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Peer-Reviewed Journal Papers

- [J20] Johan Karedal, Fredrik Tufvesson, Nicolai Czink, Alexander Paier, Charlotte Dumard, Thomas Zemen, Christoph F. Mecklenbräuer, Andreas F. Molisch: *A Geometry-Based Stochastic MIMO Model for Vehicle-to-Vehicle Communications*, to appear in IEEE Transactions for Wireless Communications, 2009.
- [J19] Zolfa Zeinalpour-Yazdi, Masoumeh Nasiri-Kenari, Behnaam Aazhang, Joachim Wehinger, Christoph F. Mecklenbräuer: *Bounds on the Delay-Constrained Capacity of UWB Communication with a Relay Node*, to appear in IEEE Transactions for Wireless Communications, 2009.
- [J18] Alexander Paier, Johan Karedal, Nicolai Czink, Charlotte Dumard, Thomas Zemen, Fredrik Tufvesson, Andreas F. Molisch, Christoph F. Mecklenbräuer: *Characterization of vehicle-to-vehicle radio channels from measurements at 5.2 GHz*, Wireless Personal Communications, ISSN 0929-6212, 14 pages, Springer Netherlands, June 2008.
- [J17] Thomas Zemen, Christoph F. Mecklenbräuer, Florian Kaltenberger, Bernard H. Fleury: *Minimum-Energy Band-Limited Predictor with Dynamic Subspace Selection for Time-Variant Flat-Fading Channels*, in IEEE Transactions on Signal Processing, Vol. 55, No. 9, pp. 4534–4548, Sep. 2007.
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- [J15] Joachim Wehinger and Christoph F. Mecklenbräuer: *Iterative CDMA Multiuser Receiver with Soft Decision-Directed Channel Estimation*, in IEEE Transactions on Signal Processing, Vol. 54, No. 10, pp. 3922–3934, Oct. 2006.
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- [J12] Maja Lončar, Ralf R. Müller, Joachim Wehinger, Christoph F. Mecklenbräuer and Tetsushi Abe: *Iterative Channel Estimation and Data Detection in Frequency Selective Fading MIMO Channels*, European Transactions on Telecommunications (ETT), Vol. 15, Issue 5, pp. 459–470, Sep.–Oct. 2004.
- [J11] Marius Pesavento, Christoph F. Mecklenbräuer and Johann F. Böhme: *Multi-dimensional Rank Reduction Estimator for Parametric MIMO Channel Models*, in EURASIP Journal on Applied Signal Processing (JASP), Special Issue on Advances in Smart Antennas, Vol. 2004, No. 9, pp. 1354–1363, Aug. 2004.
- [J10] Christoph F. Mecklenbräuer and Markus Rupp: *Generalized Alamouti Codes for Trading Quality of Service against Data Rate in MIMO UMTS*, in EURASIP Journal of Applied Signal Processing (EURASIP JASP), Special Issue on MIMO Signal Processing, Vol. 2004, No. 5, pp. 662–675, May 2004.
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- [J8] Martin Steinbauer, Hüseyin Özcelik, Helmut Hofstetter, Christoph F. Mecklenbräuer and Ernst Bonek: *How to Quantify Multipath Separation*, IEICE Transactions C: on Electronics, Special Issue on *Signals, Systems and Electronics Technology*, Vol.E85–C, No. 3, pp. 552–557, Mar. 2002.
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- [submitted] Pavle Belanovic, Danilo Valerio, Alexander Paier, Thomas Zemen, Fabio Ricciato, and Christoph F. Mecklenbräuker: “On Wireless Links for Vehicle-to-Infrastructure Communications,” submitted to IEEE Transactions on Vehicular Technology, July 2008.
- [submitted] Giulio Coluccia, Erwin Riegler, Christoph F. Mecklenbräuker, Giorgio Taricco: “An optimum MIMO-OFDM iterative detector with pilot-aided channel state information,” submitted to IEEE Journal on Selected Topics in Signal Processing, September 2008.

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- [B3] Ernst Bonek, Thomas Neubauer, Christoph F. Mecklenbräuer: *Network Planning and Deployment Issues for MIMO Systems*, Chapter 12 in *MIMO Antenna Technology for Wireless Communications*, George Tsoulos (Ed.), Series in Electrical Engineering and Applied Signal Processing, CRC Press, 2006.
- [B2] Ian Oppermann, Matti Hämäläinen, Jari Iinatti, Alberto Rabbachin, Ben Allen, Seyed A. Ghorashi, Mohammad Ghavami, Olaf Albert and Christoph F. Mecklenbräuer: *Signal Processing*, Ch. 3 in *UWB Communication Systems — A Comprehensive Overview*, EURASIP Book Series on Signal Processing and Communications, Vol. 5, M.G. Di Benedetto, C. Politano, T. Kaiser, A. Molisch, I. Oppermann, D. Porcino (Eds.), Hindawi Publishing Co., Spring 2006.
- [B1] Christoph F. Mecklenbräuer, Joachim Wehinger, Thomas Zemen, Harold Artés, and Franz Hlawatsch: *Multiuser MIMO Channel Equalization*, in *Smart Antennas — State-of-the-Art*, EURASIP Book Series on Signal Processing and Communications, Vol. 3, Part I, Ch. 4, pp. 53–76, T. Kaiser, A. Bourdoux, H. Boche, J. Rodríguez Fonollosa, J. Bach Andersen, and W. Utschick (Eds.), Hindawi Publishing Co., 2006. ISBN 977-5945-09-7.

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- [D] Christoph F. Mecklenbräuer: *Parameterschätzung und Hypothesentests für akustische Wellenfelder unter Berücksichtigung der physikalischen Ausbreitungsbedingungen*, Shaker Verlag GmbH, Aachen, 1998.

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- [C95] Pei-Jung Chung, Mats Viberg, Christoph Mecklenbräuer: “Broadband ML Estimation Under Model Order Uncertainty,” in Proc. IEEE ICASSP 2009, Taipei, Taiwan, Apr. 19–24, 2009.
- [C94] Gordhan Das Menghwar, Christoph F. Mecklenbräuer: “Cooperative versus Non-cooperative Communications,” in Proc. Second IEEE

International Conference on Computer, Control, and Communication (IEEE-IC4), Karachi, Pakistan, Feb. 17–18, 2009.

- [C93] Ayse Adalan, Michael Fischer, Thomas Gigl, Klaus Witrisal, Arpad L. Scholtz, Christoph F. Mecklenbräuer: “Ultra-Wideband Radio Pulse Shaping Filter Design for IEEE 802.15.4a Transmitter,” in Proc. IEEE Wireless Communications and Networking Conference (WCNC 2009), Budapest, Hungary, Apr. 5–8, 2009.
- [C92] Alexander Paier, Thomas Zemen, Johan Karedal, Nicolai Czink, Charlotte Dumard, Fredrik Tufvesson, Christoph F. Mecklenbräuer, Andreas F. Molisch: “Spatial Diversity and Spatial Correlation Evaluation of Measured Vehicle-to-Vehicle Radio Channels at 5.2 GHz,” in Proc. 13th DSP Workshop and 5th SPE Workshop, Hilton Marco Island Beach Resort, Marco Island (FL), USA, January 4–7, 2009.
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- [C87] Laura Bernadó, Thomas Zemen, Alexander Paier, Gerald Matz, Johan Karedal, Nicolai Czink, Charlotte Dumard, Fredrik Tufvesson, Martin Hagenauer, Andreas F. Molisch, Christoph F. Mecklenbräuer: “Non-WSSUS vehicular channel characterization at 5.2 GHz – Spectral divergence and time-variant coherence parameters,” in Proc. XXIX General Assembly of the International Union of Radio Science (URSI), Chicago (IL), USA, Aug. 7–16, 2008.
- [C86] Alexander Paier, Thomas Zemen, Laura Bernadó, Gerald Matz, Johan Karedal, Nicolai Czink, Charlotte Dumard, Fredrik Tufvesson, Andreas F. Molisch, Christoph F. Mecklenbräuer: “Non-WSSUS vehicular channel characterization in highway and urban scenarios at

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- [C85] Nicolai Czink, Pei-Jung Chung, Dirk Maiwald, Bernard H. Fleury, Christoph F. Mecklenbräuer: “Determining the number of propagation paths from broadband MIMO measurements via bootstrapped likelihoods and the false discovery rate criterion — Part II: Application,” in Proc. IEEE 2nd International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP 2007), St. Thomas, U.S. Virgin Islands, Dec. 12–14, 2007.
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- [C74] Thomas Zemen, Christoph F. Mecklenbräuer, Bernard H. Fleury: *Time-Variant Channel Prediction using Time-Concentrated and Band-Limited Sequences*, in Proc. IEEE International Conference on Communications (ICC 2006), Istanbul, Turkey, Jun. 11–15, 2006.
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- [C68] Pei-Jung Chung, Johann F. Böhme, Christoph F. Mecklenbräuer, Alfred O. Hero: *Multiple Signal Detection Using the Benjamini-Hochberg Procedure*, in Proc. IEEE 1st International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP 2005), Puerto Vallarta, Jalisco State, Mexico, Dec. 13–15, 2005.
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- [C56] Joachim Wehinger and Christoph F. Mecklenbräuer: *Space-Time UMTS-FDD Receiver with Weighted Interference Cancellation*, in Proc. EUSIPCO 2004, Vienna, Austria.
- [C55] Pei-Jung Chung, Johann F. Böhme, Alfred O. Hero, Christoph F. Mecklenbräuer: *Signal Detection using a Multiple Hypothesis Test*, in Proc. 3rd IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM 2004), Sitges, Spain, Jul. 18–21, 2004.
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- [C53] Joachim Wehinger, Christoph F. Mecklenbräuker, Steffen Paul, Florian Kaltenberger: “*Two-stage Space-Time Receiver for UMTS Frequency Division Duplex*”, in Proc. ITG/IEEE Workshop on Smart Antennas, Munich, Germany, Mar. 18–19, 2004.
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- [T30] Christoph F. Mecklenbräuker, Alexander Paier, Thomas Zemen, Gerald Matz, Andreas F. Molisch: On the Temporal Evolution of Signal Subspaces in Vehicular MIMO Channels in the 5 GHz Band, in Proc. Joint Workshop on Coding and Communications (JWCC 2008), St. Helena (CA), USA, Oct. 26–28, 2008 (invited, to be published).
- [T29] Christoph F. Mecklenbräuker, Alexander Paier, Johan Karedal, Nicolai Czink, Gerald Matz, Helmut Hofstetter, Charlotte Dumard, Thomas Zemen, Fredrik Tufvesson, Andreas F. Molisch: “Analysis of time-variant channel measurements with the Lund channel sounder,” presented at Norges Teknisk-Naturvitenskapelige Universitet (NTNU), Trondheim, Norway, Jun. 9, 2008.
- [T28] Christoph F. Mecklenbräuker, Pei-Jung Chung, Dirk Maiwald, Nicolai Czink, Bernard H. Fleury: “*Model Identification for Wireless Propagation with Control of the False Discovery Rate*,” presented at Advanced Lectures in Wireless Communications, Technische Universität München, Germany, Apr. 8, 2008.
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- [T22] Olaf Albert and Christoph F. Mecklenbräuer: “*An 8-bit programmable fine delay circuit with step size 65ps for an ultrawideband pulse position modulation testbed,*” presented at the IEEE Austria Section’s UWB Forum on Sensing and Communication, Johannes Kepler Universität Linz, Linz, Austria, Mar. 14, 2007.
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