

REFERENCES

- [1] W. C. Jakes Jr, *Multipath interference in microwave mobile communications*. New York: Wiley, 1974.
- [2] V. Tarokh, N. Seshadri, and A. R. Calderbank, “Space-time codes for high data rate wireless communication: performance criterion and code construction,” *IEEE Trans. Information Theory*, vol. 44, pp. 744–765, March 1998.
- [3] D. Bevan and R. Tanner, “Performance comparison of space-time coding techniques,” *Electronics Letters*, vol. 35, pp. 1707–1708, Oct. 1999.
- [4] G. Foschini, “Layered space-time architecture for wireless communication in fading environment when using multiple antennas,” *Bell Labs Tech. J.*, vol. 1, pp. 41–59, Autumn 1996.
- [5] G. D. Golden, C. J. Foschini, R. A. Valenzuela, and P. W. Wolniansky, “Detection algorithm and initial laboratory results using V-BLAST space-time communication architecture,” *Electronics Letters*, vol. 35, pp. 14–16, Jan. 1999.
- [6] H. Bölcskei, A. J. Paulraj, K. V. S. Hari, and R. U. Nabar, “Fixed broadband wireless access: State of the art, challenges and future directions,” *IEEE Communications Magazine*, pp. 100–108, Jan. 2001.
- [7] B. Clerckx, C. Oestges, D. Vanhoenacker-Janvier, and L. Vandendorpe, “Robustness of space-time coding in spatially correlated fast-fading MIMO channels,” in *Proc. 2005 IEEE 62nd Veh. Technology Conf.*, vol. 4, Dallas, TX, Sep. 25-28 2005, pp. 2413–2417.
- [8] G. Ginis and J. Cioffi, “Vectored transmission for digital subscriber line systems,” *IEEE J. Selected Areas in Communications*, vol. 20, pp. 1085–1104, June 2002.
- [9] I. Telatar, “Capacity of multi-antenna gaussian channels,” AT&T Bell Laboratories, Tech. Report #BL0112170-950615-07TM, 1995.
- [10] A. Goldsmith, S. A. Jafar, N. Jindal, and S. Vishwanath, “Capacity limits of MIMO channels,” *IEEE Trans. Information Theory*, vol. 21, pp. 684–702, June 2003.
- [11] T. Yoo and A. Goldsmith, “Capacity of fading MIMO channels with channel estimation error,” in *Proc. 2004 IEEE Intl. Conf. Communications*, vol. 2, Paris, France, June 20-24 2004, pp. 808–813.



- [12] M. Herdin, “Non-stationary indoor MIMO radio channels,” Ph.D. dissertation, Technische Universität Wien, August 2004.
- [13] M. Ivrlač, T. Kurpjuhn, C. Brunner, and W. Utschick, “Efficient use of fading correlation in mimo systems,” in *Proc. 2001 IEEE 54th Veh. Technology Conf.*, vol. 4, Atlantic City, NJ, Oct. 7-11, 2001, pp. 2763–2767.
- [14] J. W. Wallace, M. A. Jensen, A. L. Swindlehurst, and B. D. Jeffs, “Experimental characterization of the MIMO wireless channel: Data acquisition and analysis,” *IEEE Trans. Wireless Communications*, vol. 2, pp. 335–343, March 2003.
- [15] G. J. Foschini and M. J. Gans, “On limits of wireless communications in a fading environment when using multiple antennas,” *Wireless Personal Commun.*, vol. 6, pp. 311–335, March 1998.
- [16] A. Burr, “Evaluation of capacity of indoor wireless MIMO channel using ray tracing,” in *Proc. of the 2002 Intl. Zurich Seminar on Access, Transmission, and Networking*, Zurich, Switzerland, Feb. 19-21, 2002, pp. 28–1–28–6.
- [17] M. Steinbauer, A. F. Molisch, and E. Bonek, “The double-directional radio channel,” *IEEE Antennas and Propag. Mag.*, vol. 43, pp. 51–63, Aug. 2001.
- [18] K. Yu, M. Bengtsson, B. Ottersten, D. McNamara, P. Karlsson, and M. Beach, “A wideband statistical model for NLOS indoor MIMO channels,” in *Proc. 2002 IEEE 55th Veh. Technology Conf.*, vol. 1, Birmingham, AL, May 6-9, 2002, pp. 370–374.
- [19] M. A. Jensen and J. W. Wallace, “A review of antennas and propagation for MIMO wireless communications,” *IEEE Trans. Antennas Propagation*, pp. 2810–2824, Nov. 2004.
- [20] T. M. Cover and J. A. Thomas, *Elements of Information Theory*. John Wiley and Sons, 1991.
- [21] J. G. Proakis, *Digital Communications*. McGraw-Hill, 1995.
- [22] M.-S. Alouini and A. Goldsmith, “Capacity of nakagami multipath fading channels,” in *Proc. 1997 IEEE Spring Veh. Technology Conf.*, vol. 1, 1997, pp. 358–362.
- [23] J. B. Anderson, “Antenna arrays in mobile communications: Gain, diversity, and channel capacity,” *IEEE Antennas and Propagation Magazine*, vol. 42, pp. 12–16, April 2000.
- [24] B. T. Maharaj, L. P. Linde, J. W. Wallace, and M. Jensen, “Co-located indoor 2.4 and 5.2 GHz MIMO channel measurements: frequency scaling of capacity and correlation,” in *Proc. 2005 IEEE Intl. Conf. on Telecommunications*, vol. 1, Cape Town, South Africa, May 18-23, CDROM 2005.
- [25] J. B. Andersen and R. G. Vaughan, “Transmitting, receiving, and scattering properties of antennas,” *IEEE Antennas Propag. Magazine*, vol. 45, Aug. 2003.
- [26] G. G. Raleigh and J. M. Cioffi, “Spatio-temporal coding for wireless communication,” *IEEE Trans. Selected Areas in Communications*, vol. 46, pp. 357–366, March 1998.



- [27] T. K. Moon and W. C. Stirling, *Mathematical Methods and Algorithms for Signal Processing*. Prentice-Hall, 2000.
- [28] M. A. Khalighi, J. Brossier, G. Jourdain, and K. Raoof, “Water filling capacity of Rayleigh MIMO channels,” in *Proc. 2001 IEEE 12th Intl. Symp. on Personal, Indoor and Mobile Radio Comm.*, vol. 1, San Diego, CA, Sep. 30 - Oct 3, 2001, pp. 155–158.
- [29] J. B. Andersen, “Array gain and capacity for known random channels with multiple element arrays at both ends,” *IEEE J. Selected Areas in Communications*, vol. 18, pp. 2172–2178, Nov. 2000.
- [30] L. Zheng and D. Tse, “Diversity and multiplexing: A fundamental tradeoff in multiple antenna channels,” *IEEE Trans. Information Theory*, vol. 49, pp. 1073–1096, May 2003.
- [31] M. Herdin, H. Özcelik, H. Hofstetter, and E. Bonek, “Variation of measured indoor MIMO capacity with receive direction and position at 5.2 GHz,” *Electronics Letters*, vol. 38, pp. 1283–1285, Oct. 10, 2002.
- [32] D. Chizhik, G. J. Foschini, M. J. Gans, and R. A. Valenzuela, “Propagation and capacities of multi-element transmit and receive antennas,” in *Proc. 2001 IEEE Antennas and Propag. Society Intl. Symp.*, vol. 1, Boston, MA, July 8-13 2001, pp. 438–441.
- [33] D. Gesbert, H. Bölcseki, D. A. Gore, and A. J. Paulraj, “Outdoor MIMO wireless channels: Models and performance prediction,” *IEEE Trans. Selected Areas in Communications*, vol. 50, pp. 1926–1934, Dec. 2002.
- [34] D. Chizhik, G. J. Foschini, M. J. Gans, and R. A. Valenzuela, “Keyholes, correlations, and capacities of multielement transmit and receive antennas,” *IEEE Trans. Wireless Communications*, vol. 2, pp. 361–368, April 2002.
- [35] P. Almers, F. Tufvesson, and A. F. Molisch, “Measurement of keyhole effect in a wireless multiple-input multiple-output (MIMO) channel,” *IEEE Communication Letters*, vol. 7, pp. 373–375, Aug. 2003.
- [36] D. P. McNamara, M. A. Beach, P. N. Fletcher, and P. Karlsson, “Capacity variation of indoor multiple-input multiple-output channels,” *Electronics Letters*, vol. 36, pp. 2037–2038, Nov. 2000.
- [37] D. Shiu, G. J. Foschini, M. J. Gans, and J. M. Kahn, “Fading correlation and its effect on the capacity of multielement antenna systems,” *IEEE Trans. Selected Areas in Communications*, vol. 48, pp. 502–513, March 2000.
- [38] D. Chizhik, F. Rashid-Farrokhi, J. Ling, and A. Lozano, “Effect of antenna separation on the capacity of BLAST in correlated channels,” *IEEE Communication Letters*, vol. 4, pp. 337–339, Nov. 2000.
- [39] N. Chiurtu, B. Rimoldi, and E. Telatar, “Dense multiple antenna systems,” in *Proc. IEEE 2001 Information Theory Workshop*, Cairns, Australia, Sep. 2-7 2001, pp. 108–109.



- [40] C. N. Chuah, D. N. C. Tse, J. M. Kahn, and R. A. Valenzuela, "Capacity scaling in MIMO wireless systems under correlated fading," *IEEE Trans. Information Theory*, vol. 48, pp. 637–650, March 2002.
- [41] S. Q. Wei, D. Goeckel, and R. Janaswamy, "On the asymptotic capacity of MIMO systems with fixed length linear antenna arrays," in *Proc. 2003 IEEE Intl. Conf. Communications*, vol. 4, Anchorage, AK, May 11-15 2003, pp. 2633–2637.
- [42] H. Krim and M. Viberg, "Two decades of array signal processing research: The parametric approach," *IEEE Signal Processing Magazine*, vol. 13, pp. 67–94, July 1996.
- [43] M. Bartlett, "Smoothing periodograms from time series with continuous spectra," *Nature*, vol. 161, pp. 686–687, May 1948.
- [44] J. Capon, "High-resolution frequency-wavenumber spectrum analysis," *IEEE Proceedings*, vol. 57, pp. 1408–1418, Aug. 1969.
- [45] M. Steinbauer, "A comprehensive transmission and channel model for directional radio channels," COST259, Tech. Rep. No. TD(98)027, Bern, Switzerland, Feb. 1998.
- [46] M. Steinbauer, "The radio propagation channel: A non-directional, directional and double directional point-of-view," Ph.D. dissertation, Technische Universität Wien, November 2001.
- [47] Q. H. Spencer, B. D. Jeffs, M. A. Jensen, and A. L. Swindlehurst, "Modeling the statistical time and angle of arrival characteristics of an indoor multipath channel," *IEEE J. Selected Areas in Communications*, vol. 18, pp. 347–360, March 2000.
- [48] J. Fuhl, J. P. Rossi, and E. Bonek, "High-resolution 3-D direction-of-arrival determination for urban mobile radio," *IEEE Trans. Antennas Propagation*, vol. 45, pp. 672–682, April 1997.
- [49] A. Richter, D. Hampicke, G. Sommerkorn, and R. S. Thoma, "Joint estimation of DoD, time-delay, and DoA for high-resolution channel sounding," in *Proc. 2000 IEEE 51st Veh. Technology Conf.*, vol. 2, Tokyo, Japan, May 15-18, 2000, pp. 1045–1049.
- [50] S. Y. Seidel and T. S. Rappaport, "Site-specific propagation prediction for wireless in-building personal communication system design," *IEEE Trans. Vehicular Technology*, vol. 43, pp. 879–891, Nov. 1994.
- [51] D. J. Cichon and T. Kurner, "Propagation prediction models," in *COST 231 Final Rep.*, 1995, available online at <http://www.lx.it.pt/cost231/>.
- [52] G. E. Athanasiadou, A. R. Nix, and J. P. McGeehan, "A microcellular ray-tracing propagation model and evaluation of its narrow-band and wide-band predictions," *IEEE J. Selected Areas in Communications*, vol. 18, pp. 322–335, March 2000.
- [53] M. F. Iskander and Z. Yun, "Propagation prediction models for wireless communication systems," *IEEE Trans. Microwave Theory Techniques*, vol. 50, pp. 662–673, March 2002.



- [54] A. L. Swindlehurst, G. German, J. Wallace, and M. Jensen, "Experimental measurements of capacity for MIMO indoor wireless channels," in *IEEE Third Workshop on Signal Processing Advances in Wireless Communications, 2001. (SPAWC '01)*, March 2001, pp. 30–33.
- [55] C. Takahashi, Z. Yun, M. F. Iskander, G. Poilasne, V. Pathak, and J. Fabrega, "Propagation-prediction software and site-planning software for wireless communication systems," *IEEE Antennas and Propagation Magazine*, vol. 49, pp. 52–60, September 2007.
- [56] R. A. Valenzuela, "Ray tracing prediction of indoor radio propagation," in *Proc. 1994 IEEE 5th Intl. Symp. on Personal, Indoor and Mobile Radio Comm.*, vol. 1, The Hague, The Netherlands, Sep. 18-23, 1994, pp. 140–144.
- [57] P. Marques, J. Fernandes, and J. Neves, "Complex impulse response modeling for wideband channels," in *Proc. 1998 IEEE Spring Veh. Technology Conf.*, vol. 2, Ottawa, Ontario, Canada, May 18-21, 1998, pp. 702–706.
- [58] Z. Yun, M. F. Iskander, and Z. Zhang, "Complex-wall effect on propagation characteristics and mimo capacities for a indoor wireless communication environment," *IEEE Trans. Antennas Propagation*, vol. 52, pp. 914–922, April 2004.
- [59] Z. Zhang, R. Sorensen, Z. Yun, M. F. Iskander, and J. F. Harvey, "A ray-tracing approach for indoor/outdoor propagation through window structures," *IEEE Trans. Antennas Propagation*, vol. 50, pp. 742–748, May 2002.
- [60] F. Tila, P. R. Shepherd, and S. R. Pennock, "Theoretical capacity evaluation of indoor micro- and macro-MIMO systems at 5 GHz using site specific ray tracing," *Electronics Letters*, vol. 39, pp. 471–472, March 6 2003.
- [61] K. R. Dandekar, A. Arredondo, G. Xu, and H. Ling, "Using ray tracing to study urban vector channel propagation characteristics," in *Proc. 1999 IEEE Spring Veh. Technology Conf.*, vol. 1, Houston, TX, May 16-20, 1999, pp. 381–385.
- [62] R. B. Ertel, P. Cardieri, K. W. Sowerby, T. S. Rappaport, and J. H. Reed, "Overview of spatial channel models for antenna array communication systems," *IEEE Pers. Commun.*, pp. 10–21, Feb. 1998.
- [63] D.-S. Shiu, *Wireless communication using dual antenna arrays*. Kluwer Academic Publishers, 2000.
- [64] A. Abdi and M. Kaveh, "A space-time correlation model for multielement antenna systems in mobile fading channels," *IEEE J. Selected Areas in Communications*, vol. 20, pp. 550–560, April 2002.
- [65] A. Abdi and M. Kaveh, "Space-time correlation modelling of multielement antenna systems in mobile fading channels," in *Proc. 2001 IEEE Intl. Conf. Acoustics, Speech, and Signal Processing*, Salt Lake City, UT, May 7-11, 2001, pp. 2505–2508.



- [66] A. Abdi and M. Kaveh, "A versatile spatio-temporal correlation function for mobile fading channels with non-isotropic scattering," in *IEEE Workshop on Statistical Signal and Array Processing*, Pocono Manor, PA, Aug. 14-16 2000, pp. 58–62.
- [67] D. Gesbert, D. Bölcseki, D. Gore, and A. Paulraj, "Mimo wireless channels: capacity and performance," in *Proc. 2000 IEEE Global Telecomm. Conf.*, vol. 2, Nov. 2000, pp. 1083–1088.
- [68] A. A. M. Saleh and R. A. Valenzuela, "A statistical model for indoor multipath propagation," *IEEE J. Selected Areas in Communications*, vol. SAC-5, pp. 128–137, Feb. 1987.
- [69] J. W. Wallace and M. A. Jensen, "Statistical characteristics of measured MIMO wireless channel data and comparison to conventional models," in *Proc. 2001 IEEE 54th Veh. Technology Conf.*, vol. 2, Atlantic City, NJ, Oct. 7-11 2001, pp. 1078–1082.
- [70] J. W. Wallace and M. A. Jensen, "Measured characteristics of the MIMO wireless channel," in *Proc. 2001 IEEE 54th Veh. Technology Conf.*, vol. 4, Atlantic City, NJ, Oct. 7-11 2001, pp. 2038–2042.
- [71] J. W. Wallace and M. A. Jensen, "Modeling the indoor MIMO wireless channel," *IEEE Trans. Antennas Propagation*, vol. 50, pp. 591–599, May 2002.
- [72] L. M. Correia, *Wireless Flexible Personalised Communications*. John Wiley & Sons, 2001.
- [73] M. Stege, J. Jelitto, M. Bronzel, and G. Fettweis, "A multiple input-multiple output channel model for simulation of Tx- and Rx-diversity wireless systems," in *Proc. 2000 IEEE 52nd Veh. Technology Conf.*, vol. 2, Boston, MA, Sep. 24-28, 2000, pp. 833–839.
- [74] T. Svantesson, "A physical MIMO radio channel model for multi-element multi-polarized antenna systems," in *Proc. 2001 IEEE 54th Veh. Technology Conf.*, vol. 2, Atlantic City, NJ, Oct. 7-11, 2001, pp. 1083–1087.
- [75] T. Svantesson, "On capacity and correlation of multi-antenna systems employing multiple polarizations," in *Proc. 2002 IEEE Antennas and Propag. Society Intl. Symp.*, vol. 3, San Antonio, TX, June 16-21, 2002, pp. 202–205.
- [76] T. Svantesson, "A double-bounce channel model for multi-polarized MIMO systems," in *Proc. 2002 IEEE 56th Veh. Technology Conf.*, vol. 2, Vancouver, BC, Sep. 24-28, 2002, pp. 691–695.
- [77] L. Hanlen and M. Fu, "Multiple antenna wireless communication systems: limits to capacity growth," in *Proc. 2002 IEEE Wireless Comm. and Networking Conf.*, vol. 1, March 17-21, 2002, pp. 172–176.
- [78] R. Tingley and K. Bahlavan, "A statistical model of space-time radio propagation in indoor environments," in *Proc. 2000 IEEE-APS Conf. on Antennas and Propagation for Wireless Comm.*, Waltham, MA, Nov., 6-8 2000, pp. 61–64.



- [79] A. F. Molisch, "A generic model for MIMO wireless propagation channels," in *Proc. 2002 IEEE Intl. Conf. Communications*, vol. 1, New York, NY, April 28 - May 2, 2002, pp. 277–282.
- [80] R. J. Piechocki, J. P. McGeehan, and G. Tsoulos, "A new stochastic spatio-temporal propagation model (SSTPM) for mobile communications with antenna arrays," *IEEE Trans. Selected Areas in Communications*, vol. 49, pp. 855–862, May 2001.
- [81] J. D. Parsons, *The Mobile Radio Propagation Channel*. Halsted Press, 1992.
- [82] D. Gesbert, M. Shafi, D.-S. Shiu, P. J. Smith, and A. Naguib, "From theory to practice: an overview of MIMO space-time coded wireless systems," *IEEE J. Selected Areas in Communications*, vol. 21, pp. 281–302, April 2003.
- [83] C. Xiao, J. Wu, S. Y. Leong, Y. R. Zheng, and K. B. Letaief, "A discrete-time model for spatio-temporally correlated MIMO WSSUS multipath channels," in *Proc. 2003 IEEE Wireless Comm. and Networking Conf.*, vol. 1, New Orleans, LA, March 16-20, 2003, pp. 354–358.
- [84] G. Byers and F. Takawira, "The influence of spatial and temporal correlation on the capacity of MIMO channels," in *Proc. 2003 IEEE Wireless Comm. and Networking Conf.*, vol. 1, New Orleans, LA, March 16-20, 2003, pp. 359–364.
- [85] B. Maharaj and L. Linde, "Capacity for spatial-temporal correlated MIMO fading channel," in *Proc. 2004 IEEE Africon Conf.*, vol. 1, Gaborone, Botswana, Sep. 15-17 2004, pp. 269–274.
- [86] J. Fuhl, A. F. Molisch, and E. Bonek, "Unified channel model for mobile radio systems with smart antennas," *IEE Proc. Radar, Sonar and Navigation*, vol. 145, pp. 32–41, Feb. 1998.
- [87] I. S. Gradshteyn and I. M. Ryzhik, *Table of Integrals, Series, and Products*. Academic Press, 6th edition, ISBN 0-12-294757-6, 2000.
- [88] B. T. Maharaj, J. W. Wallace, L. P. Linde, and M. A. Jensen, "A low cost open-hardware wideband MIMO wireless channel sounder," *IEEE Trans. Instrumentation and Measurement*, first review completed, July 2007.
- [89] B. T. Maharaj, J. W. Wallace, L. P. Linde, and M. A. Jensen, "Frequency scaling of spatial correlation from co-located 2.4 and 5.2 GHz wideband indoor MIMO channel measurements," *Electronics Letters*, vol. 41, pp. 336–337, 17 March 2005.
- [90] B. T. Maharaj and L. P. Linde, "Geometric modelling of a spatially correlated MIMO fading channel," *SAIEE Africa Research Journal*, vol. 97, no. 2, pp. 191–197, June 2006.
- [91] B. B. Varghese and B. T. Maharaj, "A spatially correlated model for mimo fading channels," in *Proc. 2005 IEEE Intl. Conf. on Telecommunications*, vol. 1, Cape Town, South Africa, May 18-23, CDROM 2005.

- [92] Q. H. Spencer, C. B. Peel, A. L. Swindlehurst, and M. Haardt, "An introduction to the multi-user MIMO downlink," *IEEE Communications Magazine*, vol. 42, pp. 60–67, Oct. 2004.
- [93] R. S. Thoma, D. Hampicke, A. Richter, G. Sommerkorn, A. Schneider, U. Trautwein, and W. Wirnitzer, "Identification of time-variant directional mobile radio channels," *IEEE Trans. Instrumentation and Measurement*, vol. 49, pp. 357–364, Apr. 2000.
- [94] J. W. Wallace, "BYU wideband MIMO channel sounder:technical reference," Brigham Young University, Tech. Rep. DSpace 1877/538, 2006. [Online]. Available: <http://hdl.handle.net/1877/538>
- [95] B. T. Maharaj, L. P. Linde, J. W. Wallace, and M. Jensen, "A cost-effective wideband MIMO channel sounder and initial co-located 2.4 GHz and 5.2 GHz measurements," in *Proc. 2005 IEEE Intl. Conf. Acoustics, Speech, and Signal Processing*, vol. 3, Philadelphia, PA, March 18-23 2005, pp. 981–984.
- [96] J. W. Wallace, "Modeling electromagnetic wave propagation in electrically large structures," Ph.D. dissertation, Brigham Young University, 2002, available on the Internet at <http://www.ycomm.org>.
- [97] H. Özcelik, M. Herdin, W. Weichselberger, J. Wallace, and E. Bonek, "Deficiencies of 'Kronecker' MIMO radio channel model," *Electronics Letters*, vol. 39, pp. 1209–1210, Aug. 7 2003.
- [98] C. Xiao, J. Wu, and S. Y. Leong, "A discrete-time model for spatio-temporally correlated MIMO WSSUS multipath channels," *IEEE Trans. Wireless Communications*, vol. Sept., pp. 1678–1688, Sept. 2004.
- [99] A. F. Molisch, M. Steinbauer, M. Toeltsch, E. Bonek, and R. S. Thoma, "Capacity of MIMO systems based on measured wireless channels," *IEEE J. Selected Areas in Communications*, vol. 20, pp. 561–569, April 2002.
- [100] D. P. McNamara, M. A. Beach, and P. N. Fletcher, "Spatial correlation in indoor MIMO channels," in *Proc. 2002 IEEE 13th Intl. Symp. on Personal, Indoor and Mobile Radio Comm.*, vol. 1, Lisboa, Portugal, Sep. 15-18, 2002, pp. 290–294.
- [101] D. Chizhik, J. Ling, P. W. Wolniansky, R. A. Valenzuela, N. Costa, and K. Huber, "Multiple-input-multiple-output measurements and modeling in Manhattan," *IEEE J. Selected Areas in Communications*, vol. 21, pp. 321–331, April 2003.
- [102] W. Weichselberger, M. Herdin, H. Özcelik, and E. Bonek, "A stochastic MIMO channel model with joint correlation of both link ends," *IEEE Trans. Wireless Communications*, vol. 5, pp. 90–100, Jan. 2006.
- [103] M. Debbah and R. Muller, "MIMO channel modelling and the principle of maximum entropy," *IEEE Transactions on Information Theory*, vol. 51, no. 5, pp. 1667–1690, May 2005.



- [104] A. Zajić and G. Strüber, “Space-time correlated mimo mobile-to-mobile channels,” in *Proc. 2006 IEEE Intl. Symp. on Personal, Indoor and Mobile Radio Comm.*, vol. CDROM, Finland, September 2006.
- [105] A. Zajić and G. Strüber, “A three-dimensional mimo mobile-to-mobile channel model,” in *Proc. 2007 IEEE Wireless Comm. and Networking Conf.*, vol. CDROM, Hong Kong, PRC, 18-23 March 2007.
- [106] A. M. Sayeed, “Deconstructing multiantenna fading channels,” *IEEE Trans. on Signal Processing*, vol. 50, pp. 2563–2579, Oct. 2002.