


# SAWSAN BANI-YASEEN

Assistant Professor Medical Imaging and Information  
Technology Vision Robotic Engineering.


## PERSONAL INFORMATION


 **Gender**  
Female


 **Nationality**  
Jordanian

 **Place of birth**  
W. Germany

## CONTACT INFORMATION

 **Phone number**  
00962781599746


 **Email**  
dr.suzanee@gmail.com  
dr.susanee@gmail.com

 **Address**  
House no.46, street ibn al haitham,  
iskan atibaa (medical doctors  
compound), irbid , south  
compound ,Irbid

## LANGUAGES

 **Arabic ,English, German  
and Malay**

## LANGUAGE COMPETENCY

 **Oral,spoken and written  
proficiency in English.**

**Oral, spoken and written  
proficiency in Arabic.**

**Oral, spoken and written  
intermediate in Malay.**

**Oral, spoken and written  
rudimentary in German.**

## SYNOPSIS

I have completed my PhD where my specialization area lies in the field of “InformationTechnology and Multimedia System” from Engineering Faculty, Universiti PutraMalaysia since 13 Dec 2012. I hold a Master degree in Computer System Engineering(Universiti Putra Malaysia UPM, Malaysia), and the first degree in Computer & ControlSystem Engineering (Yarmouk University, Jordan). I was a lecture at National IrbidUniversity (NIU University, Jordan), and a senior lecture at Higher College ofTechnology HCT (Muscat-Oman), I worked as a senior lecturer at IUKL University.

Accomplished PhD with more than six years of experience in conducting high levelscientific research in digital imaging and multimedia research. Motivated by challengesto improve imaging system and vision in degraded videos due to multiple noise factorsthat can be used in video editing, video indexing, IT cyber security (Endpoint CyberSecurity) such as video surveillance and vision based navigation...etc. However currentfield of interest is in medical imaging, digital earth sciences especially for geohazardand weather applications, cyber security, and artificial intelligence. Cyber security isthe practice of defending computers, servers, mobile devices, electronic systems,networks, and data from malicious attacks. Mostly known as information technologysecurity or electronic information, recently with the need demand of informationsecurity gained a high demand due to its importance and direct involvement of different users in different sectors starting from health to politics, this high demand gave interestto research it and develop techniques that can defend data from intruders. During myteaching experience several proactive supervisions for technology researches, that weresuccessful. Dedicated scholar with strong teaching experience. Diplomatic supervisorwith sophisticated knowledge in my field. Highly developed work ethic, and reputationfor integrity. I taught in several undergraduate and postgraduate coursed in severalcolleges. Fluent in English, Arabic, Germany and the ability to converse in BahasaMalay.

## FIELD OF SPECIALIZATION AND INTEREST

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- Multimedia and Information Technology System Engineering.
- Computer System Engineering, specialized image processing and enhancement.
- IT Cyber Security (Endpoint Cyber Security).
- Medical Imaging.
- Artificial intelligence
- Digital Earth Sciences (Geohazard, Weather, Climate Change).

## ACADEMIC QUALIFICATION

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- Ph.D.; Information and Multimedia Technology System Engineering, Faculty of Engineering, Universiti Putra Malaysia (UPM).

**CGPA: 3.8 out of 4.0.**

Dissertation Title: Rain Streak Removal Using Emboss and Spatial-Temporal Depth Filtering Technique in Video Keyframes.

- MSc (Eng.), Computer System Engineering- Image Processing, Faculty of Engineering, Universiti Putra Malaysia (UPM).  
Dissertation Title: Applying YUV Color Mode in Color Image Processing by Using Java Swing.
- B.Eng., Computer & Control Robotic System Engineering, Yarmouk University, Irbid- Jordan.
- Diploma in Novell from Royal Computer Cultural Center Amman-Jordan, 1994.
- Diploma in Computer Maintenance from Royal Computer Cultural Center Amman-Jordan, 1994.

## COMPUTER SKILL

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- Matlab
- Web design tools
- Unix, Linux
- Novell
- AutoCAD
- ArcGIS
- Microsoft Office & tools
- Language packages: Java, C, C++, Basic, Visual Basic, etc
- Graphic software
- Statistical softwares
- Image enhancing softwares
- Oracle Data Base
- Adobe Photoshop CS6
- MAYA

## EMPLOYMENT EXPERIENCE

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National Irbid University, Jordan  
(**Lecturer**)

HCT, Manpower Ministry, Oman  
(**Senior Lecture**)

University Putra Malaysia (UPM)  
( **Graduate Research Assistantship and PhD candidate**)

Universiti Putra Malaysia  
(**Postgraduate Student**)

NCR, Amman- Jordan  
(**Training Engineer**)

Al-Shalah Computer Center, Irbid - Jordan  
(**Training Engineer**)

University Putra of Malaysia,Member with Image Processing & Multimedia Group  
(**Graduate Research Assistant**)

University of Malaya  
(**Researcher**)

University Northern BorderKingdom of Saudi Arabia  
(**Researcher, Research projects under Deanship of Scientific Research**)

## TEACHING

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Artificial Intelligence advanced topics in game theory, image processing Matlab, pattern recognition, object-oriented programming, Data structure, Operating system, multimedia and information, Master level (Postgraduate Courses) knowledgemanagement, the undergraduate honors thesis seminar, and the departmental dissertation.

**The following some major topics (Undergraduate Courses) that I taught in several colleges:**

1. Introduction to Computer Science/ Computer Skills.
2. Introduction to Information Technology.
3. Programming in Java.
4. Programming in C & C++.
5. Visual Basic.
6. Software Engineering.
7. Computer Programming for Engineer.
8. Multimedia & Web Page Design.
9. Object-oriented Programming.
10. Computer Architecture.
11. Operating System.
12. Image Processing.
13. Microprocessor System.
14. Pattern Recognition.
15. Matlab.
16. Graduation Project.
17. Diploma Project.
18. Artificial intelligent .

**The following some major topics (Postgraduate Courses) that I taught in IUKL University :**

1. System Development.
2. Management Information System.
3. Computer, Organizational Behavior.

## STUDENT RESEARCH EXPERIENCE

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As part of my placement in HCT college and others, I was assigned multiple research and projects that highlighted the potential of student capability of inducing new techniques for pushing the student capabilities to the maximum where they were just undergraduate. My idea was to create a new generation capable of creating and thinking and verify his ideas through interesting projects and research.

- Going beyond this point involving the undergraduate to write a senior thesis preparing them for post graduate studies.
- Involving them in writing a review paper that will enhance their capability of thinking and prepare them for researches as a pre-step.
- Applying on them a semi module scheme where the undergraduate had to fulfill a defending thesis section.
- Impressive outcome resulted and many researches were created.

**The following some of senior projects which I was as supervisor for more than 50 students:**

4. Car NiCad Battery Charger.
5. Bank Security Alarm.
6. Telephone Bug.
7. Park-Aid Sensor.
8. Cellular Phone Calling Detector.
9. Everything-That-Moves Alarm.
10. Mini Bug Detector.
11. Infrared Detector.
12. Night Light Saver.
13. Electronic Locker.
14. Fridge Door-Open Alarm & Sound - Light Unit.
15. Multi Voltage Monitor & Self-Powered Battery Tester.
16. High Quality Intercom.

# ACTIVITIES

Institution/Organization to which consultation services are rendered	Nature of consultation service
<ul style="list-style-type: none"><li>• Internal examiner for MSc thesis (IUKL University).</li><li>• Chairman of thesis examination (IUKL University).</li><li>• Internal Examiner for senior thesis (IUKL University, HCT College, &amp; NIU University).</li><li>• Chairman of senior thesis examination (IUKL University, HCT College, &amp; NIU University).</li></ul>	
<ul style="list-style-type: none"><li>• Head of Computer Engineering (HCT College).</li><li>• Member/Chairman in several committees (IUKL University, HCT College, &amp; NIU University).</li><li>• Journal Reviewer</li><li>• Involved in different presentation about management system in universities</li><li>• Assigned in viva panel for master student</li><li>• Attending different Program Professional Talk.</li><li>• Earthquake Risk in Malaysia: Past, Present and Future</li><li>• Personal Financial Planning, Live Rich Save Money</li><li>• Training sessions attended.</li><li>• Cloud Computing and Python &amp; MongoDB Training, October and November 2015</li><li>• Portraiture Photography Workshop</li><li>• SPSS workshop on Understanding Pre Data Analysis.</li><li>• Recent Trends in Computer Science and Electronics”.</li></ul>	
<ul style="list-style-type: none"><li>• <b>Title of some seminars and presentations that I presented as following;</b></li></ul> <ol style="list-style-type: none"><li>1- Managing Multimedia.</li><li>2- Guide to Malaysia through multimedia</li><li>3- Robotics vision &amp; pattern recognition</li><li>4- Development of color image processing</li><li>5- Multimedia technology</li><li>6- Native ATM applications</li><li>7- Web-based color Image Processing software development</li><li>8- Digital image processing</li><li>9- Water drop detection by using Fuzzy Image Processing (FIP)</li><li>10- Weather Element Detection in Robot Vision by Using Fuzzy Image Processing (FIP).</li><li>11- Weather Element Detection in Robot Vision Using Fuzzy Image Processing (FIP), Advanced Technology Congress</li><li>12- Comprehensive study of tropical raindrop behaviour.</li></ol>	



<b>RESEARCHES &amp; CONSULTATIONS</b>	
<b>Researcher, Universiti Putra Malaysia</b>	Weather Elements Detection and Removal in Robotic Vision
<b>Researcher, Northern Border University</b>	Landslides Risk Management
<b>Researcher, Northern Border University</b>	Management of flood in Jeddah, Kingdom of Saudi Arabia
<b>Consultant, Northern Border University</b>	Management of flood in Arar, Northern Border at Kingdom of Saudi Arabia
<b>Researcher, Northern Border University</b>	Synthetic Computer Resistivity Imaging Data Set (Forward) Modeling
<b>Researcher, High Impact Research (HIR) Grant, Universiti Malaya</b>	Electrical Resistivity Tomography for Groundwater Quality Management
<b>Researcher, Universiti Malaya Research Grant (UMRG)</b>	Mapping Subsurface Karstic Terrain and Geohazard Assessment at Ipoh, Perak, Malaysia

## PUBLICATION

- Sawsan K. Shariah, Mohammad Hamiruce Marhaban, Abd Rahman Ramli, and Samsul Bahari Mohd Noor, Comprehensive Study of Tropical Raindrop Behaviour, Global Journal for Engineering and Technology, India, Vol. 1, No. 1, March 2008.
- Sawsan K. Shariah, Mohammad Hamiruce Marhaban, Abd Rahman Ramli and Samsul Bahari Mohd Noor, “Tropical Raindrop Anatomy”, 2<sup>nd</sup> National Intelligent Systems and Information Technology Symposium (ISITS), 30-31 Oct 2007, UPM, Malaysia. ISBN 978-983-42758-2-2.
- Sawsan K. Shariah, Mohammad Hamiruce Marhaban, Abd Rahman Ramli and Samsul Bahari Mohd Noor, Tropical Raindrop Anatomy, Global Journal for Engineering and Technology, India, November 2007.

- Sawsan K. Shariah, Mohammad Hamiruce Marhaban, Abd Rahman Ramli and Samsul Bahari b. Mohd. Noor. Weather Element Detection in Robot Vision, Conference on Intelligent Systems and Robotics, International Advanced Technology Congress 2005, Putrajaya, Malaysia, 6-8 December 2005, ISBN 983-42758-1-1.
  
- Sawsan K. Shariah, Mohammad Hamiruce Marhaban, Abd Rahman Ramli and Samsul Bahari b. Mohd. Noor; 2005, A Review on Detection and Removal of Raindrop Using Cameras, Advanced Technology Congress (ATCi2005), Conf.On Intelligent Systems and Robotics, Dec. 6-8, 2005, Putrajaya, Malaysia.
  
- Mohammed Ismael Abu-Shariah, Sawsan Kamel Shariah, Abdul Rahman Ramli & Abdul Rahim Samsudin, (2011). Image processing for geological applications, Proceedings of National Geoscience Conference 2011: Geoscientist& Ethic for Sustainable Society, The Puteri Pacific Johor Bahru, Malaysia, p150- 151.
  
- Sawsan Kamel Shariah, Mohammad H Marhaban, Abdul Rahman Ramli, & Samsul Bahari b. Mohd. Noor, (2011). Rain detection and removal using a new algorithm, Proceedings of National Geoscience Conference 2011: Geoscientist& Ethic for Sustainable Society, The Puteri Pacific Johor Bahru, Malaysia, p154- 155.
  
- Abu Shariah, M. I. and Shariah, S. K. (2013), Detection The Groundwater Flow Using Electrical Resistivity Tomography Technique, Proceeding- National Geological Conference, Geological Society of Malaysia. 8-9th June 2013, Kinta Riverfront Hotel and Suites, Ipoh, Malaysia, pp 148-149.
  
- Abu Shariah, M. I. I. & Shariah, S. K. (2015). A Simplified Technique to Evaluate Risk Region Using Picture Editing Tools in Microsoft Word. International Journal of Internet of Things, 4 (1A), 16-21.  
<http://article.sapub.org/10.5923.c.ijit.201501.03.html>.
  
- Abu Shariah, M. I. I & Shariah, S. K. (2019). Application of Electrical Resistivity Tomography Synthetic Modeling, Electronic Journal of Geotechnical Engineering. (24.04), pp 931-948.  
<http://www.ejge.com/2019/Ppr2019.0071ma.pdf>.
  
- Abu Shariah, M. I. I & Shariah, S. K. (2021). Landslides Risk Management, (it will submit to WoS Journal).
  
- Abu Shariah, M. I. I & Shariah, S. K. (2021). Management of flood in Jeddah, Kingdom of Saudi Arabia, (it will submit to WoS Journal).
  
- Abu Shariah, M. I. I & Shariah, S. K. (2021). Management of flood in Arar, Northern Border at Kingdom of Saudi Arabia, (it will submit to WoS Journal).



**- Other articles in progress as the following:**

I- A Novel Planning for Groundwater Management (Mohammed Abu Shariah and Sawsan K. Shariah).

II- Catalogue of Electrical Resistivity Tomography inverse models for delineation aquifers (Mohammed Abu Shariah and Sawsan K.Shariah).

III- Dynamic Weather Elements Management in Video Keyframes (Sawsan Kamel Shariah et. al.)

IV- A New Embossing Algorithm for Color Rain Images (Sawsan Kamel Shariah et. al.)

V- Shariah, S. K. and Abu-Shariah, M. I., Bone Fracture Detection Using Least Square Method.

VI- Abu Shariah, M. and Shaiah, S. K. Edge Enhancement and Color Image Processing of Seismic Reflection Section at Region of Interest.