

# OBAIDA M. AL-HAZAIMEH

## Curriculum Vitae



### Associate Professor, PhD

AL-BALQA' APPLIED UNIVERSITY  
AL-HUSON University College, Irbid, JORDAN  
Department of Computer Science &  
Information Technology

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### PERSONAL DATA:

Name : Obaida M. Al-Hazaimeh  
Birth : 17 of December, 1982  
Religion : Islam  
Nationality : Jordanian

### ACADEMIC QUALIFICATIONS:

**Doctor of Philosophy in Computer science, Thesis Title:** "NEW CRYPTOGRAPHIC ALGORITHMS FOR ENHANCING SECURITY OF VOICE DATA".

Program Structure : Research (Thesis)

Mode of study : Full time

📅 2007 - 2010

**Master of Computer science, University Science Malaysia. Mini-Thesis Title:** "ANALYZING IMAGES USING IMAGE THRESHOLDING TECHNIQUES".

Program Structure : Mix mode

Mode of study : Full time

📅 2005 - 2006

**Bachelor of Computer science, Applied Science University.**

📅 2000 - 2004

### SPECIALIZATION:

CRYPTOGRAPHY, PARALLEL & DISTRIBUTED COMPUTING, AND MACHINE LEARNING

### RESEARCH INTEREST:

Dr. Obaida M Al-Hazaimeh's current research focus is on Cryptography, which is mainly focusing on creating an electronic equivalent of security primitives such as confidentiality, integrity, identification, and authentication. To achieve this goal, the research concentrates on the design of cryptographic protocols and the development of security architectures for computer systems. The theoretical work on cryptographic

algorithms and protocols is mainly based on number theory; other fields of mathematics relevant to cryptography such as elliptic curve, braid theory and chaos theory are also being investigated. The goal is to achieve efficient and secure solutions.

### **EXPERIENCE:**

- Feb. 2011 – Sep. 2011** : **Full Time Lecturer.** Department of Computer Science and Information Technology. JADARA University, Jordan.
- Sep. 2011- Sep. 2014** **Full Time Lecturer.** AL-BALQA' Applied University, AL-HUSON University College, Department of Information Technology. Jordan.
- Sep. 2014 - Sep. 2016** : **Head of Department.** AL-BALQA' Applied University, AL-HUSON University College, Department of Information Technology. Jordan.
- Sep. 2016 - to date** : **Full Time Lecturer.** AL-BALQA' Applied University, AL-HUSON University College, Department of Information Technology. Jordan.

### **PROMOTIONS:**

- **Feb. 2011** : Assistant Professor from AL – Balqa' Applied University, Jordan
- **Mar. 2016** : Associate Professor. AL – Balqa' Applied University, Jordan.

### **TEACHING EXPERIENCE:**

<b><u>TITLE/SUBJECT</u></b>	<b><u>TERM/DATES</u></b>	<b><u>ACADEMIC LEVEL</u></b>	<b><u>INSTITUTION</u></b>
Managerial Mathematics	1 <sup>st</sup> 2009-2010	Postgraduate	USM
Operating System	1 <sup>st</sup> 2010-2011	Postgraduate	ASU
Algorithms Design and Analysis	1 <sup>st</sup> 2010-2011	Undergraduates	ASU
Introduction to Computer Design	1 <sup>st</sup> 2011-2012	Undergraduates	ASU
Internet Skills	1 <sup>st</sup> 2011-2012	Undergraduates	JU
(CS 101) Computer Skills	2 <sup>nd</sup> 2011-2012	Undergraduates	JU
Discreet	2 <sup>nd</sup> 2011-2012	Undergraduates	JU
Algorithms	2 <sup>nd</sup> 2011-2012	Undergraduates	JU
Programming in C++	2 <sup>nd</sup> 2011-2012	Undergraduates	JU
Publishing on the Internet	1 <sup>st</sup> 2011-2012	Undergraduates	JU
Network Security	1 <sup>st</sup> 2011-2012	Undergraduates	BAU
Algorithms	2 <sup>nd</sup> 2012-2013	Undergraduates	BAU
Computation Theory	2 <sup>nd</sup> 2011-2015	Undergraduates	BAU
Data Structure Principles	2 <sup>nd</sup> 2012-2013	Undergraduates	BAU
Advance Data Structure	1 <sup>st</sup> 2012-2013	Undergraduates	BAU
Routing and Switching	1 <sup>st</sup> 2011-2012	Undergraduates	BAU
Programming in C++	2 <sup>nd</sup> 2012-2013	Undergraduates	BAU

Compiler Design	1 <sup>st</sup> 2011-2015	Undergraduates	BAU
Programming in Java	2 <sup>nd</sup> 2013-2014	Undergraduates	BAU
Image Processing	2 <sup>nd</sup> 2013-2014	Undergraduates	BAU
System Analysis and Design	2 <sup>nd</sup> 2014-2015	Undergraduates	BAU
Special Topics/Data Mining	1 <sup>st</sup> 2015-2016	Undergraduates	BAU
Computer Graphics	1 <sup>st</sup> 2016-2017	Undergraduates	BAU
Mobile Ad-Hoc Security	1 <sup>st</sup> 2017-2018	Undergraduates	BAU
Data Structure	2 <sup>nd</sup> 2019-2020	Undergraduates	BAU
Security analysis	2 <sup>nd</sup> 2019-2020	Undergraduates	BAU
Compiler Design	2 <sup>nd</sup> 2019-2020	Undergraduates	BAU

### **RELEVANT ACADEMIC COURSEWORK**

Network Simulation, Research Methodology, Advanced Operating System, Advanced Database System, Advanced System Analysis, Software Engineering, Advanced Computer Networks, Advanced Knowledge Based System, Information System Management, E-Business, Research Project in Information System, many of programming language (i.e. JAVA, C++, C#...et).

### **AREAS OF EXPERTISE:**

- Cryptographic.
- Wireless Network.
- Switching and routing.
- Distributed Systems.
- Image processing.
- Information Technology.
- Mobile Ad-Hoc Security.
- Machine Learning.

### **LANGUAGE SKILLS:**

<b>LANGUAGE</b>	<b>READING</b>	<b>SPEAKING</b>	<b>WRITING</b>	<b>LISTENING</b>
<b>ARABIC</b>	: Excellent	Excellent	Excellent	Excellent
<b>ENGLISH</b>	: Excellent	Excellent	Excellent	Excellent

[**Note:** I have passed (TOEFL) Test of English as a Foreign Language –IBT Grading 97 out of 120 from ETS]

### **COMPUTER SKILLS:**

- MATLAB
- Security analysis tools (NIST, and DIEHARD)
- ASP Technology: Microsoft FrontPage, Dream Weaver and ASP.NET
- Programming Languages: FORTRAN, VB.NET, Pascal, C++, Java, C# and WML
- Database Management such as Oracle, SQL Server, and Ms Access.

### **ACADEMIC ACTIVITIES & Memberships:**

- Member of the supreme committee to ensure the quality of academic programs at JADARA University (2010-2011).
- Member of university strategic planning committee at Al-Balqa' Applied University. Department of Information Technology (2013-2017).
- Member of selective academic's books at Al-Balqa' Applied University. Department of Information Technology (2012-2019).
- Member of scientific research committee at Al-Balqa' Applied University. AL-HUSON University College (2014-2018).
- Supervisor and Coordinator for Graduation Project/ Dept of Information Technology / Al-Balqa' Applied University (2013 – 2019).
- Member of student's affairs committee at Al-Balqa Applied University. AL-HUSON University College (2012-2016).
- Member of courses transfer committee at Al-Balqa' Applied University. AL-HUSON University College (2013-2018).
- Member of laboratories and tenders committee at Al-Balqa' Applied University. AL-HUSON University College (2013-2017).
- Member of scientific day committee at Al-Balqa' Applied University. AL-HUSON University College. Department of Information Technology (2015-2017).
- Member of exams committee of several computer science courses at Al-Balqa Applied University. Department of Information Technology.
- Acting as external examiner for MS students at The University of Jordan, Yarmouk University, and Al-Albet University (2014-2018).
- Member of the general committee to repair the certification exam (Diploma) at Al-Balqa Applied University, Jordan, (2012-2018).
- Member of the supreme committee to ensure the quality of academic programs (Diploma) at Al-Balqa Applied University, Jordan, (2019-2020).

### **SUPERVISORS: Ph.D. THESIS SUPERVISED**

- Supervisor for MALEK MAGED AL-N'AWASHI, PhD, University of SALFORD MANCHESTER, UK, School of Computing, Science & Engineering, 01 October 2015.

### **EXTERNAL EXAMINER:**


- HIBA ALSGHAIER "Software Fault Prediction Using Optimization Algorithm with Genetic Algorithm". Supervised by Dr. MOHAMMED AKOUR, Computer Information system. YARMOUK University, Irbid, Jordan. 2018.
- OMAR OTOUM "New algorithm for digital image encryption". Supervised by Dr. MAZEN AL-ZYOUD, Computer Information system, Al Albet University, Al-Mafraq-Jordan. 2018.


- BARA'A MOHAMMAD HAMDONI "Synchronization of Chaotic Systems with Application to Cryptography". Supervised by Dr. MOHAMMED AL-JAMAL, Mathematics. YARMOUK University, Irbid, Jordan. 2018.


#### **FINANCIAL ASSISTANCES & FUNDS:**

- Fund from Employment Technical and Vocational Education Training (E-TVET Fund - Ministry of Labor - JORDAN)to promote vocational technical skills training and employment opportunities for young men and women with the goal of reducing unemployment in Closed-Circuit Television camera (CCTV), 2017.
- Fund from Employment Technical and Vocational Education Training (E-TVET Fund - Ministry of Labor - JORDAN)to promote vocational technical skills training and employment opportunities for young men and women with the goal of reducing unemployment in advanced Closed-Circuit Television camera (CCTV- IP Camera), 2017/2018.

#### **PUBLICATIONS:** Journals & Conferences-Refereed:


1. **Obaida M. Al-Hazaimeh**, Hatim Mohamad Tahir, Zurni B. Omar, and Wan RozainiBt Sheik Osman, "Improving the Performance of Real-Time VoIP Applications Using New Cryptography Approach", *International Workshop and Conference Putra World Trade Centre (PWTC)*, 2008, KL, Malaysia.
2. **Obaida M. Al-Hazaimeh**, Zurni B. Omar, Wan R., Hatim B., "Calculation For Delay Sources of The Voice Packets and Their Codecs In Real Time Applications". *Journal of International Cryptology (UPM)*, 2008, Malaysia.
3. **Obaida M. Al-Hazaimeh**, Hatim Mohamad Tahir, "New Cryptographic Algorithms over AES\_Rijndael algorithm", *Journal of Information Technology, Universiti Teknologi Malaysia*, Jilid 14, bil 2, Des. 2009.
4. **Obaida M. Al-Hazaimeh**, Zurni B Omar, Wan RozainiBt Sheik Osman Hatim B Mohamad Tahir, "New Approach For Enhancement A Real-Time Application (VoIP) Security Over the Internet", *International Conference on Information Theory and Engineering (ICITE 2009)*. November 2009, Kota Kinabalu, Malaysia.
5. **Obaida M. Al-Hazaimeh**, "Increase the Security Level for Real-Time Application Using New Key Management Solution", *International Journal of Computer Science Issues (IJCSI)*. Vol.9, Issue 3, May 2012. [Citation Indexed Journal (EBSCO/SCIRUS/CiteSeerX, DBLP)]. 
6. **Obaida M. Al-Hazaimeh**., " Hiding Data in Images Using New Random Technique", *International Journal of Computer Science Issues (IJCSI)*. Vol.9, Issue 4, July, 2012. [Citation Indexed Journal (EBSCO/SCIRUS/CiteSeerX, DBLP)].
7. IsraSitan Al-Qasrawi, and **Obaida M. Al-Hazaimeh**, " A Pair-Wise Key Establishment Scheme for Ad Hoc Networks", *International Journal of Computer Networks &*

*Communications (IJCNC)*.Vol.5, No.2, March 2013. [Citation Indexed Journal (ISI, THOMSON REUTERS / Elsevier (SCOPUS)/SSCI/AI/ URLICH)]. 


8. **Obaida M. Al-Hazaimeh**, " A New Approach for Complex Encrypting and Decrypting Data", *International Journal of Computer Networks & Communications (IJCNC)*. Vol.5, No.2, March 2013. [Citation Indexed Journal (ISI, THOMSON REUTERS / Elsevier (SCOPUS)/SSCI/AI/ URLICH)]. 


9. **Obaida M. Al-Hazaimeh**, " Design of a New Block Cipher Algorithm", *International Institute for Science Technology and Education (IISTE)*, Vol.3, No.8, 2013. [Citation Indexed Journal (Elsevier (SCOPUS) /EBSCO/ULRICH)]. **scopus**


10. Malek Maged Al-N'awashi, **Obaida M. Al-Hazaimeh**. " A Guideline to Video Codecs Delay", *International Institute for Science Technology and Education (IISTE)*. Vol.3, No.8, 2013.[Citation Indexed Journal (SCOPUS/EBSCO/ULRICH)]. **scopus**

11. **Obaida M. Al-Hazaimeh**, Saleh A. Alomari, J. Alsakran, N. Alhindawi. "Across correlation - new based technique for speaker recognition". *International Journal of Academic Research (IJACR) Part A*; Vol.6, No.3, 2014. [Citation Indexed Journal (ISI THOMSON REUTERS)]. 

12. Ma'moun A. Al-smadi, **Obaida M. Al-Hazaimeh**, Nouh Alhindawi. "A Dual Curvature Shell Phased Array Simulation for Delivery of High Intensity Focused Ultrasound". *Computer and Information Science, Canadian Center of Science and Education (ISSN 1913-8989)*. Vol. 7, No. 3; 2014.[Citation Indexed Journal (SCOPUS/ISI/SSCI/AI)].









13. **Obaida M. Al-Hazaimeh**, Nouh Alhindawi,Sofyan M. A. Hayajneh,&Ammar almomani." A new HENON chaotic map - based algorithm for image encryption". *MAGNT Research Report(ISSN. 1444-8939)*. Vol. 2 No.4, PP: 261- 266, July 2014. [Citation Indexed Journal (ISI, THOMSON REUTERS Indexed)]. 

14. **Obaida M. Al-Hazaimeh**, "A Novel Encryption Scheme for Digital Image - Based on One Dimensional Logistic Map". *Computer and Information Science, Canadian Center of Science and Education (ISSN 1913-8989)*. Vol. 7, No. 4; 2014.[Citation Indexed Journal (SCOPUS/ISI/SSCI/EBSCO)]. 









15. **Obaida M. Al-Hazaimeh**, NouhAlhindawi, Nesreen A. Otoum, "A Novel Video Encryption Algorithm-Based on Speaker Voice as The Public Key", *IEEE International Conference on Control Science and Systems Engineering (CCSSE 2014), China. 2014*. Available at:  
[http://www.ieee.org/conferences\\_events/conferences/conferencedetails/index.html?Conf\\_ID=34130](http://www.ieee.org/conferences_events/conferences/conferencedetails/index.html?Conf_ID=34130) 

16. Ammar Almomani, Atef Obeidat, Karim Alsaedi, **Obaida M. Al-hazaimeh**, Mohammed Al-Betar, "Spam Email Filtering using ECOS algorithms",*Indian Society for Education and Environment, Indian Journal of Science and Technology*,Vol. 8, 2015.

[Citation Indexed Journal (ISI, THOMSON REUTERS/SSCI/EBSCO/ Elsevier (SCOPUS))]. 

17. **Obaida M. Al-Hazaimeh**, “Combining Audio Samples and Image Frames for Enhancing Video Security”, *Indian Society for Education and Environment, Indian Journal of Science and Technology*, Vol. 8, 2015. [Citation Indexed Journal (ISI, THOMSON REUTERS/SSCI/URLICH/ EBSCO/ Elsevier (SCOPUS))]. 
18. Nouh Alhindawi, **Obaida M. Al-Hazaimeh**, Rami Malkawi, Jamal Alsakran, “A Topic Modeling Based Solution for Confirming”, *International Journal of Advanced Computer Science and Applications (IJACSA)*. Vol. 7, No. 2, 2016. [Citation Indexed Journal (THOMSON REUTERS/SSCI/EBSCO/ Elsevier (SCOPUS))]. 
19. Sofyan M. A. Hayajneh, AbdulRahman Rashad, Omar A. Saraereh, **Obaida M. Al-hazaimeh**, “A Computerized High Quality - Low Computational Cost Technique for Principal Object Segmentation Applied in Solar and Medical Imaging”, *Computer and Information Science, Canadian Center of Science and Education* (ISSN 1913-8989). Vol. 9, No. 2; 2016.[Citation Indexed Journal (SCOPUS/ISI/SSCI/EBSCO)]. 
20. Malik Al-Nawashi, **Obaida M. Al-Hazaimeh** and Mohamad Sarae, “A Novel Framework For Intelligent Surveillance System Based On Abnormal Human Activity Detection In Academic Environments”, *Neural Computing and Applications* (DOI: 10.1007/s00521-016-2363-z ) Vol. 27 , No. 4 ; 2016[Social mentions by University of SALFORD MANCHESTER (U.K)], [Citation ISI impact factor 1.569] .
21. **Obaida M. Al-Hazaimeh**, Mohammad F Al-Jama, Nouh Alhindawi and Abedalkareem Omari, "Image Encryption Algorithm Based On-Lorenz Chaotic Map With Dynamic Secret Keys", *Neural Computing and Applications* (DOI: 10.1007/s00521-017-3195-1) Vol. 13 , No. 3 ; 2017 [Citation ISI impact factor 1.569] .
22. Nouh Alhindawi, Ziad Saraireh, Omar Meqdadi, **Obaida M. Al-Hazaimeh**, Mohammad Subhi Al-Batah, “Revising Program’s Internal Documentation for Developers Sustaining”, *Journal of Theoretical and Applied Information Technology*. Vol. 95, No. 18; 2017 [Citation Indexed Journal (SCOPUS/Ulrich's Periodicals Directory /SSCI/EBSCO)]. 
23. Gharaibeh, N., **Al-Hazaimeh, O.M.**, Al-Naami, B. and Nahar, K.M.O., “An effective image processing method for detection of diabetic retinopathy diseases from retinal fundus images”, *Int. J. Signal and Imaging Systems Engineering*, Vol. 11, No. 4, pp.206–216; 2018[Citation Indexed Journal (SCOPUS/ISI/SSCI/EBSCO)]. 
24. Khalid Nahar, Nouh Alhindawi, **Obaida Al-hazaimeh**, “NLP AND IR BASED SOLUTION FOR CONFIRMING CLASSIFICATION OF RESEARCH PAPERS”, *Journal of Theoretical and Applied Information Technology*, Vol. 96, No. 16, pp.5269-5279; 2018. 




25. **Obaida M. Al-Hazaimeh**, Malik Al-Nawashi and Mohamad Saraee, "Geometrical-based approach for robust human image detection", *Multimedia Tools and Applications*, Vol. 25, No.1; 2018 [Citation ISI impact factor 1.569]  Springer.
26. **Obaida M. Al-Hazaimeh**, Monther Al-Bsool, Ma'moun Al-Smadi, "Developing A Mobile Application to Simplify The Educational Process Using Android Operating System", *The 1st International Conference in Technical Education*, Al-Balqa' applied University-Salt - Jordan, 19 - 20 Dec, 2018.
27. **Obaida M. Al-Hazaimeh**, Ma'moun Al-Smadi, "Automated Pedestrian recognition Based on Deep Convolutional Neural Networks", *the 4th International Conference on Multimedia and Image Processing (ICMIP)*, Kuala Lumpur, Malaysia. January 19-21, 2019 [Best Presentation Award]. Available at: <http://www.ijmlc.org/index.php?m=content&c=index&a=show&catid=98&id=991>
28. Nedal Tahat, A. K. Alomari, Ajab Al-Freedi, **Obaida M. Al-Hazaimeh** & Mohammad F. Al-Jamal, "An Efficient Identity-Based Cryptographic Model for Chebyhev Chaotic Map and Integer Factoring Based Cryptosystem", *Journal of Applied Security Research*, (DOI: 10.1080/19361610.2019.1621513) Vol. 14 , No. 3 ; PP: 257-269, 2017. 
29. **Obaida M. Al-Hazaimeh**, M.F. Al-Jamal, A.K. Alomari, M.J. Bawaneh, N. Tahat. "Image Encryption Using Anti-Synchronization and Bogdanov Transformation Map". *International Journal of Computing Science and Mathematics*, 2019 (In press). 
30. Mohammad Subhi Al-Batah, Nouh Alhindawi, Saleh Oqeili, and **Obaida M. Al-Hazaimeh**, " Source Code Explorer System to Enhance the Software Maintainability and Scalability". *International journal of education and information technologies*, Vol. 13, 2019. 
31. Nedal Tahat, Ashraf A. Tahat, Maysam Abu-Dalu, Ramzi B. Albadarneh, Alaa E. Abdallah, **Obaida M. Al-Hazaimeh**, " A new RSA public key encryption scheme with chaotic maps". *International Journal of Electrical and Computer Engineering (IJECE)*, Vol. 10, No. 2, PP. 1430-1437, April 2020. 
32. Nedal Tahat, A. K. Alomari, **Obaida M. Al-Hazaimeh** & Mohammad F. Al-Jamal, "An efficient self-certified multi-proxy signature scheme based on elliptic curve discrete logarithm problem". *Journal of Discrete Mathematical Sciences & Cryptography*. Vol. 23, No. 4, pp. 935–948, 2020. 
33. **Obaida M. Al-Hazaimeh**, "A new dynamic speech encryption algorithm based on Lorenz chaotic map over Internet Protocol". *International Journal of Electrical and Computer Engineering (IJECE)*, Vol. 10, No. 5, PP. 4828-4834, 2020. 
34. **Obaida M. Al-Hazaimeh**, Mohammad Al- Jamal, Mohammed Bawaneh, and Nouh Alhindawi, " A New Image Encryption Scheme Using Dual Chaotic Map Synchronization" *The International Arab Journal of Information Technology (IAJIT)*, Vol. 18, No. 1, 2021. 



35. **Obaida M. Al-Hazaimeh**, "A new speech encryption algorithm based on dual shuffling HÉNON chaotic map ". *International Journal of Electrical and Computer Engineering (IJECE)*, Vol. 11, No. 3, 2021. **scopus**

#### **JOURNALS AND CONFERENCES REVIEWER:**

- IEEE International Conference on Control Science and Systems Engineering (CCSSE 2011, 2012, 2013, 2014).
- IEEE International Conference on Program Comprehension (ICPC, 2011, 2012, 2013, 2014).
- Computer and Information Science ([www.ccsenet.org/cis](http://www.ccsenet.org/cis)), Canadian Center of Science and Education (2014/2015/2016).
- Journal of Communication Networks and Information Security (IJCNIS) ([www.ijcnis.org](http://www.ijcnis.org)), (2013/2014).
- Journal of American Science (J Am Sci), ([www.jofamericanscience.org](http://www.jofamericanscience.org)), (2014).
- International Journal of Advanced Computer Science and Applications (IJACSA).
- Neural Computing and Applications (  Springer ISI impact factor 1.569).
- IEEE Access (2019/2020).

#### **REFERENCES:**

- 1. Mohamad (mo) saraee, Professor**  
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- 2. Mohammed S. Ibbini, Professor**  
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Jordan University of Science and Technology  
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- 3. Samer Samarah, Professor**  
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YARMOUK University  
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Full Professor of Data Science - Data Mining  
E-mail: [samers@yu.edu.jo](mailto:samers@yu.edu.jo)

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**Note: For further information, details, or documents, don't hesitate to contact me, please.**

**Last updated: October 08, 2020**