

# SHAVAN ASKAR

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## **PERSONAL PROFILE**

### **Language: English, Kurdish, and Arabic**

I am a PhD holder in the field of Electronic Systems Engineering from the University of Essex\UK, I did my PhD under the supervision of Dr. David K. Hunter and Dr. Dimitra Simeonidou in 2012. I am a Senior Lecturer in the field of Networks Engineering at the College of Engineering\University of Duhok\Kurdistan Region\Iraq. I received my B.Sc. degree in Computer Engineering from Control and Systems Engineering Department, University of Technology, Baghdad in 2001 with an average score of 78.451/100 (ranked 1/106). I awarded my M.Sc. degree in Computer Engineering from the same department in 2003. After completing my MSc study, I employed as an academic staff at the University of Duhok till 2008 when I granted a scholarship from the Ministry of Higher Education\Baghdad\Iraq to do my PhD degree that started in October 2008 and finished successfully in June 2012. My papers accepted in prestigious conferences such as OFC and ECOC and high impact factor (3.58, Q1) journals such as Optics Express. During my PhD period in UK, I worked as a Researcher in two European projects; MAINS project (Metro Architecture enabling Subwavelengths) <http://www.ist-mains.eu/documents> and ADDONAS (Active Distributed and Dynamic Optical Network Access Systems). (<http://www.pianoplus.eu/addonas.html>). I was part of the High Performance Networks group at the University of Essex which is moved into Bristol University in 2012 ([http://www.bristol.ac.uk/engineering/people/group/research\\_group/5403](http://www.bristol.ac.uk/engineering/people/group/research_group/5403)).

Currently, I conduct a scientific research in the field of SDN, IoTs, Smart City, and Optical Burst Switching. I recently published some research on SDN and I am intending to submit some high impact factor journals on the topic of utilizing SDN for IoTs Networks to come up with unprecedented and innovative solutions for smart city services. I am a supervisor of seven MSc students; three of them have already graduated successfully, each one with at least one journal publication before the viva. I am currently supervising four MSc students; two of them are from Iraq on the topic of SDN and Cloud Computing and the other two are international MSc students from Turkey, on the topic of video streaming and security.

I am also a consultant for a leading Telecommunication Company in Iraq (<https://www.linkedin.com/company/rt-group-regional-telecom>). My role is to solve the problems that face our senior engineers and also to come up with ideas on the new technologies that our company can deploy. I started the IPv6 project in 2013 from scratch and hopefully we could have designed it and implemented in our core network and offered it to our customers. Our core network consists of Alcatel and Cisco routers.

## **KEY SKILLS AND TRAINING**

- Certificate of Completion of a workshop on “Integration Problem-based Learning into Engineering Program” Led by the University of Missouri\USA on March 28-30, 2016. (funded project)
- Certificate of Completion of a workshop on “ABET Accreditation: Processes, Methodology and Good Practices” led by the University of Missouri\USA on March 30-1<sup>st</sup> April, 2016. (funded project)

- ABET and PBL certificate from University of Missouri\USA which achieved as part of a training course at the University of Missouri\USA after our submitted proposal was accepted. 18/10/2015-13/11/2015. (funded project)
- Training course of Iraqi University Linkage Program: Collaboration in Higher Education between Michigan State University and University of Duhok Project, Michigan State University, USA, April 10-May 4, 2013. (funded project)
- IPv6 design and implementation, NAT64, DNS6, L2VPN, L3VPN, OSPF, BGP, Network Security. (project manager)
- Participation in PGCHEP training course, Postgraduate Certificate in Higher Education Practice, UK, 2012. (teaching qualification certificate from the higher education\UK)
- Researcher at two European projects;  
ADDONAS:  
([http://www.addonas.eu/wp-content/uploads/2013/01/D.4.1\\_ADDONAS\\_Control\\_Plane\\_extensions\\_high\\_level\\_design\\_v2.0.pdf](http://www.addonas.eu/wp-content/uploads/2013/01/D.4.1_ADDONAS_Control_Plane_extensions_high_level_design_v2.0.pdf))  
([http://www.addonas.eu/wp-content/uploads/2012/10/D2.1\\_ADDONAS\\_Architecture\\_Proposal.pdf](http://www.addonas.eu/wp-content/uploads/2012/10/D2.1_ADDONAS_Architecture_Proposal.pdf)).  
MAINS:  
(<http://cordis.europa.eu/docs/projects/cnect/6/247706/080/deliverables/002-MAINS53.pdf>) (UK, 2010-2012)
- Skills on using Mininet which is the most reliable emulator for SDN networks. I've already started using Raspberry Pi to conduct SDN experiments to see the difference with Mininet. I have some published research on utilizing Mininet for SDN.
- Skills on using Ns-2 simulator which is used to simulate real networks and have an insight into their performance before the implementation phase. This simulator could be fed with real YUV videos after encoding them with an H.264 encoder using the JM software. Then decode them and retrieve the YUV video and display it to have an insight on the network efficiency. My major target is QoS provisioning for real time videos which could be used for Telemedicine, online conferencing, and online gaming that are one of the smart city services.
- C++, Oracle, Visual Basic programming, and VHDL coding language.
- Excellent understanding of SDN, IoT, and I am intending to combine them for the purpose of coming up with new network structures to support smart city applications.
- Excellent understanding of GMPLS, MPLS, optical networks architectures and design.
- Very well organized and structured with excellent time management and the ability to work to deadlines.
- 4 years teaching and research experience in UK at the University of Essex. (UK, 2008-2012)
- 9 years teaching, research, and supervision experience in Kurdistan\Iraq at the College of Engineering\University of Duhok.
- Certificate for completing a training course on OPNET simulator London\Slough. (UK)
- Excellent understanding of networks; I have Cisco exploration instructor certificates from Anglia Ruskin University\UK. I was a Cisco instructor at the University of Essex for 4+ years; I graduated over than 300 Cisco students in UK. (UK, 2008-2012)
- Training course in Seoul, Korea for Technical staff in 18 National Universities in Iraq for the project of establishment of Internet Rooms at 18 national universities in Iraq from December 12 to December 25, 2004, organized by the Korea International Cooperation Agency and LG cable Co. Ltd. Of the Republic of Korea. (Southern Korea, 2004)
- Training course "Oracle and Data Base Management System and Developer" 2000.
- Coding using VHDL coding language.

- Intensive training course for three months in the Computers National Centre\Baghdad\Iraq in 1997.

## **EDUCATION**

### **University of Essex (PhD)**

**2008 – 2012**

*Colchester, Essex*

PhD in Electronic Systems Engineering (Optical Burst Switching Networks)

Thesis Title “**Classified cloning for QoS provisioning in OBS networks**”

### **University of Technology (MSc)**

**2001 – 2003**

*Baghdad, Iraq*

MSc in Computer Engineering

- Key modules: Advanced Data Communications, Computer Networking, Digital Signal Processing, Real Time and Computer Control, Parallel Processing, Software Engineering, Intelligent System Design, Digital Techniques and Microprocessors, System Identification.
- Thesis title: “**Simulation of Telemetry Protocol**”

### **University of Technology (BSc)**

**1997- 2001**

*Baghdad, Iraq*

BSc in Computer Engineering

- Key modules: Computer Networks, Digital Signal Processing, Communications, Microprocessors, Computer Architecture, Computer Control, Interfacing, Robotics, Control Engineering, Mathematics.
- Project title: “**Wireless Communication Utilising Ultrasound and Infrared Radiation**”

## **EMPLOYMENT HISTORY**

### **University of Duhok\College of Engineering\Electrical and Computer Engineering Department (2003 - Present)**

#### **MSc Supervision Experience:**

Supervision of MSc Students: Total 7; successfully completed 4; ongoing 3.

- 1- Sulaiman Mohamad Sulaiman, “ Design A Campus Network for University of Zakho with Distributed Denial of Service Experiment”, 2014.
- 2- Nashwan Maslah Fares, “A Novel Semi-symmetric Encryption Algorithm”, 2015.
- 3- Faris Ilyas Ketli, “Software Defined Networking for Critical Real-time Internet Applications, 2015.
- 4- Kanar Yaseen Qader, “Evaluation of Different Service Broker Algorithms for Cloud Computing Networks”, 2016.

- 5- Faez S. Faizi, "A Novel Load Balancing Algorithm for Software Defined Networks Based Datacenters", 2016.
- 6- Farhad, Video encryption, to be arranged in 2017.
- 7- Salah, Voice Encryption, to be arranged in 2017.

### **Teaching Experience for Master Degree students (MSc)**

Advanced Networks, MSc ECE Dept\College of Engineering\University of Duhok 2014/2015  
 Advanced Networks, MSc Computer Science Dept\College of Science\University of Zakho 2014/2015  
 Telecommunication Systems, MSc ECE Dept\College of Engineering\University of Duhok 2014/2015  
 Network Programming and Security, MSc Computer Science Dept\College of Science\University of Zakho 2014\2015  
 Advanced Networks, Master students\ECE\College of Engineering\University of Duhok 2013\2014  
 Optical Networks, MSc students\ECE\College of Engineering\University of Duhok 2013\2014  
 Advanced Networks, MSc \ECE\ College of Engineering\University of Duhok 2012\2013  
 Teaching Module CE784, MSc School of Computer Science and Electronic Engineering\University of Essex\UK 2008.

### **Teaching Experience for Bachelor Degree students (BSc)**

Computer Networks, 4<sup>th</sup> year ECE, 2015\2016  
 Optical and Satellite Networks, 4<sup>th</sup> year ECE 2015\2016  
 Computer Networks, 4<sup>th</sup> year ECE, 2014\2015  
 Optical and Satellite Networks, 4<sup>th</sup> year ECE 2014\2015  
 Networks, 4th year students ECE dept. 2013/2014  
 CE123: Computer Systems and Networks\ School of Science and Electronic Engineering\University of Essex 2008-2012  
 C++ programming, 1st year students\ ECE\College of Eng. 2006-2007.  
 Mathematics for the 2nd year students\Civil Engineering\ College of Engineering 2006-2007.  
 C++ programming for the first year students\Physics Dept.\College of Science 2004-2006.  
 C++ programming for the first year students\ Math. Dept. \College of Science 2005-2006.  
 Artificial Intelligence 4th year students\ Computer Science\College of Science 2003-2004.  
 Software Engineering 4th year students\Computer Science\ College of Science 2003-2004.  
 Logic Circuits\for the 1st year students\College of Science 2003-2004.  
 Electronics Lab 3rd year students\ Physics Dept\ College of Education 2003-2004.

### **Researcher at MAINS (Metro Architectures enabling Sub wavelengths) European project (Budget : € 2,707,881) (2010-2012)**

For more information, kindly refer to the following links:

<http://www.ist-mains.eu/>

<http://cordis.europa.eu/fp7/ict/future-networks/projects/summaries/mains.pdf>

[http://ec.europa.eu/information\\_society/apps/projects/logos/6/247706/080/deliverables/001\\_MAINSD53.pdf](http://ec.europa.eu/information_society/apps/projects/logos/6/247706/080/deliverables/001_MAINSD53.pdf)

## **Researcher in ADDONAS (Active Distributed & Dynamic Optical Network Access Systems) European project (Budget : £ 259,839) (2011-2012)**

For more information, kindly refer to the following links:

[http://www.addonas.eu/wp-content/uploads/2012/10/D2.1\\_ADDONAS\\_Architecture\\_Proposal.pdf](http://www.addonas.eu/wp-content/uploads/2012/10/D2.1_ADDONAS_Architecture_Proposal.pdf)

<http://www.pianoplus.eu/addonas.html>

[http://www.addonas.eu/wp-content/uploads/2013/01/D.4.1\\_ADDONAS\\_Control\\_Plane\\_extensions\\_high\\_level\\_design\\_v2.0.pdf](http://www.addonas.eu/wp-content/uploads/2013/01/D.4.1_ADDONAS_Control_Plane_extensions_high_level_design_v2.0.pdf)

## **University of Essex\UK (2008-2012)**

Cisco Instructor (2008-2012)

Teaching Module CE123 (2008-2012)

Teaching Module CE784, MSc students 2008

## **Assistant Professor at Erbil Polytechnic University (Jan. 2020-Present)**

- 1- teach postgraduate courses
- 2- open PhD courses
- 3- member in the scientific and higher education committee
- 4- supervision of PhD students
- 5- scientific promotion evaluation
- 6- evaluate capstone projects

## **Director General of Scientific Research Center At DPU (Jan. 2017-Dec. 2019)**

- 1- Oversight of Duhok Polytechnic University's research strategy.
- 2- Initiate research activities that contribute to; new discoveries, scientific and technical breakthroughs, innovation, institutional reputation.
- 3- Coordinate and promote the University's research.
- 4- Represent Duhok Polytechnic University to external R&D funding agencies in Iraq as well as abroad.
- 5- Responsible for initiating partnerships and collaborations with industry via research, knowledge transfer, and internships. In addition, managing and following up with the implementation of international programs and agreements.
- 6- Promote international collaboration in research and engage in strategic alliances and networking with other world-wide universities.
- 7- Managerial responsibility of IT directorate of the University.
- 8- Managerial responsibility of skills development directorate. Responsible for skills development of the academic staff members of the DPU.
- 9- Managerial responsibility for the University's English Language programs.
- 10- Promote interdisciplinary research collaboration with the interaction of the University's deans.
- 11- Establish, Maintain, and oversee programs and research's laboratories and centers.
- 12- Assist colleges to deliver the Strategic Plan s targets in order to obtain an improvement in the quality and quantity of the University s research which leads to increasing the University's research grant income.

## **E-Government Expertise at Duhok Governorate Jan. 2015**

Strategic plan to establish E-Government system for Duhok city over the next three years.

Assess the present status of our ICT in Kurdistan and particularly Duhok City.

The plan was laid out and categorized and handed-in to the Governorate of Duhok.

## **Head of E-University Committee at the University of Duhok (2014-2016)**

Design and implement an E-learning application for the University of Duhok to enhance the way of teaching as well as improving the communications between lecturers and students.

Design E-Document, HR, account, and registry system.

The goal was to achieve a paperless university.

### **Head of Optical Fiber Network committee at the University of Duhok (2014-2016)**

Design and implement an Intranet network for the University of Duhok

Utilize Optical Fiber technology to interconnect University buildings’.

Design and implement a modern data centre for the University of Duhok

### **Head of Computer Centre**

**(2004 – 2005)**

University of Duhok, Duhok City-Kurdistan Region\Iraq

- Establishment and provide an Internet service to University of Duhok's colleges.
- Collaborative work to cope up with the technical needs of the University.

### ***Published work***

- Shavan Askar, S.S Al-Majeed, M. Fleury, “Improved Telemedicine System using the H.265 Codec and 4G Networks”, 2016.
- Nashwan Maslah Fares, Shavan Askar, “A Novel Semi-symmetric Encryption Algorithm for Internet Applications”, Journal of Duhok, Vol. 19, No.1, 2016.
- Faris Ketli, Shavan Askar, “An Investigation of MININET Emulator for Evaluating Software Defined Networks Performance”, Journal of Duhok, Vol. 18, No. 1, 2015.
- M. Fleury, S. K. Askar, and S.S. Al-Majeed, "H.265 video over wireless networks for telemedicine and telecare", Chapter accepted for Telemedicine: Emerging technologies, impacts and applications, ed. H. Khaleel, 2015
- Sulaiman Mohamed Sulaiman, Shavan Askar, “Investigation of the Impact of DDoS Attack on Zakho University”, Journal of University of Zakho, Vol 3A, No. 2, 2015
- Faris Ketli, Shavan Askar, “Emulation of Software Defined Network using Mininet in Different Simulation Environments”, IEEE 6th International Conference on Intelligent Systems, Modelling and Simulation ISMS 15, Kuala Lumpur, Malaysia, 9-12 Feb. 2015.
- Salah M. Saleh Al-Majeed, Shavan K. Askar, Martin Fleury, “H.265 Codec over 4G Networks for Telemedicine System Application”, UKSIM, Cambridge, UK, March, 2014.
- S. Askar, G. Zervas, D. K. Hunter, D. Simeonidou, “A Novel Ingress Node Design for Video Streaming over Optical Burst Switching Networks”, Optics Express Journal (3.751 Impact Factor), Vol. 19, No. 26, pp. 191-196.
- S. Askar, G. Zervas, D. K. Hunter, D. Simeonidou, “Adaptive Edge Node to Support QoS in OBS Networks”, Engineering Sciences Conference of the Iraqi Cultural Attache, University College London, London, 1-2, October 2011.
- S. Askar, G. Zervas, D. K. Hunter, D. Simeonidou, “A Novel Ingress Node Design for Video Streaming over Optical Burst Switching Networks”, European Conference on Optical Communications (ECOC) 2011, Geneva, Switzerland, 18-22 September 2011.
- S. Askar, G. Zervas, D. K. Hunter, D. Simeonidou, “Service Differentiation for Video Applications Over OBS Networks”, 16th European Conference on Networks and Optical Communications, 20-22 July 2011, Newcastle-upon-Tyne, UK.
- S. Askar, G. Zervas, D. K. Hunter, D. Simeonidou, “A Novel Scheme for Video Streaming over OBS Networks”, 16th European Conference on Networks and Optical Communications, 20-22 July 2011, Newcastle-upon-Tyne, UK.

- S. K. Askar, G. S. Zervas, D. K. Hunter, D. Simeonidou, "Evaluation of Classified Cloning Scheme with Self-similar Traffic", Third Computer Science and Electronic Engineering Conference (CEEC), 13-14 July 2011, Colchester, UK.
- S. Askar, G. Zervas, D. Hunter, D. Simeonidou, "Adaptive Classified Cloning and Aggregation Technique for Delay and Loss Sensitive Applications for Delay and Loss Sensitive Applications in OBS Networks", OFC 2011, 6-8 March 2011, Los Angeles, CA, USA.
- S. K. Askar, G. Zervas, D. K. Hunter, D. Simeonidou, "A Novel QoS provisioning Scheme for OBS Networks", BROADNETS 2010, 25-27 October 2010, Athens, Greece.
- S. Askar, G. Zervas, D. K. Hunter, D. Simeonidou, "Classified Cloning for QoS Provisioning in OBS Networks", European Conference on Optical Communications (ECOC) 2010, Turin, Italy, 19-23 September 2010.
- Shavan K. Askar, "Implementation of MAC Units on FPGAs for DSP Architecture", Alrafidain Engineering Journal, 20th March 2007. <http://alrafidain.engineering-coll-mosul.com/files/183.pdf>
- Shavan K. Askar, "Numeric Classification using Hopfield Network", Journal of Duhok University, Volume 10, Number 2 2007.
- Shavan K. Askar, "Integration of a Telemetry and Telecommand Protocols", Journal of Dohuk University, Vol. 8, No.1, pp. 68-76, 2005.

### ***MEMBERSHIP***

- Membership of IEEE communication society
- Membership of Kurdistan Engineers union\ Consultant Engineer.
- IEEE officer, SAMIEEE Recipient Officer.
- Membership of Iraqi Engineers Union

### ***Awards***

- Minister of Higher Education 2001 for ranking first on the college.
- Minister of higher Education 2013 for my PhD.
- Grant a Scholarship in 2007 from the Ministry of Higher Education\Baghdad\Iraq
- Grant a fund from Mains project to present my paper in Geneva
- Grant from the University of Essex to present my paper in Turino

### ***INTERESTS***

- I enjoy playing football and chess.
- Swimming.
- I also have interests in world affairs and new technologies.

### ***REFERENCES***

Dr. David K. Hunter (My PhD supervisor)  
dhunter@decayatch.co.uk

Prof. Dr. Rund Hammoudi  
rund.hammoudi@uod.ac