Amir Masoud Nasri-Nasrabadi

Department of Electrical and Computer Engineering University of British Columbia, Vancouver, Canada 2332 Main Mall, Vancouver, BC Canada V6T 1Z4 URL: <u>http://ca.linkedin.com/pub/amir-masoud-nasri/35/69b/2b0</u> Email: amirn at ece.ubc.ca

EDUCATION

Ph.D. Candidate in Electrical Engineering, 2004-2008

University of British Columbia, Vancouver, Canada,

- Thesis: "Performance of Wireless Communication Systems in Ultra-wideband Interference and Non-Gaussian noise", Advisor: Prof. Robert Schober
- M.Sc. Candidate in Electrical Engineering, 2001-2004
 - University of Tehran, Tehran, Iran,
 - Thesis: "Space-Time Code and Precoder Design for MIMO Channels", Advisor: Prof. S. Hamid Reza Jamali
- B.Sc. Candidate in Electrical Engineering, 1997-2001
 Sharif University of Technology, Tehran, Iran

Research Interests

- Cooperative communications in wireless relay networks
- Network-coding in relay networks
- Communications in non-Gaussian noise and interference
- Orthogonal frequency division multiplexing (OFDM) systems
- Bit-interleaved coded modulation (BICM)
- Ultra-wideband (UWB) communication
- Multiple-input multiple-output (MIMO) systems and space-time coding
- Cognitive radio systems
- Optimization theory and applications

Research Experience

- Postdoctoral Fellow, Jan. 2010 present
 - Jointly held at University of British Columbia, Vancouver, Canada, and University of Waterloo, Waterloo, Canada, Advisors: Prof. Robert Schober and Prof. Murat Uysal
 - Investigated the performance and optimization of network-coded cooperative diversity systems
- Postdoctoral Fellow, Nov. 2008 Jan. 2010
 - University of British Columbia, Vancouver, Canada, Advisors: Prof. Robert Schober and Prof. Ian F. Blake
 - Investigated the performance and optimization of cooperative diversity systems in noise and interference with generic distribution
 - Worked on novel spectrum sensing techniques for cognitive radio systems in non-Gaussian noise and interference

- Research Assistant, Sep. 2004 Nov. 2008
 - University of British Columbia, Vancouver, Canada, Advisor: Prof. Robert Schober
 - Developed a unified framework for the performance analysis of communication systems in non-Gaussian noise and interference
 - Studied the effects of ultra-wideband interference on narrow-band victim receivers
- Research Assistant, Sep. 2001 Sep. 2004
 - University of Tehran, Tehran, Iran, Advisor: Prof. S. Hamid Reza Jamali
 - Designed novel space-time trellis codes in MIMO keyhole channels
 - Designed pre-coders for MIMO channels based on partial channel state information

TEACHING EXPERIENCE

- Teaching Assistant for Signals and Communications course
 - University of British Columbia, 5 semesters
 - Involved teaching tutorials, marking assignments and exams, and helping students during office hours
- Co-supervising three students during their Ph.D. programs
 - Co-supervising Ph.D. student Ali Nezampour with Prof. Robert Schober resulting in two journal papers and two conference papers
 - Co-supervising Ph.D. student Farzad Moghimi with Prof. Robert Schober resulting in one journal paper and one conference paper
 - Co-supervising Ph.D. student Toufiqal Islam with Prof. Robert Schober resulting in one submitted conference paper

HONORS AND AWARDS

- Best Paper Award, IEEE International Conf. on Ultra-Wideband (ICUWB), 2006
- Finalist for Best Student Paper Award (one of three), IEEE Globecom, 2006
- NSERC Post-Doctoral Fellowship, 2009-2011
- University Graduate Fellowship (Li Tze Fong), Sept. 2007 Aug. 2008
- Ranked 2nd and awarded *Silver Medal* in the *Nation-Wide Mathematics Olympiad*, Iran, 1996
- Ranked 3rd and awarded *Bronze Medal* in the *Nation-Wide Mathematics Olympiad*, Iran, 1995

PROFESSIONAL ACTIVITIES

- Member of the secretariat of the 9th International Symposium on Power-Line Communications Conference (ISPLC), Vancouver, Canada, May 2005
- Session Chair for the IEEE Global Telecommunications Conference (Globecom), Honolulu, Hawaii, November 2008
- Technical Reviewer for the IEEE Transaction on Communications, the IEEE Transactions on Wireless Communications, the IEEE Transactions on Vehicular Technology, the IEEE Global Telecommunications Conference (Globecom), the IEEE International Conference on Communications (ICC), the IEEE Vehicular Technology Conference (VTC), the IEEE Wireless Communication and Networking Conference (WCNC), and the IEEE International Symposium on Power-Line Communications (ISPLC)

PUBLICATIONS

Journal Publications (Accepted or Published):

1. A. Nezampour, **A. Nasri**, and R. Schober, "Asymptotic Analysis of Space–Time Codes in Generalized Keyhole Fading Channels", Accepted for publication in the *IEEE Transactions on Communications*, December 2010.

2. F. Moghimi, **A. Nasri** and R. Schober, "Robust Spectrum Sensing for Cognitive Radio Networks in Non–Gaussian Noise and Interference", Accepted for publication in the *IEEE Transactions on Communications*, October 2010.

3. A. Nasri, R. Schober, and Ian F. Blake, "Performance and Optimization of Cooperative Diversity Systems in Generic Noise and Interference", *IEEE Transactions on Wireless Communications*, Vol. 10, pp. 1132–1143, April 2011.

4. A. Nasri and R. Schober, "Robust Lp–Norm Decoding for Secondary BICM Systems", *IEEE Transactions on Communications*, Vol. 58, pp. 3084–3090, November 2010.

5. A. Nasri and R. Schober, "Performance of BICM–SC and BICM–OFDM Systems with Diversity Reception in Non–Gaussian Noise and Interference", *IEEE Transactions on Communications*, Vol. 57 (11), pp. 3316–3327, November 2009.

6. A. Nasri, A. Nezampour, and R. Schober, "Adaptive Lp–Norm Diversity Combining in Non–Gaussian Noise and Interference", *IEEE Transactions on Wireless Communications*, Vol. 8 (8), pp. 4230–4240, August 2009.

7. A. Nasri, R. Schober, and L. Lampe, "Performance of BICM–OFDM Systems in UWB Interference", *IEEE Transactions on Wireless Communications*, Vol. 8 (9), pp. 4389–4393, June 2009.

8. A. Nezampour, **A. Nasri**, R. Schober, and Y. Ma, "Asymptotic BEP and SEP of Quadratic Diversity Combining Receivers in Correlated Ricean Fading, Non–Gaussian Noise, and Interference", *IEEE Transactions on Communications*, Vol. 57 (4), pp. 1039–1049, April 2009.

9. A. Nasri, R. Schober, and Y. Ma, "Unified Asymptotic Analysis of Linearly Modulated Signals in Fading, Non–Gaussian Noise, and Interference", *IEEE Transactions on Communications*, Vol. 56 (6), pp. 980–990, June 2008.

10. A. Nasri, R. Schober, and L. Lampe, "Analysis of Narrowband Communication Systems Impaired by MB–OFDM UWB Interference", *IEEE Transactions on Wireless Communications*, Vol. 6 (11), pp. 4090–4100, November 2007.

11. A. M. Nasri Nasrabadi, H. R. Bahrami, and S. H. Jamali, "Space–Time Trellis Codes for Keyhole Channels: Performance Criterion and Code Design", *IEE Electronics Letters*, Vol. 40 (1), January 2004.

Journal Publications (Submitted):

12. A. Nasri, R. Schober, and M. Uysal, "Performance and Optimization of Network–Coded Cooperative Diversity systems", Submitted to the *IEEE Transactions on Communications*, June 2009.

13. A. Nasri, R. Schober, and M. Uysal, "Unified Performance Analysis of C–MRC and LAR Decode– and–Forward Systems", Submitted to the *IEEE Transactions on Communications*, December 2010.

14. I. Ahmed, **A. Nasri**, R. Schober, and R. Mallik, "Asymptotic Performance of Generalized Selection Combining in Generic Noise and Fading", Submitted to the *IEEE Transactions on Communications*, January 2011.

15. A. Nasri, R. Schober, and M. Uysal, "Enhanced MRC for Decode–and–Forward Cooperative Diversity systems", Submitted to the *IEEE Transactions on Wireless Communications*, June 2011.

16. I. Ahmed, **A. Nasri**, R. Schober, and R. Mallik, "Asymptotic Performance and Optimization of Relay Selection Cooperation in Generic Noise, Interference, and Fading", Submitted to the *IEEE Transactions on Wireless Communications*, June 2011.

Journal Publications (In preparation):

17. T. Islam, **A. Nasri**, and R. Schober, "Analysis and Optimization of Decode–and–Forward Cooperative BICM–OFDM Systems", To be submitted to the *IEEE Transactions on Communications*.

Conference Publications (Accepted or Published):

1. A. Nasri, R. Schober, and M. Uysal, "Error Performance of Network–Coded Cooperative Diversity", *IEEE Global Telecommunication Conference (Globecom)*, Miami, Florida, December 2010.

2. A. Nasri and R. Schober, "Performance of Cooperative Diversity Systems in Non–Gaussian Environments", In *Proc. IEEE International Conference on Communications (ICC)*. Cape Town, South Africa, May 2010.

3. A. Nezampour, **A. Nasri**, and R. Schober, "Asymptotic Analysis of Space–Time Codes in Generalized Keyhole Fading Channels", *IEEE Wireless Communications and Networking Conference (WCNC)*, Sydney, Australia, March 2010.

4. A. Nasri and R. Schober, "Adaptive Lp–Norm Metric for Secondary BICM–OFDM Systems", In *Proc. IEEE Global Telecommunications Conference (Globecom)*, Honolulu, Hawaii, December 2009.

5. F. Moghimi, **A. Nasri** and R. Schober, "Lp–Norm Spectrum Sensing for Cognitive Radio Networks Impaired by Non–Gaussian Noise", In *Proc. IEEE Global Telecommunications Conference (Globecom)*, Honolulu, Hawaii, December 2009.

6. A. Nasri, A. Nezampour, and R. Schober, "Adaptive Coherent Lp–Norm Combining", In *Proc. IEEE International Communications Conference (ICC)*, Dresden, Germany, June 2009.

7. A. Nasri and R. Schober, "Robust Lp–Norm Metric for BICM–OFDM Cognitive Radio Systems", In *Proc. IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)*, *Invited Paper*, St. John's, Newfoundland and Labrador, Canada, May 2009.

8. A. Nasri and R. Schober, "Performance of BICM–OFDM Systems in Non–Gaussian Noise and Interference", In *Proc. IEEE Global Telecommunications Conference (Globecom)*, New Orleans, Louisiana, USA, December 2008.

9. A. Nasri, R. Schober, and L. Lampe, "Performance Evaluation of BICM–OFDM Systems Impaired by UWB Interference", In *Proc. IEEE International Communications Conference (ICC)*, Beijing, China, May 2008.

10. A. Nezampour, **A. Nasri**, R. Schober, and Y. Ma, "Asymptotic BEP and SEP of MRC in Correlated Ricean Fading and Non–Gaussian Noise", In *Proc. IEEE Vehicular Technology Conference (VTC)*, Baltimore, USA, September 2007.

11. A. Nasri, R. Schober, and M. Yao, "Asymptotic SER Analysis of EGC and SC in Fading and Non–Gaussian Noise and Interference", In *Proc. IEEE International Communications Conference (ICC)*, Glasgow, UK, June 2007.

12. A. Nezampour, **A. Nasri**, R. Schober, and Y. Ma, "Asymptotic BEP and SEP of Differential EGC in Correlated Ricean Fading and Non–Gaussian Noise", In *Proc. IEEE Global Telecommunications Conference (Globecom)*, Washington, USA, March 2007.

13. A. Nasri, R. Schober, and Y. Ma, "Unified Asymptotic Analysis of Linearly Modulated Signals in Fading and Noise", In *Proc. IEEE Global Telecommunications Conference (Globecom), Finalist for Best Student Paper Award*, San Francisco, USA, December 2006.

14. L. Lampe, A. Nasri, and R. Schober, "Interference from MB–OFDM UWB Systems: Exact, Approximate, and Asymptotic Analysis", In *Proc. IEEE International Conference on Ultra–Wideband (ICUWB), Invited Paper, Best Paper Award*, Boston, USA, September 2006.

15. A. Nasri, R. Schober, and L. Lampe, "Comparison of MB–OFDM and DS–UWB Interference", In *Proc. IEEE International Conference on Ultra–Wideband (ICUWB)*, Boston, USA, September 2006.

16. A. Nasri, R. Schober, L. Lampe, "Performance of a BPSK NB Receiver in MB–OFDM UWB Interference", In *Proc. IEEE International Communications Conference (ICC)*, Istanbul, Turkey, June 2006.

17. A. Nasri, R. Schober, and L. Lampe, "Analysis of NB BPSK in MB–OFDM UWB Interference and Fading", In *Proc. Vehicular Technology Conference (VTC Spring)*, Melbourne, Australia, May 2006.

18. H. R. Bahrami, T. Le–Ngoc, **A. M. Nasri Nasrabadi**, and S. H. Jamali, "Precoder Design based on Correlation Matrices for MIMO Systems", In *Proc. IEEE International Communications Conference (ICC)*, Seoul, Korea, May 2005.

19. T. Islam, **A. Nasri**, and R. Schober, "Analysis and Relay Placement for DF Cooperative BICM– OFDM Systems", In *Proc. IEEE Wireless Communications and Networking Conference (WCNC)*, Quintana-Roo, Mexico, March 2011.