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Education

- 04.2005–05.2007 Ph.D. (with the highest honors) in Electrical Engineering, Darmstadt University of Technology, Darmstadt, Germany.
Thesis: “Blind Signature Waveform Estimation and Linear Multiuser Detection in Direct Sequence Code Division Multiple Access Systems.”
- 03.2002–04.2005 Ph.D. Candidate in Electrical Engineering and Research Associate in Department of Communication Systems.*
- 09.2002–03.2003 Visiting Researcher, Communication Research Laboratory, McMaster University, Hamilton, Ontario, Canada.
- 09.1997–09.2000 M.Sc. in Electrical Engineering, University of Tehran, Tehran, Iran.
Thesis: “Robust Control of Nonlinear Systems Using Nonlinear H_∞ Method.”
- 09.1993–09.1997 B.Sc. in Electrical Engineering, University of Tehran, Tehran, Iran.

* The university has been changed to accompany the adviser, Prof. Alex Gershman, during the course of Ph.D.

Publications

Journal Publications

- **K. Zarifi** and A. B. Gershman, “Asymptotic performance analysis of blind minimum output energy receivers for large DS-CDMA systems,” accepted for publication in *IEEE Transactions on Signal Processing*, 14 pages.
- **K. Zarifi** and A. B. Gershman, “Blind subspace-based signature estimation in DS-CDMA systems with unknown wide-sense stationary interference,” *IEEE Transactions on Signal Processing*, vol. 55, pp. 3325-3335, July 2007.
- **K. Zarifi** and A. B. Gershman, “Performance Analysis of Blind Subspace-Based Signature Estimation Algorithms for DS-CDMA Systems with Unknown Correlated Noise,” *EURASIP Journal on Advances in Signal Processing*, vol. 2007, Article ID 83863, 14 pages, 2007. doi:10.1155/2007/83863
- **K. Zarifi** and A. B. Gershman, “Blind subspace-based signature waveform estimation in BPSK-modulated DS-CDMA systems with circular noise,” *IEEE Transactions on Signal Processing*, vol. 54, pp. 3592-3602, Sep. 2006.
- **K. Zarifi**, S. Shahbazpanahi, A. B. Gershman, and Z.-Q. Luo, “Robust blind multiuser detection based on the worst-case performance optimization of the MMSE receiver,” *IEEE Transactions on Signal Processing*, vol. 53, pp. 295-305, Jan. 2005.
- **K. Zarifi** and A. B. Gershman, “High SNR performance analysis of blind minimum output energy receivers for large DS-CDMA systems,” submitted to *IEEE Transactions on Signal Processing*, under revision.
- **K. Zarifi** and A. B. Gershman, “Generalized correlation decomposition based blind channel estimation in DS-CDMA systems with unknown wide-sense stationary noise,” submitted to *IEEE Transactions on Signal Processing*.

Conference Publications

- **K. Zarifi** and A. B. Gershman, "Large system performance analysis of minimum output energy receivers for DS-CDMA systems," *IEEE International Workshop on Signal Processing Advances for Wireless Communications (SPAWC)*, June 2007, Helsinki, Finland.
- **K. Zarifi** and A. B. Gershman, "High SNR performance analysis of blind minimum output energy receivers in large DS-CDMA systems," *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Apr. 2007, Honolulu, USA.
- **K. Zarifi** and A. B. Gershman, "Subspace-based blind channel estimation in DS-CDMA systems with unknown wide-sense stationary interference," *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, May 2006, Toulouse, France.
- **K. Zarifi** and A. B. Gershman, "Performance analysis of subspace-based signature waveform estimation algorithms for DS-CDMA systems with unknown correlated noise," *IEEE International Workshop on Signal Processing Advances for Wireless Communications (SPAWC)*, June 2005, New York, USA.
- **K. Zarifi** and A. B. Gershman, "Enhanced blind subspace-based signature waveform estimation in CDMA systems with circular noise," *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, March 2005, Philadelphia, USA.
- **K. Zarifi**, S. Shahbazpanahi, A. B. Gershman, and Z.-Q. Luo, "Robust blind multiuser detection based on worst-case MMSE performance," *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, May 2004, Montreal, Canada.
- A. Afsahi, M. J. Yazdanpanah and **K. Zarifi**, "Improvement of least square and hyper-optimal methods to design the nonlinear H_∞ controller," *Iranian Conference on Electrical Engineering*, May 2001, Tehran, Iran.
- **K. Zarifi** and M. J. Yazdanpanah, "Two approximate solutions to HJI equation via state dependent Riccati equation," *European Control Conference*, Sep. 2001, Porto, Portugal.

Grants and Honours

- **Ph.D. Degree with the Highest Honours** (German title: *Auszeichnung*).
- **Industrial R&D Fellowship (IRDF)**: Funded by Natural Sciences and Engineering Research Council of Canada, 30,000 CAD/year for two years beginning from 2007.
- **Finalist in the Student Paper Contest**: *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, May 2006, Toulouse, France.
- **DFG Kongressreise Grant**: Funded by German Research Foundation (Deutsche Forschungsgemeinschaft), 800 EURO to participate in ICASSP, 2006.

Professional Activities

- **M.Sc. Thesis Adviser**:
 - V. T. Tran, "Robust multiuser detection for multi-antenna DS-CDMA systems," Darmstadt University of Technology, 2007.
 - A. Gantumur, "Blind robust multiuser receiver design for multi-antenna DS-CDMA systems," Department of Communication Systems, Darmstadt University of Technology, 2006.
 - C. Hohendorf, "An angular diversity scheme for multi-antenna transmission system," Department of Communication Systems, University of Duisburg-Essen, 2003.
- **Journal Referee**: IEEE Transactions on Signal Processing, IEEE Signal Processing Letters, IEEE Transactions on Wireless Communications, EURASIP Journal on Applied Signal Processing, EURASIP Journal on Wireless Communications and Networking, Signal Processing-Elsevier, Institution of Engineering and Technology (IET) Signal Processing.
- **Panel Chair**: 2nd Iranian Student Conference on Electrical Engineering, University of Tehran, Tehran, Iran, 1999.
- **Society Membership**: Institute of Electrical and Electronics Engineers (IEEE).

Teaching Experience

- **Teacher Assistant:** “Communication technology III: Signal and Information Theory,” Darmstadt University of Technology, 2005–2006.
- **Teacher:** Teaching Calculus to the pre-university students preparing to attend in Iranian National Entrance Exam for study in University, 1994-2001.
- **Instructor:** Special courses on “Advanced Mathematics for Engineers” and “Differential Equations” held by ECE Student Council for the B.Sc. students preparing to attend in Iranian National Entrance Exam for Graduate Study, Department of Electrical and Computer Engineering, University of Tehran, 1998-1999.
- **Teacher Assistant:** “Advanced Mathematics for Engineers”, Department of Electrical and Computer Engineering, University of Tehran, 1996.

References

Dr. Alex Gershman, **Fellow IEEE**
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Darmstadt, Germany
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Dr. Sergiy Vorobyov, **Senior member IEEE**
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