



Mohammad Karimi

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About

I became a faculty member of the Electrical and Electronic Engineering Department of Razi University on September 2023.

Mohammad Karimi

Assistant Professor of Razi University

Citations: 133

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EDUCATION

- ❖ **Ph.D.** in Communications, Electrical Engineering Department, Shahid Beheshti University, Tehran, Iran, September 2015-2019.
- ❖ **M.Sc.** in Communications, Electrical Engineering Department, Shahid Beheshti University, Tehran, Iran, 2013-2015.
- ❖ **B.Sc.** in Electrical Engineering, Electrical Engineering Department, Sharif University of Technology, Tehran, Iran, September 2011.
- ❖ **Diploma:** in Mathematics & Physics, Zanyaran high school of Sanandaj (Kurdistan, Sanandaj, Pasdaran Blvd): 2006.
- ❖ **Rank** 73 (non-regional; in the whole country) in the national exam for entrance to university.

My Master and PhD Theses

Master Thesis:

- ❖ Analysis and Optimization of Cognitive Radio Systems under Destructive Attacks

PhD Thesis:

- ❖ Spectrum Sensing, Resource Management and Parameter Estimation in Cognitive Radio Systems

Teaching

I have taught the following courses in Razi University since 2022:

- ❖ Digital Signal Processing (*graduate*)
- ❖ Wireless Communications (*graduate*)
- ❖ Stochastic Processes (*graduate*)
- ❖ Information Theory (*graduate*)
- ❖ Channel Coding (*graduate*)
- ❖ Communications Systems (*undergraduate*)
- ❖ Digital Communication (*undergraduate*)
- ❖ Signals and Systems (*undergraduate*)

Reviewer

I have reviewed many papers for many journals, such as:

- ❖ **IEEE Systems Journal**
- ❖ **IEEE Transactions on Cognitive Communications and Networking**
- ❖ **IET Communications**
- ❖ **Journal of Communications and Networks**
- ❖ **IEEE Wireless Communications Letters**
- ❖ **IEEE Access**

Experiences

Before becoming a faculty member of Razi University, during my BSc, MSc and PhD studies, I was working part-time for Iranian companies, as:

- ❖ System Designer and R&D Developer (8 years)
- ❖ R&D Manager (4 years)
- ❖ Project Manager (4 years)

Teacher Assistant (TA) of courses:

- ❖ Communications Systems
- ❖ Signals and Systems
- ❖ Probability and Statistics
- ❖ Stochastic Processes
- ❖ Digital Signal Processing
- ❖ Detection and Estimation Theory

Publications

Journals:

- [1] M Karimi, S Ahmadi, *Joint spectrum sensing, power, and bandwidth allocation for multiband cognitive radio systems*, **IET Communications**, 2020.
- [2] M Karimi, SMS Sadough, M Torabi, *Enhanced physical layer security for cognitive radio systems through joint spectrum access and power allocation*, **IET Communications**, 2020.
- [3] M Karimi, SMS Sadough, M Torabi, *Efficient Differential Signaling with Reduced Background Radiation for Multiple Aperture FSO Communication Systems*, **IET Communications**, 2020.
- [4] M Karimi, Z Dehghani, SMS Sadough, M Torabi, *Optimal Power Control and Spectrum Sensing for Throughput Maximization in Cognitive Radio Systems Under PUEA*, **IET Communications**, 2019.

- [5] M Karimi, SMS Sadough, M Torabi, *Robust Spectrum Access for Hybrid Interweave-Underlay Cognitive Radio Systems using Probabilistic Spectrum Access*, **IET Signal Processing**, 2019.
- [6] M Karimi, SMS Sadough, M Torabi, *Optimal Cognitive Radio Spectrum Access with Joint Spectrum Sensing and Power Allocation*, **IEEE Wireless Communications Letters**, 2019.
- [7] Mowlavi, M Karimi, SMS Sadough, *Bit Error Rate and Outage Analysis of MIMO-FSO Communications over - Distributed Atmospheric Channels with Imperfect Feedback*, **Optik - International Journal for Light and Electron Optics**, 2019.
- [8] M Karimi, SMS Sadough, M Torabi, *Improved Joint Spectrum Sensing and Power Allocation for Cognitive Radio Networks Using Probabilistic Spectrum Access*, **IEEE Systems Journal**, 2019.
- [9] M Karimi, Sadough, Seyed Mohammad Sajad, *Improved Spectrum Sensing and Achieved Throughputs of Multiband Cognitive Radio Systems Under Probabilistic Spectrum Access*, **International Journal of Electronics and Communications**, 2018.
- [10] M Karimi, SMS Sadough, *Efficient transmission strategy for cognitive radio systems under primary user emulation attack*, **IEEE Systems Journal**, 12 (4), 3767-3774, 2017.

Conferences:

- [1] M Karimi, SMS Sadough, M Torabi, *On the Reduction of Background Radiation for Differential Signaling FSO Systems*, **Second West Asian Colloquium on Optical Wireless Communications (WACOWC)**, 2019.
- [2] Molawi, M Karimi, SMS Sadough, *A Beamforming Scheme for MIMO-FSO Links over Atmospheric Channels with Imperfect Feedback*, **First West Asian Colloquium on Optical Wireless Communications (WACOWC)**, 2018, (Selected as **Best Paper**).
- [3] M Karimi, SMS Sadough, *A probabilistic spectrum access approach to joint sensing and power allocation in multiband cognitive radio*, **2017 Iranian Conference on Electrical Engineering (ICEE)**, 1933-1937.

Research Interests

- ❖ Cognitive Radio Systems
- ❖ Wireless Communications
- ❖ Digital Communications
- ❖ Detection and Estimation Theory
- ❖ Digital Signal Processing
- ❖ Phased Array Radars
- ❖ Statistical Signal Processing
- ❖ Free-Space Optical Communication (FSO)
- ❖ Visible Light Communication (VLC)