

Dr. ASIM SHAHZAD

Currently serving as Assistant Professor department of electrical engineering FUUAST
Islamaabad Pakistan

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EDUCATION

PhD in **Computer Engineering (specialization in optical communication)** from
University Of Engineering and Technology Pakistan

City University of Dublin Ireland (Research work)

MS in Telecom Engineering from University Of Engineering and Technology

PAKISTAN

BSC in Computer Engineering from University of engineering and Technology Taxila

PAKISTAN

PEC REGISTATION NUMBER: COMP/3503

PERSONAL DESCRIPTION

I have done PhD Computer Engineering(Specialization in optics) from UETTaxila and City university of Dublin Ireland. I am experienced and have a sound knowledge and skills and above all the zest. I have a tremendous academic record to back me up. I think being a young and energetic I can provide my employer's organization with a very proficient and hard working employee who is at the start of his professional carrier but has a great learning ability as depicted by his excellent academic carrier. I assure my employer as well that I being a zealous supporter of the cause of the organization, can work anywhere anytime on any project with utmost courage, devotion, honesty and with 100% of my technical ability and with one goal of taking my organization to the zenith of success.

POSITION OBJECTIVE

Seeking a position in a professional and dynamic organization where I can serve as well as groom my technical, managerial and interpersonal abilities. Areas of Interest include Wireless Communication Systems.

ACADEMIC RECORD

DEGREE/ CERTIFICATION	YEAR OF PASSING	INSTITUTION	SCORE
PhD (Optical com)	2014	University of Engineering and Technology Taxila Pakistan (course work) City University of Dublin Ireland (Research work) <u>Thesis evaluation Foreign experts</u> 1) Dr.Henry Leung , Professor information & Communication Technologies Dept. of Electrical and Computer Engineering ,Schulich School of Engineering ,University of Calgary ,250 University Drive NW ,Calgary Canada 2) Dr. Gang Ding Peng , Address Professor in Photonics and Optical Communication, School of Electrical Engg.& Telecommunications UNSW, Sydney, Australia. Country Australia.	3.89/4
M.S (Telecom Eng)	2007	University of Engineering and Technology, Peshawar	3.06/4 CGPA
B.E Computer	2007	University of Engineering and Technology, Taxila	80 %

Engineering)			
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EXPERIENCE(MORE THAN 14 YEARS)

1) Currently serving as Head of Department(Electrical Engineering department) and PEC coordinator at Federal Urdu University of arts science and Technology Islamabad Pakistan Since January 2011.

2) Served as Assistant Professor/Academic coordinator at University of Engineering & Technology in Computer Engineering department from November 10, 2006 to December 5, 2010.

3)Served in Hamdard University Islamabad as lecturer for a year(2006)

4)Work as design Engineer in military organization

PhD THESIS TOPIC(Research work conducted at city university of Dublin Ireland)

“Optical code division multiplexing through mode lock lasers”

- 1) The quality and pulse compression of the 60 GHz millimeter wave signals generated by 750 μ m long InAlGaAs Multi Quantum Well (MQW) passively mode locked laser under free running and optical self -injection locked conditions is experimentally characterized in terms of longitudinal modes under certain bias currents.
- 2) Generation and Characterization of high frequency MM wave signals in 60GHz range using
 - MQW FP Passively mode locked lasers through self injection locking.
 - Using Phase modulators by exploiting π out of phase nature of first order harmonics.
 - Using EAM modulators by exploiting higher nonlinearity of modulator.
 - Using dual and single arm MZM modulators.
 - Using Remote Heterodyning detection

Taught courses:

- Digital communication at Master level
- Computer architecture
- Optical communication/Ultrafast optics
- Digital signal processing/Signals and system
- Object oriented programming
- Wireless Communication at undergraduate level
- Network Security at Master level
- Software design engineering-I at undergraduate level
- Data authentication and security at Master level.
- Computer networks and communication at undergraduate level

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- Circuit analysis at undergraduate level
 - Microprocessor and Interfacing at Undergraduate level
 - Basic electronics at undergraduate level

NON ACADAMIC/ADMINSIRATION DUTIES

- Establish fiber optics lab in University of Engineering and Technology Taxila.
- PEC coordinator
- Prepatation of AC-1 forms.
- Time table incharge.
- Prepared documentation/presentations for PEC(Pakistan engineering council) visit for more than three times.
- Conducted and arranged examinations.
- Design course management system.
- Academic advisor for undergraduate studies.
- Member of postgraduate board of studies.
- Arranged study trips to various industries.

COURSES STUDIED IN PHDAND MASTERCOMPUTER ENGINEERING

- Optical communication
- Computer architecture
- Microprocessor systems
- Digital Signal Processing
- Digital communication
- Satellite Communication
- Ultra fast optics and its application
- Telecom switching
- Traffic engineering
- IP Telephony & VOIP
- Network security
- Telecom network management
- Advance topics in computers

MAJOR COURSES STUDIED

- Wireless Communication
- Digital Communication
- Digital Signal Processing
- Digital Image Processing
- Artificial Intelligence

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- VLSI Design
 - Control Engineering
 - Computer networks.
 - Fiber optics communication
 - Traffic switching
 - Random signal processing
 - Ultra fast optics communication
 - Satellite communication
 - Wireless networks
 - Mobile communication
- Analog & Digital Electronics
Circuit Analysis
Digital Logic Design
Advanced Computer Architecture
Microprocessor Theory
Signals & Systems
- Communications Systems
 - Computer Communications.
 - Network security
 - Data authentication and security
 - Project management
 - Voice over IP
 - Software testing and development
 - Software quality assurance
 - Microcontroller based application design
 - Telecommunication network management

PROJECTS SUPERVISED

- 1) Development of new digest Hash algorithm for data authentication and security.
 - 2) Implementation of advanced encryption standard (AES) for secure speech transmission.
 - 3) Simulated verification of fiber Solitons interaction and stability based on NLS equation.
 - 4) Simulation of IP over WDM.
 - 5) Design and Implementation of efficient TCP/IP stack using network simulator.
 - 6) Loss calculation in cellular communication using Pathloss software.
 - 7) Design and Implementation of efficient Reed Solemn encoder and decoder over FPGA.
 - 8) Implementation of convolution encoder and vitebri decoder
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for error correction and detection.

9) Design of gain flattened Raman amplifiers.

10) Implementation of secure hash algorithm over FPGA.

11) Design of road guidance system for blind people using 8051 microcontrollers.

12) WIMAX traffic security using Advanced encryption standard.

13) Simulation of dispersion compensation using dispersion compensation fiber.

14) Design of efficient match filter for signal detection.

15) Design of efficient Raman amplifier for optical communication.

16) Design of new digest cipher algorithm based on MD5 and MD6.

17) WIMAX security model based on Advanced encryption standard.

COMPUTER SKILLS

- **OPERATING SYSTEMS:** MS WINDOWS 98, XP & RED HAT LINUX, UNIX.
- **Languages:** C, C++, JAVA, VB.NET, ASP.NET, PROLOG, C#, Matlab
- **Tools:** Ms Office, Ms Project, PathLoss

FIELDS OF INTEREST

- Network security
- Wireless Communication
- Telecommunication Networks
- Optical communication
- Data encryption and cipher designing
- Embedded system design
- microcontrollers
- ultra fast optics

SOFTWARE PROFICIENCY

- Visual Studio 2003
 - Visual Studio 2005
 - Visual Studio 2008
 - NS-2
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- Ms Project (SPM Software)
 - SQL (Data Base)
 - UML
 - Ms Office
 - Mat Lab
 - CAD
 - Ps Pice
 - AutoCAD
 - Electronic Work Bench
 - Verilog
 - HDL
 - Microsoft Visio 2000

LANGUAGE PROFICIENCY

- TOEFL TEST
- Very fluent and proficient in speaking as well as writing English
- Very fluent in writing and speaking Urdu.

REFERENCES

- 1) Dr.Henry Leung, Professor information& Communication Technologies Dept. of Electrical and Computer Engineering ,Schulich School of Engineering ,University of Calgary ,250 University Drive NW ,Calgary Canada
- 2) Dr. Gang Ding Peng, Address Professor in Photonics and Optical Communication, School of Electrical Engg.& Telecommunications UNSW, Sydney, Australia.
- 3) Prof Dr.M.Zafrullah ,Vice chancellor University of Engineering and Technology Taxila
- 4) Dr Pascal landais ,assistant professor department of electrical engineering Dublin city university Ireland.
- 5)Prof.Dr. AdeelAkram ,Dean Faculty of telecommunication and information engineering UET Taxila.