Seyed Hamid Safavi

Curriculum Vitae

Shahid Beheshti University G.C.
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Education

2015–2016 **Visiting Fellow**, *Singapore University of Technology and Design (SUTD)*.
Supervisor: Prof. Ngai-Man Cheung

2012–present **Ph.D. Student in Electrical Engineering - Communication Systems**, *Shahid Beheshti University (SBU)*, Tehran, Iran,
Thesis title: *Designing an Efficient Sensing Matrix for Compressive Video Sensing*.
Supervisor: Prof. Farah Torkamani-Azar

2010–2012 **M.Sc. in Electrical Engineering - Communication Systems**, *K. N. Toosi University of Technology (KNTU)*, Tehran, Iran,
Thesis title: *Simulation and Analysis of Beamforming in Cognitive Two-way Relay Networks*.
Supervisor: Prof. Mehrdad Ardebilipour

2006–2010 **B.Sc. in Electrical Engineering - Communication Systems**, *KNTU*, Tehran, Iran,
Thesis title: *Simulation and implementation of QAM Modulator on DSK6713*.
Supervisor: Dr. Soheil Salari

2005–2006 **High school**, *National Organization for Development of Exceptional Talents (NODET)*, Ardabil, Iran, GPA: **19.67**/20.

Honors and Awards

2015 **Dr. Shahriari Scholarship**, *Shahid Beheshti University*, Tehran, Iran.

July 2015 **Student Travel Grant**, *The First IEEE Communication Society Summer School*, Trento, Italy.

2012 **Second Place, M. Sc. Graduation**, *KNTU*, Tehran, Iran.

2010 **Top 0.2 % rank**, *National Graduate Degree Entrance Exam*, Iran.

2006 **Top 0.02 % rank**, *National Undergraduate Degree Entrance Exam*, Iran.

Research Interests

Signal Processing, Image and Video Processing, Compressive Sensing, Sparse Representations, Machine Learning, Linear Inverse Problems, Convex Optimizations, Wireless Communications, Cognitive Networks.

Talks

Dec-2015   **Next Generation of Wireless Communications**, *Department of Physics*, SBU, Tehran, Iran.

Professional Activities

- Student Member of IEEE (2011 to present)
- Member of IEEE Communication Society (2011 to present)
- Member of IEEE Signal Processing Society (2012 to present)
- Member of IEEE Information Theory Society (2013 to present)
- Member of IEEE Vehicular Technology Society (2013 to present)
- Reviewer for IEEE Journal on Selected Areas in Communication (JSAC), IEEE Transactions on Communications (TCOM), IEEE Transactions on Vehicular Technology (TVT), IEEE Wireless Communication Letters (WCL), IET Communication, ICEE2014, MVIP2015

Workshop Participation

- The Visual Image Search and Visual Analytics (VISVA) Summer School, Nanyang Technological University (NTU), Singapore, July 4-8, 2016.
- Selected by IEEE Communication Society for participating in the 1st IEEE ComSoc Summer School on wireless communication, Dept. of Information Engineering and Computer Science - University of Trento, Italy, July 6-9, 2015.
- Workshop on Introduction to Compressive Sensing and Sensing Matrix Designing, 23'th Iranian Conference on Electrical Engineering (ICEE), Sharif university of technology, Tehran, Iran, May 2015.
- 3'rd Iran Workshop on Communication and Information Theory (IWCIT), Sharif University of Technology, Tehran, Iran, 6-7 May, 2015.
- Workshop on Introduction to LTE and 4G Wireless Networks, 22'th Iranian Conference on Electrical Engineering (ICEE), Shahid Beheshti university, Tehran, Iran, May 2014.
- 2'nd Iran Workshop on Communication and Information Theory (IWCIT), Sharif University of Technology, Tehran, Iran, 7-8 May, 2014.
- 4'th Workshop on Optimization and its Applications, Department of Mathematics, K.N. Toosi University of Technology, Tehran, Iran, May 15, 2012.

Work Experiences

2014 - 2016   **Project co-worker**, *Iran Telecommunication Research Center (ITRC)*, Tehran, Iran.

Teaching Experiences

Summer 2014   **Digital Communication**, *Lecturer*, Ale Taha University, Tehran, Iran.
Autumn 2013   **Mathematical Engineering**, *Teacher Assistant*, SBU, Tehran, Iran.
spring 2008   **Electronic Circuits**, *Teacher Assistant*, KNTU, Tehran, Iran.
Autumn 2008   **Electronic I**, *Teacher Assistant*, KNTU, Tehran, Iran.

Research Experiences

2012-present	**Cognitive Telecommunication Research Group**, *Research Assistant*, SBU, Tehran, Iran.
2015-2016	**Visiting Fellow**, Singapore University of Technology and Design, Singapore.
2011-2012	**Spread Spectrum Laboratory**, *Research Assistant*, KNTU, Tehran, Iran.
2010	**WiMax Research Laboratory**, *Research Assistant*, KNTU, Tehran, Iran.
Spring 2009	**Electronic Laboratory**, *Research Assistant*, KNTU, Tehran, Iran.

Publication List

Journal Papers

o **S. H. Safavi**, F. Torkamani-Azar, "*Sparsity-Aware Adaptive Block-Based Compressive Sensing,*" IET Signal Processing, In press, 2016. [PDF]

o N. Abaei, **S. H. Safavi**, F. Torkamani-Azar, "*Reweighted Block-Based Compressed Sensing Using Singular Value Decomposition,*" Submitted to IET Signal Processing, 2016.

o A. Montazeri, J. Haddadnia, and **S. H. Safavi**, "*Fuzzy Hypothesis Testing for Cooperative Sequential Spectrum Sensing Under Noise Uncertainty,*" IEEE Communications Letters, 2016. [PDF]

o **S. H. Safavi**, M. Ardebilipour, S. Salari, "*Relay Beamforming in Cognitive Two-Way Networks With Imperfect Channel State Information,*" IEEE Wireless Communication Letters, vol.1, no. 4, pp. 344-347, Aug 2012. [PDF] Cited by 44

Conference Papers

o **S. H. Safavi**, F. Torkamani-Azar, "Perceptual Compressive Sensing based on Contrast Sensitivity Function", submitted to The 25th IEEE Iranian Conference on Electrical Engineering (ICEE 2017).

o **S. H. Safavi**, F. Torkamani-Azar, "A novel Adaptive weighted Kronecker Compressive Sensing", The 42nd IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2017), P.hD. Forum, Accepted for publication.

o N. Abaei, **S. H. Safavi**, F. Torkamani-Azar, "Reweighted Block-Based Compressed Sensing Using Singular Value Decomposition", The 42nd IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2017), P.hD. Forum, Accepted for publication.

o M. Khatua, **S. H. Safavi**, N.-M. Cheung, "Sparse Laplacian Component Analysis: Application to Detection of Internet Traffic Anomalies", submitted to The Thirty-First AAAI Conference on Artificial Intelligence (AAAI-17).

o A. Hashemi, **S. H. Safavi**, M. Rostami, N.-M. Cheung, "Efficient Sampling Scheme for Reconstruction of Diffiusion Fields", submitted to The 42nd IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2017).

o R. Liu, H. Nejati, **S. H. Safavi**, N.-M. Cheung, "Simultaneous Low-Rank Component and Graph Estimation for High-Dimensional Graph Signals: Application to Brain Imaging" submitted to The 42nd IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2017).

o **S. H. Safavi**, R. Sadegh Zadeh, V. Jamali and S. Salari, "*Interference Minimization Approach for Distributed Beamforming in Cognitive Two-Way Relay Networks,*" IEEE Pacific Rim Conference on Communications, Computers and Signal Processing, Victoria, Canada, 2011. pp. 352-356. [PDF] Cited by 17

o **S. H. Safavi**, M. Ardebilipour, R. Sadegh Zadeh, and A. Piltan, "*SINR Balancing Approach for Network Beamforming in Cognitive Two-Way Relay Networks,*" 11th International Conference on Hybrid Intelligent Systems. (HIS 2011), Malaca, Malaysia, 2011.pp. 481-485. [PDF] Cited by 2

o **S. H. Safavi**, M. Ardebilipour, V. Jamali and J. M. Ahmadian, "*Distributed Beamforming for SINR Balancing Approach in Cognitive Two-Way Relay Networks With Imperfect Channel State Information,*" Iranian Conference on Electrical Engineering (ICEE), Tehran, Iran, May 2012, pp. 1342-1346. [PDF] Cited by 5

o V. Jamali, M. Ahmadian, **S. H. Safavi**, and M. Ardebilipour, "*Cooperative Spectrum Sensing in Cognitive Radio Networks under Primary Outage Constraint,*" Iranian Conference on Electrical Engineering (ICEE), Tehran, Iran, May 2012, pp. 1368-1372. [PDF] Cited by 1

o V. Jamali, R. Sadegh Zadeh, **S. H. Safavi** and S. Salari, "*Optimal Cooperative Wideband Spectrum Sensing in Cognitive Radio Networks,*" The Third International Conference on Ubiquitous and Future Networks, Dalian, China, 2011, pp. 371-374 [PDF] Cited by 3

o S. M. Rezvani, **S. H. Safavi**, R. Sadegh Zadeh, A. Haghbin, R. Davarpanah, "*Relay Power Minimization Approach based on General-Rank Beamforming for Multi-Antenna Relaying Schemes,*" 5th International Conference on New Technologies, Mobility and Security (NTMS), 2012, Istanbul, Turkey, 2012. pp. 1-5. [PDF] Cited by 4

Citations are based on Google Scholar.

Languages

○ **Persian**: Perfect   ○ **Azeri**: Mother Tongue   ○ **English**: Fluent

References

- Prof. Farah Torkamani-Azar, Associate Professor of Electrical Engineering, SBU, Email: f-torkamani@sbu.ac.ir
- Prof. Ngai-Man (Man) Cheung, Assistant Professor, SUTD, Email: ngaiman_cheung@sutd.edu.sg
- Prof. Mehrdad Ardebilipour, Associate Professor of Electrical Engineering, KNTU. Email: mehrdad@eetd.kntu.ac.ir