Reza Mosayebi

Dept. of Elec. & Comp. Engineering, Univ. of British Columbia, Vancouver, BC, Canada

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Skills and Knowledge

Digital Signal Processing, Signal Estimation and Detection, Anomaly Detection, Wireless Communications, Terahertz Communications, 5G and Beyond Systems, Receiver Design, Physical Layer Design, Channel Estimation and Equalization, Timing and Phase Recovery, Forward-error Correction, OFDM, Multi-user Massive MIMO, Beamforming, Localization, Fiber-optic Communications, Machine Learning, Transfer Learning, Deep Neural Networks, Probabilities and Statistics, Bio-inspired Communications, Problem Solving, Optimization, Project Management, MATLAB, Python, C++

Work Experience

University of British Columbia, Vancouver, Canada

Role: *Postdoctoral Research Fellow* Mar. 2022 – Present

- Transfer Learning for Adapting Learned Methods to Track Dynamic Changes in Optical Networks.
- Deep Neural Network Schemes for Nonlinearity Compensation and Rotation of State of Polarization Tracking in Fiber Optics.
- Polarization-Dependent Loss Compensation in Optical Fiber Communication Systems.

Role: *Postdoctoral Teaching Fellow* Jan. 2023 – Apr. 2023

- Instructor for the "Error Control Coding for Communications and Computers" Course.

University of Pompeu Fabra, Barcelona, Spain

Role: *Postdoctoral Fellow* Sep. 2019 – Sep. 2021

- Parallel Interference Cancellation for Cell-Free Cloud Radio Access Networks (C-RANs).
- Precoding Techniques for Massive MIMO C-RAN Downlink.
- Deep Learning-Based Channel Estimation and Precoder Design for Ultra Massive MIMO Systems over Terahertz Frequencies.

Faraz Ertebat, Co., Tehran, Iran

Role: *Senior System Engineer* Apr. 2018 – Jun. 2019

- Designing (Blind) Receivers for Satellite Communications, Including: Blind Modulation Recognition, Re-sampler, Timing Recovery, Phase Recovery, Forward-error Correction Codes, Packet Detection.
- Interference Cancellation.
- Localizing Objects Using TDOA, FDOA.
- Project Management and Mentoring Engineers.

Education

Sharif University of Technology, Tehran, Iran

Doctor of Philosophy in Electrical Engineering Feb. 2014 – Sep. 2018

- Thesis: "Efficient detection schemes in molecular communication networks"

Sharif University of Technology, Tehran, Iran

Master of Science in Electrical Engineering – Communication Systems Sep. 2012 – Feb. 2014

- Thesis: "Efficient methods for transmission and reception of information in molecular communication systems"

Sharif University of Technology, Tehran, Iran

Bachelor of Science in Electrical Engineering – Communications Sep. 2008 – Sep. 2012

- Thesis: "Data transmission over GSM voice channel"

Selected Publications

[J1] **R. Mosayebi**, M. Mojahedian, and A. Lozano, "Linear interference cancellation for the cell-free C-RAN uplink," in *IEEE Transactions on Wireless Communications,* Mar. 2021.

[J2] R Nikbakht, **R. Mosayebi**, and A. Lozano, "Uplink fractional power control and downlink power allocation for cell-free networks," *IEEE Wireless Communications Letters*, Jan. 2020.

[J3] **R. Mosayebi**, H. Arjmandi, A. Gohari, M. Nasiri-Kenari, and U. Mitra, "Receivers for diffusion based molecular communication: Exploiting memory and sampling Rate," *IEEE Journal on Selected Areas in Communications*, Dec. 2014.