

Hamid Saeedi

Assistant Professor
Department of Electrical and Computer Engineering
Tarbiat Modares University
Tel. & fax: +98 (218) 288 4348
Email: hsaeeedi@ieee.org

Birthdate: March/21/1978

Education:

- Postdoctoral fellowship, University of Massachusetts, Amherst, MA, USA, 2009.
- Ph.D. in Electrical Engineering, Carleton University, Ottawa, Canada, 2007.
- M.Sc. in Electrical Engineering, Sharif University of Technology, Tehran, Iran, 2001.
- B.Sc. in Electrical Engineering, Sharif University of Technology, Tehran, Iran, 1999.

Work Experience:

- Assistant Professor, Department of Electrical and Computer (ECE) Engineering, Tarbiat Modares University, Tehran, Iran, 2009 - Present.
- Communications Section Coordinator, ECE Department, Tarbiat Modares University, Dec. 2013- Present.
- Collaboration with Mobile Communication Company of Iran (MCI), 2011- Present, by carrying out the following projects:
 - Customization of services in 3G and 4G networks for the Iranian market, 2013-now (Project head)
 - Development of a network planning license controller software, 2012-2013 (Project head)
 - MCI roadmap to migrate to next generation of mobile systems, 2010-2011 (Member of Project Technical Staff)
- Postdoctoral fellow, University of Massachusetts, Amherst, MA, USA, 2008 – 2009.

Teaching Experience:

- “Wireless Communications”, Modares University, Winter 2012 and 2013.
- “Stochastic Processes”, Modares University, Fall 2011, 2012, 2013 and 2014
- “Information Theory”, Modares University, Spring 2011 and 2014.
- “Detection and Estimation Theory”, Modares University, Spring 2010.
- “Advanced Coding Theory”, Modares University, Fall 2009, 2010 and 2011.
- “Communication Systems II”, Modares University, Fall 2010.

Selected Journal Publications (16):

2015:

- N. Mokari, S. Parsaeefard, H. Saeedi, P. Azmi, and E. Hossain, “Secure Robust Ergodic Resource Allocation in Relay-Assisted Cognitive Radio Networks” *IEEE Transactions on Signal Processing*, vol. 63, no. 2, Jan 2015.

2014:

- N. Mokari, H. Saeedi, and P. Azmi, "Quantized Ergodic Radio Resource Allocation in Cognitive Femto Networks with Controlled Collision and Power Outage Probabilities", *IEEE Journal on Selected Areas in Communications*, vol 32, no. 11, Nov. 2014.
- N. Mokari, P. Azmi, and H. Saeedi, "Quantized Ergodic Radio Resource Allocation in Cognitive Networks with Guaranteed Quality of Service for Primary Network", *IEEE Transactions on Vehicular Technology*, vol. 63, no. 8, Oct. 2014.
- N. Mokari, S. Parsaeefard, H. Saeedi, and P. Azmi, "Cooperative Secure Resource Allocation in Cognitive Radio Networks with Guaranteed Secrecy Rate for Primary Users" *IEEE Transactions on Wireless Communications*, vol. 13, no. 3, Feb. 2014.

2013:

- N. Mokari, P. Azmi, and H. Saeedi, "Quantized Ergodic Radio Resource Allocation in OFDMA-based Cognitive DF Relay-Assisted Networks," *IEEE Transactions on Wireless Communications*, vol. 12, no. 10, Oct. 2013.
- S. Hadadi, H. Saeedi, and K. Navaie, "Managing Imperfect Spectrum Sensing in the Secondary Service: Increasing Sensing Time or Adopting Channel Coding?," *IEEE Communications Letters*, vol. 17, no. 6, pp. 1232-1235, June 2013.
- N. Mokari, H. Saeedi, and K. Navaie, "Channel Coding Increases the Achievable Rate of the Cognitive Networks," *IEEE Communications Letters*, 2013, vol. 17, no. 3, pp. 495-498, March 2013.

2012:

- R. Asvadi, A. H. Banihashemi, Mahmoud Ahmadian-Attari, and H. Saeedi, "LLR Approximation for Wireless Channels Based on Taylor Series and Its Application to BICM with LDPC Codes," *IEEE Transactions on Communications*, vol. 60, pp. 1226-1236, May 2012.

2011:

- H. Saeedi, H. Pishro-Nik and A. H. Banihashemi, "On systematic design of universally capacity approaching rate-compatible sequences of LDPC code ensembles over binary-input output-symmetric memoryless channels," *IEEE Transactions on Communications*, vol. 59, pp. 1807-1819, July 2011.

2010:

- H. Saeedi and A. H. Banihashemi, "New Sequences of Capacity Achieving LDPC Code Ensembles over Binary Erasure Channels," *IEEE Transactions on Information Theory*, vol. 56, pp. 6332 - 6346, Dec. 2010.
- H. Saeedi and A. H. Banihashemi, "On the Design of LDPC codes ensembles for the BIAWGN channels," *IEEE Transactions on Communications*, vol.58, May 2010.
- H. Saeedi and A. H. Banihashemi, "Systematic Design of LDPC Codes over Binary Erasure Channels," *IEEE Transactions on Communications*, vol. 58, pp. 118-127, Jan 2010.

2009 and before

- H. Saeedi and A. H. Banihashemi, "Design of Irregular LDPC Codes for BIAWGN Channels with SNR Mismatch," *IEEE Transactions on Communications*, vol. 57, pp. 6-11, Jan. 2009.
- H. Saeedi and A. H. Banihashemi, "Performance of Belief Propagation for Decoding LDPC codes in the Presence of Channel Estimation Error," *IEEE Transactions on Communications*, vol. 55, pp. 83-89, Jan. 2007.
- H. Saeedi and A. H. Banihashemi, "A Note on Signal-to-Noise Ratio Mismatch for Low - Density Parity-Check Coded Magnetic Recording Channels by W. Tan and J. R. Cruz," *IEEE Transactions on Magnetics*, vol. 42, pp. 3765-3766, Nov. 2006.
- H. Saeedi, M. Sharif, and F. Marvasti, "Clipping Noise Cancellation in OFDM Systems Using Over-sampled Signal Reconstruction," *IEEE Communications Letters*, vol. 6, pp. 73-75, Feb. 2002.

Journal Papers under Review (1):

- N. Mokari, S. Parsaeefard, P. Azmi, H. Saeedi, and E. Hussain, "Robust Ergodic Resource Allocation in Cognitive Radio Networks: Models and Algorithms" Submitted to *IEEE Transactions on Mobile Computing*, July 2013, a revised Feb. 2014 and Aug. 2014.

Conference Presentations:

- H. Mani, N. Mokari, M. Khoshkholgh, and H. Saeedi, "Resource Allocation based on the Message Passing Algorithm in Underlay Cognitive Networks," in Proc. *IEEE Wireless Communications and Networking Conference (WCNC)*, Istanbul, Turkey, April 2012.
- N. Mokari, M. Abedi, H. Saeedi, and P. Azmi, "Ergodic Radio Resource Allocation Based on Imperfect Channel Distribution Information," in Proc *IEEE Wireless Communications and Networking Conference (WCNC)*, Istanbul, Turkey, April 2012.

- H. Mamani, H. Saeedi, A. Eslami and H. Pishro-nik, "On Generalized EXIT Charts of LDPC Code Ensembles over Binary-Input Output-Symmetric Memoryless Channels," in Proc. **IEEE International Symposium on Information Theory (ISIT)**, MIT, Cambridge, MA, USA, July 2012.
- A. Makhdoumi Kakhaki, H. Karkeh Abadi, P. Pad, H. Saeedi, and F. Marvasti, "Capacity Achieving Random Sparse Linear Codes," in Proc. **IEEE International Symposium on Information Theory (ISIT)**, MIT, Cambridge, MA, USA, July 2012.
- N. Mokari, K. Navaie, and H. Saeedi, "Trellis Coded Modulation OFDMA for Spectrum Sharing in Cognitive Environment," in Proc. **IEEE Symposium on Computers and Communications (ISCC)**, Cappadocia, Turkey, July 2012
- R. Asvadi, A. H. Banihashemi, M. Ahmadian-Attari, and H. Saeedi, "Approximation of Log-Likelihood Ratio for Wireless Channels Based on Taylor Series," in Proc. **IEEE Global Telecommunication Conference (Globecom)**, Dec. 2011.
- H. Mamani and H. Saeedi, "Generalized EXIT Charts for Irregular LDPC codes," In Proc. **Artificial Intelligence and Signal Processing Conference (AISP)**, Sharif University of Technology, Tehran, Iran, June 2011.
- H. Saeedi, H. Pishro-Nik and A. H. Banihashemi, "On systematic design of universally capacity approaching rate-compatible sequences of LDPC code ensembles over binary-input output-symmetric memoryless channels," in Proc. the Forty-Seventh **Annual Allerton Conf. Commun. Control, and Computing**, Sept. 30 - Oct. 2, 2009.
- H. Saeedi and H. Pishro-Nik, "On LDPC Codes over Symmetric Channels," in Proc. **IEEE Information Theory Workshop (ITW)**, Volos, Greece, June 2009.
- H. Saeedi and A. H. Banihashemi, "New Sequences of Capacity Achieving LDPC Code Ensembles over Binary Erasure Channels," in Proc. **IEEE International Symposium on Information Theory (ISIT)**, Toronto, ON, Canada, July 2008.
- H. Saeedi and Amir H. Banihashemi, "Deterministic Design of LDPC Codes over Binary Erasure Channels," in Proc. **IEEE Global Telecommunication Conference (Globecom)**, Dec. 2007, Washington DC, USA.
- H. Saeedi and Amir H. Banihashemi, "EXIT charts of LDPC codes over BIAWGN channels with imperfect channel estimation," in Proc. **Canadian Workshop on Information Theory, (CWIT)**, Edmonton, AB, Canada, June 2007.
- M. Sabbaghian, D. Falconer, and H. Saeedi, "BER Transfer Chart Analysis of Turbo Frequency Domain Equalization," in Proc. **IEEE Vehicular Technology Conference (VTC)**, Montreal, QC, Canada, September 2006.
- H. Saeedi and A. H. Banihashemi, "Design of LDPC codes for BIAWGN channel with estimation error," in Proc. **International Symposium on Turbo Codes (ISTC)**, Munich, Germany, April 2006.

- H. Saeedi and A. H. Banihashemi, “Effects of Channel Estimation Error on the Asymptotic Performance of LDPC Codes,” in Proc. *Canadian Workshop on Information Theory, (CWIT)*, Montreal, QC, Canada, June 2005.
- H. Saeedi and A. H. Banihashemi, “Asymptotic Performance Analysis of LDPC Codes with Channel Estimation Error,” in Proc. *IEEE Vehicular Technology Conference (VTC)*, Stockholm, Sweden, May 2005.
- H. Saeedi, P. Azmi, and F. Marvasti, “A Novel DFT-Based Method for Clipping Noise Suppression in OFDM Systems,” in Proc. *IEEE Wireless Communications and Networking Conference (WCNC)*, vol 1, New Orleans, LA, USA, March 2003, pp. 26-31.
- H. Saeedi and F. Marvasti, “A New Transform Technique for Encryption of Image and Speech Signals,” in Proc. *International Symposium on Telecommunications (IST'2001)*, 1-3 Sept. 2001, Tehran-Iran.

Awards & Honors

- University **Senate Medal** for outstanding academic achievement, 2007.
- Industrial Research and Development Post-Doctoral Fellowship awarded by Natural Science and Engineering Research Council of Canada (**NSERC-IRDF**), 2007.
- Ontario Graduate Scholarship (**OGS**), 2006-07.
- Ontario Graduate Scholarship for Science and Technology (**OGSST**), 2005-06.
- Carleton Universality Graduate Scholarship, 2002-2006.
- Ranked 47th in the Iranian public universities entrance exam for undergraduate studies, 1995.

Services / Membership:

- Editor, IEEE Communications Letters, May 2014 - Present.
- TPC member of International Conference on Communications (ICC), 2015, London, UK.
- TPC member of Wireless Communications and Networking Conference (WCNC), 2014 and 2015.
- TPC member of Iran Workshop on Communication and Information Theory (IWCIT), 2014 and 2015, Tehran, Iran.
- TPC member of Vehicular Technology Conference (VTC), Spring 2012, Japan.
- TPC member of Canadian Workshop on Information Theory (CWIT), June 2009, Ottawa, Canada.
- Organization Committee Member of IST'2001 (International Symposium on Telecommunications), 1-3 Sept. 2001, Tehran, Iran.
- TPC member of IMSEE'2000 (International Millennium Seminar on Electrical Engineering), 1-3 March 2000, Sharif University of Technology, Tehran, Iran.
- Reviewer for IEEE Transactions on Communications, Wireless Communications, Vehicular Technology, and IEEE Communications Letters.

References

- Dr. Amir H. Banihashmi, Carleton University, Ottawa, ON, Canada. (PhD advisor).
- Dr. Daniel J. Costello, University of Notre Dame, IN, USA (PhD external Examiner).
- Dr. Hossein Pishro-Nik, University of Massachusetts, Amherst, MA, USA.
- Dr. Halim Yanikomeroglu, Carleton University, Ottawa, ON, Canada.

