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PROFILE:

I am working as Assistant Professor in the Department of Computer Science, Usman Institute of Technology (Hamdard University), Karachi, Pakistan.

I am currently enrolled in PhD (Information Technology). My area of research is Image Processing and the title of thesis is “A Security System Employing Edge-Based Rasterstereography”.

I have more than 19 years of teaching and research experience in the field of Security Technologies, Digital Image Processing and Bio-Physics. I have specialization in implementing Moiré Fringe Topography and Rasterstereography Techniques in Recognition and Security Technologies.

My research work has appeared in well reputed academic journals. I have four journal publications and two conference papers in my account.

I am also an author of a book titled “Rasterstereography Based Partial Face Recognition – A Novel Technique can be used as Identification-Based Security System”, which is published in Germany in August 2014. I am now working on my second book titled “Anthroimaging – Imaging Challenges of the Third Millennium” for Springer.

I previously hold the degrees of MS (Mobile Computing & Information Systems) in 2006 with first class first position (*Gold Medalist*), M. Phil (Bio-Physics) from the University of Karachi, MCS in 2002 from Hamdard University with *first division*, M. Sc (Bio-Physics) in 1994 from the University of Karachi with *first division*.

EDUCATION:

PhD (Information Technology) (Thesis submitted for External review)	2014	[Hamdard University]
MS (Mobile Computing & Information Sys.) (First Class First Position)	2006 - 2007	[Hamdard University]
M. Phil (Bio-Physics) (Thesis Based)	2003 – 2005	[University of Karachi]
MCS (First Division)	2001 – 2003	[Hamdard University]
M. Sc (Bio-Physics) (First Division)	1993 - 1994	[University of Karachi]

JOURNAL PUBLICATIONS:

Four research papers have been published, detail are as under:

1. **A Security System Employing Edge-Based Rasterstereography**
International Journal of Biology and Biotechnology
Ref: 10(4): 613-630, 2013
2. **Physics and Geometry of Heart Sound Quadrilateral**
Journal of Information & Communication Technology
Vol. 1, No. 2, (Fall 2007) 74-82
Inspec Classification: A877OF, B7510, C3385, C733O
3. **Physics of scoliosis screening in school going children**
Karachi University Journal of science.
Ref. Kar.Univ.J.Sc. 26(1) 5-12 (1998)
4. **Physics of screening procedures to detect trunk deformities**
Third Annual National Symposium of the Aga Khan University
Ref: "Impact of research on health, education and community development".
Karachi- September 21 & 22, 1996

CONFERENCES PUBLICATIONS:

1. **A Security System-cum-Background Rating System through Face Recognition Employing Edge-Based Rasterstereography**
2nd Conference on "Anthro & Sports Mathematics" at Government College Hyderabad
September 3 & 4 2014
2. **Card less authorization and Charge System**
Seventh Symposium on Computational Complexities, Innovations and Solutions (7th CCIS), the COMSATS Institute of Information Technology, Abbotabad, KP, Pakistan,
May 7, 8, 2012

BOOK PUBLICATION:

1. **Rasterstereography Based Partial Face Recognition – A Novel Technique can be used as Identification-Based Security System**
Book Published in August 2014 (Germany)

THESIS PUBLICATION:

1. **Physics and Geometry of 3-D Heart-Sound-Quadrilateral**
M. Phil Thesis, University of Karachi
2. **WAP PORTAL**
MCS Thesis, Hamdard University
3. **Study of Relative Variation of Area of Heart-Sound-Triangle & Study of Change in Heart-Sound-Triangle in different Positions**
M. SC Thesis, University of Karachi

SEMINARS/WORKSHOPS:

1. Participated in the workshop on "The International Center for Chemical and Biological Sciences, University of Karachi, Karachi. Saturday, January 24, 2009
2. Participated in the lecture on "Efficient Use of Computers in Research Methodology" at the faculty of science, Karachi University, February 2009
3. Organized a 1-day work shop on "BioInformatics and Biocomputing" at Usman Institute of Technology, Karachi for BS students, My 2009
4. Organized a 3-day work shop on "BioInformatics and Biocomputing" at Usman Institute of Technology, Karachi for M. Phil / Ph. D students, June 2009
5. Organized a 3-day work shop on " Research Methodology" at Hamadrd university, Karachi for M. Phil / Ph. D students, July 2009

6. Given a seminar on “Moiré Fringe Topography and Rasterstereography Techniques in Security Technologies” at Hamdard University, August 2009
7. Participated in the 2-day workshop on “Research Proposal Writing”, at State Bank of Pakistan, organized by KAIZAN, Karachi, November 2009
8. Organized and delivered a lecture in third session of “Research Methodology” at UIT for faculty Members, December 2009
9. Established “First UIT Research Forum” with Prof. Dr. Abdulbasit Shaikh and arranged a session at UIT for researchers from different public and private sector Universities, December 2009

WORK EXPERIENCE:

1. Working as Assistant Professor in the department of computer science, Usman Institute of Technology, Hamdard University, 2004 to date
2. Worked as “Head of Department” in computer science at Usman Institute of Technology (UIT), 2007
3. Worked as Lecturer in the department of Computer Science, Usman Institute of Technology, Hamdard University, 1997-2003

TEACHING AND COURSES OF INTEREST:

Post Graduate Level:

1. Advanced Digital Image Processing

Graduate Level:

1. Mobile Applications
2. System Programming
3. Information Theory
4. Advanced GSM Architecture
5. Digital Signal Processing
6. Digital Image Processing
7. GIS and Remote Sensing
8. Satellite Communication

Undergraduate Level:

1. Digital Image Processing
2. Computer Graphics

3. Introduction to Programming
4. Computer Programming Principles
5. Microprocessor & Assembly Language
6. Internet Programming
7. Digital Signal Processing
8. Operating Systems
9. Computer Architecture & Organization
10. Internet & Network Security
11. Data Structures
12. Fundamentals of Electronics
13. Distributed Systems
14. Data Communication and Computer Networks
15. Digital Logic & Design

CO-CURRICULAR ACTIVITIES:

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| 1. Convener SAAP (Student Academic Assistance Program) | Usman Institute of Technology (2014) |
| 2. Member of UIT Prospectus Review Committee | Usman Institute of Technology (2014) |
| 3. Convener Graduate Directory | Usman Institute of Technology (2006 - 2014) |
| 4. Member of Alumni Committee | Usman Institute of Technology (2006 - 2014) |
| 5. Member of vigilance committee | Usman Institute of Technology (2004 – 2006) |
| 6. External Examiner | NED University of Engineering & Tech. (CS & IT) |
| 7. Convener Academic Scheduler | Usman Institute of Technology (2001 – 2005) |
| 8. Coordinator Foundation Course | Usman Institute of Technology (2002 - 2004) |
| 9. Head Sports committee | Usman Institute of Technology (2002 - 2004) |

AWARDS & PROFESSIONAL MEMBERSHIP:

1. Life time member of **Pakistan Association of Scientist and Scientific Professions**
2. Worked as Convener, **ACM** chapter at Usman Institute of Technology
3. **Gold Medalist** (MS Mobile Computing & Information Systems)
4. **Gold Medalist** (Celia Cricket Tournament at University of Karachi)

Ph. D (LIST OF COVERED COURSES):

- | | |
|---------------------------------|---------|
| 1. Network Security | GPA 3.6 |
| 2. Mobile Applications | GPA 3.2 |
| 3. Digital Signal Processing | GPA 4.0 |
| 4. Satellite Communication | GPA 4.0 |
| 5. 2D Digital Signal Processing | GPA 3.5 |
| 6. GIS & Remote Sensing | GPA 3.5 |

MS (LIST OF COVERED COURSES):

1.	Network and Protocols	GPA 4.0
2.	Information Theory	GPA 4.0
3.	Mobile Application	GPA 3.0
4.	Mobile Communication System & Their Planning	GPA 4.0
5.	Digital Communication Theory	GPA 3.7
6.	Mobile Telephone Systems	GPA 4.0
7.	Concurrent & Distributed Systems	GPA 4.0
8.	Information Systems Audit	GPA 2.9
9.	Enterprise Services & Components	GPA 4.0
10.	Design & Modeling of Mobile Protocols	GPA 3.6

CERTIFICATION & SPECIALIZED COURSES:

1. Controlling/Interfacing Devices and Sensors through PC using C- Language
2. System Design Using Microcontroller (8051)
3. Red-hat Linux Installation, Configuration and User Management
4. Certificate Course of JAVA

REFERENCES:

1. **Engr. Parkash Lohana**
Head, Department of Computer Science,
Usman Institute of Technology, Hamdard
University
2. **Engr. Idris Mala**
Coordinator, Department of
Telecommunication Engineering,
Usman Institute of Technology,
Hamdard University