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Career Objectives:

I am seeking a competitive position within the Engineering department, possibly with a developing and learning perspective, where I can carefully utilize my knowledge and polish skills, producing innovative yet practical solutions to challenging problems.

Education

PhD in Electronics Engineering (by Research) — [September, 2018–
Onwards]

University of Electronic, Science and Technology of China (UESTC), P. R. China

- Research Area: RF & Microwave Engineering.
- Research Title: Novel Antenna Design for Sensing Applications.

MSc in Electrical & Electronics Engineering (by Research) — [October, 2015]

Universiti Teknologi PETRONAS (UTP), Malaysia

- Research Area: RF & Microwave Engineering.
- Research Title: Design and Implementation of Bandpass Filters using Defected Ground Structures (DGS).

BS in Electronics Engineering — Sir Syed University of Engineering and Technology (SSUET), Pakistan [March, 2010]

- Major: Advance Communication Systems and Industrial Automation.
- CGPA: 3.50/4.0 (Registered Engineer with Pakistan Engineering Council).

Teaching Experience

Lecturer (Electrical Engineering Department) — Indus University, Karachi, Pakistan. [April, 2017 – Date]

- Deliver lectures for the following courses:
 1. Communication Systems
 2. Linear Control Systems.
 3. Engineering Machines.
 4. Industrial Automation.
 5. Embedded System Design
 6. Electronic Circuit Devices.
- Supervise and conduct Labs/Workshop on **PCB Designing, Electrical methods, PLC & Industrial Automation** etc.
- Conduct lab for Analog and Digital Filter Design using MATLAB and DSP kit.
- **Additional Responsibility: FYP Supervisor, Internship Coordinator, Industry Liaison Officer**

Administrator/Teacher — The Little Learning Kindergarten School and Academy, Karachi. [May,16 – April, 17]

- To look after all the administrator duties of the school such as structuring class courses, finalizing fee structure and managing school ethics.
- To teach Physics and Computer for higher secondary classes in the academy.

Graduate Assistant — Universiti Teknologi PETRONAS, Malaysia. [November, 2011–
August, 2015]

- Conduct tutorials and lab experiments for the following courses:

- Advance Communication Systems, Electromagnetic Analog Systems. Fiber Optics Labs including Transmission line modules, Fiber Optic loss measurement modules and MODICOM modules.
- Design and implementations of various RF and Microwave Circuits and components such as filters and antennas in PCB Fabrication lab and simulate them using different software such as Ansoft HFSS, CST and ADS.
- Carry out measurements of the RF and Microwave devices using Network Analyzer, Signal Generator, Anechoic Chamber etc.

Research Publications:

JOURNALS:

1. Z. Chen, X. Q. Lin, Y. H. Yan, F. Xiao, **M. T. Khan** and S. Zhang, "Noncontact Group-Delay-Based Sensor for Metal Deformation and Crack Detection," in IEEE Transactions on Industrial Electronics.
2. M. T. Jilani, M. Z. Ur Rehman, A. M. Khan, O. Chughtai, M. A. Abbas, **M. T. Khan**, "An implementation of IoT-based microwave sensing system for the evaluation of tissues moisture." Microelectronics Journal, p.p 1-11, **2019**.
3. Mahnoor Shahzadi, Weili Zhang, **M. T. Khan**, "Exciton-polariton in WS₂ microcavity in the presence of the optical Stark effect", Chinese Optics Letters, 2019, 17(2)
4. **M. T. Khan**, M. T. Jilani, A. M. Khan, F. Hafeez, A. K. Memon, "Effects of defected ground structure slot tuning on frequency and circuit parameters of bandpass filter", Journal of Optoelectronics and Advanced Materials Vol. 20, Iss. 9-10, pp. 479-485, **2018**.
5. M. T. Jilani, W. Peng Wong, L. Y. Cheong, M. Z. Ur Rehman, **M. T. Khan**, "Determination of Size-Independent Effective Permittivity of an Overlay Material using Microstrip Ring Resonator," Microwave and Optical Technology Letters, Vol. 58(1), p.p 4-9, **2016**.
6. M. Z. Ur Rehman, Z. Baharudin, M. A. Zakariya, M. H. M. Khir, M. T. Jilani, and **M. T. Khan**, "RF MEMS Based Half Mode Bowtie Shaped Substrate Integrated Waveguide Tunable Bandpass Filter", Progress In Electromagnetic Research C, Vol. 60, p.p 21-30, **2015**.
7. **M. T. Khan**, M. A. Zakariya, Z. Baharudin, R. Ibrahim, S. S. B. Hong and J. J. Adz, "An Overview of Defected Ground Structure with Practical Application of Defected Ground Structure Bandpass Filter in Energy Harvester Circuit", Research Journal of Applied Sciences, Engineering and Technology, Vol. 8(7): p.p 837-843, **2014**.
8. **M. T. Khan**, S. M. Ali, "A Brief Review of Measuring Techniques for Characterization of Dielectric Materials", International Journal of Information Technology and Electrical Engineering (ITEE), Vol. 1 (1), p.p 1-5, **2012**.

BOOK CHAPTER:

9. Z. Baharudin, M. Z. Ur Rehman, M. A. Zakariya, M. H. M. Khir, **M. T. Khan**, J. J. Adz "Bowtie Shaped Substrate Integrated Waveguide Bandpass Filter", Advanced Computer and Communication Engineering Technology, Springer, Vol. 315, p.p 365-373, **2014**.
10. M. A. Zakariya, S. M. Ali, Z. B. Baharudin, M. Z. Ur Rehman, S. M. Che Abdullah, A. M. Khan, **M. T. Khan**, "Investigation of DGS CDRA for High Gain Applications", 9th International Conference on

Robotic, Vision, Signal Processing and Power Applications, Lecture Notes in Electrical Engineering, Springer, Vol. 398, p.p 571-580, **2016**.

CONFERENCES:

11. **M. T. Khan**, X. Qi Lin, Z. Chen, F. Xiao, Y. H. Yan and A. Khalil Memon, "Design and Analysis of A Microstrip Patch Antenna for Water Content Sensing," 2019 16th International Computer Conference on Wavelet Active Media Technology and Information Processing, Chengdu, China, 2019, pp. 438-442.
12. A. H. Sani; C. Jianwen; **M. T. Khan**; S. B. Yussif; S. Nahar; K. E. Ewald; C. C. Ukwuoma, "Design and Simulation of 3.9 GHz Microstrip Parallel Coupled Line Band Pass Filter," 2019 16th International Computer Conference on Wavelet Active Media Technology and Information Processing, Chengdu, China, 2019, pp. 429-433
13. **M. T. Khan**, M. A. Zakariya, M. N. M Saad, Z. Baharudin, M. Z. Ur Rehman, Peng W. Wong "Tuning of end-coupled line bandpass filter for 2.4 GHz using defected ground structure (DGS) parameters", IEEE Business Engineering and Industrial Applications Colloquium (BEIAC), p.p 131-134, **2013**.
14. **M. T. Khan**, M. A. Zakariya, M. N. M Saad, Z. Baharudin, M. Z. Ur Rehman "Parametric effect of defected ground structure (DGS) on frequency of a bandpass filter", IEEE International RF and Microwave Conference (RFM), p.p 184-188, **2013**.
15. **M. T. Khan**, M. A. Zakariya, M. N. M. Saad, Z. Baharudin, M. Z. Ur Rehman "Analysis and Realization of Defected Ground Structure (DGS) on Bandpass Filter", 5th International Conference on Intelligent and Advanced Systems (ICIAS), p.p 1-4, **2014**.
16. M. Z. Ur Rehman, Z. Baharudin, M. A. Zakariya, M. H. M. Khir, **M. T. Khan**, Peng W Weng, "Recent advances in miniaturization of Substrate integrated waveguide bandpass filters and its applications in tunable filters", IEEE Business Engineering and Industrial Applications Colloquium (BEIAC), p.p 109-114, **2013**.
17. M. Z. Ur Rehman, Z. Baharudin, M. A. Zakariya, M. H. M. Khir, **M. T. Khan**, "Microwave bandpass filter using QMSIW", IEEE International RF and Microwave Conference (RFM), p.p 172-175, **2013**.

Technical Experiences

Engineering Officer — AGP Pvt. Ltd. Karachi, Pakistan

[February, 2011-
November, 2011]

- Supervise in all Electrical and Electronics based Engineering Works.
- Identify and solve all electronic problems involving HVAC system, Air Handling Units, HT and LT panels, Screw Compressor, Electronics sensors and instruments.
- PLC programming and automation of machines involved in pharmaceutical industry. Project handling, management and involvement.

Content Expert Engineer — Etilize Pakistan, GFK International

[December, 2010 -
February, 2011]

- Search and extract web based content.
- Produce data for various electronic, network, IT etc based devices and products.
- To remove errors in product data and get it QC passed.

Managerial Experience (Project Supervision)

- **Undergraduate FYP Project** - Design and implementation of a parallel coupled line bandpass filter operating at 2.4 GHz for WLAN applications (2012).
- **Undergraduate FYP Project** - Design of a bandpass filter using defected ground structure (DGS) operating at 900 MHz and 1800 MHz frequency for GSM applications (2013).
- **Undergraduate FYP project** – Development of Bandpass filter for Energy Harvester Circuit (2014).
- **Undergraduate FYP Project** – Design of a Smart device for the safety and monitoring of coal miners (2017-18).

Software and Technical Skills

Proficient and knowledge of a vast array of programming languages, concepts and technologies, including:			
Engineering based Programming Languages: • PLC (Ladder Logic, FBD and STL). • Microcontroller (KEIL). • CST Microwave Studio • ANSOFT HFSS and Designer. • MATLAB	Development Programming Languages : • Java. • C Language	Telecommunication Based Techniques and Studies: • GSM, WiFi, WiMAX, BTS and BSS, Channel & Cell Assignment etc. • RF based Antenna and Filters fabrication, testing and measurement	Networking fundamentals: • Routing. • Switching. • DSL. • Frame Relay. • ATM.

Awards and Achievements

- **IELTS** – 7.5 Bands [2018]
- **National Grassroots ICT Research Initiative (NGIRI)** – Ignite - National Technology Fund, Ministry of Information Technology & Telecom. Amount: Rs. 70,000/= [2018]
- **Object Based Education (OBE)** – Certified Professional, Universiti Teknologi PETRONAS, Malaysia. [2014]
- **Fully Funded Scholarship, MSc**, Universiti Teknologi PETRONAS, Malaysia. [2011-2014]
- **GOLD/SILVER MEDAL**, as a RF group in ITEX International Exhibition, Malaysia. [2014]
- **Fully Funded Scholarship**, BS (Semester 4th to 8th), SSUET, Pakistan. [2007- 2010]
- **Research Grant** – IGEN, UTP. Amount: RM 10,000/= [2014]
- **Captain** – Universiti Teknologi Petronas, Malaysia Cricket Team. [2015]
- **Certificate in Programmable Logic Controller (PLC)** – Skill Development Council (Sindh). [2010]

References

Will be furnished on request.