



Rizwan Khan Jadoon



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Dielectric Resonator Antenna (DRA)

Objective:

Seeking to apply and upgrade my research skills in a demanding environment. Looking for an international career in research and academics. Learn new tools and techniques in communication systems engineering. Basically, I want a fruitful career in communication engineering and want to work at a place which can offer a lifelong learning opportunity with challenging research problems that contribute to the advancement of the society.

Research Interests: Dielectric Resonator Antennas (DRA), Advance antenna design, MIMO DRA, Microwave Devices, Microstrip Antennas, Metamaterials, Substrate Integrated Waveguides (SIW) and Reflect array antenna.

Education and Training

- **MS in Electrical Engineering (Specialization in communication)**
Comsats Institute of Information and Technology, Abbottabad, Pakistan. (2012-2015)

This course provided theoretical and practical knowledge of Communication Engineering, a comprehensive insight into Microwave Passive Devices and Circuits, Radio Engineering, RF System Engineering and Design focusing in particular on next generation networks. The contributions of Optical Fiber Networks to this area were also prominently covered as well as Data Communication and Computer networks, Information Theory and Coding, Cryptography and Secure Communication, Optical Fiber Networks and Optimization Techniques.

CGPA: 3.26/4.00

- **MSc in Electronics**
Sarhad University of Sciences & Information Technology, Peshawar, Pakistan. (2010-2012)

This course provided the knowledge of Communication Theory-1, Electromagnetic Field Theory, Data Communication and Computer Networks, Electronics Communication, as well as Programming Fundamentals, Signal and Systems, Digital Filter Design, Digital Signal Processing.

CGPA: 3.15/4.00

Professional Experiences and Educational Projects

- **Research Associate at Comsats Institute of Information Technology**, Abbottabad, Pakistan.
(May 2015 – Till Date)
- **Engineering Resource Centre Comsats Institute of Information Technology**, Abbottabad, Pakistan.

Working as an Internee Lab Engineer in Engineering labs (Communication Lab, Electronics Lab, DLD Lab).

(Sep 2012 – Feb 2015)

- **National Telecommunication Corporation**, Islamabad, Pakistan.

Transmission-NMS Engineer Intern Worked on PDH, SDH, DWDM, CDMA, TDMA.
(Jul 2012 – Aug 2012)

- **Designing of Multiband-Rectangular Dielectric Resonator Antenna (M-RDRA) in HFSS**
MS Thesis Title

In this Research work I have designed M-RDRA in High Frequency Structural Simulator (HFSS) which covers lower and higher frequency bands at (824 – 894)MHz and (1570 – 2488)MHz, respectively, which is used for LTE Band-VI and w-cdma, wifi, wimax, GSM 1800,1900 and GPS bands. We used HFSS, Agilent ADS and CST for the design, simulation and optimization. I also learnt the art of optimization of RF structures.

In the end, I could sense the problem and propose intuitive solutions without even resorting to mathematical durgutery, an art that is of utmost importance in designing and optimizing EM structures.

- **Car Parking Allocation System**
MSc Final Semester Project

In this project I have designed a complete system for Parking in large shopping malls, hospitals and big, busy parking areas using Microcontroller AT89C52, GSM module LDR, are the main components used in this project.

Skills and Expertise

Designing Tools and skills: Competent with High Frequency Structural Simulator (HFSS) and Agilent Advance Design System (ADS), used during my research as well as CST Microwave Studio. Have used, Matlab, Optisim, C programming Language and latex in semester courses. Knowledge about technical and research paper writing, and high level of interest in research and development.

Team Leadership Skills: Excellent speaking and problem solving skills, especially when comes to team leadership.

- Team leader of Antenna Group at Ciit Abbottabad , which gave me a great experience of leadership.
- Assist two PhD students in the design of MIMO and Reconfigurable DRA antenna.
- I have also co-supervised two MS projects during my MS. I have been comfortable with the team mates and instrumental in the research activity of the group.
- I fabricated my designed antenna and tested it using a Vector Network Analyzer (VNA). I learnt the nits and grits of testing EM structures using VNA.
- Awarded 1st Position in First Semester during MSc.
- Transceiver Design during 2nd Semester of MS (Electrical Engineering).

Research Publication

Journal(s)

- Submitted in
IET Microwave, Antenna and propagation
K. Rizwan et al “Multiband-Dielectric Resonator Antenna for LTE Application”

Conference(s)

- Submitted in
Frontier of Information Tecnology
Aftab Ahmad Khan, Rizwan Khan et al “Stacked Dual-polarized MIMO Rectangular Dielectric Resonator Antenna for Wi-MAX Application”
- Submitted in
ICET
Rizwan khan et al “Reconfigurable UWB Monopole Antenna for Cognitive Radio Applications”

Technical Reports and Presentations

- MS Research “Dielectric Resonator Antennas”
 - Presented in Communication Group meeting “Basic Study of Dielectric Resonator Antennas (DRA)”
 - MS Project report on “Multiband-Rectangular Dielectric Resonator Antenna (M-RDRA)”
- Attended:**
- Attended Frontier of Information and Technology (FIT) conference at Sarena hotel, Islamabad in 2013.
 - Attended 5 days open workshop on a Zen - cart, Joomla, and Wordpress at Ciit Abbottabad.

References

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