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Elza Erkip

Education

1996 Ph.D. in Electrical Engineering
Stanford University, Stanford, California
Thesis: The Efficiency of Information in Investment
Advisor: Thomas M. Cover

1993 M.S. in Electrical Engineering
Stanford University, Stanford, California

1990 B.S. in Electrical and Electronics Engineering
Middle East Technical University, Ankara, Turkey

Experience

2017-Present Institute Professor, Electrical and Computer Engineering
New York University Tandon School of Engineering, Brooklyn, NY

2011-2017 Professor, Electrical and Computer Engineering
New York University Tandon School of Engineering, Brooklyn, NY

2006-2011 Associate Professor, Electrical and Computer Engineering
New York University Tandon School of Engineering, Brooklyn, NY

2007-2008 Visiting Professor, Electrical Engineering
Princeton University, Princeton, NJ

2000-2006 Assistant Professor, Electrical and Computer Engineering
New York University Tandon School of Engineering, Brooklyn, NY

1998-1999 Faculty Fellow, Electrical and Computer Engineering
Rice University, Houston, TX

1996-1998 Visiting Assistant Professor, Electrical and Computer Engineering
Rice University, Houston, TX

1990-1996 Research Assistant, Electrical Engineering
Stanford University, Stanford, CA

1989-1990 Student Assistant, Electrical and Electronics Engineering
Middle East Technical University, Ankara, Turkey

Awards & Honors

2016 IEEE Communications Society WICE Outstanding Achievement Award

2014, 2015 Thomson Reuters Highly Cited Researcher

2012	Elected Member, Science Academy Society of Turkey
2011	IEEE Fellow, for contributions to multi-user and cooperative communications
2010	The New York Academy of Sciences Blavatnik Awards for Young Scientists, Finalist
2004-2006	Junior Fellow, Othmer Institute for Interdisciplinary Studies, New York University
2001	National Science Foundation CAREER Award
2000	IBM Faculty Partnership Award

Best Paper Awards

2016	IEEE Sarnoff Symposium Poster Award
2013	IEEE Communications Society Award for Advances in Communication
2007	Best Paper Award, IEEE International Conference on Communications (ICC) Communications Theory Symposium
2007	Student Paper Award, co-author, IEEE International Symposium on Information Theory
2004	IEEE Communications Society Stephen O. Rice Prize in the Field of Communication Theory

Research Highlight

Two papers among top-five cited publications of *IEEE Transactions on Communications* since its inception in 1972:

- A. Sendonaris, E. Erkip and B. Aazhang, "User cooperation diversity-Part I: System description," *IEEE Transactions on Communications*, vol. 51, no. 11, pp. 1927-1938, November 2003 *(Rank 1).*
- A. Sendonaris, E. Erkip and B. Aazhang, "User cooperation diversity-Part II: Implementation aspects and performance analysis," *IEEE Transactions on Communications*, vol. 51, no. 11, pp. 1939-1948, November 2003 *(Rank 5).*

Journal Publications

1. P. Hassanzadeh, A. Tulino, J. Llorca and E. Erkip, "On coding for cache-aided delivery of dynamic correlated content," to appear, *IEEE Journal on Selected Areas in Communications*, 2018.

2. N. V. Shende, O. Gurbuz and E. Erkip, "Half-duplex or full-duplex communications: Degrees of freedom analysis under self-interference," *IEEE Transactions on Wireless Communications*, vol. 17, no. 2, pp. 1081-1093, Feb. 2018.

3. F. Gomez-Cuba, E. Erkip, S. Rangan and F. J. Gonzalez-Castano, “Capacity scaling of cellular networks: Impact of bandwidth, infrastructure density and number of antennas,” *IEEE Transactions on Wireless Communications*, vol. 17, no. 1, pp. 652-666, Jan. 2018.

4. F. Rezagah, S. Jalali, E. Erkip, H.V. Poor, “Compression-Based Compressed Sensing,” *IEEE Transactions on Information Theory,* vol. 63, no. 10, pp. 6735 – 6752, October 2017.

5. Y. Liu and E. Erkip, “Completion time in two-user channels: An information theoretic perspective,” *IEEE Transactions on Information Theory*, vol. 63, no. 5, pp. 3209 – 3223, May 2017.

6. F. Gomez-Cuba, J. Du, M. Medard and E. Erkip, “Unified capacity limit of non-coherent wideband fading channels," *IEEE Transactions on Wireless Communications*, vol. 16, no. 1, pp. 43-57, January 2017.

7. F. Boccardi, H. Shokri-Ghadikolaei, G. Fodor, E. Erkip, C. Fischione, M. Kountouris, P.Popovski and M. Zorzi, “Spectrum pooling in mmWave networks: Opportunities, challenges, and enablers,” *IEEE Communications Magazine*, vol. 54, no. 11, pp. 33-39, November 2016.

8. Y. Liu and E. Erkip, “Capacity and rate regions of a class of broadcast interference channels,” *IEEE Transactions on Information Theory*, vol. 62, no. 10, pp. 5556-5572, October 2016.

9. R. Joda, F. Lahouti and E. Erkip, “Distortion-power tradeoffs in quasi-stationary source transmission over delay and buffer limited block fading channels," *IEEE Transactions on Wireless Communications*, vol. 15, no. 7, pp. 4505-4520, July 2016.

10. O. Orhan and E. Erkip, "Energy harvesting two-hop communication networks," *IEEE Journal on Selected Areas in Communications*, vol. 33, no. 12, pp. 2658-2670, December 2015.

11. F. Liu, E. Bala, E. Erkip, M. C. Beluri and R. Yang, "Small-cell traffic balancing over licensed and unlicensed bands," *IEEE Transactions on Vehicular Technology*, vol. 64, no. 12, pp. 5850-5865, December 2015.

12. Z. Guo, Y. Wang, E. Erkip, and S. Panwar, “Wireless video multicast with cooperative and incremental transmission of parity packets,” *IEEE Transactions on Multimedia*, vol. 17, no. 8, pp. 1335-1346, August 2015.

13. O. Orhan, D. Gündüz and E. Erkip, "Source-channel coding under energy, delay, and buffer constraints," *IEEE Transactions on Wireless Communications*, vol. 14, no. 7, pp. 3836-3849, July 2015.

14. S. Ulukus, A. Yener, E. Erkip, O. Simeone, M. Zorzi, P. Grover, K. Huang, "Energy harvesting wireless communications: A review of recent advances," *IEEE Journal on Selected Areas in Communications*, vol.33, no.3, pp. 360-381, March 2015.

15. O. Orhan, D. Gunduz, and E. Erkip, “Energy harvesting broadband communication systems with processing energy cost,” *IEEE Transactions on Wireless Communications*, vol. 13, no. 11, pp. 6095-6107, November 2014.

16. O. Simeone, E. Erkip and S. Shamai, "Full-duplex cloud radio access networks: An information-theoretic viewpoint," *IEEE Wireless Communications Letters*, vol. 3, no. 4, pp. 413-416, August 2014.

17. A. Fouladgar, O. Simeone, and E. Erkip, “Constrained codes for joint energy and information transfer,” *IEEE Transactions on Communications*, vol. 62, no. 6, pp. 2121-2131, June 2014.

18. M.R. Akdeniz, Y. Liu, Matthew Samimi, S. Sun, S. Rangan, T.S. Rappaport, and E. Erkip, “Millimeter wave channel modeling and cellular capacity evaluation,” *IEEE Journal on Selected Areas*

in Communications, Special Issue on 5G Wireless Communication Systems, vol. 32, no. 6, pp. 1164-1179, June 2014.

19. S. Rangan, T.S. Rapapport, and E. Erkip, "Millimeter-wave cellular wireless networks: Potentials and challenges," *Proceedings of the IEEE,* vol. 102, no. 3, pp. 366-385, March 2014 *(invited paper).*

20. S. Gokturk, O. Gurbuz and E. Erkip, "A cross-layer multi-hop cooperative network architecture for wireless ad hoc networks," *Computer Networks*, vol. 57, no. 18, pp. 4010-4029, December 2013 *(invited paper*).

21. X. Liu and E. Erkip, "Transmission schemes for Gaussian interference channels with transmitter processing energy," *IEEE Transactions on Wireless Communications*, vol. 12, no. 9, pp. 4756-4765, September 2013.

22. X. Liu, O. Simeone, E. Erkip, "Lossy computing of correlated sources with fractional sampling," *IEEE Transactions on Communications*, vol. 61, no. 9, pp. 3685-3696, September 2013.

23. D. Gunduz, E. Erkip, A. Goldsmith and H.V. Poor, "Reliable joint source-channel cooperative transmission over relay networks, *IEEE Transactions on Information Theory,* vol. 59, no. 4, pp. 2442-2458, April 2013.

24. K. Bakanoglu, E. Erkip, O. Simeone and S. Shamai, "Relay channel with orthogonal components and structured interference known at the source," *IEEE Transactions on Communications*, vol. 61, no. 4, pp. 1277-1289, April 2013.

25. C. Nie, P. Liu, T. Korakis, E. Erkip and S. Panwar, "Cooperative relaying in next generation mobile WiMAX networks," *IEEE Transactions on Vehicular Technology*, vol. 62, no. 3, pp. 1399-1405, March 2013.

26. X. Liu, O. Simeone and E. Erkip, "Energy efficient sensing and communication of parallel sources," *IEEE Transactions on Communications*, vol. 60, no. 12, pp. 3826-3835, December 2012.

27. P. Castiglione, O. Simeone, E. Erkip and T. Zemen, "Energy management policies for energy-neutral source-channel coding," *IEEE Transactions on Communications*, vol. 60, no. 9, pp. 2668-2678, September 2012.

28. P. Liu, C. Nie, T. Korakis, E. Erkip, S. Panwar, F. Verde and A. Scaglione, "STiCMAC: A MAC protocol for robust space-time coding in cooperative wireless LANs," *IEEE Transactions on Wireless Communications,* vol. 11, no. 4, pp. 1358-1369, April 2012.

29. O. Sahin, O. Simeone, E. Erkip, "Gaussian interference channel aided by a relay with out-of-band reception and in-band transmission," *IEEE Transactions on Communications,* vol. 59, no. 11, pp. 2976-2981, November 2011.

30. O. Alay, P. Liu, Y. Wang, E. Erkip and S. Panwar, "Cooperative layered video multicast using randomized distributed space-time codes," *IEEE Transactions on Multimedia,* vol. 13, no. 5, pp. 1127-1140, October 2011.

31. M. Yuksel, X. Liu and E. Erkip, "A secure communication game with a relay helping the eavesdropper," *IEEE Transactions on Information Forensics and Security, Special Issue on Using the Physical Layer for Securing the Next Generation of Communication Systems*, vol. 6, no.3, Part 1, pp. 818-830, September 2011.

32. O. Simeone, O. Somekh, E. Erkip, H. V. Poor, S. Shamai, "Robust communication via decentralized processing with unreliable backhaul links," *IEEE Transactions on Information Theory,* vol. 57, no. 7, pp. 4187-4201, July 2011.

33. O. Simeone, E. Erkip, S. Shamai, "On codebook information for interference relay channels with out-of-band relaying," *IEEE Transactions on Information Theory, Special Issue on Interference Networks*, vol. 57, no. 5, pp. 2880-2888, May 2011.

34. X. Liu and E. Erkip, "A game-theoretic view of the interference channel: Impact of coordination and bargaining," *IEEE Transactions on Information Theory, Special Issue on Interference Networks*, vol. 57, no. 5, pp. 2805-2820, May 2011.

35. O. Sahin, O. Simeone, E. Erkip, "Interference channel with an out-of-band relay," *IEEE Transactions on Information Theory, Special Issue on Interference Networks*, vol. 57, no. 5, pp. 2746-2764, May 2011.

36. L. Sankar, X. Shang, E. Erkip and H.V. Poor, "Ergodic fading interference channels: Sum-capacity and separability," *IEEE Transactions on Information Theory,* vol. 57, no. 5, pp. 2605-2626, May 2011.

37. K. Bakanoglu, S. Tomasin and E. Erkip, "Resource allocation for the parallel relay channel with mutliple relays," *IEEE Transactions on Wireless Communications*, vol 10, no. 3, pp. 792-802, March 2011.

38. M. Yuksel and E. Erkip, "Diversity-multiplexing tradeoff for the multiple-antenna wiretap channel," *IEEE Transactions on Wireless Communications,* vol 10, no. 3, pp. 762-771, March 2011.

39. O. Simeone, E. Erkip and S. Shamai, "Robust transmission and interference management for femtocells with unreliable network access," *IEEE Journal on Selected Areas on Communications, Special Issue on Cooperative Communications on Cellular Networks*, vol. 28, no. 9, pp. 1469 - 1478, December 2010.

40. F. Verde, T. Korakis, E. Erkip and A. Scaglione, "A simple recruitment scheme of multiple nodes for cooperative MAC," *IEEE Transactions on Communications,* vol. 58, no. 9, pp. 2667 - 2682, September 2010.

41. O. Alay, T. Korakis, Y. Wang, E. Erkip and S. Panwar, "Layered wireless video multicast using relays," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 20, no.8, 1095 - 1109, August 2010.

42. Y. Fan, L. Lai, E. Erkip and H.V. Poor, "Rateless coding for MIMO fading channels: Performance limit and code construction," *IEEE Transactions on Wireless Communications,* vol. 9, no. 4, pp. 1288-1292, April 2010.

43. J. Nayak, E. Tuncel, D. Gunduz and E. Erkip, "Successive refinement of vector sources under individual distortion criteria," *IEEE Transactions on Information Theory*, vol. 56, no. 4, pp. 1769-1781, April 2010.

44. C.T. K. Ng, D. Gunduz, A.J. Goldsmith and E. Erkip, "Optimal power distribution and minimum expected distortion in Gaussian layered broadcast coding with successive refinement," *IEEE Transactions on Information Theory,* vol. 55, no. 10, pp. 5074-5086, November 2009.

45. D. Gunduz, E. Erkip, A. Goldsmith and H. V. Poor, "Source and channel coding for correlated sources over multi-user channels," *IEEE Transactions on Information Theory,* vol.55, no.9, pp. 3927-3946, September 2009.

46. T. Korakis, M. Knox, E. Erkip and S. Panwar, "Cooperative network implementation using open source platforms," *IEEE Communications Magazine,* vol. 47, no. 2, pp. 134-141, February 2009.

47. D. Gunduz and E. Erkip, "Joint source-channel codes for MIMO block fading channels," *IEEE Transactions on Information Theory*, vol. 54, no. 1, pp. 116-134, January 2008.

48. M. Yuksel and E. Erkip, "Multi-antenna cooperative wireless systems: A diversity multiplexing tradeoff perspective," *IEEE Transactions on Information Theory, Special Issue on Models, Theory, and Codes for Relaying and Cooperation in Communication Networks*, vol. 53, no. 10, pp. 3371-3393, October 2007.

49. D. Gunduz and E. Erkip, "Source and channel coding for cooperative relaying," *IEEE Transactions on Information Theory, Special Issue on Models, Theory, and Codes for Relaying and Cooperation in Communication Networks*, vol. 53, no. 10, pp. 3453-3475, October 2007.

50. A. Chakrabarti, E. Erkip, A. Sabharwal and B. Aazhang, "Code designs for cooperative communications," *IEEE Signal Processing Magazine, Special Issue on Signal Processing for Multiterminal Communication Systems,* vol. 24, no. 5, pp.16-26, September 2007.

51. H.Y. Shutoy, D. Gunduz, E. Erkip and Y. Wang, "Cooperative source and channel coding for wireless multimedia communications," *IEEE Journal on Selected Topics in Signal Processing, Special Issue on Network-Aware Multimedia Processing and Communications,* vol. 17, no. 6, pp. 674-685, August 2007.

52. X. Lu, Y. Wang, E. Erkip and D. Goodman, "Total power minimization for multiuser video communications over CDMA networks," *IEEE Transactions on Circuits and Systems: Video Technology,* vol. 17, no. 6, pp. 674-685, June 2007.

53. D. Gunduz and E. Erkip, "Opportunistic cooperation by dynamic resource allocation," *IEEE Transactions on Wireless Communications,* vol. 6, no. 4, pp. 1446-1454, April 2007.

54. P. Liu, Z. Tao, Z. Lin, E. Erkip and S. Panwar, "Cooperative wireless communications: A cross-layer approach," *IEEE Wireless Communications Magazine*, vol. 13, no. 4, pp. 84-92, August 2006 (*invited*).

55. Z. Lin, E. Erkip and A. Stefanov, "Cooperative regions and partner choice in coded cooperative systems," *IEEE Transactions on Communications,* vol. 54, no. 7, pp. 1323-1334, July 2006.

56. A. Stefanov and E. Erkip, "Cooperative space-time coding for wireless networks," *IEEE Transactions on Communications*, vol. 53, no. 11, pp. 1804-1809, November 2005.

57. S. Das, E. Erkip, J. Cavallaro and B. Aazhang, "Low complexity iterative multiuser detection and decoding for real-time applications," *IEEE Transactions on Wireless Communications*, vol. 4, no. 4, pp. 1455-1460, July 2005.

58. A. Stefanov and E. Erkip, "Cooperative coding for wireless networks" *IEEE Transactions on Communications,* vol. 52, no. 9, pp. 1470-1476, September 2004.

59. X. Lu, E. Erkip, Y. Wang and D. Goodman, "Power efficient multimedia communication over wireless channels," *IEEE Journal on Selected Areas on Communications, Special Issue on Recent Advances in Wireless Multimedia*, vol.21, no. 10, pp.1738-1751, December 2003.

60. A. Sendonaris, E. Erkip and B. Aazhang, "User cooperation diversity-Part I: System description," *IEEE Transactions on Communications*, vol. 51, no. 11, pp. 1927-1938, November 2003.

61. A. Sendonaris, E. Erkip and B. Aazhang, "User cooperation diversity-Part II: Implementation aspects and performance analysis," *IEEE Transactions on Communications*, vol. 51, no. 11, pp. 1939-1948, November 2003.

62. K. K. Mukkavilli, A. Sabharwal, E. Erkip and B. Aazhang, "On beamforming with finite rate feedback in multiple antenna systems," *IEEE Transactions on Information Theory, Special Issue on*

Space-Time Transmission, Reception, Coding and Signal Design, vol. 49, no.10, pp. 2562-2579, October 2003.

63. D. Rajan, E. Erkip and B. Aazhang, "Spreading and power allocation for multiple antenna transmission using deccorrelating receivers," *IEEE Transactions on Wireless Communications*, vol. 2, no. 3, pp. 436-445, May 2003.

64. E. Erkip and T. Cover, "The efficiency of investment information," *IEEE Transactions on Information Theory*, vol. 44, no. 3, pp. 1026-1040, May 1998.

Book Chapters

1. D. Gunduz, E. Erkip and H.V. Poor, "Source coding under security constraints," in *Securing Wireless Communications at the Physical Layer*, edited by Wade Trappe and Ruoheng Liu, pp. 173-200, Springer-Verlag, 2010 (*invited*).

2. M. Yuksel and E. Erkip, "Information theoretic limits on cooperative communications," in *Cooperative Communications for Improved Wireless Network Transmission*, edited by Murat Uysal, Chapter 1, pp. 1-28, IGI –Global, 2009 (*invited*).

3. E. Erkip, A. Sendonaris, A. Stefanov and B. Aazhang, "Cooperative communication in wireless systems," in *Advances in Network Information Theory*, edited by Piyush Gupta, Gerhard Kramer and Adriaan J. van Wijngaarden, pp. 303-320, AMS DIMACS Series, 2004 (*invited*).

4. E. Erkip, X. Lu, Y. Wang, D. Goodman, "Total power optimization for wireless multimedia communication," in *System Level Power Optimization for Wireless Multimedia Communication: Power Aware Computing*, edited by R. Karri and D. Goodman, Chapter 1, Kluwer Academic Publishers, 2002.

Conference Publications (Invited)

1. F. Shirani, S. Garg and E. Erkip, "Matching graphs with community structure: A concentration of measure approach," to appear, *Allerton Conference on Communication, Control, and Computing*, Allerton, IL, October 2018.

2. F. Shirani, S. Garg and E. Erkip, "Seeded graph matching: Efficient algorithms and theoretical guarantees," in *Proceedings of Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, California, November 2017.

3. F. Boccardi, H. Shokri, E. Erkip, C. Fischione, G. Fodor, M. Kountoris, P. Popovski, M. Zorzi, "Spectrum access schemes for mmwave networks," in *Proceedings of Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, California, November 2016.

4. P. Hassanzadeh, A. Tulino, J. Llorca and E. Erkip, "Cache-aided coded multicast for correlated sources," in *Proceedings of International Symposium on Turbo Codes and Iterative Information Processing (ISTC*), Brest, September 2016.

5. F. Gomez-Cuba, S. Rangan, E. Erkip, J. Gonzales-Castano, "Capacity scaling bounds in wideband cellular networks," in *Proceedings of International Zurich Seminar (IZS)*, Zurich, Switzerland, March 2016.

6. O. Orhan, E. Erkip and S. Rangan, "Low power analog-to-digital conversion in millimeter wave systems: Impact of resolution and bandwidth on performance," in *Proceedings of Information Theory and Applications Workshop*, San Diego, CA, February 2015.

7. F. Rezagah and E. Erkip, “Interactive relay assisted source coding,” in *Proceedings of IEEE Global Conference on Information and Signal Processing, Network Theory Symposium*, Austin, Texas, December 2013.

8. S. Goyal, P. Liu, O. Gurbuz, E. Erkip and S. Panwar, “A distributed MAC protocol for full-duplex radio,” in *Proceedings of Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, California, November 2013.

9. X. Liu, O. Simeone and E. Erkip, “Lossy computing of correlated sources,” in *Proceedings of IEEE Information Theory Workshop*, Lausanne, Switzerland, September 2012.

10. O. Orhan. D. Gunduz and E. Erkip, “Throughput maximization for an energy harvesting system with processing cost,” in *Proceedings of IEEE Information Theory Workshop*, Lausanne, Switzerland, September 2012.

11. O. Orhan and E. Erkip, “Energy harvesting two-hop networks: Optimal policies for the multi-energy arrival case,” In *Proceedings of IEEE Sarnoff Symposium*, Princeton, New Jersey, March 2012.

12. P. Castiglione, O. Simeone, E. Erkip and T. Zemen, “Energy-harvesting for source-channel coding in cyber-physical systems,” in *Proceedings of IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing*, San Juan, Puerto Rico, December 2011.

13. K. Bakanoglu and E. Erkip, “Relay channel with non-causal interference information at the source,” in *Proceedings of Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, California, November 2010.

14. M. Yuksel, X. Liu, E. Erkip, “A secrecy game with an informed jammer relay,” in *Proceedings of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*, Istanbul, Turkey, September 2010.

15. D. Gunduz, E. Erkip. A. Goldsmith and H.V. Poor, “Cooperative relating in sensor networks,” in *Proceedings of Conference on Cognitive Radio Oriented Wireless Networks and Communications (CROWNCOM),* Cannes, France, June 2010.

16. M. Yuksel and E. Erkip, “Diversity-multiplexing tradeoff for MIMO wiretap channels with CSIT,” in *Proceedings of European Wireless Conference*, Lucca, Italy, April 2010.

17. M. Knox and E. Erkip, “Implementation of cooperative communications using software defined radios,” in *Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP),* Dallas, TX, March 2010.

18. O. Alay, P. Liu, Y. Wang, E. Erkip and S. Panwar, “Error resilient video multicast using randomized distributed space-time codes,” in *Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP),* Dallas, TX, March 2010.

19. O. Simeone, E. Erkip and S. Shamai, “Oblivious relaying for primitive interference relay channels,” in *Proceedings of International Zurich Seminar on Communications*, Zurich, Switzerland, March 2010.

20. O. Simeone, E. Erkip and S. Shamai, “Achievable rates for multicell systems with femtocells and network MIMO,” in *Proceedings of International Zurich Seminar on Communications,* Zurich, Switzerland, March 2010.

21. C. Bilen, E. Erkip and Y. Wang, “Layered video multicast using diversity embedded space-time codes,” in *Proceedings of IEEE Sarnoff Symposium*, Princeton, New Jersey, March 2009.

22. O. Simeone, O. Somekh, E. Erkip, H. V. Poor, S. Shamai (Shitz), "A broadcast approach to robust communications over unreliable multi-relay networks," in *Proceedings of Information Theory and Applications Workshop*, UCSD, San Diego, CA, February 2009.

23. O. Sahin, E. Erkip, O. Simeone, "Interference channel with a relay: Models, relaying strategies, bounds," in *Proceedings of Information Theory and Applications Workshop*, UCSD, San Diego, CA, February 2009.

24. O. Sahin and E. Erkip, "Cognitive relaying with one-sided interference," in *Proceedings of Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, California, October 2008.

25. O. Alay, R. Ding, E. Erkip, Y. Wang, A. Scaglione, "Layered randomized cooperation for multicast," in *Proceedings of Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, California, October 2008.

26. O. Sahin and E. Erkip, "On achievable rates for interference relay channel with interference cancellation," in *Proceedings of Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, California, November 2007.

27. J. Nayak, E. Tuncel, D. Gunduz, and E. Erkip, "Successive refinement of vector sources under individual distortion criteria," in *Proceedings of IEEE Information Theory Workshop*, Lake Tahoe, California, September 2007.

28. D. Gunduz and E. Erkip, "Reliable cooperative source transmission with side information," in *Proceedings of IEEE Information Theory Workshop*, Bergen, Norway, July 2007.

29. M. Yuksel and E. Erkip, "Secure communication with a relay helping the wiretapper," in Proceedings *of IEEE Information Theory Workshop*, Lake Tahoe, California, September 2007.

30. H.Y. Mok, Y. Wang and E. Erkip, "Cooperative source and channel coding for wireless video transmission," in *Proceedings of IEEE International Conference on Image Processing*, Atlanta, Georgia, October 2006.

31. D. Gunduz and E. Erkip, "Transmission of correlated sources over multiuser channels with receiver side information," in *Proceedings of Information Theory and Applications Workshop*, UCSD, San Diego, CA, Jan. 2007.

32. D. Gunduz and E. Erkip, "Source and channel coding for cooperative relaying," in *Proceedings of IEEE International Workshop on Signal Processing Advances for Wireless Communications (SPAWC),* New York City, June 2005.

33. X. Xu, D. Gunduz, E. Erkip and Y. Wang, "Layered cooperative source and channel coding," in *Proceedings of IEEE ICC Multimedia Communication and Home Networking Symposium*, Seoul, Korea, May 2005.

34. X. Xu, Y. Wang and E. Erkip, "Layered cooperation for wireless multimedia communications," in *Proceedings of Picture Coding Symposium,* San Francisco, December 2004.

35. M. Yuksel and E. Erkip, "Broadcast strategies for the fading relay channel," in *Proceedings of IEEE Military Communications Conference (MILCOM),* Monterey, November 2004.

36. E. Erkip, "Capacity and power control for spatial diversity," in *Proceedings of Conference on Information Sciences and Systems (CISS),* Princeton University, New Jersey, March 2000.

37. S. Das, E. Erkip and B. Aazhang, "Computationally efficient iterative multiuser detection and decoding," in *Proceedings of Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, California, November 1998.

38. E. Erkip and B. Aazhang, "A comparative study of multiple accessing schemes," in *Proceedings of Conference on Signals, Systems, and Computers*, Pacific Grove, California, November 1997.

39. T. Cover and E. Erkip, "Multiple access investment," in *Proceedings of IEEE Information Theory Workshop*, Rydzyna, Poland, June 1995.

Conference Publications (Refereed)

40. S. Shahsavari, A. Ashikhmin, E. Erkip, and T. Marzetta, "Coordinated multi-point massive MIMO cellular systems with sectorized antennas," to appear, *Proceedings of Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, California, October 2018.

41. S. Shahsavari, S. A. Hosseini, C. Ng, and E. Erkip, "Adaptive hybrid beamforming with massive phased arrays in macro-cellular networks," in *Proceedings of IEEE 5G World Forum,* Santa Clara, CA, July 2018.

42. S.H. Park, O. Simeone, Y. Eldar and E. Erkip, "Optimizing pilots and analog processing for channel estimation in cell-free massive MIMO with one-bit ADCs," in *Proceedings of IEEE International Workshop on Signal Processing Advances in Wireless Communications*, Kalamata, Greece, June 2018.

43. F. Shirani, S. Garg and E. Erkip, "Optimal active social network de-anonymization using information thresholds," in *Proceedings of IEEE International Symposium on Information Theory,* Vail, Colorado, June 2018.

44. F. Shirani, S. Garg and E. Erkip, "Typicality matching for pairs of correlated graphs," in *Proceedings of IEEE International Symposium on Information Theory,* Vail, Colorado, June 2018.

45. A. Khalili, S. Rini, L. Barletta, E. Erkip and Y. Eldar, "On MIMO channel capacity with output quantization constraints," in *Proceedings of IEEE International Symposium on Information Theory,* Vail, Colorado, June 2018.

46. Q. Yang, P.Hassanzadeh, D. Gunduz and E. Erkip, "Centralized caching and delivery of correlated contents over a Gaussian broadcast channel," in *Proceedings of WiOpt Content Caching and Delivery in Wireless Networks Workshop (CCDWN 2018)*, Shanghai, China, May 2018.

47. S. Shahsavari, F. Fund, E. Erkip, S. Panwar, "Capturing capacity and profit gains with base station sharing in mmWave cellular networks," in *Proceedings of IEEE INFOCOM Workshops, Millimeter-Wave Networked Systems*, Honolulu, Hawaii, April 2018.

48. S. Shahsavari, D. Ramirez, and E. Erkip, "Scheduling and power optimization in full-duplex small cells with successive interference cancellation," in *Proceedings of Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, California, November 2017.

49. P. Hassanzadeh, A. Tulino, J. Llorca and E. Erkip, "Broadcast caching networks with two receivers and multiple correlated sources," in *Proceedings of Asilomar Conference on Signals, Systems and Computers,* Pacific Grove, California, November 2017.

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172. T. Cover and E. Erkip, "Information efficiency in investment," in *Proceedings of IEEE International Symposium on Information Theory*, Whistler, Canada, September 1995.

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Conference Presentations (Invited)

1. F. Shirani, S. Garg and E. Erkip, "Social network de-anonymization based on group memberships: An information theoretic approach," in *Information Theory and Applications Workshop*, UCSD, San Diego, CA, February 2018.

2. F. Fund, S. Shahsavari, S. Panwar. E. Erkip and S. Rangan, "An economic perspective on spectrum and infrastructure sharing in millimeter wave cellular networks," in *IEEE Communication Theory Workshop*, Fiji, June 2017.

3. P. Hassanzadeh, A. Tulino, J. Llorca and E. Erkip, "Caching correlated sources: Bounds on the rate-memory trade-off," in *Information Theory and Applications Workshop*, UCSD, San Diego, CA, February 2017.

4. E. Onaran, S. Garg and E. Erkip, "Anonymity in social networks: Fundamental bounds and connections to community detection," in *Nexus of Information Theory and Computer Science Program*, Institut Henri Poincare, Paris, France, March 2016.

5. E. Onaran, S. Garg and E. Erkip, "Social network de-anonymization for graphs with community structure." in *Information Theory and Applications Workshop*, UCSD, San Diego, CA, February 2016.

6. F. Rezagah and E. Erkip, "Interactive source coding with reconstruction constraints," in *Information Theory and Applications Workshop*, UCSD, San Diego, CA, February 2013.

7. X. Liu, O. Simeone and E. Erkip, "Energy-efficient sensing and communication in multihop channels," in *Information Theory and Applications Workshop*, UCSD, San Diego, CA, February 2012.

8. X. Liu, O. Simeone and E. Erkip, "Energy efficient wireless communication: Impact of energy harvesting and processing energy," in *Third International Workshop on Green Wireless (W-GREEN 2011)*, held in conjunction with *IEEE PIMRC*, Toronto, Canada, September 2011.

9. K. Bakanoglu and E. Erkip, "Relaying in the presence of an external interferer," in *Information Theory and Applications Workshop*, UCSD, San Diego, CA, February 2011.

10. Xi Liu and E. Erkip, "A game-theoretic perspective of the interference channel: Impact of coordination and bargaining," in *IEEE Communication Theory Workshop*, Cancun, Mexico, May 2010.

11. O. Sahin, O. Simeone, E. Erkip, "Gaussian interference channel with an out-of-band relay," in *Information Theory and Applications Workshop*, UCSD, San Diego, CA, February 2010.

12. O. Simeone, E. Erkip, S. Shamai, "Oblivious and out-of-band relaying for interference networks," in *Information Theory and Applications Workshop*, UCSD, San Diego, CA, February 2010.

13. O. Sahin and E. Erkip, "Cooperative interference management: The role of cognitive relaying," in *IEEE Communication Theory Workshop,* St. Croix, U.S. Virgin Islands, May 2008.

14. D. Gunduz, E. Erkip and H.V. Poor, "Secure source compression with side information," in *Information Theory and Applications Workshop*, UCSD, San Diego, CA, January 2008.

15. M. Yuksel and E. Erkip, "Can virtual MIMO mimic a multi-antenna system: Diversity-multiplexing tradeoff for wireless relay networks," in *IEEE Communication Theory Workshop,* Park City, Utah, June 2005.

16. E. Erkip, A. Sendonaris, A. Stefanov and B. Aazhang, “Diversity-multiplexing tradeoff for cooperative systems: Characterization and impact on joint source-channel coding,” *MSRI Workshop on Mathematics of Relaying and Cooperation in Communication Networks*, Berkeley, CA, April 2006.

17. E. Erkip and T.M. Cover, “Data compression with side information,” in *Center for Telecommunications Workshop Empirical Bounds on Data Compression*, Stanford University, California, September 1995.

Other Conference Presentations

1. E. Erkip and M. Gonen, "Estimation of cellular and genetic diversity," in *Joint Statistical Meetings*, Vancouver, Canada, August 2010.

2. E. Erkip, X. Lu, Y. Wang and D. Goodman, “Total power optimization for wireless multimedia communication,” in *IEEE Workshop on Integrated Management of Power Aware Communications, Computing and Networking (IMPACCT 2002)*, held in conjunction with *IEEE ICC,* New York, New York, May 2002.

3. M. Gonen and E. Erkip, "Infinitesimal Bayesian robustness via Kullback-Leibler distance," in *Valencia International Meeting on Bayesian Statistics,* Alcossebre, Spain, May 1998.

Keynotes

1. “Cooperative Wireless Networking: Theoretical Foundations and 5G Applications,” *IEEE Sarnoff Symposium*, Newark, NJ, September 2016.

2. “From 3T to 5G: Theory and Practice of Cooperation in Wireless Networks,” *IEEE International Symposium on Information Theory (ISIT),* Barcelona, Spain, July 2016.

Invited Short Courses, Tutorials and Guest Lectures

1. “An information theoretic perspective on web privacy,” to be presented in *East Asian School of Information Theory and Communication*, Taipei City, Taiwan, August 2018.

2. “From Sensors to Video: Information Theoretic Foundations of Source Communication over Wireless Channels,” in *IEEE Australian School of Information Theory*, Melbourne, Australia, January 2016.

3. “Information Theoretic Foundations of Cooperation in Multiuser Networks,” in *IEEE North American School of Information Theory*, Cornell, NY, June 2012.

4. “Shannon’s Information Theory and Investment,” guest lecture in freshman course *FRS174: The Information Revolution*, Princeton University, Princeton, NJ, November 2010.

5. “Cooperative Joint Source and Channel Coding,” three-day short course in University of Oulu, Center for Wireless Communications, Oulu, Finland, August 2010 (with B. Aazhang).

6. “Cooperative Communications,” tutorial in *IEEE International Symposium on Information Theory*, Austin, TX, June 2010 (with A. Nosratinia).

7. “Shannon’s Information Theory and Investment,” guest lecture in freshman course *FRS174: The Information Revolution*, Princeton University, Princeton, NJ, April 2009.

Invited Seminars

1. “From Shannon to 5G: Theory and Practice of Cooperative Wireless Networking” Air Force Research Lab, Rome, NY, December 2016.

2. “From Shannon to 5G: Theory and Practice of Cooperative Wireless Networking”, Rutgers University, New Brunswick, NJ, December 2016.

3. “From Shannon to 5G: Theory and Practice of Cooperative Wireless Networking,” University of Michigan, Ann Arbor, Michigan, November 2016.

4. “Energy Efficiency in Delay-Constrained Sensing and Communication,” Imperial College, London, UK, April 2013.

5. “Energy Efficient Wireless Communication: Impact of Energy Harvesting and Processing Energy,” MIT Weeks Seminar Series, Boston, MA, September 2012.

6. “Energy Efficient Wireless Communication: Impact of Energy Harvesting and Processing Energy,” InterDigital Communications, Melville, NY, May 2012.

7. “Energy Efficient Wireless Communication: Impact of Energy Harvesting and Processing Energy,” University of Padova, Italy, April 2012.

8. “Robust Cross-Layer Design for Cooperative Wireless Networks,” Alcatel-Lucent Bell Labs, Crawford Hill, NJ, April 2011.

9. “Robust Cross-Layer Design for Cooperative Wireless Networks,” Technicolor Research Center, Paris, France, April 2011.

10. “A Game-Theoretic View of the Interference Channel: Impact of Coordination and Bargaining,” Telecom ParisTech, Paris, France, April 2011.

11. “Cooperative Wireless Networking: From Theory to Practice,” Centre Tecnologic de Telecomunicacions de Catalunya (CTTC), Barcelona, Spain, April 2010.

12. “Cooperative Wireless Networking: From Theory to Practice,” TOBB University of Economics and Technology, Ankara, Turkey, December 2009.

13. “Cooperative Networking and Interference Management,” Alcatel-Lucent Bell Labs, Murray Hill, NJ, December 2009.

14. “Cooperative Wireless Networking: From Theory to Practice,” Syracuse University, Syracuse, NY, November 2009.

15. “Cooperative Wireless Networking: From Theory to Practice,” NEC Labs, Princeton, NJ, June 2009 (with S. Panwar).

16. “Cooperative Wireless Networking: From Theory to Practice,” Alcatel-Lucent Bell Labs, Crawford Hill, NJ, June 2009 (with S. Panwar).

17. “Cooperative Wireless Networking: From Theory to Practice,” InterDigital Communications, Melville, NY, June 2009.

18. “Cooperative Wireless Networking: From Theory to Practice, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil, April 2009.

19. "Cooperative Wireless Networking: From Theory to Practice," Columbia University, New York, NY, November 2008.

20. "Cooperative Wireless Networking: From Theory to Practice," Qualcomm/Flarion Technologies, NJ, February 2008.

21. "Cooperative Wireless Networking: From Theory to Practice," Stanford University, CA, February 2008.

22. "Cooperative Wireless Networking: From Theory to Practice," University of California, Berkeley, CA, February 2008.

23. "Cooperative Wireless Networking: From Theory to Practice," Princeton University, NJ, November 2007.

24. "Cooperative Wireless Networking: From Theory to Practice," Penn State University, PA, October 2007.

25. "Cooperative Wireless Networking," InterDigital Communications, Melville, NY, January 2007.

26. "Cooperative Communications," BAE Systems, NJ, November 2006.

27. "Diversity versus Multiplexing: Tradeoff for Virtual MIMO and Effect on Joint Source-Channel Coding," WINLAB, Rutgers University, New Jersey, January 2006.

28. "Channel Coding and Partner Selection for Cooperative Systems," Philips Research, Briarcliff, New York, November 2004.

29. "User Cooperation in Wireless Communications," Cornell University, School of Electrical and Computer Engineering Colloquium, Ithaca, New York, January 2004.

30. "Cooperative Communication in Wireless Networks," Symbol Technologies, New York, October 2003.

31. "Cooperative Communication in Wireless Networks," Philips Research, Briarcliff, New York, October 2003.

32. "Cooperative Communication in Wireless Networks," Lucent Technologies Bell Labs, Mathematical Sciences Center, Murray Hill, New Jersey, March 2003.

33. "Computationally Efficient Multiuser Detection and Decoding," Georgia Institute of Technology, School of Electrical and Computer Engineering, Atlanta, Georgia, March 1999.

34. "On Fading and Multiuser Aspects of Wireless Communications," Bilkent University Electrical-Electronics Engineering Department, Ankara, Turkey, December 1998.

35. "Information Theoretic Aspects of Wireless Communications," Visual Communications Group, Texas Instruments Inc., Houston, Texas, March 1997.

36. "The Efficiency of Information in Investment," IBM Almaden Research Center, San Jose, California, August 1996.

Patents

1. C. Nie, P. Liu, T. Korakis, E. Erkip and S. Panwar, "CoopMAX: A cooperative MAC with randomized distributed space time coding for an IEEE 802.16 network," US 8,792,367, July 29, 2014.

2. E. Erkip, P. Liu, C. Nie and S. Panwar, "Robust cooperative relaying in a wireless LAN: Cross-layer design and performance analysis," US 8,611,271, December 17, 2013.

3. E. Erkip, P. Liu, T. Korakis, and S. Panwar, "Spatial multiplexing gain for a distributed cooperative communications system using randomized coding," US 8,509,288, August 13, 2013.

4. Z. Lin, M. Ghosh and E. Erkip, "Adaptive modulation for coded cooperative systems," US 8,451,768, May 28, 2013.

5. E. Erkip, T. Korakis, P. Liu, S. Panwar and A. Scaglione, "Cooperative MAC for rate adaptive randomized distributed space-time coding," US 8,228,836, July 24, 2012.

6. O. Alay, E. Erkip, T. Korakis, E. Erkip, S. Panwar and Y. Wang "Video multicast, such as layered video multicast for example, using relay devices defined by a channel quality parameter hierarchy," US 8,179,848, May 15, 2012.

Professional Activities

Technical Society

- **President,** IEEE Information Theory Society, 2018.
- **Vice-Chair,** IEEE Medals Council, 2018.
- **Member**, IEEE Bell Medal Committee, 2016-2018.
- **Member,** IEEE Founders Medal Committee, 2018.
- **First Vice President,** IEEE Information Theory Society, 2017.
- **Co-Chair,** IEEE Information Theory Society Ad-hoc Committee on New Publications, 2017.
- **Second Vice President,** IEEE Information Theory Society, 2016.
- **Member,** IEEE Information Theory Society Board of Governors, 2012- present.
- **Chair,** IEEE Information Theory Society Conference Committee, 2013- 2015.
- **Chair,** IEEE Information Theory Society Student Committee, 2012-2013.
- **Member,** IEEE Information Theory Society Outreach Committee, 2012- 2014.
- **Member,** IEEE Information Theory Society Conference Committee, 2011- present.
- **Member,** IEEE Information Theory Society Awards Committee, 2010-2011.

Journal

- **Guest Editor**, *IEEE Journal on Selected Areas in Communications*, *Special Issue on Wireless Communications Powered by Energy Harvesting and Wireless Energy Transfer*, 2014.
- **Associate Editor** for Shannon Theory, *IEEE Transactions on Information Theory*, January 2009-December 2011.
- **Associate Editor** for Cooperative Diversity, *IEEE Transactions on Communications*, January 2006-December 2008.
- **Publications Editor**, *IEEE Transactions on Information Theory*, January 2006-December 2008.
- **Guest Editor**, *IEEE Signal Processing Magazine, Special Issue on Signal Processing for Multiterminal Communication Systems*, August 2007.

Conference

- **Technical Area Chair**, "MIMO Communications and Signal Processing" track, Asilomar Conference on Signals, Systems, and Computers, California, 2017.
- **Technical Program Chair,** IEEE Wireless Communications and Networking Conference (WCNC), 2017.
- **General Chair,** IEEE International Symposium on Information Theory, 2013.
- **Technical Program Chair,** IEEE ICC Workshop on Realizing Advanced Video Optimized Wireless Networks, 2012.
- **Program and Applications Chair,** Information Theory Summer School, 2011.
- **Technical Program Chair**, IEEE International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), 2011.
- **Technical Program Chair**, IEEE GLOBECOM Communication Theory Symposium, 2009.
- **Publications Chair,** IEEE Information Theory Workshop, Taormina, 2009.
- **Organizer and Chair,** Workshop in Honor of David Goodman, NYU Tandon School of Engineering, Brooklyn, New York, 2009.
- **Organizer and Chair,** Malignant Spaghetti: Wireless Technologies in Hospital Health Care Workshop, NYU Tandon School of Engineering, Brooklyn, New York, 2008.
- **Technical Area Chair** for the "MIMO Communications and Signal Processing" track, Asilomar Conference on Signals, Systems, and Computers, California, 2007.
- **Technical Program Chair**, IEEE Communication Theory Workshop, Dorado, Puerto Rico, May 2006.
- **Organizer and Chair**, WICAT Workshop on Cooperative Communications, NYU Polytechnic School of Engineering, Brooklyn, New York, October 2005.
- **Session Organizer:**
  - "Cooperative Interference Management," *IEEE Communication Theory Workshop*, Curacao, May 2014.
  - "Cooperative Networking," *IEEE Information Theory Workshop*, Zurich, Switzerland, September 2012.
  - "Cooperative Media Communication," *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Dallas, TX, March 2010.
  - "Wireless Communication," *International Zurich Seminar*, Zurich, Switzerland, March 2010.
  - "Cooperative Communications," *Conference on Information Sciences and Systems (CISS)*, Princeton, New Jersey, March 2008.
  - "Cooperative Communications," *IEEE Information Theory Workshop*, Lake Tahoe, California, 2007.

- **Technical Program Committee Member:**

  - IEEE ICC, Communication Theory Symposium, 2019.
  - IEEE Information Theory Symposium, 2018.
  - IEEE Information Theory Workshop, 2018.
  - IEEE International Symposium on Information Theory and its Applications (ISITA), 2018.
  - IEEE Information Theory Symposium, 2017.
  - IEEE ICC, Communication Theory Symposium, 2017.
  - IEEE Information Theory Symposium, 2016.
  - IEEE International Symposium on Information Theory and its Applications (ISITA), 2016.
  - IEEE GLOBECOM, Communication Theory Symposium, 2016.
  - IEEE Information Theory Symposium, 2015.
  - IEEE Information Theory Symposium, 2014.
  - IEEE International Symposium on Information Theory and its Applications (ISITA), 2014.
  - IEEE BlackSeaCom, 2013.
  - IEEE International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), 2013.

- IEEE ICC, Workshop on Green Broadband Access: Energy Efficient Wireless and Wired Network Solutions, 2013.
- IEEE International Conference on Computing, Management & Telecommunications, 2013.
- IEEE International Symposium on Information Theory and its Applications (ISITA), 2012.
- IEEE Information Theory Workshop, 2012.
- IEEE Information Theory Symposium, 2012.
- IEEE ICC, Communication Theory Symposium, 2012.
- IEEE International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), 2012.
- IEEE Sinyal İşleme ve İletişim Uygulamaları (SIU) Kurultayı, Turkey, 2012.
- IEEE GLOBECOM, Workshop on Physical Layer Security, 2011.
- International Symposium on Wireless Communication Systems, 2011.
- IEEE Information Theory Symposium, 2011.
- IEEE ICC Workshop on Heterogeneous Networks (HETnet), 2011.
- IEEE ICC Workshop on Physical Layer Security, 2011.
- IEEE Information Theory Symposium, 2010.
- IEEE ICC, Wireless Communications Symposium, 2010.
- IEEE WCNC, Physical Layer, 2010.
- IEEE Information Theory Symposium, 2009.
- IEEE GLOBECOM, Communication Theory Symposium, 2008.
- IEEE ICC, Communication Theory Symposium, 2008.
- IEEE GLOBECOM, Communication Theory Symposium, 2007.
- IEEE Information Theory Workshop, Lake Tahoe, California, 2007.
- IEEE Information Theory Workshop, Bergen, Norway, 2007.
- IEEE Information Theory Symposium, 2007.
- IEEE International Workshop on Wireless Networks: Communication, Cooperation and Competition, 2007.
- IEEE GLOBECOM, Communication Theory Symposium, 2006.
- IEEE ICC, Wireless Communications Symposium, 2006.
- IEEE WCNC, 2006.
- IEEE GLOBECOM, Wireless Communications Symposium, 2005.
- IEEE Fall Vehicular Technology Conference (VTC), 2005.
- IEEE WirelessCom, Symposium on Information Theory, 2005.
- IEEE Workshop on Signal Processing Advances in Wireless Communications (SPAWC) 2005.
- IEEE Wireless Communications and Networking Conference (WCNC), 2005.
- IEEE GLOBECOM, 2004.
- IEEE International Symposium on Information Theory, 2001.

NYU Service

- **Chair,** NYU Tandon School of Engineering Tenure and Promotions Committee, 2017-Present.
- **Member**, NYU Tandon School of Engineering Dean Search Committee, 2017-2018.
- **Member,** NYU Center for Data Science Steering Committee, 2017-present.
- **Member,** NYU Center for Data Science Director Search Committee, 2017-2018.
- **Member,** NYU Tandon School of Engineering Tenure and Promotions Committee, 2014-2015, 2016-2017.
- **Member,** Electrical and Computer Engineering Retreat Committee, 2017-present.
- **Member,** Electrical and Computer Engineering Tenure and Promotions Committee, 2014-Present.

Teaching

○ Graduate Courses

- Information Theory
- Multi-User Communications
- Network Information Theory
- Principles of Digital Communications: Modulation and Coding
- Probability and Stochastic Processes
- Special Topics in Information Theory
- Selected Topics in Wireless Communications, Advances in the Physical Layer

○ Undergraduate Courses

- Fundamentals of Communication Theory
- Introduction to Signals
- Principles of Analog and Digital Communications

Advising

○ Researchers (Current)

- David Ramirez, Post-Doctoral Fellow, 2017-present.
- Farhad Shirani, Research Assistant Professor, 2017-present.

○ Researchers (Former)

- Shirin Jalali, Faculty Fellow, 2013-2014.
  Currently with Bell Labs.

○ PhD Students (Current)

- Parisa Hassanzadeh
- Abbas Khalili
- Shahram Shahsavari

○ PhD Students (Former)

- Ozgu Alay (co-advised with Yao Wang), Ph.D. NYU Tandon School of Engineering, 2010.
  Thesis: Cooperative Layered Wireless Video Multicast.
  Currently with Simula Research Laboratory, Norway.

- Kagan Bakanoglu, PhD. NYU Tandon School of Engineering, 2012.
  Thesis: Resource Allocation and Interference Mitigation for Cooperative Networks.
  Currently with VESTEL Electronics Inc. Research Department, Turkey.

- Deniz Gunduz, Ph.D. NYU Tandon School of Engineering, 2007.
  Thesis: Source and Channel Coding for Wireless Networks.
  Currently with Imperial College, London, UK.
  – *Alexander Hessel Award* for the best Ph.D. dissertation, 2008.
  – *Richard Rosenthal Award*, awarded to the highest-ranking student in the Ph.D. Qualifying Exam, 2003.

- Anil Kocak, NYU Tandon School of Engineering, 2017.
  Thesis: Reliable Online Prediction with Refuse Option.
  Currently with Broad Institute of MIT and Harvard.
  – *Richard Rosenthal Award*, awarded to the highest-ranking student in the Ph.D. Qualifying Exam, 2012.

- Zinan Lin, Ph.D. NYU Tandon School of Engineering, 2006.
  Thesis: Coded Cooperation: Partner Choice and Rate Adaptation.
  Currently with Huawei Research, NJ.

- Feilu Liu, Ph.D. NYU Tandon School of Engineering, 2012.
  Thesis: Small Cell Wireless Communications Over Licensed and Unlicensed Bands.
  Currently with Qualcomm, CA.

- Xi Liu, Ph.D. NYU Tandon School of Engineering, 2013.
  Thesis: Fairness, Security and Energy Efficiency in Interference and Sensor Networks.
  Currently with Bloomberg, NY.

- Yuanpeng Liu, Ph.D. NYU Tandon School of Engineering, 2013.
  Thesis: Information Theoretic Perspective for Rate and Delay in Interference Limited Wireless Networks.
  Currently with Goldman Sachs, NY.

- Oner Orhan, NYU Tandon School of Engineering, 2016.
  Thesis: Energy Neutral and Low Power Wireless Communications.
  Currently with Intel Research, CA.

- Farideh Rezagah, NYU Tandon School of Engineering.
  Thesis: From Source Acquisition to Interactive Computation.
  Currently with Goldman Sachs, NY.

- Onur Sahin: Ph.D. NYU Tandon School of Engineering, 2009.
  Thesis: Relaying in Interference Limited Networks: Models, Bounds and Strategies.
  Currently with InterDigital, London.

- Melda Yuksel: Ph.D. NYU Tandon School of Engineering, 2007.
  Thesis: Reliability, Rate and Security in Cooperative Networks.
  Currently with TOBB University, Turkey.
  – *Richard Rosenthal Award*, awarded to the highest-ranking student in the Ph.D. Qualifying Exam, 2002.

○ Masters Students (Former)

- Yasin Kadioglu, M.S. NYU Tandon School of Engineering, 2014.
  Currently pursuing Ph.D. at Imperial College.

- Abbas Khalili, NYU Tandon School of Engineering, 2016-2018.
  Currently pursuing Ph.D. at NYU.

- Nirmal Shende, NYU Tandon School of Engineering, 2013.
  Currently pursuing Ph.D. at Cornell University.

○ Undergraduate Students (Former)

- Steven Li, NYU Tandon School of Engineering, January 2010-June 2011.
  Currently pursuing Ph.D. at University of Southern California.

○ Faculty Visitors

- Torbjorn Ekman, Professor, Norwegian University for Science and Technology, Trondheim, Norway, August 2011-August 2012.
- Ozgur Gurbuz, Professor, Sabanci University, Istanbul, Turkey, September 2012-January 2013.
- Ibrahim Tekin, Professor, Sabanci University, Istanbul, Turkey, February 2010-June 2010.
- Stefano Tomasin, Associate Professor, University of Padova, Italy, September 2007-December 2007.

○ Student Visitors

- Soumyadeep Datta, B.S. Student, Indian Institute of Technology, Kharagpur, India, May 2018-July 2018.
- Damla Dimlioglu, B.S. Student, Middle East Technical University, Turkey, August 2011-September 2011.
- Trung Duong, Ph.D. Student, Blekinge Institute of Technology, Sweden, September 2009-December 2009.
- Umay Geyikci, B.S.Student, Middle East Technical University, Turkey, June 2016-September 2016.
- Ekin Yagmur Gonen, B.S.Student, Middle East Technical University, Turkey, August 2011-September 2011.
- Sarper Gokturk, Ph.D. Student, Sabanci University, Turkey, April 2010-October 2010.
- Felipe Gomez-Cuba, Ph.D. Student, University of Vigo, Spain, September 2013-March 2014.
- Roghayeh Joda, Ph.D. Student, University of Tehran, Iran, June 2011-January 2012.
- Mert Kayaapl, B.S. Student, Koc University, Turkey, July 2018-Present.
- Nitish Mital, Ph.D. Student, Imperial College, U.K., May 2018-Present.
- Cezmi Mutlu, B.S. Student, Middle East Technical University, Turkey, June 2016-September 2016.
- Qianqian Yang, Ph.D. Student, Imperial College, U.K., November 2017-April 2018.