

LIST OF PUBLICATIONS  
ERIK G. LARSSON

April 6, 2018

**Books:**

- [1] T. L. Marzetta, E. G. Larsson, H. Yang and H. Q. Ngo, *Fundamentals of Massive MIMO*, Cambridge, UK: Cambridge University Press, Nov. 2016.
- [2] E. G. Larsson and P. Stoica, *Space-Time Block Coding for Wireless Communications*. Cambridge, UK: Cambridge University Press, May 2003.

**Chapters in Books:**

- [1] E. G. Larsson, J. Li, and P. Stoica, “High-resolution nonparametric spectral analysis: theory and applications,” in *High-resolution and robust signal processing* (Y. Hua, A. B. Gershman, and Q. Cheng, eds.), New York, NY: Marcel-Dekker, 2003. ISBN 0-8247-4752-6.
- [2] E. G. Larsson and E. Jorswieck, “Game theory,” in *Mathematical Foundations for Signal Processing, Communications and Networking* (T. Chen, D. Rajan and E. Serpedin, eds.), CRC Press, 2011. ISBN 978-1-4398-5513-3.

**Journal Papers:**

- [1] Z. Chen, E. Björnson and E. G. Larsson, “When is the achievable rate region convex in two-user massive MIMO systems?,” *IEEE Wireless Communications Letters*. To appear.
- [2] E. G. Larsson and L. V. der Perre, “Out-of-band radiation from antenna arrays clarified,” *IEEE Wireless Communications Letters*. To appear.
- [3] J. Flordelis, F. Rusek, F. Tufvesson, E. G. Larsson and O. Edfors, “Massive MIMO performance – TDD versus FDD: What do measurements say?,” *IEEE Transactions on Wireless Communications*. To appear.
- [4] C. Mollén, E. G. Larsson, U. Gustafsson, T. Eriksson and R. Heath, Jr., “Out-of-band radiation from large antenna arrays,” *IEEE Communications Magazine*. To appear.
- [5] H. Q. Ngo, L.-N. Tran, T. Q. Duong, M. Matthaiou, and E. G. Larsson, “On the total energy efficiency of cell-free massive MIMO,” *IEEE Transactions on Green Communications and Networking*, vol. 2, pp. 25–39, Mar. 2018.
- [6] M. Karlsson, E. Björnson and E. G. Larsson, “Performance of in-band transmission of system information in massive MIMO systems,” *IEEE Transactions on Wireless Communications*, vol. 17, pp. 1700–1712, Mar. 2018.
- [7] P. Chandhar, D. Danev and E. G. Larsson, “Massive MIMO for communications with drone swarms,” *IEEE Transactions on Wireless Communications*, vol. 17, pp. 1604–1629, Mar. 2018.
- [8] T. Van Chien, E. Björnson and E. G. Larsson, “Joint pilot design and uplink power allocation in multi-cell massive MIMO systems,” *IEEE Transactions on Wireless Communications*, vol. 17, pp. 2000–2015, Mar. 2018.

- [9] M. Sadeghi, E. Björnson, E. G. Larsson, C. Yuen and T. L. Marzetta, “Max-min fair transmit precoding for multi-group multicasting in massive MIMO,” *IEEE Transactions on Wireless Communications*, vol. 17, pp. 1358–1373, Feb. 2018.
- [10] R. Chopra, C. R. Murthy, H. A. Suraweera and E. G. Larsson, “Performance analysis of FDD massive MIMO systems under channel aging,” *IEEE Transactions on Wireless Communications*, vol. 17, pp. 1094–1108, Feb. 2018.
- [11] H. V. Cheng, E. Björnson and E. G. Larsson, “Performance analysis of NOMA in training based multiuser MIMO systems,” *IEEE Transactions on Wireless Communications*, vol. 17, pp. 372–385, Jan. 2018.
- [12] T. T. Do, E. Björnson, E. G. Larsson and S. M. Razavizadeh, “Jamming-resistant receivers for the massive MIMO uplink,” *IEEE Transactions on Information Forensics and Security*, vol. 13, pp. 210–223, Jan. 2018.
- [13] X. Li, E. Björnson, E. G. Larsson, S. Zhou and J. Wang, “Massive MIMO with multi-cell MMSE processing: exploiting all pilots for interference suppression,” *EURASIP Journal on Wireless Communications and Networking*, 2017.
- [14] E. de Carvalho, E. Björnson, J. H. Sørensen, E. G. Larsson and P. Popovski, “Random pilot and data access in Massive MIMO for machine-type communications,” *IEEE Transactions on Wireless Communications*, vol. 12, pp. 7703–7717, Dec. 2017.
- [15] M. Karlsson, E. Björnson and E. G. Larsson, “Jamming a TDD point-to-point link using reciprocity-based MIMO,” *IEEE Transactions on Information Forensics and Security*, vol. 12, pp. 2957–2970, Dec. 2017.
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- [22] A. Gökçeoglu, E. Björnson, E. G. Larsson and M. Valkama, “Spatio-temporal waveform design for multi-user massive MIMO downlink with 1-bit receivers,” *IEEE Journal on Selected Topics in Signal Processing*, vol. 11, pp. 347–362, March 2017.
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**Publicly Available Software:**

- [1] Contributions as developer to IT++ (open-source C++ class library for scientific computing, see <http://itpp.sf.net>): GF(2) matrix algebra module, vector/MIMO modulator/demodulator module, fast likelihood algebra calculation module, and classes for LDPC coding. GNU GPL, mostly developed 2005–2007; later on refined by others. April 6, 2018
- [2] Various code associated with published research papers. Available at [www.commsys.isy.liu.se/~egl/software/](http://www.commsys.isy.liu.se/~egl/software/).