Sima Bahrani

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Address: Optical Networks Research Lab ,
Electrical Engineering Department,
Sharif University of Technology,
Tehran, Iran

Personal Information

Place of Birth: Shiraz, Iran
Date of Birth: August 6th, 1987

Education

2012-present **Ph.D. Candidate in Communications Engineering**, Sharif University of Technology, Tehran, Iran
Supervisor: Prof. Jawad Salehi

2009-2012 **M.Sc. in Communications Engineering**, Shiraz University, Shiraz, Iran,
GPA: 93.9%
Master thesis: Investigation of blind modulation recognition in adaptive OFDM systems
Supervisors: Dr. Mostafa Derakhtian, Dr. Alireza Zolghadrasli

2005-2009 **B.Sc. in Electrical Engineering** , Shiraz University, Shiraz, Iran, GPA: 88%
B.Sc. project: Investigation of pulse deinterleaving methods in radar systems

Research Interests

- Optical communications, Multiplexing and Multiple access techniques in optical networks, Optical OFDM, All-Optical OFDM, Optical Code-Division Multiple-Access, Optical Orthogonal Codes, All-Optical signal Processing
- Quantum communications, Quantum information theory, Quantum entanglement
- Wireless Communications, Adaptive modulation and coding techniques for OFDM systems, bit loading algorithms for adaptive OFDM systems, Automatic modulation classification techniques, Channel estimation and prediction for OFDM systems

Relevant Courses

Digital Signal Processing, Stochastic Processes, Advanced communications, Adaptive Filtering, Estimation Theory, detection theory, Statistical Optical Communications, optical communication networks, integrated optics, numerical methods in optimization, coding theory.

Honors

2011 **2nd** Rank in M.Sc., Communications Engineering Department, Shiraz University
2009 **3rd** Rank in B.Sc., Communications Engineering Department, Shiraz University

2009 Ranked **124** in the Nationwide M.Sc. Entrance Exam, Electrical Engineering, Iran
2005 Ranked **326** in the Nationwide University Entrance Exam among more than 400,000 participants, Iran

Publications

Conference:

- S. Bahrani, M. Razavi, J. A. Salehi, "Orthogonal frequency division multiplexing in trusted-node quantum key distribution networks", *In Proc. 12th Int. Conf. Quantum Communication, Measurement, and Computing (QCMC)*, 2014.
- S. Bahrani, M. Derakhtian, A. Zolghadrasli, "Effect of channel prediction on automatic modulation classification for adaptive OFDM Systems", *Electrical Engineering (ICEE), 2012 20th Iranian Conference on*. IEEE, 2012.

Journals:

- S. Bahrani, M. Razavi, J. A. Salehi, "Orthogonal frequency division multiplexed quantum key distribution", *Journal of Lightwave Technology*, vol. 33, no. 23, pp. 4687-4698, 2015.
- S. Bahrani, M. Derakhtian, A. Zolghadrasli, "Performance analysis of approximated MAP algorithm for automatic modulation classification in adaptive OFDM system", *submitted to IET Communications.*

Teaching Experiences

2009-2011 Signals and Systems, **Teaching Assistant**, Shiraz University
2010-2011 Stochastic Processes, **Teaching Assistant**, Shiraz University
2010-2011 Electronic II laboratory, **Teaching Assistant**, Shiraz University
2010-2011 Signals and Systems, **Instructor**, Shiraz Pasargad Higher Education Institute
2013-2014 Advanced Communications, **Teaching Assistant**, Sharif University of Technology
2013-2015 Digital Communications, **Teaching Assistant**, Sharif University of Technology
2015 Signals and Systems, **Teaching Assistant,** Sharif University of Technology

References

- Prof. Jawad Salehi, Sharif University of Technology, Tehran, Iran
  Email: jasalehi@sharif.edu
- Dr. Mohsen Razavi, University of Leeds, Leeds, United Kingdom
  Email: m.razavi@leeds.ac.uk
- Dr. Mostafa Derakhtian,Shiraz University, Shiraz, Iran
  Email: derakhtian@shirazu.ac.ir
- Dr. Alireza Zolghadrasli, Shiraz University, Shiraz, Iran
  Email: zolghadr@shirazu.ac.ir