Hamid Saeedi

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Birthdate: March/21/1978

Education:

• B.Sc. in Electrical Engineering, Sharif University of Technology, Tehran, Iran, 1995-1999.
• M.Sc. in Electrical Engineering, Sharif University of Technology, Tehran, Iran, 1999-2001.
• Ph.D. in Electrical Engineering, Carleton University, Ottawa, Canada, 2002-2007.
• Postdoctoral fellowship, University of Massachusetts, Amherst, MA, USA, 2008-2009.

Work Experience:

• Associate Professor, Department of Electrical and Computer (ECE) Engineering, Tarbiat Modares University, Tehran, Iran, 2017 - Present.
• Assistant Professor, Department of Electrical and Computer (ECE) Engineering, Tarbiat Modares University, Tehran, Iran, 2010 - 2016.
• Director of International Affairs, Tarbiat Modares University, Nov. 2017- Present.
• Communications Section Coordinator, ECE Department, Tarbiat Modares University, Dec. 2013- Dec. 2017.
• Collaboration with Mobile Communication Company of Iran (MCI), 2010- 2014, by carrying out the following projects:

- Customization of services in 3G and 4G networks for the Iranian market, 2013-2014 (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 2011-2017.
• "Information Theory", Modares University, Winter 2011, Winter 2014-2018.
• "Detection and Estimation Theory", Modares University, Winter 2010.
• "Advanced Coding Theory", Modares University, Fall 2009, 2010 and 2011.

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.
• Ranked 47th in the Iranian public universities entrance exam for undergraduate studies, 1995.

Services / Membership:

- Editor, ***IEEE Transactions on Communications***, March 2018 – Present.
- Editor, ***IEEE Communications Letters***, 2014 – 2018.
- Editor, ***Elsevier Physical Communications***, Oct. 2016 - Present.
- TPC member of ***Global Telecommunications Conference (Globecome),*** 2017.
- TPC member of ***International Conference on Communications (ICC),*** 2015 and 2018.
- TPC member of ***Wireless Communications and Networking Conference (WCNC),*** 2014, 2015, 2016.
- TPC member of ***Iran Workshop on Communication and Information Theory (IWCIT),*** 2014-2018.
- Organization Committee Member of ***IST'2001 (International Symposium on Telecomm.),*** 1-3 Sept. 2001, Tehran, Iran.
- Reviewer for IEEE Transactions on Communications, Wireless Communications, Vehicular Technology, and IEEE Communications Letters.

Selected Journal Publications (24):

2018:

• M. Moltafet, N. Mokari, M. R. Javan, H. Saeedi, and H. Pishro-Nik, "A New Multiple Access Technique for 5G: Power Domain Sparse Code Multiple Access (PSMA)", ***IEEE Access***, vol. 6, no. 2, Feb. 2018.

• M. Dabiri and H. Saeedi, "Dynamic SCMA Codebook Assignment Methods: A Comparative Study," ***IEEE Communications Letters***, vol. 22, no. 2, Feb. 2018.

• M. Khas, H. Saeedi, and R. Asvadi, "Design and Analysis of LDPC Codes for Joint Source-Channel Decoding of Two Correlated Sensors," Accepted for publication in ***IET Communications***, Jan. 2018.

2017:

• M. Abedi, N. Mokari, H. Saeedi, and H. Yanikomeroglu, "Robust Resource Allocation to Enhance Physical Layer Security in Systems with Full-Duplex Receivers: Active Adversary," ***IEEE Transactions on Wireless Communications,*** vol. 16, no. 2, Feb. 2017.

2016:

• S. Enayati and H. Saeedi, "Deployment of Mixed FSO/RF Links in Backhaul of Rural Area Cellular Networks: Advantages and Performance Analysis," ***IEEE Communications Letters***, vol. 20, no. 9, Sept. 2016.

• H. Mani and H. Saeedi, "Message Passing Based Decoding of Convolutional Codes: Complexity and Performance Analysis," ***IEEE Communications Letters***, vol. 20, no. 2, Feb. 2016.

• N. Mokari, S. Parsaeefard, P. Azmi, H. Saeedi, and E. Hussain, "Robust Ergodic Uplink Resource Allocation in Underlay OFDMA Cognitive Radio Networks", ***IEEE Transactions on Mobile Computing,*** vol. 15, no. 2, Feb. 2016.

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.

• F. Alavi and H. Saeedi, "Radio resource allocation to provide physical layer security in relay-assisted cognitive radio networks," ***IET Communications***, vol. 10, no. 17, Nov. 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 Radio 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.

Conference Presentations:

• N. Gholipoor, H. Saeedi, and N. Mokari, "Cross-Layer Resource Allocation for Mixed Tactile Internet and Traditional Data in SCMA Based Wireless Networks," in Proc. ***Wireless Communications and Networking Conference* (*WCNC*),** Workshop on Flexible and Agile Networks, Barcelona, Spain, April. 2018.

• M. Khas, H. Saeedi, and R. Asvadi, "LDPC code design for correlated sources using EXIT charts", in Proc. ***IEEE International Symposium on Information Theory (ISIT)***, July 2017, Aachen, Germany

• B. Khamidehi, M. Sabbaghian, H. Saeedi, "Power Allocation in Uplink LTE Femtocells with Zero Forcing Frequency Domain Equalizer," in Proc. ***Wireless Communications and Networking Conference* (*WCNC*),** Doha, Qatar, April. 2016.

• M. R. Abedi, N. Mokari and H. Saeedi, and H. Yanikomeroglu, "Secure Robust Resource Allocation in the Presence of Active Eavesdroppers using Full-Duplex Receivers," in Proc. ***IEEE Vehicular Technology Conference (VTC),*** Boston, USA, Sept. 2015.

• M. Sabbaghian, A. Ebadi and H. Saeedi, "Performance Evaluation of GFDMA Systems using an Analytical Tool," in Proc. ***IEEE Vehicular Technology Conference (VTC),*** Boston, USA, Sept. 2015.

• S. Enayati, H. Saeedi and N. Mokari, "Throughput maximization in hybrid FSO/RF communication systems," ***International Workshop on Optical Wireless Communications (IWOW)***, Istanbul, Turkey, Sept. 2015

• M. R. Abedi, N. Mokari and H. Saeedi, and H. Yanikomeroglu, "Secure Robust Resource Allocation using Full-Duplex Receivers," in Proc***. IEEE International Conference on Communications (ICC)*** – Workshop on Physical Layer Security, London, UK, June 2015.

• 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 2014.

• 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 2014.

• 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. Sabbbaghian, 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.

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 (Research Collaborator).
• Dr. Halim Yanikomeroglu, Carleton University, Ottawa, ON, Canada (Research Collaborator).