

ENGR. MEHRAN MEMON

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OBJECTIVE

Looking forward to expand knowledge through enhancing academic and research skills in area of Internet of Things, Wireless Sensor Networks and related fields. I am self-motivated, fast learner and have ability to dig out solutions in various challenging situation. I possess strong programming skills and have practiced on various languages. Along with that I have hands on practice on embedded systems and believes practical implementation to serve humanity. I am ready contribute and put my share towards new research to archive mutual goals.

PERSONAL PROFILE

- Lead Researcher on Malware Analysis, Intruder Detection System, Embedded Networks, Internet of Things systems and Crowd Sourcing for enhancing user experience.
- Qualified faculty member in area of Telecommunication and Cyber Security. Advisor on Security & Environmental Health and Focal person on event planning and logistics management in department of Telecommunication.

EDUCATION

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| Sep 2013 – Feb 2015 | Master of Engineering in Electrical - Electronics & Telecommunication
Universiti Teknologi Malaysia (UTM) – Malaysia
Thesis Title: <u>Wireless Power Transfer in Near-Field Communication (NFC) using a Current-Controlled Multi Loops with a Loaded Capacitance</u>
CGPA: 3.69 / 4.00 |
| Jan 2006 – Feb 2009 | Bachelor of Engineering in Telecommunication
Mehran University of Engineering and Technology, Pakistan
Thesis Title: <u>Analyzing Protocols of Optical Burst Switching Network</u>
CGPA: 3.54 / 4.00 |

EMPLOYMENT

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| Oct 2016 – Present | Assistant Professor
Department of Telecommunication Engineering
Department of Cyber Security
Mehran University of Engineering and Technology, Jamshoro |
| July 2011 – Oct 2016 | Lecturer
Department of Telecommunication Engineering
Mehran University of Engineering and Technology, Jamshoro |
| Aug 2010 – July 2011 | System Engineer
Information & Communication Processing Center, Mehran UET |

RESEARCH

- Currently doing research on Smart and Energy Efficient IoT System, data collection using crowd sourcing techniques for road monitoring and Indoor positioning techniques.
- Cyber Security research area in Data Forensics and Malware Analysis using Machine Learning.
- I have supervised more than 25 groups of undergraduate and 10 Master students under my supervision since 2011.

PUBLICATIONS and PRESENTATIONS

- Rehana, Asif, Mehran Memon, "**MUET Shuttle Tracking System Using Fusion Of Wi-Fi Network and Lora Architecture**" (Under Write up)
- Asif Ali, Mehran Memon, "**Acoustic Based Electronic Rodents Repellent System**", IJMREM, Volume 3, Issue 1 January 2020
- Samra S. Memon, A. Aleem Jamali, M. R. Anjum, Mehran M. Memon, "**Vivaldi Antenna for Ground Penetrating Radar Applications**", Sindh University Research Journal (Science Series), March 2018
- Sugandh Memon, Mehran Memon, Faisal K. Shaikh, Shakeel Laghari "**Smart Indoor Positioning using BLE Technology**", 4th IEEE International Conference on Engineering Technologies and Applied Sciences (ICETAS) 2017.
- Mehran Memon, Shakul Kamal Abdul Rahim and Akaa Eteng, "**Wireless Power Transfer in Near-Field Communication using a Current-Controlled Multi Loops with A Loaded Capacitance**", Microwave and Optical Technology Letters, October 2016, Vol. 58, Issue 10, Pages 2473-2476 (**IF=0.56**)
- **Poster Presentation** along with students in 1st Innovation Summit at University of Balochistan, Quetta held on **May 4th – 5th May 2016**.
- **Poster Presentation** as individual in 5th Innovation Summit at University of Punjab, Lahore held on **March 2nd – 3rd, 2016**.
- **3rd position**, Gold Medal, Rs.8000 cash prize and certificates were won by students under my supervision and guidance with paper name as "**Wireless LAN Security Survey 2013 of Hyderabad**".

SUPERVISED THESISES

- Malware Analysis on Website, Office documents and identifying rogue devices using SIEM tools (**Under research**)
- LoRa Based Public Safety Networks (**Under research**)
- LoRa Based vehicle monitoring System (**under research**)
- Acoustic based Electronic Rodent Repellent system with variable frequencies(2020)
- Smart Indoor Positioning using BLE Technology (Masters-2016)
- Estimation of Walking Patterns using Smartphone Sensors (Undergraduate-2017)
- Smart Green IoT Home (Undergrad-2016)
- Road Monitoring using mobile crowd sensing method (Undergrad-2016)
- Wi-Fi band Energy Harvesting System (Undergrad-2015)
- Health Monitoring System using Body Area Networks (Undergrad-2013)
- Wireless Transmission system as agent to Global warming (Undergrad-2012)
- Wi-Fi war driving of Hyderabad city of Pakistan (Undergrad-2011)

CONFERENCES and COURSES ATTENDED

- IEEE Summer School by IEEE ComSoc Lahore Section (**July 2017**)
- Game Development using Unity 2D (**May 2017**)

- Unpacking the Internet of Things (IoT) and A Simple Framework for Designing IoT Products as online course with Udemy (**Feb 2017**)
- Training workshop on "Technology-based Entrepreneurship for Developing Countries" at IRIS, Isfahan, Iran with cooperation of ECOSF-Pakistan (**Full Funded**) (**25-28 May 2017**)
- International Conference on Chemistry, University of Malakand, Khyber Pakhtoonkha, Pakistan (**22-25 Aug- 2016**)
- Entrepreneurial Development & Industry Linkage (**26 Jan-2016**)
- 1st International Conference on Dependable Embedded Wireless and Sensing Networks 2015 (**26 December, 2015**).
- Tutorial on Cloud Computing & Cyber Security Challenges, International Multi-topic conference 2012 (**28-30 March 2012**).

TEACHING

- Appointed as Lecturer in 2011, since then teaching various subject related to **Telecommunication** and **Cyber Security**. Teaching area focusses on electronics, communication and cyber security in **Bachelor** and **Master Programs**. Teaching is my passion and I lead students in such way that they learn more from subjects' theoretical concepts but understand more applied aspects.
- Nominated for Supervisory grant for implementing Arduino System as IoT Home.
- Various times nominated to visit numerous industries and field trips along with students under university-industry liaison.
- As co-curriculum activities, took part in various tutorial sessions, workshop on Arduino, website development, electronics design (from schematic to PCB to soldering).

ADMINISTRATIVE EXPERIENCE

- Secretary Finance, International Student Society for Pakistan, UTM, Malaysia (**Sept 2013- Aug 2014**).
- Departmental Sports Coordinator
- Departmental in-charge of Health, Security and Environmental.
- Monitoring, planning and installation of CCTV Security cameras and Security checks.
- Responsibility for planning conferences as Focal Person Logistics and Food
 - 1st International Conference on Dependable Embedded Wireless and Sensing Networks 2015 (**December, 2015**).
 - International Multi-topic conference 2012 (**28-29 March**).
 - TechCombat-Technology Battle 2012, in collaboration with IEEE COMSOC Chapter organized a National level event, (**7th April**)
 - World Space Week (WSW) – 2012 (**09-10 October**).

QUALIFICATIONS and CERTIFICATION

- Google Certification - Tools of the Trade: Linux and SQL
- Google Certification - Play It Safe: Manage Security Risks
- Google Certification - Foundations of Cybersecurity
- Google Certification - Connect and Protect: Networks and Network Security
- Master Hydra for Ethical hacking: Advance Brute-forcing techniques
- Ethically Hack the Planet
- Practical IoT Security and Penetration
- Cyber security and Artificial Intelligence Risk Course
- AI & Cyber Crime
- **IELTS** score 6.5 (**16th June 2016**)
 - English test to establish my language skills

- National Instrument RF & Microwave Symposium 2016 (**March 2016**)
 - New equipment to make effective research on wireless channel modelling
- Web Development Course 2016 by IEEE WIE, MUET (**March 2016**)
 - Designing own website using php and database through hosted server
- Smart System Workshop with Arduino by ThinkSpace, Malaysia (**September 2014**)
 - Learned Arduino basis and hands on position, won 1st prize as quick, resourceful programmer
- EndNote Workshop by Post Graduate Society, UTM, Malaysia (**October 2013**)
 - Learned referencing software for effective and proper references in research articles
- Workshop on CPD Framework for Professional Development of Engineers by Pakistan Engineering Council (**January 2013**)
 - Learn the role of engineers as researchers
- Android Application Development Certification by Dynamic Training Solutions Hyderabad (**December 2012-January 2013**)
- Graphical User Interface Design using MATLAB, Telecom Dept. MUET (**March 2012**)
- Hands on training on MSoftX, HLR, BSS of Huawei Technologies by Huawei-UET Telecom IT Center, U.E.T, Lahore (**March-April 2010**)
- CCNA Discovery: Working at Small to Medium Business or ISP by CISCO Networking Academy, Mehran UET (**Jan-Apr 2010**)
- Cellular Planning and Optimization by Institute of Communication Technologies, Hyderabad (**Dec 2009**).
- Fiber Optics Communication System, Telecom Dept. MUET (**June 2009**)
- CCNA Discovery: Networking for Home and Small Businesses by CISCO Networking Academy, Mehran UET (**Jun-Aug 2009**)
- Training in Wireless Local Area Network (WLAN), Telecom Dept. MUET (**Jun 2008**)
- Training in Wireless Mobile Network, Cellcom Telecom School, Karachi (**Jun-Jul 2007**)
- Training in Visual Basic 6.0, Horizon Computer Network, Hyderabad (**Jun-Jul 2004**) • Diploma in English, Pakistan American Cultural Center, Hyderabad.
- Training in Microsoft Office 2000, Horizon Computer Network, Hyderabad (**Jun-Jul 2001**)
- Hardware/Software Trouble Shooting in Personal Computer, Zeenia Institute of Computer Science (**Jun 2000**)
- Introduction to DOS, Mehran U.E.T (**Jun 1998**)

SKILLS

- Developed skills in website designing to integrate sensor data to server or internet. Languages used were **HTML and PHP along with MySQL** database and also used Dreamweaver CS5, Notepad++ as IDE.
- To improve coding, started working with **Turbo C** then moved towards more GUI interfacing with Visual Basic 6.0 and used Microsoft Access Database.
- **Android App development**
- Mathematical simulation and experimenting on **MATLAB** software.
- Designing circuits, learned Electronics Work Bench, Proteus with Arduino Libraries and Fritzing for microcontroller **Arduino**.
- Technical certification and General Training in **Wireless Network, RF-Optimization & Planning**, Cisco Certified Network Associate (**CCNA- Academic**), Training in Wireless Local Area Network (**W-LAN**) and **Fibre Optics** Communication System.
- **Antenna Fabrication** using **CST-Microwave studio** for modelling and FR-4 as substrate using UV method for etching.
- On the list is Raspberry Pie system.

There are more to list and many other certifications on programing and administration activities

EXTRA CO-CURRICULAM ACTIVITIES

- Recently participated in event on Innovation to Invention and Entrepreneurship to start up, where learned many ideas.
- Initiated **online exam/test** conduction platform using open source PHP environment.
- I can speak **Good English**, along with local languages as Urdu and Sindhi with some Basic Malay Bahasa as well.
- I also took part in multimedia designing as extra-curriculum activities on volunteer bases where I learned video editing and composing using ULEAD video studio 10, Audio Editing using Gold wave 5.0, Photo Editing using **Adobe Photoshop 7.0**.

REFEREES

1. Merituous Professor Dr. Bhawani Shankar Chowdhry (Former - DEAN)
Faculty of Electrical, Electronic & Computer Engineering Mehran
University of Engineering and Technology
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2. Meritorious Professor Dr. Aftab Ahmed Memon Department of Telecommunication
Engineering Mehran University of Engineering and Technology
aftab.memon@faculty.muett.edu.pk
3. Professor Dr. Mukhtiar Ali Unar
Dean, Faculty of Electrical, Electronic & Computer Engineering
Mehran University of Engineering and Technology
mukhtiar.unar@faculty.muett.edu.pk
4. Associate Professor Ir. Dr.Sharul Kamal Abdul Rahim (M.E Supervisor) Univerisiti
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