CURRICULUM VITAE

MOHAMMAD M. N. HAMARSHEH
Associate proffesor

PERSONAL DETAILS

Home address : Jenin, Westbank, Palestine	Contact number :	+ 970 42430985
Email address :hamarsheh1@hotmail.com	Mobile number :	+ 970 599205978
Date of birth : 20 June 1975	Marital status :	Married
Nationality : Palestinian	Gender :	Male
Passport : 2373951		

SUMMARY OF QUALIFICATIONS

PhD in Communications and Network Engineering - Optical fiber	:	University Putra Malaysia (Malaysia), 2006
MSc in Computer and Comm. Engineering (Fiber Bragg Gratings)	:	University Putra Malaysia (Malaysia), 2003
BSc (Honours) in Electrical Engineering (Highest grade in the faculty)	:	An-najah National University (Palestine), 1999
Certified Labview Programmer	:	National Instruments (Malaysia), 2002
Novel Administrator	:	Galaxy Information Systems (Palestine), 2000
Matriculation Certificate (One of the top 10 grades in the state)	:	Ya'bad (Palestine) , 1993

EDUCATIONAL QUALIFICATIONS

November 2002 – September 2006	*: PhD in Communications and Network Engineering, University Putra Malaysia.*

- Propose a novel, simple, programmable, and effective OCDMA system based on new family of codes and describes its fundamental principles and implementation solution by:
    - Developing an analytical model for the proposed system.
    - Developing simulation model of the proposed system.
    - Conducting the performance analysis of the proposed system, and compare it with the other related research works.
- Develop a continuous functional code family to be used with the proposed system using shifted sine function.
- Reduce the interference and the effect of noise on the system to improve the BER performance.
- Do further performance improvement of DFH-OCMDA system by signal clipping.
- Thesis title: Dynamic Frequency Hopping Optical Code Division Multiple Access Communications systems.

November 2000 – January 2003	*M.Sc. in computer and communication engineering, University Putra Malaysia.*

Studies have been held to relax the fabrication of apodized fiber Bragg grating by using approximated apodization profiles, the title of the thesis is:

Effects of Segmentation and Step Sampling on Apodized Fiber Bragg Grating.

June 1994 – May 1999	*BSc in Electrical Engineering, An-najah National University (Palestine).*

Final year project: Microprocessor based remote controller has been designed and implemented to control any type of devices, the title of the project is:

Microprocessor Based General Purpose Remote Controller.

WORKING EXPERIENCE

September 2016 –Present	*: Associate professor (2017), Dean, Faculty of Engineering and Information Technology, Arab American University, Jenin, (AAUJ), Palestine*

September 2015 – September 2016	*: Assistant professor, Head of Natural, Applied, and dental sciences Department, Faculty of graduate studies, Arab American University, Jenin, (AAUJ), Palestine*

As a department head in the faculty of graduate studies, the responsibilities include in addition of the assistant professor responsibilities:

- Administration and development of the department.
- Execution of all decisions of the university council, the dean's council, the faculty council, the department council, and the dean.
- Submit, at the end of each academic year, a report to the Dean and the department council on the activities of the department.
- Represent the department internally and externally.
- Submit periodic reports on the work of the department to the dean.
- Distribution of courses offered for the members of the teaching faculty in all programs in the department and in accordance with to their specialties in coordination with programs coordinators.
- Make the necessary arrangements to advice and supervise the graduate students in the department.
- Discussing the results of the students and the list of graduating students.
- Make the necessary arrangement for the comprehensive exam>
- Make the necessary arrangements for the thesis defense.
- Any other tasks assigned by the Dean or the President.

September 2012 –September 2014	*: Assistant professor, Vice Dean, Faculty of Engineering and Information Technology, Arab American University, Jenin, (AAUJ), Palestine*

As a vice dean in the faculty of engineering and IT, the responsibilities include in addition of the assistant professor responsibilities:

- Manage the budget of the faculty
- Assist in handling the academic activities of the faculty
- Any other tasks assigned by the Dean or the President.

June 2014 – September 2014	*: Research visitor, MMU University, Cyberjaya, Malaysia.* *Zamalah program*
July 2013 –September 2013	*: Assistant professor, Acting Dean, Faculty of Engineering and Information Technology, Arab American University, Jenin, (AAUJ), Palestine*

As acting dean in the faculty of engineering and IT, the responsibilities include in addition of the assistant professor responsibilities:

- Manage the faculty affairs according the rules and regulations
- Collaborate with other faculties
- Proposing the graduating students names to the dean's council
- Writing to the president of the university
- Any other tasks assigned by the President of the university.

September 2010 –September 2012	*: Assistant professor, Head of Telecommunication Engineering Department, Arab American University, Jenin, (AAUJ), Palestine*

As a department head in the faculty of engineering and IT, the responsibilities include in addition of the assistant professor responsibilities:

- Supervision and follow-up of the academic and administrative department affairs
- Execution of all decisions of the university council, the dean's council, the faculty council, the department council, and the dean.
- Submit, at the end of each academic year, a report to the Dean and the department council on the activities of the department.
- Call for department meetings, lead the department council, sign the minutes of its meetings, and implement its resolutions.
- Represent the department internally and externally.
- Submit periodic reports on the work of the department to the dean.
- Distribution of courses offered for the members of the teaching faculty in the department and in accordance with to their specialties.
- Assign an academic advisor to students from the department members.
- Any other tasks assigned by the Dean or the President.

September 2008 – September20010	*: Assistant professor, Arab American University, Jenin, (AAUJ), Palestine*

As an assistant professor in the faculty of engineering and IT, the responsibilities include:

- Teach some of the offered subjects and prepare their exams.

- Do research and participate in conferences.
- Supervise and guide students in their research, academic, and social activities.
- Academically advise undergraduate students.
- Participate in the committees and councils of the university.
- Do the best to keep the university in its distinguished academic, research and social guiding level.
- Participate in evaluating and developing the programs and syllabuses.

September 2005 – September 2008	*: Lecturer, Multimedia University, Melaka, Malaysia*

As lecturer at Multimedia university, the responsibilities include:

- To engage in teaching and learning activities by making use of up-to-date and state-of-the-art technologies.
- To prepare and make available course materials to students and Faculty in various delivery modes including MMLS. These materials include tutorials, assignments, projects and lab experiments.
- To be academic advisor to students and to make sure the students get an all-rounded tertiary education of the highest quality.
- To supervise undergraduate projects and to make sure that the results of the projects are of highest standard.
- To supervise postgraduate students (at Masters and/or PhD levels).
- To demonstrate recognition of expertise either through industrial consultancy, invitation to international meetings/conferences as a resource person, or to sit on technical committees of international/national professional bodies/agencies.
- To be actively involved in research activities of the various Faculty Centers of Excellence that can bring income or external funding to the Faculty.
- To assist the Dean to establish links and collaborations with external bodies/agencies this will result in bringing income or funding for the Faculty.
- To use every best effort and mind to produce publications/patents/products/ services that are of international standard.
- To actively involve in the Faculty and University activities.
- To ensure that all spending and expenditure are prudent and cost-effective.
- To maintain and promote the good name of the Faculty and the University at all times.
- To carry out other duties and functions as directed by the Dean of the Faculty.

May 2005 – November 2005	*Consultant, Photronix Technologies Sdn. Bhd., Cyberjaya, Malaysia*

As a consultant to Photronix technologies the responsibilities include:

- Use research outcome to direct the engineers and technicians to produce different new types of FBGs.
- Help in recruiting staff when required.
- Advice on the information technology and data base strategy of the company.

December 2004 – May 2005	*FBG unit head, Photronix Technologies Sdn. Bhd., Cyberjaya, Malaysia*

As a head of the FBG unit head in Photronix technologies the responsibilities include:

- Definition and implementation of the FBG unit production agenda, its strategic alignment to customer's needs, and the maintenance of a global customers and partners network.
- Handle the customer's inquiries and orders and make the orders available to the production lines.
- Use research outcome to direct the engineers and technicians to produce different new types of FBGs.
- Make purchase orders to materials and equipments required for the FBG unit.
- Recruit FBG unit staff when required after the approval of the company CEO.
- Plan the information technology and data base strategy of the FBG unit.

May 2001 – December 2004	*: Researcher, FBG Production and research engineer, Photronix (Malaysia) Sdn. Bhd, Cyberjaya, Malaysia*

As a researcher at Photronix (m), responsibilities include:

- Conducting a research on optical fiber sensing techniques.
- Conducting a research on optical fiber communication techniques.

As product and research engineer at Photronix (m), responsibilities include:

- The implementation of high intensity UV laser optical arrangements for in-fiber grating inscription.
- Establishing optical test facilities for product characterization.
- Handle customer orders and addressing customer needs.
- Conducting a research on opto-mechanical setup for FBG production.

Key skills were obtained by working at Photronix:

- Broad knowledge of fiber optics, optical physics, and optical sensing techniques.
- Experience with fiber optic system design and assembly, and use of laboratory test equipment.
- Hands-on experience with high-intensity UV laser systems for the fabrication fiber gratings.
- Design and packaging of fiber gratings for sensing and device applications.
- Implementation of electronic system control and monitoring architectures, and PC-based data acquisition techniques.

November 2002 – July 2005	*: Graduate Research Assistant, University Putra Malaysia*

Responsibilities include,

- Handling tutorials and discussion classes for undergraduate students.
- Handling optical fiber communication laboratory sessions for final year students.
- Actively involved in research in the area of fiber-optic communication systems especially code division multiple access.

November 1999 October 2000	*: Technical Support Engineer, Palestinian Telecom (Palestine)*

Involved in the area of computer networking. Responsibilities include,

- Member of the team to implement, maintain, support WAN/LAN's in 6 cities including the PCs, printers, and network accessories.
- Member of the committee to open tenders and decide on the suitable one to provide the company with the required network devices and services.

June 1999 - November 1999	*: Teaching Assistant, An-najah National University (Palestine)*

- Handle tutorials and discussion classes.
- Train students in the microprocessor and circuits labs.

SOME TAUGHT COURSES

Level	Course name
Master	High speed networks
Master	Programming languages
Master	Networks security and management
Master	Advanced computer networks
Bachelor	Probability and random variables
Bachelor	Signals and systems.
Bachelor	Analog communication
Bachelor	Digital communications I
Bachelor	Optical communications
Bachelor	Engineering circuit analysis I
Bachelor	Digital logic design
Bachelor	Cryptography and data security
Bachelor	Information security

MEMBERSHIP AND OTHERS

September 2015 – present	:	Member in the engineering association training council, Palestine.
September 2015 – present	:	Member of the faculty of graduate studies council, AAUJ.

September 2015 – present	:	Member of the faculty of engineering and IT council, AAUJ.
September 2012 – present	:	Counselor of the IEEE AAUJ student Branch.
September 2012 – present	:	Member of the IEEE Palestine Chapter committee
September 2012 – September 2013	:	Member of the AAUJ University council.
September 2009- September 2014	:	Member of the faculty of engineering and IT council, AAUJ.
September -2011 September 2012	:	Member of the University Quality Control and Assurance committee, AAUJ.
September 2009- September 2011	:	Member of the University Research committee, AAUJ.
December 2007	:	M2USIC symposium technical committee member, MMU This symposium is held to promote R&D activities and to provide a global forum of discussion for academicians, leading technologists and engineers in multimedia technologies in the Asia Pacific region.
July 2007	:	MIT Final Project coordinator, MMU Coordinate the Project for master students and prepare the documents, forms and flow of activities.
June-2006	:	Celcom program coordinator, MMU Appointed by FIST Dean to Cooperate with Celcom to conduct lectures and hands on labs for staff and students on using mobile web services.

SCHOLARSHIPS AND FUNDS

2012	:	Arab American university Seed Fund (7000 USD) for Making lensed fiber.
2008	:	"Commercial Development of Fibre Optic Sensors For Civil Engineering Applications", Technofund, Ministry of Science, Technology and Innovation, Malaysia. Amount of (5 million RM ~= 1.6 million USD)

2006	:	Projek Perintis Penggunaan Pengesan Fiber Optik Dalam Sistem Amaran Awal Tanah Runtuh di Taman Hillview, Ampang (Pilot Project on Using Fibre Optical Sensor In Landslide Early Warning System At Taman Hillview, Ampang), Jabatan Kerja Raya Malaysia, Agreement No.: JKR/IP/CKC/81/2006, Project Value: RM701,239.00.
2002-2005	:	Graduate Research Assistantship, University Putara Malaysia, Malaysia.
Jul-Aug 1998	:	Scholarship to attend training on computer aided design and manufacturing programming, Phosphate Mines Company, Jordan.
1994-1999	:	Scholarship for undergraduate studies, An-najah National University, Palestine.

TRAINING

September 2006	2 Days	Development of mobile content, Celcom, Melaka, Malaysia
January 2003	2 Weeks	Certified Labview programmer, National Instrument, Kuala Lumpur, Malaysia
Jul-Aug 1998	40 days	Computer aided design and manufacturing programming, Phosphate Mines Company, Aqabah, Jordan.

COMPUTER LITERACY

Experience with LabView, MathCad, Matlab, and C++. General skills include the use of Windows operating system, Microsoft word, excel, outlook, PowerPoint.

LANGUAGES

English, Arabic, and basics of Bahasa Malaysia.

RESEARCH INTERESTS

Optical fiber networking systems, Computer networking, Optical CDMA communication systems, Passive and active optical components, optical fiber Bragg gratings, network security.

PUBLICATIONS
Journals

1. Mohammad M N Hamarsheh, "Hemispherical Thermal lensing of fiber" , International Journal of Application or Innovation in Engineering & Management, Vol 5, Issue 4, April 2016

2. Hamzah M A Hijawi, Mohammad M. N. Hamarsheh, "Performance Analysis of Multi-Path TCP Network", International Journal of Computer Networks & Communications, Vol 8, No. 2, March 2016, **ERA**.

3. Nael Zidan, Mohammad M. N. Hamarsheh, "Implementation of Border Gateway Protocol (BGP) Attributes", International Journal of Application or Innovation in Engineering & Management, Vol 5, Issue 2, February 2016.

4. Mohammad M. N. Hamarsheh, Ahmed Falah , Mohd Ridzuan Mokhtar, "Tunable fiber Bragg grating phase shift by simple pressure packaging", Optical engineering, spie, Vol 54, Issue 1, January, 2015, **ISI**.

5. T Eltaif, H M H Shalaby, S Shaari, M. M. N. Hamarsheh, "Successive interference cancellation for optical CDMA systems: fundamental principles" WSEAS transactions on communications, Vol. 8, Issue 7, pages 668-677, July 2009.

6. T Eltaif, H M H Shalaby, S Shaari, M. M. N. Hamarsheh, "Performance enhancement of successive interference cancellation scheme based on spectral amplitude coding for optical code-division multiple-access systems using Hadamard codes", Optical engineering, spie, Vol 48, Issue 4, April, 2009, **ISI**.

7. T Eltaif, H M H Shalaby, S Shaari, M. M. N. Hamarsheh, "Performance analysis of a hybrid fiber Bragg grating-based spectral-amplitude-coding successive interference cancellation for optical CDMA systems", Optics Communications, Vol 282, Issue 1, pages 1-6, Janary 2009, **ISI**.

8. T Eltaif, H M H Shalaby, S Shaari, M. M. N. Hamarsheh, "Analytical comparison of optical code-division multiple-access systems with and without a successive interference cancellation scheme using modified prime-sequence codes", Optical engineering, Vol 47, Issue 9, September, 2008, **ISI**.

9. ZT Abdul-Mehdi, B Byamba, M. M. N. Hamarsheh, "Security Model for the MCTO Data Transaction Management", International Journal of Computer Science and Network Security, Vol.8 No.6, Pages 140-149, June 2008, **ERA**.

10. Tawfiq Eltaief, Hossam Shalaby, Mohammad M. N. Hamarsheh, "A proposal of successive interference cancellation scheme in optical CDMA systems", Optical engineering, Vol 47, Issue 3, March 2008, **ISI**.

11. Mohammad M. N. Hamarsheh, Mohamad K. Abdullah, Sabira Khatun, and Hossam. M. H. Shalaby, "Fast Frequency Modulation Code Division Multiple Access Communication System", Journal of Optics and Laser Technology, Volume 39, Issue 3, Pages 605-609, April 2007, **ISI**.

12. Mohammad M. N. Hamarsheh, Mohamad K. Abdullah, Sabira Khatun, and Hossam. M. H. Shalaby, "Design and Analysis of Dynamic Spectral Encoding Code Division Multiple Access Communication System", Optical engineering, Vol 45, Issue 10, October 2006, **ISI**.

13. Mohammad M. N. Hamarsheh, Mohamad K. Abdullah, Sabira Khatun, and Hossam. M. H. Shalaby, "Configuration Design and Performance Analysis of a Fast Frequency Modulation Optical CDMA Communication System", Malaysian Journal of Computer Science, Volume 19, No. 1, Pages 1-8, July 2006, **ERA**.

14. Mohammad M. N. Hamarsheh, Mohamad K. Abdullah, Sabira Khatun, and Hossam. M. H. Shalaby, "Design and analysis of synchronous dynamic frequency hopping

code division multiple access communication system", Journal of Optical Fiber Technology, Volume 12, Issue 4 , Pages 334-339, April 2006, **ISI**.

15. Mohammad M. N. Hamarsheh, Hossam. M. H. Shalaby, and Mohamad K. Abdullah "Design and Analysis of a Dynamic Code Division Multiple Access Communication System Based on Tunable Optical Filter", Journal of lightwave technology, Volume 23, Issue 12, Pages 3959-3965, December 2005, **ISI**.

Conferences

1. T Eltaif, H M H Shalaby, S Shaari, &M. M. N. Hamarsheh, "Analysis of spectral amplitude coding OCDMA successive interference cancellation scheme", Conference on Lasers and Electro-Optics/Pacific Rim, 30 August 2009, Pages TUP11_17, Shanghai, China, Optical Society of America (OSA).

2. T Eltaif, H M H Shalaby, S Shaari, &M. M. N. Hamarsheh, "Interference mitigation using successive interference cancellation in optical CDMA systems", Proceedings of the 8th WSEAS International Conference on Microelectronics, Nanoelectronics, Optoelectronics (MINO), 30 May 2009, Issue 8, Istanbul, Turkey, WSEAS.

3. T Eltaif, H M H Shalaby, S Shaari, &M. M. N. Hamarsheh, "Performance analysis of successive interference cancellation with modified quadratic congruence and Hadamard codes for optical CDMA", 11th International Conference on Advanced Communication Technology, (ICACT), 15-18 February 2009, Vol 3, Pages: 1885 - 1889, Phoenix Park, Korea, IEEE.

4. T Eltaif, H M H Shalaby, S Shaari, M. M. N. Hamarsheh, "Analysis of Successive Interference Cancellation Scheme using OOC code in Optical CDMA Systems," in proc. of 10 IEEE International Conference on Advanced Communication Technology, (ICACT), 17-20 February 2008, Vol 3, Pages: 2023 - 2026 Phoenix Park, Gangwon-Do, Korea, IEEE.

5. T Eltaif, H M H Shalaby, S Shaari, M. M. N. Hamarsheh, "Analysis of successive interference cancellation with Modified quadratic congruence codes for optical CDMA" in Proc. Regional Symposium Microelectronics (RSM), 5-7 December 2007, Penang, Malaysia?.

6. T Eltaif, H M H Shalaby, S Shaari, M. M. N. Hamarsheh, "Analysis of a DS/OCDMA successive interference cancellation scheme using modified prime sequence codes," in Proc. Regional Symposium Microelectronics (RSM), 5-7 December 2007, Penang, Malaysia?.

7. T Eltaif, H M H Shalaby, S Shaari, M. M. N. Hamarsheh, "Performance analysis of successive interference cancellation scheme for optical CDMA using modified prime sequence codes", Proc. of Information Optics and Photonics Technologies II, 5 November 2007, Volume 6837, Beijing, China. SPIE.

8. Mohammad M. N. Hamarsheh, Mohamad K. Abdullah, S. Khatun, and Hossam. M. H. Shalaby, "Wavelength Modulation Encoding Optical Code Division Multiple Access Communication System", MMU International Symposium on Information and Communications Technologies (M²USIC), 24-25 November 2005, TS08, Pages.9-11, Kuala Lumpur, Malaysia?.

9. Mohammad M. N. Hamarsheh, Mohamad K. Abdullah, "Analysis of Fiber Bragg Gratings Apodized with Approximated Linearly Segmented Cosine Function", MMU International Symposium on Information and Communications Technologies (M²USIC), 24-25 November 2005, TS06, Pages.16-19, Kuala Lumpur, Malaysia?.

10. Mohammad M. N. Hamarsheh, Mohamad K. Abdullah, M. A. Mahdi, S. Khatun, and Hossam. M. H. Shalaby, "Performance Enhancement of a Dynamic Optical Code Division Multiple Access Communication System by Signal Clipping", IEEE 7th Malaysia International Conference on Communications and IEEE 13th International Conference on Networks (MICC & ICON 2005), 16 – 18 November 2005, Volume 2, Pages. 781-784, Kuala Lumpur, Malaysia, IEEE.

11. Mohammad M. N. Hamarsheh, Mohamad K. Abdullah, M. A. Mahdi, S. Khatun, and Hossam. M. H. Shalaby, "Dynamic Optical Code Division Multiple Access Communication System Analysis and Performance Enhancement by Signal Clipping", International Conference on Computers, Communications, and Signal Processing (CCSP 2005), 14-16 November, 2005, Pages. 125-129, Kuala Lumpur, Malaysia, IEEE.

12. Mohammad M. N. Hamarsheh, Mohamad K. Abdullah, S. Khatun, M. A. Mahdi, and Hossam. M. H. Shalaby "New Coding Scheme for Code Division Multiple Access Communication system", 11th international Asia pacific conference on communications, 3, 5 October, 2005, Perth, Australia?.

13. Mohammad M. N. Hamarsheh, Mohamad K. Abdullah, M. A. Mahdi, S. Khatun, and Hossam. M. H. Shalaby, "Novell Coding Technique for Code Division Multiple Access Communication system", International Conference on Instrumentation, Communications and Information Technology (ICICI 2005), August 2005, Pages 252-257, Bandung, Indonesia, IEEE.

14. Mohammad M. N. Hamarsheh and M. K. Abdullah, "Analysis of Fiber Bragg Gratings Apodized with Linearly Approximated Segmented Gaussian Function", IEEE, The 9th Asia-Pacific Conference on Communication (APCC 2003), 21-24 September- 2003, Vol. 1, Pages 163-167, Penang, Malaysia, IEEE.

15. Mohammad M. N. Hamarsheh, Ahmad Manasreh, Sahbudin Shaari, Mohamad Khazani Abdullah, "Simplifying the Apodized Fiber Bragg Grating Writing Procedure by Segmentation", The third International Conference on Advances in Strategic Technologies (ICAST), 12-14 August 2003, Kuala Lumpur, Malaysia?.

16. Ahmed Muhammed Almanasreh and Mohammed M. Naje Hamarsheh, "Segmentation effects of the apodization profile on the characteristics of fiber Bragg gratings", IEEE National Symposium on Microelectronics (NSM), 12-13 November 2002, Genting Highlands, Malaysia.