



Muhammad Furqan Zia

Date of birth: 14/11/1995


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CONTACT

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WORK EXPERIENCE

01/10/2021 – CURRENT – Istanbul, Turkey

Researcher and Teaching Assistant

Koc University (Communications Research and Innovation Laboratory)

- Researching on Next Generation WiFi Communication Technologies in collaboration with VESTEL Electronics Corp.
- Teaching undergraduate level courses in the Electrical and Electronics Engineering Department.

01/10/2018 – 30/06/2021 – Antalya, Turkey

Researcher

Antalya Bilim University (Wireless Intelligent Systems Laboratory)

- Worked on a research project funded by the Scientific and Technological Research Council of Turkey "TÜBİTAK" to enhance the security and reliability of future communication systems.
- Devised novel Physical Layer Security (PLS) Techniques for 6G and Beyond Communication Networks.
- Invented multiple new advanced small-scale NOMA Schemes for Enhancing Communication Security and Reliability of Future Low-complexity, Massive Machine-Type Communications.
- Developed mathematical equations for the design of novel advanced NOMA schemes for IoT-based applications.
- Wrote MATLAB codes for our designed models and schemes.
- Published multiple peer-reviewed research articles, conference paper, journal papers and a patent application.
- My published research articles are cited by major labs working in this domain.

EDUCATION AND TRAINING

01/10/2021 – CURRENT – Istanbul, Turkey

Ph.D. (Electrical and Electronics Engineering)

Koc University

01/09/2018 – 30/01/2021 – Antalya, Turkey

M.S. (Electrical and Computer Engineering)

Antalya Bilim University

01/08/2013 – 30/06/2017 – Karachi, Pakistan

B.E. (Electrical Engineering)

DHA Suffa University

PUBLICATIONS

Conference

- **M. F. Zia** and J. Hamamreh, "An advanced NOMA security technique for future wireless communication," Workshop on Information and Communications technologies, International Conference on Software, Telecommunications and Computer Networks (SoftCOM2020), 17-19 Sep 2020

Journals

- **Zia, M. F.**, Furqan, H. M., & Hamamreh, J. M. (2021). Multi-cell, Multi-user, and Multi-carrier Secure Communication Using Non-Orthogonal Signals' Superposition with Dual-Transmission for IoT in 6G and Beyond. RS Open Journal on Innovative Communication Technologies. <https://doi.org/10.46470/03d8ffbd.08b7bd1d>
- **Zia, M. F.**, & Hamamreh, J. M. (2020). An Advanced Non-Orthogonal Multiple Access Security Technique for Future Wireless Communication Networks. RS Open Journal on Innovative Communication Technologies. <https://doi.org/10.46470/03d8ffbd.19888ce7>

Pending Patent

- Muhammad Furqan Zia and Jehad M. Hamamreh " A Communication System with Multiple-Input Single-Output Non-Orthogonal Multiple Access (MISO-NOMA) system and its Communication Method".

PROJECTS

01/10/2021 - CURRENT

Vestel – Koc University Joint (Industry) Project- Novel Physical Layer Designs for Next-Generation Wi-Fi Standards

01/03/2020 – 30/04/2021

TÜBİTAK Funded Project: Advanced small-scale NOMA Schemes for Enhancing Communication Security and Reliability of Future Low-complexity, Massive Machine-Type Communications.

<https://www.youtube.com/watch?v=iHREcm6qio0&t=724s>

- Developed a novel security technique based on MISO-NOMA systems for Future Wireless Communication Networks", which was presented at SoftCom 2020 conference organized by the University of Split in Hvar, Croatia and also filed a Turkish patent out it.

TECHNICAL SKILLS

Software

MATLAB, Latex, Proteus, Multisim, LT-Spice, SPSS, P-Spice.

Hardware

Circuit Designing, PCB, Microcontrollers, Arduino

Other

Research & Development, Problem Solving, Project Management, Research Writing.

ACHIEVEMENTS

Selected

- Got fee waiver along with TÜBİTAK scholarship for my research during master's degree at Antalya Bilim University.
- Got selected for Erasmus Training Program (Summer 2019) in Europe by Antalya Bilim University, Turkey *(Passed)
- Winner of Robocamp "ROBOSPRINT" competition held in summer 2015 at PAF-KIET University, Karachi.
- Got several Awards for winning Quiz competitions, Sports competitions, Athletics, and Science projects

LANGUAGES

English

TOEFL - 80

IELTS - 6.0



Turkish

Elementary