS)</i>			220-225	<b>2020</b>
Sanna Abu Sini; <b>Hammo, Bassam H;</b> Obeid, Nadim;	<i>Enhanced Pattern Matching Algorithms for Searching Arabic Text Based on Multithreading Technology</i>	2019 IEEE International Symposium on Signal Processing and Information Technology (ISSPIT)			1-7	<b>2019</b>
Shannag, Fatima; <b>Hammo, Bassam H;</b>	Lessons Learned from Event Detection from Arabic Tweets: The Case of Jordan Flash Floods near Dead Sea	2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT)			806-811	<b>2019</b>
Alhaj, Fatima; Qutishat, Duha; Harahsheh, Heba Al; Obeid, Nadim; <b>Hammo, Bassam;</b>	Detecting DDI Using Ontology: Drug Mechanism of Action	2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT)			179-185	<b>2019</b>
Sundus, Katrina; Al-Haj, Fatima; <b>Hammo, Bassam;</b>	A Deep Learning Approach for Arabic Text Classification	2019 2nd International Conference on new Trends in Computing Sciences (ICTCS)				<b>2019</b>
Alwidian, Jaber; <b>Hammo, Bassam H;</b> Obeid, Nadim;	WCBA: Weighted classification based on association rules algorithm for breast cancer disease	Applied Soft Computing	62		536-549	<b>2018</b>
AlAgha, Alaa S; Faris, Hossam; <b>Hammo, Bassam H;</b> Ala'M, Al-Zoubi;	Identifying $\beta$ -thalassemia carriers using a data mining approach: The case of the Gaza Strip, Palestine	Artificial intelligence in medicine	88		70-83	<b>2018</b>
Qasem, Mais Haj; Qaddoura, Raneem; <b>Hammo, Bassam;</b>	Educational Data Mining (EDM): A Review	New Trends in Information Technology (NTIT)–2017			149	<b>2017</b>
Fasha, Mohammad; Obeid, Nadim; <b>Hammo, Bassam;</b>	A Proposed Model for Extracting Information from Arabic-Based Controlled Text Domains	New Trends in Information Technology (NTIT)–2017			86	<b>2017</b>
Ahmad, Alia Al-Sayed; <b>Hammo, Bassam;</b> Yagi, Sane;	Construction of an English-Arabic Political Parallel Corpus	New Trends in Information Technology (NTIT)–2017	2		93	<b>2017</b>
Al-Sanasleh, Hanan A; <b>Hammo, Bassam H;</b>	Building Domain Ontology: Experiences in Developing the Prophetic Ontology From Quran and Hadith	2017 International Conference on New Trends in Computing Sciences (ICTCS)			223-228	<b>2017</b>
Abuqaddom, Inas; <b>Hammo, Bassam;</b>	A survey of data replication techniques for MANET databases	2017 2nd International Conference on the Applications of Information Technology in Developing Renewable Energy Processes & Systems (IT-DREPS)				<b>2017</b>
Al-SayedAhmad, Alia; <b>Hammo, Bassam;</b> Yagi, Sane;	ENGLISH-ARABIC POLITICAL PARALLEL CORPUS: CONSTRUCTION, ANALYSIS AND A CASE STUDY IN TRANSLATION STRATEGIES	JJCIT	3	3	157-171	<b>2017</b>
<b>Hammo, Bassam;</b> Yagi, Sane; Ismail, Omaima; AbuShariah, Mohammad;	Exploring and exploiting a historical corpus for Arabic	Language Resources and Evaluation	50	4	839-861	<b>2016</b>

Varouqa, Marwa; <b>Hammo, Bassam;</b>	WIT: Weka interface translator	International Journal of Speech Technology	19	2	359-371	<b>2016</b>
<b>Hammo, Bassam;</b> Obeid, Nadim; Huzayyen, Israa;	ViStA: a visualization system for exploring Arabic text	International Journal of Speech Technology	19	2	237-247	<b>2016</b>
<b>Hammo, Bassam;</b> Evens, Martha; Abu-Salem, Hani;	Effects of the College Major on Assessments of Arabic Text Summaries	International Arab Journal of Information Technology (IAJIT)	13	3		<b>2016</b>
Abushariah, Mohammad AM; Neustein, Amy; <b>Hammo, Bassam H;</b>	Note from the guest editors: Special issue on Arabic natural language processing and speech recognition: A study of algorithms, resources, tools, techniques, and commercial applications	International Journal of Speech Technology	19	2	175-176	<b>2016</b>
Alwidian, Jaber; <b>Hammo, Bassam;</b> Obeid, Nadim;	FCBA: fast classification based on association rules algorithm	International Journal of Computer Science and Network Security (IJCSNS)	16	12	117	<b>2016</b>
Alwidian, Jaber; <b>Hammo, B;</b> Obeid, Nadim;	Enhanced CBA algorithm based on apriori optimization and statistical ranking measure	Proceeding of 28th International Business Information Management Association (IBIMA) conference on Vision			4291-4306	<b>2016</b>
Moubaidin, Asma; Shalbak, Ola; <b>Hammo, Bassam;</b> Obeid, Nadim;	Arabic Dialogue System for Hotel Reservation based on Natural Language Processing Techniques	Computación y Sistemas	19	1	119-134	<b>2015</b>
Al-Husain, Dalal; <b>Hammo, Bassam;</b>	Investigating the Readiness of College Students for ICT and Mobile Learning: A Case Study from King Saud University	International Arab Journal of e-Technology (IAJET)	4	1	48-55	<b>2015</b>
Ismail, Omaima; Yagi, Sane; <b>Hammo, Bassam;</b>	Corpus Linguistic Tools for Historical Semantics in Arabic	International Journal of Arabic-English Studies (IAES)	15		135-152	<b>2015</b>
<b>Bassam, Hammo;</b> Asma, Moubaidin; Nadim, Obeid; Abeer, Tuffaha;	Formal description of Arabic syntactic structure in the framework of the government and binding theory	Computación y Sistemas	18	3	611-625	<b>2014</b>
Obeid, Nadim; Huzayyen, Israa; <b>Hammo, Bassam;</b>	Experimenting with Arabic text visualizing	2013 1st International Conference on Communications, Signal Processing, and their Applications (ICCSPA)				<b>2013</b>
Moubaidin, Asma; Tuffaha, Abeer; <b>Hammo, Bassam;</b> Obeid, Nadim;	Investigating the syntactic structure of Arabic sentences	2013 1st International Conference on Communications, Signal Processing, and their Applications (ICCSPA)				<b>2013</b>
<b>Hammo, Bassam;</b> Al-Shargi, Faisal; Yagi, Sane; Obeid, Nadim;	Developing tools for Arabic corpus for researchers	Proceedings of the second workshop on Arabic corpus linguistics (WACL-2)				<b>2013</b>
Al-Husain, Dalal; <b>Hammo, Bassam;</b>	The Role of Mobile Technology and Social Media in Mobile Learning: A Literature Review	Proceedings of the 2012 International Conference on E-Learning, E-Business, Enterprise Information Systems, & E-Government			204-211	<b>2012</b>
<b>Hammo, Bassam H;</b> Sleit, Azzam; Baarah, Aladdin; Abu-Salem, Hani;	A Computational Approach for Identifying Quranic Themes	International Journal of Computer Processing Of Languages	24	2	189-206	<b>2012</b>

<b>Hammo, Bassam H;</b> Abu-Salem, Hani; Evens, Martha W;	A hybrid arabic text summarization technique based on text structure and topic identification	International Journal of Computer Processing Of Languages	23	1	39-65	<b>2011</b>
<b>Hammo, Bassam;</b> Saraireh, Basem;	Integrating ICT in Education: Impact on Teachers 'Beliefs and Practices	Ict Acceptance, Investment and Organization: Cultural Practices and Values in the Arab World			52	<b>2010</b>
<b>Hammo, Bassam H;</b>	Towards enhancing retrieval effectiveness of search engines for diacritized Arabic documents	Information retrieval	12	3	300-323	<b>2009</b>
Al-Zoubi, M; Hudaib, Amjad; Huneiti, Ammar; <b>Hammo, Bassam;</b>	New efficient strategy to accelerate k-means clustering algorithm	American Journal of Applied Sciences	5	9	1247-1250	<b>2008</b>
El-Haj, Mahmoud O; <b>Hammo, Bassam H;</b>	Evaluation of query-based Arabic text summarization system	2008 International Conference on Natural Language Processing and Knowledge Engineering				<b>2008</b>
<b>Hammo, Bassam;</b> Sleit, Azzam; El-Haj, Mahmoud;	Enhancing retrieval effectiveness of diacritized Arabic passages using stemmer and thesaurus	The 19th Midwest Artificial Intelligence and Cognitive Science Conference (MAICS2008)				<b>2008</b>
<b>Hammo, Bassam;</b> Sleit, Azzam; El-Haj, Mahmoud;	Effectiveness of query expansion in searching the Holy Quran					<b>2007</b>
Hudaib, Amjad; <b>Hammo, Bassam;</b> Alkhader, Yara;	Towards software requirements extraction using natural language approach	6th WSEAS Int. Conf. on Software Engineering, Parallel and Distributed Systems, Greece				<b>2007</b>
<b>Hammo, Bassam;</b>	Beyond Traditional Lecturing: Interactive Computer-Based Classroom					<b>2007</b>
Hudaib, Amjad; <b>Hammo, Bassam;</b> Alkhader, Yara;	Systematic Development for Software Requirements Using Natural Language Processing Techniques	WSEAS Transactions on Computers Research	2	2	255-261	<b>2007</b>
<b>Hammo, Bassam;</b> Hudaib, Amjad;	Shifting the Gears: Towards Automatic Assessment of Undergraduate Students at the University of Jordan					<b>2007</b>
<b>Hammo, Bassam;</b> Hudaib, Amjad; Huneiti, Ammar; Al-Zoubi, Moh'd Belal;	Preparing Jordanian Teachers to Face the Challenges in Applying Information and Communication Technology in Education					<b>2007</b>
<b>Hammo, Bassam;</b> Qutaishat, Munib; Bsaiso, Majdi;	Towards Extracting XML Data Using A Template Schema	7th Dutch-Belgian Information Retrieval Workshop (DIR 2007)				<b>2007</b>
Alkhader, Yara; Hudaib, Amjad; <b>Hammo, Bassam;</b>	Experimenting with extracting software requirements using NLP approach	2006 International Conference on Information and Automation			349-354	<b>2006</b>
Nino, David; Abdallah, Moussa; <b>Hammo, Bassam;</b>	Dual domain watermarking in the biological color model	2006 International Conference on Information and Automation			407-411	<b>2006</b>
<b>Hammo, Bassam;</b> Abuleil, Saleem; Lytinen, Steven; Evens, Martha;	Experimenting with a question answering system for the Arabic language	Computers and the Humanities	38	4	397-415	<b>2004</b>
Alsamara, K; Abu-Salem, H; Abuleil, S; <b>Hammo, B;</b>	Building Automated Indexes to Improve Arabic Information Retrieval	Proceedings of 2003 International Conference on Management Science & Engineering, Georgia, USA			2573-78	<b>2003</b>

<b>Hammo, Bassam;</b> Abu-Salem, Hani; Lytinen, Steven;	QARAB: A question answering system to support the Arabic language	Proceedings of the ACL-02 workshop on Computational Approaches to Semitic Languages				<b>2002</b>
<b>Hammo, B.;</b> Abu-Salem, H.; Lytinen, S.; Abuleil, S.;	Identifying Proper Nouns for an Arabic Question Answering	13th Midwest Artificial Intelligence and Cognitive Science Conference MAICS 2002			130-136	<b>2002</b>