

List of Publications

Risto Wichman

April 19, 2016

A Peer-reviewed scientific articles

International Journals

- A.A. Dowhuszko, G. Corral Briones, J. Hämäläinen, R. Wichman, "Performance of Quantized Random Beamforming in Delay-Tolerant Machine-Type Communication," *IEEE Transactions on Wireless Communications*, in press
- U. Ugurlu; R. Wichman; C. Ribeiro; C. Wijting, "A Multipath Extraction Based CSI Acquisition Method for FDD Cellular Networks with Massive Antenna Arrays," *IEEE Transactions on Wireless Communications*, vol.PP, no.99, pp.1-1
doi: 10.1109/TWC.2015.2513402
- K. Schober; R. Wichman; M. Enescu, "Geodesical Refinement of MIMO Limited Feedback," *IEEE Transactions on Communications*, vol.PP, no.99, pp.1-1
doi: 10.1109/TCOMM.2016.2516013
- P. Mathecken, T. Riihonen, S. Werner and R. Wichman, "Phase Noise Estimation in OFDM: Utilizing Its Associated Spectral Geometry," *IEEE Transactions on Signal Processing*, vol. 64, no. 8, pp. 1999-2012, April 15, 2016.
doi: 10.1109/TSP.2015.2512532
- U. Ugurlu, T. Riihonen, and R. Wichman, "Optimized In-band Full-Duplex MIMO Relay under Single-Stream Transmission", *IEEE Trans. Vehicular Technology*, vol. 65, no. 1, pp. 155-168, Jan. 2016.
doi: 10.1109/TVT.2015.2396684
- J. Ojaniemi, R. Poikonen, R. Wichman, "Optimization of secondary system antenna deployment in shared spectrum access," *IEEE Trans. Vehicular Technology*, 2015
doi: 10.1109/TVT.2015.2452258
- R. A. Pitaval, O. Tirkkonen, R. Wichman, K. Pajukoski, E. Lähetkangas and E. Tiirola, "Full-duplex self-backhauling for small-cell 5G networks," *IEEE Wireless Communications*, vol. 22, no. 5, pp. 83-89, October 2015
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- M. Čierny, H. Wang, R. Wichman, Z. Ding, "Higher Rank Interference Effect on Weak Beamforming or OSTBC Terminals," *IEEE Trans. Wireless Communications*, vol. 14, no. 9, pp. 4948-4957, Sept. 2015.
doi: 10.1109/TWC.2015.2429648 (<http://arxiv.org/abs/1404.1451>)
- B. B. Haile, A. Dowhuszko, J. Hämäläinen, R. Wichman, Z. Ding: "On the Performance of Some CoMP Techniques under Channel Power Imbalance and Limited Feedback," *IEEE Trans. Wireless Communications*, vol. 14, no. 8, pp. 4469-4481, Aug. 2015.
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- M. Heino, D. Korpi, T. Huusari, E. Antonio-Rodriguez, S. Venkatasubramanian, T. Riihonen, L. Anttila, C. Icheln, K. Haneda, R. Wichman, and M. Valkama, "Recent Advances in Antenna Design and Interference Cancellation Algorithms for In-band Full Duplex Relays," *IEEE Communications Magazine*, 53(5):91–101, May 2015
- K. Schober, R.-A. Pitaval, R. Wichman, "Improved User-Specific Channel Estimation Using Geodesical Interpolation at the Transmitter," *IEEE Wireless Communications Letters*, vol.4, no.2, pp.165–168, April 2015
- M. Vehkaperä, T. Riihonen, M.A. Girnyk, E. Björnson, M. Debbah, L.K. Rasmussen, R. Wichman, "Asymptotic Analysis of MIMO Channels With Transmitter Noise and Mismatched Decoding," *IEEE Trans. Communications*, 63(3):pp. 749–765, March 2015 (<http://arxiv.org/abs/1406.4980>)
- A. Sabharwal, P. Schniter, D. Guo, D.W. Bliss, S. Rangarajan, R. Wichman, "In-band Full-duplex Wireless: Challenges and Opportunities", *IEEE Journal on Selected Areas of Communications*, vol.32, no.9, pp.1637–1652, September 2014, (<http://arxiv.org/abs/1311.0456>)
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International conference proceedings

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- F.H. Gregorio, G.J. González, J. Cousseau, T. Riihonen, R. Wichman, “RF Front-End Implementation Challenges of In-band Full-Duplex Relay Transceivers”, *European Wireless*, Oulu, May 2016
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- T. Riihonen, R. Wichman, "Energy Detection in Full-Duplex Cognitive Radios under Residual Self-interference", *International Conference on Cognitive Radio Oriented Wireless Networks (CROWNCOM)*, Oulu, Finland, June 2014
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- J. Ojaniemi, J. Kalliovaara, J. Poikonen, R. Wichman, “A practical method for combining multivariate data in radio environment mapping”, *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, (PIMRC)*, London, UK, September 2013
- M. Vehkaperä, M. A. Girnyk, T. Riihonen, R. Wichman, L. K. Rasmussen, “On Achievable Rate Regions at Large-System Limit in Full-Duplex Wireless Local Access,” *International Black Sea Conference on Communications and Networking*, Georgia, July 2013
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- T. Riihonen, M. Vehkaperä, R. Wichman, “Large-system analysis of rate regions in bidirectional full-duplex MIMO link: Suppression versus cancellation,” *45th Conference on Information Sciences and Systems (CISS)*, Baltimore USA, March 2013
- T. Riihonen, P. Mathecken, and R. Wichman, “Effect of Oscillator Phase Noise and Processing Delay in Full-Duplex OFDM Repeaters”, *46th Annual Asilomar Conference on Signals, Systems, and Computers (ACSSC)*, Pacific Grove, California, USA, November 2012
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- P. Talmola, J. Kalliovaara, J. Paavola, R. Ekman, H. Kokkinen, K. Heiska, R. Wichman, J. Poikonen, “Field measurements of WSD–DTT protection ratios over outdoor and indoor reference geometries”, *International Conference on Cognitive Radio Oriented Wireless Networks (CROWNCOM)*, Stockholm, Sweden, June 2012
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