

# CURRICULUM VITA

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**Nawaf O. Alsrehin, Ph. D**

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Computer Information Systems Department

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## PROFESSIONAL OVERVIEW

I consider teaching is a very important and enjoyable academic duty. While there are many reasons why teaching is important, the most compelling one is that it is one of the most effective ways to pass on our knowledge, thus ensuring that our field grows and prospers. I enjoy teaching for two reasons. First, there is almost nothing more rewarding than seeing someone's eyes light up as they comprehend a new concept. And second, in the process of teaching a difficult concept to others, we ourselves tend to gain a deeper understanding of this concept. Teaching is exhilarating. I never feel more energized than after a class that has gone well.

My research focuses on computer vision, pattern recognition, image and video processing, video transcoding and streaming, multimedia communications and services, selection and composition of multimedia services, MapReduce for multimedia applications, and content-based multimedia retrieval systems and applications. I dedicate my life, as a faculty member, serving our generations, our community, and our field as well.

## EDUCATION

- **Ph.D., Computer Science**, Utah State University, Logan, UT, USA, 2016, GPA 3.92/4.0. Title: Toward a general parametric model for assessing the impact of video transcoding on objective video quality
- **M.Sc., Computer Information Systems**, Yarmouk University, Irbid, Jordan, 2006, GPA 88.1%, ranking as 3rd out of 17. Title: Applying Partition around Medoids (PAM) Like Clustering Algorithm for Enhancing Retrieval Processes in Arabic Language Text Retrieval System Based on Different Similarity Measures.
- **B.S., Computer Science**, Yarmouk University, Irbid, Jordan, 2003, GPA 71.1%.

## TEACHING EXPERIENCE

June 2016 till now	Assistant Professor, Computer Information Systems Department, faculty of Information Technology and Computer Sciences, Yarmouk University, Irbid, Jordan.
2017 – 2019 (2 years)	Department Head, Computer Information Systems Department, faculty of Information Technology and Computer Sciences, Yarmouk University, Irbid, Jordan.

2012 to 2016	Graduate Teaching/Research Assistant, Computer Science Department, Utah State University, Logan UT, USA
August 2013 to December 2013,	Instructor for the “CS2410 Graphical User Interface Development in Java” course, Computer Science Department, Utah State University, Logan UT, USA
May 2015 to July 2015	Lab Instructor for the “CS1410: C++ Programming Language” course, Computer Science Department, Utah State University, Logan UT, USA.
August 2011 to December 2012	Adobe Flash developer in the Engineering Education Department, Utah State University, with Dr. Ning Fang (ning.fang@usu.edu).
February 2008 to August 2011	Full time lecturer, Yarmouk University, Faculty of Information Technology and Computer Science, Computer Information Systems Department, Irbid, Jordan
September 2006 to August 2007	Full time lecturer, King Saud University, Faculty of Information Technology and Computer Science, computer science department, Al-Riyadh, Saudi Arabia.
February 2006 to January 2008	Part-time lecturer in the computer science department, Jordan University of Science and Technology (Irbid – Jordan), Yarmouk University (Irbid – Jordan), Arab Open University (Amman – Jordan), and Al-Albayt University (Al-Mafraq – Jordan).

## PUBLICATIONS

- **Nawaf O. Alsrehin**, Aws Maqableh, Ahmad Klaib, A Survey of Data Mining and Artificial Intelligence Techniques used in Smart Traffic Management and Control Systems, to be submitted to the IEEE Access Journal, 2019 (Under Review).
- Aws Magableh, Muhannad Makhadmeh, **Nawaf O. Alsrehin**, Ahmad Klaib, Smart Traffic Light Management Systems: A Systematic Literature Review, Journal of Theoretical and Applied Information Technology, 2019 (Accepted).
- Ahmad F. Klaib, **Nawaf O. Alsrehin**, Wasen Y. Melhem and Haneen O. Bashtawi, IoT Smart Home using Eye Tracking and Voice Interfaces for Elderly and Special Needs People, Journal of Communications, 2019.
- **Nawaf O. Alsrehin** and Bilal Abul-Huda, A General Structure for the Approaches Used in the Human Action and Activity Recognition from Video, the International Arab Conference on Information Technology (ACIT'2017), Sfax University, Tunisia, December 22-24, 2017.
- **Nawaf O. Alsrehin** and Ahmad Klaib, An Algorithm for Measuring the Video Motion Quality based on Frame Rate Reduction, the 2<sup>nd</sup> International Computer Sciences and Informatics Conference (ICSIC 2017). Sept. 23, 2017 – Sept.25, 2017, Amman, Jordan.
- **Nawaf O. Alsrehin**, "Toward a General Parametric Model for Assessing the Impact of Video Transcoding on Objective Video Quality" (2016). All Graduate Theses and Dissertations. 4888. <http://digitalcommons.usu.edu/etd/4888>.
- **Nawaf O. Alsrehin** and Stephen W. Clyde, "QoS-Aware Video Transcoding Service Selection Process," Journal of Media & Mass Communication, Vol. 1, No. 2, pp. 61-68, December, 2015. doi: 10.12720/jmmc.1.2.61-68.

- **Nawaf O. Alsrehin**, QoS-aware Video Transcoding Service Composition Process in a Distributed Cloud Environment, International Journal of Innovative Research in Computer and Communication Engineering, Volume 3, pp 3726-3748, 30 May 2015; doi:10.15680/ijirce.2015.0305001.
- Sameh Ghwanmeh, Ghassan Kanaan, Riyadh Al-Shalabi, and **Nawaf O. Alsrehin**, "Automatic Query Expansion for Arabic Text Retrieval System Based on an Association Clustering Thesaurus", Information Technology Journal Vol. 4, Issue 4, pp 476-483, 2005, ISSN 1812-5638.

## FUNDED PROJECTS

- **Video Quality Evaluation for Synthetic Video Sequences.**
  - Funding Agency: Yarmouk University, Department of Scientific Research
  - Budget: 6,386 JD
  - Year: 2019-2020
- **Traffic Management System using IoT.**
  - Funding Agency: Yarmouk University, Department of Scientific Research
  - Budget: 9,978 JD
  - Year: 2018-2020
- **Smart home system for people with special needs using the Audio interface and remote-control using eye movement.**
  - Funding Agency: Yarmouk University, Department of Scientific Research
  - Budget: 9,570.5 JD
  - Year: 2018-2020

## HONORS AND AWARDS

- A Scholarship from Yarmouk University to pursue my Ph.D. in computer science, September 2011 to August 2015, Utah State University, USA.
- Best Oral Presentation Award, in the Second International Conference on Multimedia Communication Technology (ICMCT 2015), Hong Kong, September 19-21, 2015.
- Travel Awards to attend the 2nd International Conference on Multimedia and Communication Technologies (ICMCT 2015). Hong Kong, September 19-20, 2015:
  - RGS graduate student travel award from school of graduate student, Utah State University, USA.
  - Student travel award from school of engineering, dean office, Utah State University, USA.
  - Computer Science Department travel grant, Utah State University, USA.

## MEMBERSHIPS

- American Society for Research (ASR), [www.asr.org](http://www.asr.org)
- IEEE Advance Teaching for Humanity, Graduate Student, Utah State University, 2015, [www.ieee.org](http://www.ieee.org)
- Scientific Committee (SC) member for the IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT), 2019).

- Conference committee member in Mosharaka International Conferences,

## **POSTERS**

- Nawaf O. Alsrehin and Stephen W. Clyde, "VTOM: Toward A General Parametric Model for Assessing the Impact of Video Transcoding on Objective Video Quality", GrTS Research Week, Utah State University, April 2016, USA.
- Nawaf O. Alsrehin and Stephen W. Clyde, "QoS-Aware Video Transcoding Service Selection Process", Computer Science Department, Utah State University, Spring 2014, Fall 2015.
- Nawaf O. Alsrehin and Stephen W. Clyde, "QoS-Aware Video Transcoding Process", Computer Science Department, Utah State University, Industry Day, Spring 2014.

## **TRAINING AND CERTIFICATIONS**

- August 21 -25, 2016, A certificate for the completion of the workshop about developing new faculty members from Yarmouk University-Faculty Development Center, Irbid, Jordan.
- November 13, 2012. Membership certificate of the Golden Key International Honour Society by Utah State University, Logan, UT, USA.
- August 13 - 22, 2012, International Teaching Assistant workshop (ITA) given by the Intensive English Language Institute at Utah State University, Logan, UT, USA.
- December 26, 2009, Using Interactive Smart Boards and Tools in Collaborative Learning given by Ketab Technology company in Yarmouk University, Irbid, Jordan.
- June 28, 2009 – July 29, 2009, Electronic Learning using Moodle given by Queen Rania Center for Jordanian Studies and Community Service in Yarmouk University, Irbid, Jordan.
- June 10 – 12, 2008. Design and Evaluation of Innovation Policy in Developing Countries given by Jordan Innovation Center, Royal Scientific Society, and United Nations University in Princes Somayah University, Amman, Jordan.

## **PERSONAL/SCIENTIFIC SKILLS**

- Excellent Hardware Maintenance.
- Excellent Various Software Installations. Operating System (OS): (MS-DOS, Windows 98, NT, 2000, XP, Vista, 7, Server, Advanced Server, Mandrake Linux 8.2.).
- Programming Languages: (Assembly, FORTRAN, Prolog, Pascal, C++, Visual Studio.NET, C#, Java and AspectJ, MATLAB)
- Web Programming development (XHTML, HTML, XPath, XQuery, XML)
- Database Management Systems: (Advanced Access 2000, 2002, Oracle10g, Workbench, DataLog, Pig-Latin, Hadoop)
- Web Page development (ASP.NET, Ioinic, AngularJS)
- Object Oriented Methodologies (Modeling Languages): UML, Booch, and Coad Methodology.
- Modeling Tools: Rational Rose, Smart Draw, Meta Mill, Request Brow, Visual Paradigm UML 8.3.
- Geographic Information System (GIS) Software Tools: ArcView 3.2, ArcGIS.

- Multimedia Software: Adobe Flash CS5.5, Adobe Photoshop CS5, Adobe Illustrator CS3. SQL tools MySQL 5.2 CE, OQL, SQL server.
- Image Processing applications using MATLAB.
- Parallel Computing: MPI-C++ under UNIX. Scripting Languages: PostScript, JavaScript.

## PRACTICAL SKILLS

- Participated in evaluating TransJ project. This project is proposed by Anas Alsoboh at the computer science department, Utah State University. My task was implementing three tasks using TransJ.
- Participated in evaluating CommJ project. This project is proposed by Ali Raza at computer science department at Utah State University. My task was implementing three tasks using CommJ.
- Participated in developing a computing system of Principal Basma Hospital in Jordan (Visitor, Staff, and Accounting), and going on programming it for Database Analysis course project,
- Participated in analyzing and developing of Jordan Micro Credit Company (JMCC) as a requirement of System Analysis course project,
- Participated in analyzing and programming of Athletic Activity Office in Al-Yarmouk University as a requirement of Fourth Generations Programming Language course projects by using Oracle 8i with Developer 6.0,
- Participated in dealing with re-establishing of al-Aqaba institutionary system (practical study),
- Participated in establishing a Web site for the Marine Science Center in Aqaba.

## COURSES THOUGHT

- Utah State University (USU), Logan UT, USA
  - Graphical User Interface Development in Java
  - C++ Programming Language
- Yarmouk University, Irbid, Jordan
  - Computer Skills I and II
  - Informatics and Society
  - Introduction to Computer Science
  - Introduction to Information System
  - Introduction to Computer Information System
  - HTML Programming
  - Software Engineering Lab (Rational Rose, Request Pro., and N-Unit)
  - Multimedia Systems Lab (Adobe Flash CS3, Photoshop CS3, Illustrator CS3)
  - Multimedia Systems
  - Advanced Topics in Multimedia Systems
  - Human Computer Interaction
- King Saud University, Alriyadh, Saudi Arabia
  - Data Structure

- Discrete Mathematics
- Programming using Visual Basic.NET
- Jordan University of Science and Technology (JUST), Irbid, Jordan
  - Programming using C++
  - Programming using Visual Basic.NET
- Arab Open University, Amman, Jordan
  - Computer Skills I and II
- Al Albayt University, Al Mafraq, Jordan
  - Computer Skills I and II

## REFERENCES

- Prof. Dr. Samer Samarah, Full Professor, Dean of the Faculty of IT and CS, Yarmouk University, [samers@yu.edu.jo](mailto:samers@yu.edu.jo), office: (+962) 2 7211111 Ext. 2632,
- Dr. Stephen Clyde, Associate Professor, Computer Science Department, Utah State University, [stephen.clyde@usu.edu](mailto:stephen.clyde@usu.edu), Phone (435) 797-2307, Old Main 401D [Major Advisor].
- Dr. Curtis Dyreson, Associate Professor, Computer Science Department, Utah State University, [curtis.dyreson@usu.edu](mailto:curtis.dyreson@usu.edu), Fax# (435) 797-3265, Office# (435) 797-0742