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## Peer-Reviewed Journal Papers

- [J60] Golsa Ghiaasi, Thomas Blazek, Mehdi Ashury, Rute Ramalho Santos and Christoph F. Mecklenbräuer: Real-Time Emulation of Nonstationary Channels in Safety-relevant Vehicular Scenarios, *Wireless Communications and Mobile Computing*, special issue *Advances in V2X Communication and Networks*, Hindawi, submitted Sep 29, 2017, accepted Feb 17, 2018.
- [J59] Gerald Artner, Erich Zöchmann, Stefan Pratschner, Martin Lerch, Markus Rupp, Christoph Mecklenbräuer: Angle-dependent reflectivity of twill-weave carbon fibre reinforced polymer for millimetre waves, *IET Electronics Letters*, to be published 2018. doi: 10.1049/el.2017.3010
- [J58] Shrief Rizkalla, Christoph F. Mecklenbräuer, Ralph Prestros: Metallic Inductive Coupling Frame-Based HF RFID Cards, *IET Microwaves, Antennas and Propagation*, 7 pages, Available online: Dec. 4, 2017, doi:10.1049/iet-map.2017.0573, Print ISSN 1751-8725, Online ISSN 1751-8733, to be published.
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- [J52] Christian Backfrieder, Gerald Ostermayer, Christoph F. Mecklenbräuer: Increased Traffic Flow through Node-Based Bottleneck Prediction and V2X Communication, to be published in *IEEE Transactions on Intelligent Transportation Systems*, Vol. 18, No. 2, 349–363, Feb. 2017. doi:10.1109/TITS.2016.2573292
- [J51] Christoph Mecklenbräuer, Peter Gerstoft, Erich Zöchmann: c-LASSO and its Dual for Sparse Signal Estimation from Array Data, *Elsevier Signal Processing*, Vol. 130, pp. 204–216, Jan. 2017. doi:10.1016/j.sigpro.2016.06.029
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- [J39] Jiri Blumenstein, Roman Maršálek, Zbynek Fedra, Aleš Prokeš, Christoph F. Mecklenbräuker: Channel estimation method for OFDM in low SNR based on two-dimensional spreading, *Wireless Personal Communications*, Vol. 78, No. 1, pp. 715–728, Sep. 2014. doi:10.1007/s11277-014-1779-y.

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## Submitted Journal Papers



## Book Chapters

- [B7] Aniruddha Chandra, Ales Prokes, Jiri Blumenstein, Pavel Kukolev, Joseph Vychodil, Tomas Mikusalek, Thomas Zemen, Christoph F. Mecklenbräuker: “Intra Vehicular Wireless Channel Measurements,” in: “European Project Space on Information and Communication Systems”, C. Angot, O. Camp (Hrg.); SCITEPRESS - Science and Technology Publications, Lda., Angers, France, 2015, ISBN: 978-989-758-155-7, S. 3 - 27.
- [B6] Laura Bernadó, Nicolai Czink, Thomas Zemen, Alexander Paier, Fredrik Tufvesson, Christoph F. Mecklenbräuker, Andreas F. Molisch, *Vehicular Channels*, Chapter 6 in *LTE-Advanced and Next Generation Wireless Networks: Channel Modelling and Propagation*, Guillaume de la Roche, Andrés Alayón, and Ben Allen (Eds.), John Wiley and Sons, Chichester, United Kingdom, pp. 153–185, Print ISBN: 978-1-119-97670-7, Web ISBN: 1-119976-70-7, eISBN: 978-1-118-41101-8, Pages in Print Edition: 566, Nov. 28, 2012. DOI: 10.1002/9781118410998.ch6
- [B5] Christoph Mecklenbräuker (Chapter Editor), Laura Bernadó, Oliver Klemp, Andreas Kwoczek, Alexander Paier, Moritz Schack, Katrin Sjöberg, Erik G. Ström, Fredrik Tufvesson, Elisabeth Uhlemann, and Thomas Zemen: *Vehicle-to-Vehicle communications*, Chapter 14 in *Pervasive Mobile and Ambient Wireless Communications, COST Action 2100*, Roberto Verdone, Alberto Zanella (Eds.), pp. 577–608, Springer Verlag London Limited, ISBN: 978-1-4471-2314-9, to be published 2012.
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- [B2] Ian Oppermann, Matti Hämäläinen, Jari Iinatti, Alberto Rabbachin, Ben Allen, Seyed A. Ghorashi, Mohammad Ghavami, Olaf Albert and Christoph F. Mecklenbräuker: *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.

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## Doctoral Thesis

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

## Peer-Reviewed Conference Contributions

- [C194] Peter Gerstoft, Santosh Nannuru, Christoph F. Mecklenbräuer, Geert Leus: DOA Estimation in Heteroscedastic Noise with sparse Bayesian Learning, in Proc. IEEE ICASSP 2018, Calgary, Canada, Apr. 9-13, 2018.
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- [C189] Thomas Blazek and Christoph F. Mecklenbräuker: Sparse Time-Variant Impulse Response Estimation for Vehicular Channels Using the c-LASSO, in Proc. IEEE PIMRC 2017, Oct. 2017.
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- [C186] Thomas Blazek, Christoph F. Mecklenbräuker, Golsa Ghiaasi-Hafezi, Dieter Smely, Mehdi Ashury: Vehicular Channel Models: A System Level Performance Analysis of Tapped Delay Line Models, in Proc. 2017 15th International Conference on ITS Telecommunications (ITST) (ITST 2017), Warsaw, Poland; May 29–31, 2017; ISBN: 978-1-5090-5274-5; 8 pages.
- [C185] Taulant Berisha, Philipp Svoboda, Stephan Ojak, Christoph F. Mecklenbräuker: "SegHyPer: Segmentation- and Hypothesis based Network Performance Evaluation for High Speed Train Users"; Poster: IEEE International Conference on Communications (ICC 2017), Paris, France; 21.05.2017 - 25.05.2017; in: "IEEE International Conference on Communications", IEEE Xplore, Paris, France (2017), ISBN: 978-1-4673-8999-0; S. 1 - 6.
- [C184] Erich Zöchmann, Robert Langwieser, Sebastian Caban, Martin Lerch, Stefan Pratschner, Roland Nissel, Christoph F. Mecklenbräuker, Markus Rupp: A Millimeter Wave Testbed for Repeatable High Velocity Measurements, in Proc. European Wireless 2017, pp. 358–362, Dresden, Germany, May 17–19, 2017. ISBN: 978-3-8007-4426-8;
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- [C2] Ali-Reza Baghai-Wadji, Heinz Reichinger, Herbert Zidek and Christoph F. Mecklenbräuer: “*Green’s Function Applications in SAW Devices*”, in Proc. IEEE Ultrasonics Symposium, Walt Disney World Village, Lake Buena Vista, Florida, USA, pp. 11–20, Dec. 8-11, 1991 (**invited**).
- [C1] Ali-Reza Baghai-Wadji and Christoph F. Mecklenbräuer: “*Propagation of Piezoelectric Waves in Singly and Doubly Periodic Metallic Gratings*”, in Proc. EFTF 91, 5th European Frequency and Time Forum, Besançon, France, pp. 66–72, Mar. 1991.

## Presentations and Invited Talks

- [T47] Ralf R. Müller, Christoph F. Mecklenbräuer, Ali Bereyhi: Oversampled Adaptive Sensing, Information Theory and Applications Workshop (ITA 2018), San Diego (CA), USA, Feb. 16, 2018.
- [T46] Shrief Rizkalla, Christoph F. Mecklenbräuer, Ralf R. Müller: Direction of Arrival Estimation using Dual LASSO with Reed-Solomon Error Evaluation Algorithms, Information Theory and Applications Workshop (ITA 2018), San Diego (CA), USA, Feb. 15, 2018.
- [T45] Peter Gerstoft, Christoph Mecklenbräuer, Aggeliki Xenaki, Santosh Nannuru: Multi Snapshot Sparse Bayesian Learning for DOA Estimation, Guest Lecture, FAU Erlangen–Nürnberg, Germany, June 12, 2017 (**invited**).

- [T44] Peter Gerstoft, Christoph Mecklenbräuer, Aggeliki Xenaki, Santosh Nannuru: Multisnapshot Sparse Bayesian Learning for DOA, Poster Presentation at IEEE ICASSP 2017 of IEEE Signal Processing Letters paper [J50], New Orleans (LA), USA, Mar. 7, 2017.
- [T43] Christoph Mecklenbräuer and Peter Gerstoft: Sparse Bayesian Learning for Wavefields from Sensor Array Data, in Proc. Information Theory and Applications Workshop (ITA 2016), San Diego (CA), USA, Feb. 2016 (invited).
- [T42] Christoph Mecklenbräuer and Peter Gerstoft: Sequential Bayesian Reconstruction of Sparse Source from Sensor Array Data in Proc. Information Theory and Applications Workshop (ITA 2014), San Diego (CA), USA, Feb. 2014 (invited).
- [T41] Peter Gerstoft and Christoph F. Mecklenbräuer: Bayesian sequential sparse sampling, 21st International Congress on Acoustics (ICA 2013), Montreal, Canada, June 2–7, 2013.
- [T40] Martin Böck, Andreas Kugi, Christoph F. Mecklenbräuer: Maximierung der Dienstgüte in Drahtlosnetzen mittels Methoden der dynamischen Optimierung, Workshop GMA-Fachausschuss 1.40 “Theoretische Verfahren der Regelungstechnik”, Salzburg, Austria, Sep. 18–21, 2011.
- [T39] Christoph F. Mecklenbräuer, Compressive Sensing and Bayesian Sparse Wideband Source Reconstruction of Japanese 2011 Earthquake, Scripps Institute of Oceanography, University of California San Diego (UCSD), Aug. 19, 2011.
- [T38] Christoph F. Mecklenbräuer, Bujar Krasniqi: Power Efficiency of Partial Frequency Reuse for Cellular Networks, University of Southern California (USC), Los Angeles, Aug. 17, 2011.
- [T37] Christoph F. Mecklenbräuer, Florian Xavier, Gerald Matz, Peter Gerstoft: Distributed Wave-Field Parameter Estimation Using a Particle Filter, ETH Zurich, Jun. 17, 2011.
- [T36] Christoph F. Mecklenbräuer, Florian Xavier, Gerald Matz, Peter Gerstoft: Distributed Wave-Field Parameter Estimation Using a Particle Filter, TU Darmstadt, Jun. 8, 2011.
- [T35] Christoph F. Mecklenbräuer: Proofs for the Maximum Entropy Property of the Normal Distribution, in Proc. Joint Workshop on Coding and Communications (JWCC 2010), Santo Stefano Belbo, Oct. 18–19, 2010.

- [T34] Christoph F. Mecklenbräuker, Arrate Alonso, Alexander Paier, Thomas Zemen, Nicolai Czink, Fredrik Tufvesson: MIMO Capacity Evaluation of Measured Ricean Vehicle-to-Vehicle Radio Channels at 5.2 GHz, ETH Zurich, Jun. 11, 2010.
- [T33] Christoph F. Mecklenbräuker, Arrate Alonso, Alexander Paier, Thomas Zemen, Nicolai Czink, Fredrik Tufvesson: MIMO Capacity Evaluation of Measured Ricean Vehicle-to-Vehicle Radio Channels at 5.2 GHz, Chalmers University of Technology, Göteborg, Sweden, Apr. 28, 2010.
- [T32] Christoph F. Mecklenbräuker, Alexander Paier, Pavle Belanovic, Samaneh Shooshtary, Nuria Martí Boix, Mahdi Abbasi, Manuel Zaera, Thomas Zemen: Wireless Access for Vehicular Environments (IEEE 802.11p), ftw. member tutorial *Traffic Telematics*, Vienna, Nov. 5, 2008.
- [T31] 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).
- [T30] 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.
- [T29] 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.
- [T28] Christoph Mecklenbräuker, Maxime Guillaud, Roland Tresch and Marius Pesavento: “*MU-MIMO schemes in current standards for 3GPP Long Term Evolution, Wireless LAN, and WiMax*,” presented at Multi-user MIMO Industry Course, Nokia Research Center, Helsinki, Finland, Nov. 16, 2007.
- [T27] Christoph Mecklenbräuker, Giulio Coluccia, Giorgio Taricco, Christian Mehlführer and Sebastian Caban : “*MU-MIMO scheme performance evaluations using measured channels in specific environments*,” presented at Multi-user MIMO Industry Course, Nokia Research Center, Helsinki, Finland, Nov. 16, 2007.

- [T26] Christoph Mecklenbräuer, Pei-Jung Chung, Dirk Maiwald, Nicolai Czink, Bernard H. Fleury: Determining the Number of Propagation Paths from Broadband MIMO Measurements via the False Discovery Rate Criterion, presented at Chalmers University, Göteborg, Sweden, Oct. 25, 2007.
- [T25] Christoph Mecklenbräuer, Alexander Paier, Johan Karedal, Nicolai Czink, Helmut Hofstetter, Charlotte Dumard, Thomas Zemen, Fredrik Tufvesson, Andreas F. Molisch: “*Challenges in vehicular communications for impactive systems — Dynamics, Doppler, and Delay*,” presented at Joint Workshop on Coding and Communications (JWCC 2007), Dürnstein, Austria, Oct. 16, 2007.
- [T24] Christoph Mecklenbräuer: “*Das Handy frisst den iPod u.v.m.*,” presented at TU Wien, Austria, Jun. 14, 2007.
- [T23] Christoph Mecklenbräuer and Olaf Albert: “*An Impulse Radio Demonstrator for 4-PPM*,” presented at Universität Bremen, Bremen, Germany, May 30, 2007.
- [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.
- [T21] Christoph Mecklenbräuer: “*An Impulse Radio Ultra Wideband Multiuser Transmission Scheme for Wireless Personal Area Networks Applications*,” UWB Workshop 2005, hosted by Linz Center of Competence for Mechatronics (LCM), Linz, Austria, Mar. 2, 2005.
- [T20] Olaf Albert and Christoph Mecklenbräuer: “*Practical Aspects of the UWB Testbed Implementation*,” UWB Workshop 2004, hosted by Siemens PSE PRO RCD, Vienna, Austria, Oct. 20, 2004.
- [T19] Christoph Mecklenbräuer and Olaf Albert: “*Early-Late Synchroniser: Simulation Results and Comparison with the Testbed*,” UWB Workshop 2004, hosted Siemens PSE PRO RCD, Vienna, Austria, Oct. 20, 2004.
- [T18] Olaf Albert and Christoph F. Mecklenbräuer: “*UWB Channel Measurements in Linz*,” Centro Technologia Telecommunication Catalunya (CTTC), Barcelona, Spain, Jul. 27, 2004.
- [T17] Olaf Albert and Christoph F. Mecklenbräuer: “*Testbed for Low-Power Short-Range UWB Transmission*,” Centro Technologia Telecommunication Catalunya (CTTC), Barcelona, Spain, Jul. 27, 2004.

- [T16] Christoph F. Mecklenbräuker and Steffen Paul: “*SNR Estimation from BPSK and QPSK Signals*”, Arbeitsgemeinschaft Kommunikation im Kleinwalsertal (KiK 2004), Riezlern, Austria, Jul. 12, 2004.
- [T15] Christoph F. Mecklenbräuker: “*Throughput simulation for UMTS radio access networks with smart antennas*”, Universität Rostock, Rostock, Germany, Feb. 17, 2004.
- [T14] Christoph F. Mecklenbräuker: “*Throughput simulation for UMTS radio access networks with smart antennas*”, Technische Universität Darmstadt, Darmstadt, Germany, Dec. 18, 2003.
- [T13] Marius Pesavento, Christoph F. Mecklenbräuker and Johann F. Böhme: “*Multi-dimensional Rank Reduction Estimator for Parametric MIMO Channel Models*”, Eidgenössische Technische Hochschule, Zurich, Switzerland, Jun. 26, 2003.
- [T12] Christoph F. Mecklenbräuker: “*Low-Power Testbed for Short-Range Data Transmission via Ultra-Wideband Radio Pulses*”, Johannes Kepler Universität Linz, Linz, Apr. 14, 2002.
- [T11] Christoph F. Mecklenbräuker: “*Ultra Wideband Radio*”, ftw. member tutorial *Wireless Communications*, Vienna, Dec. 5, 2002.
- [T10] Christoph F. Mecklenbräuker and Markus Rupp: “*Über Erweiterungen des Alamouti-Schemas für die Space-Time Codierung*”, Seminar *Netzwerktheorie und Signalverarbeitung*, Technische Universität München, Munich, Germany, Jun. 5, 2002.
- [T9] Christoph F. Mecklenbräuker and Ralf R. Müller: “*The Wireless Multiple-Input, Multiple-Output Channel: Measurements, Double-Directional Parameters, and Capacity*”, Int. Symp. Advanced Radio Technologies (ISART’02), ITS/NIST, Boulder (CO), USA, Mar. 4–6, 2002.
- [T8] Christoph F. Mecklenbräuker: “*Channel Estimation for Antenna Arrays*”, ftw. member tutorial *Wireless Communications*, Vienna, Jan. 30, 2002.
- [T7] Christoph F. Mecklenbräuker: “*Smart Antennas*”, Future Telecommunications Workshop, Wiener Telekom-Tag’01, Vienna, Nov. 15, 2001.
- [T6] Alex B. Gershman, Christoph F. Mecklenbräuker and Johann F. Böhme: “*Direction Finding with Imperfect Wavefront Coherence: A Matrix Fitting Approach Using Genetic Algorithm*”, Arbeitsgemeinschaft Kommunikation im Klein-Walsertal (KiK’2001), Riezlern, Austria, Jul. 31, 2001.

- [T5] Martin Haardt, Christoph F. Mecklenbräuker and Marius Vollmer: “*Efficient Joint Space-Time Processing for UTRA TDD*”, Diskussionsitzung “Systeme mit intelligenten Antennen” im Rahmen des ITG-Fokusprojekts “Mobilkommunikation”, Ilmenau, Mar. 2001.
- [T4] Alex B. Gershman, Christoph F. Mecklenbräuker and Johann F. Böhme: “*Matrix Fitting Approach to Direction of Arrival Estimation with Imperfect Spatial Coherence of Wavefronts*”, INTAS Colloquium, Bochum, May 1996.
- [T3] Christoph F. Mecklenbräuker, Alex B. Gershman and Johann F. Böhme: “*Estimation and Testing of Environmental Parameters in Shallow Ocean using Likelihood Functions*”, INTAS Colloquium, Bochum, May 1996.
- [T2] Christoph F. Mecklenbräuker: “*Modenfilterung mit einer Linearantenne im Flachwasser, Verarbeitung von Sonardaten*”, ITG Fachausschuß 5.4: “Algorithmen für die Signalverarbeitung”, Ilmenau, Germany, Mar. 1993.
- [T1] Ali-Reza Baghai-Wadji and Christoph F. Mecklenbräuker: “*Greenfunktion und Elementfaktor bei periodischen piezoelektrischen Problemen*”, Zweites Piezoelektrisches Kolloquium der Österreichischen Physikalischen Gesellschaft, Nagycenk, Hungary, Nov. 7-9, 1991.

## Patent Applications

- [P8] Thomas Gruhn, Christoph F. Mecklenbräuker, Fariba Raji and Frank Wegner: “*Verfahren und Kommunikationssystem zum Übertragen von kodierten Datenpaketen*”, Deutsches Patent- und Markenamt, Offenlegungsschrift DE 100 22 270 A1, Applicant: Siemens AG, D-80333 Munich, Anmeldetag: May 8, 2000. Equivalents: WO 01/86857 A1, “*Transmission of Encoded Data Packets with Determination of the Coding Through Explicit Signalling by the Receiver*”.
- [P7] Christoph F. Mecklenbräuker and Martin Haardt: “*Verfahren und Kommunikationssystem zur Schätzung einer Störungs-Kovarianzmatrix für die Abwärtsverbindung in zellularen Mobilfunknetzen mit adaptiven Antennen*”, Deutsches Patent- und Markenamt, Offenlegungsschrift DE 100 25 287 A1, Applicant: Siemens AG, D-80333 Munich, Anmeldetag: May 22, 2000. Equivalents: WO 01/91324 A1, AU 6893901, “*Method and Communications System for Estimating an Error Covariance Matrix for the Downlink in Cellular Mobile Radio Telephone Networks with Adaptive Antennae*”.

- [P6] Thomas Gruhn, Christoph F. Mecklenbräuer, Fariba Raji, Frank Wegner: “*Verfahren zum Übertragen von Paketdateninformationen in einem Funk-Kommunikationssystem*”, Deutsches Patent- und Markenamt, Offenlegungsschrift DE 100 07 602 A1, Anmeldetag: Feb. 18, 2000. Equivalents: WO 01/62021 A2, EP 1256242, US 2003/0053440 A1, “*Method for transmitting packet data information in a radio communication system*”.
- [P5] Martin Haardt, Christina Geßner, Gerald Ostermayer, Thomas Stadler, Peter Slanina, Christoph F. Mecklenbräuer, Toplica Pacic, Christian Hölzl: “*Verfahren zur Ressourcenzuteilung in einem Funk-Kommunikationssystem unter Verwendung adaptiver Antennen*”, Deutsches Patent- und Markenamt, Offenlegungsschrift DE 199 58 891 B4, Applicant: Siemens AG, D-80333 Munich, Anmeldetag: Dec. 7, 1999, Publication date: Jun. 21, 2001, Publication date of the patent grant: Apr. 22, 2010.
- [P4] Jean-Michel Traynard, Thomas Gruhn, Frank Wegner, Jürgen Schindler, Armin Sitte, Fariba Raji, Christoph F. Mecklenbräuer and Peter Slanina, “*Verfahren zur Signalübertragung in einem Kanal zum willkürlichen Zugriff eines Funk-Kommunikationssystems*”, Deutsches Patent- und Markenamt, Offenlegungsschrift DE 199 36 318 A1, Applicant: Siemens AG, D-80333 Munich, Anmeldetag: Aug. 2, 1999, Publication date: Mar. 15, 2001.
- [P3] Christoph F. Mecklenbräuer and Jean-Michel Traynard, “*Übertragungsverfahren mit variabler Datenrate in einem RACH-Kanal eines Funk-Kommunikationssystems*”, Deutsches Patent- und Markenamt, Offenlegungsschrift DE 199 11 712 A1, Applicant: Siemens AG, D-80333 Munich, Anmeldetag: Mar. 16, 1999, Publication date: Oct. 5, 2000, Equivalents: EP 1159793, WO 00/55990, “*Transmission method with variable data rate in a random access channel of a radio communication system*”.
- [P2] Christoph F. Mecklenbräuer and Peter Slanina, “*Stochastische Sendeleistungseinstellung in einem Kanal zum willkürlichen Zugriff eines Funk-Kommunikationssystems*”, Deutsches Patent- und Markenamt, Patentschrift DE 199 18 371 C1, Patentinhaber: Siemens AG, D-80333 Munich, Anmeldetag: Apr. 22, 1999, Veröffentlichungstag der Patenterteilung: Nov. 2, 2000, Equivalents: EP 1169788, WO 00/65745, “*Stochastic regulation of transmitter power in a random access channel of a radio communication system*”.
- [P1] Erik Newton, David Randall, Christoph F. Mecklenbräuer, Martin Öttl, Christian Menzel, Michael Benz, Anja Klein, Armin Sitte, Thomas Ulrich, Reinhard Köhn, Jörn Krause, Jean-Michel Traynard and Enric



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[TD03020] Marius Pesavento, Christoph F. Mecklenbräuker, and Johann F. Böhme: “*Tree-structured multi-dimensional RARE for MIMO channel estimation*,” COST-273 Temporary Document TD(03)-020, Barcelona, Spain, Jan. 15–17, 2003.

[TD02135] Helmut Hofstetter, Christoph F. Mecklenbräuker, Hermann Anegg, Ernst Bonek, Ralf R. Müller, and Harald Kunczler: “*The FTW wireless MIMO measurement campaign at 2GHz: documentation of the downloadable data sets*,” COST-273 Temporary Document TD(02)-135, Lisboa, Portugal, Sep. 19–20, 2002.

## Contributions to COST action 2100

[TD12037] Philipp K. Gentner, Geoff Hilton, Mark A. Beach, Christoph F. Mecklenbräuker: Characterisation of an UWB Antenna Array with Spacings Following a Geometric Progression, COST 2100 TD(10)12037, presented at 12th Management Committee Meeting, Bologna, Italy, November 23-25, 2010.

[TD12026] Erik Ström, Elisabeth Uhlemann, Christoph F. Mecklenbräuker: Performance Metrics for mobile-to-mobile communications, COST 2100 TD(10)12026, presented at 12th Management Committee Meeting, Bologna, Italy, November 23-25, 2010.

[TD11045] Philipp K. Gentner, Geoff Hilton, Mark A. Beach, C. F. Mecklenbräuker: Analysis of ultra-wideband linear antenna arrays, COST 2100 TD(10)11045, presented at 11th Management Committee Meeting, Aalborg, Denmark, June 2-4, 2010.

[TD11022] Bujar Krasniqi, Martin Wolkerstorfer, Christian Mehlführer, Christoph F. Mecklenbräuker: Weighted Sum-Rate Maximization for Two Users in Partial Frequency Reuse Cellular Networks, COST 2100

TD(10)11022, presented at 11th Management Committee Meeting, Aalborg, Denmark, June 2-4, 2010.

[TD10034] Philipp K. Gentner, Wolfgang Gartner, Geoff Hilton, Mark A. Beach, Christoph F. Mecklenbräuer: Towards an Hardware Implementation of Ultra-Wideband Beamforming, COST 2100 TD(10)034, presented at 10th Management Committee Meeting, Athens, Greece, February 3-5, 2010.

[TD10015] Laura Bernadó, Thomas Zemen, Johan Karedal, Alexander Paier, Andreas Thiel, Oliver Klemp, Nicolai Czink, Fredrik Tufvesson, Andreas F. Molisch, Christoph F. Mecklenbräuer: Multi-Dimensional K-Factor Analysis for V2V Radio Channels in Open Sub-urban Street Crossings, COST 2100 TD(10)015, presented at 10th Management Committee Meeting, Athens, Greece, February 3-5, 2010.

[TD09973] Carolina Reyes, Thibault Hilaire, C.F. Mecklenbräuer: Distributed Projection Approximation Subspace Tracking Based on Consensus Propagation, COST 2100 TD(09)973, presented at 9th Management Committee Meeting, Vienna, Austria, September 28-30, 2009.

[TD 09947] Philipp K. Gentner, Christoph F. Mecklenbräuer: For a beamforming UWB Antenna, COST 2100 TD(09)947, presented at 9th Management Committee Meeting, Vienna, Austria, September 28-30, 2009.

[TD09936] Gregor Lasser, C.F. Mecklenbräuer: Channel Model for Tyre Pressure Monitoring Systems (TPMS), COST 2100 TD(09)936, presented at 9th Management Committee Meeting, Vienna, Austria, September 28-30, 2009.

[TD09928] Alexander Paier, Laura Bernadó, Johan Karedal, Oliver Klemp, Andreas Kwoczek, Fredrik Tufvesson, Lund Andreas Thiel, Yi Zhou, Nicolai Czink, Thomas Zemen, Andreas Molisch, Christoph F. Mecklenbräuer: Overview of Vehicle-to-Vehicle Radio Channel Measurements for Collision Avoidance Applications, COST 2100 TD(09)928, presented at 9th Management Committee Meeting, Vienna, Austria, September 28-30, 2009.

[TD09865] Ayse Adalan, Holger Arthaber, Christoph F. Mecklenbräuer: On the Potential of IEEE 802.15.4a for Use in Car Safety and Healthcare Applications, COST 2100 TD(09)865, presented at 8th Management Committee Meeting, Valencia, Spain, May 18-19, 2009.

[TD09801] Bujar Krasniqi, Martin Wrulich, Christoph Mecklenbräuer: Network-Load Dependent Partial Frequency Reuse for LTE, COST 2100 TD(09)801, presented at 8th Management Committee Meeting, Valencia, Spain, May 18-19, 2009.

- [TD09751] Alexander Paier, Thomas Zemen, Johan Karedal, Nicolai Czink, Charlotte Dumard, Fredrik Tufvesson, Christoph F. Mecklenbräuker, Andreas F. Molisch: Spatial Diversity and Spatial Correlation Evaluation of Measured Vehicle-to-Vehicle Radio Channels at 5.2 GHz, COST 2100 TD(09)751, presented at 7th Management Committee Meeting, Braunschweig, Germany, Feb. 16–18, 2009.
- [TD08636] Alexander Paier, Johan Karedal, Thomas Zemen, Nicolai Czink, Charlotte Dumard, Fredrik Tufvesson, Christoph F. Mecklenbräuker, Andreas F. Molisch: “Description of Vehicle-to-Vehicle and Vehicle-to-Infrastructure Radio Channel Measurements at 5.2 GHz,” COST 2100 TD(08)636, presented at 6th Management Committee Meeting, Lille, France, Oct. 6–8, 2008.
- [TD08631] 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,” COST 2100 TD(08)631, presented at 6th Management Committee Meeting, Lille, France, Oct. 6–8, 2008.
- [TD08613] Ayse Adalan, Michael Fischer, Arpad L. Scholtz, Christoph F. Mecklenbräuker: “A Design Method for Ultra-Wideband Radio Pulse Shaping Filter Ensuring IEEE 802.15.4a Compliance,” COST 2100 TD(08)613, presented at 6th Management Committee Meeting, Lille, France, Oct. 6–8, 2008.
- [TD08473] Johan Karedal, Fredrik Tufvesson, Nicolai Czink, Alexander Paier, Thomas Zemen, Charlotte Dumard, Christoph F. Mecklenbräuker, Andreas F. Molisch: Geometry-Based Stochastic Channel Modeling of a Vehicle-to-Vehicle Radio Channel, COST 2100 TD(08)473, presented at 4th Management Committee Meeting, Wroclav, Poland, Feb. 6-8, 2008.
- [TD08436] Alexander Paier, Johan Karedal, Nicolai Czink, Charlotte Dumard, Thomas Zemen, Fredrik Tufvesson, Andreas F. Molisch, Christoph F. Mecklenbräuker: Comparison of Lund’07 vehicular channel measurements with the IEEE 802.11p channel model, COST 2100 TD(08)436, presented at 4th Management Committee Meeting, Wroclav, Poland, Feb. 6-8, 2008.
- [TD07303] Alexander Paier, Johan Karedal, Nicolai Czink, Helmut Hofstetter, Charlotte Dumard, Thomas Zemen, Fredrik Tufvesson, Christoph F. Mecklenbräuker, Andreas F. Molisch: “*First Results from Car-to-car and Car-to-infrastructure Radio Channel Measurements at 5.2 GHz*,” COST-2100 TD(07)303, presented at 3rd Management Committee Meeting, Duisburg, Germany, Sep. 10–12, 2007.

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- [1] Veronika Shivaldova, Christoph F. Mecklenbräuker: “Modeling of Signal-to-Noise Ratio and Error Patterns in Vehicle-to-Infrastructure Communications,” Vortrag: COST IC1004 9th MC and Scientific Meeting, Ferrara, Italy; 05.02.2014 - 07.02.2014; in: COST IC1004 9th MC and Scientific Meeting, (2014), 5 S.
- [2] Gregor Lasser, Christoph F. Mecklenbräuker: “Distortions of Measured Antenna Patterns caused by Dielectric Support Structures”; Vortrag: COST IC1004 9th MC and Scientific Meeting, Ferrara. Italy; 05.02.2014 - 07.02.2014; in: COST IC1004 9th MC and Scientific Meeting, (2014), Paper-Nr. TD(14)09048, 6 S.
- [3] Gregor Lasser, David Löschenbrand, Christoph F. Mecklenbräuker: ”Update on Distorted Measured Antenna Patterns”; Vortrag: COST IC1004 10th MC and Scientific Meeting, Aalborg, Denmark; 26.05.2014 - 28.05.2014; in: COST IC1004 10th MC and Scientific Meeting, (2014), Paper-Nr. TD(14)10033, 8 S.
- [4] Veronika Shivaldova, Andreas Winkelbauer, Christoph F. Mecklenbräuker: ”Vehicular Link Performance: From Real-World Experiments to Reliability Models and Performance Analysis”; Vortrag: IC1004 8th MC and Scientific Meeting, Ghent, Belgium (eingeladen); 26.09.2013 - 27.09.2013; in: COST IC1004 8th MC and Scientific Meeting, (2013), 9 S.

## ftw. Project Reports

- [MAGNET D322a] Partners of Workpackage 3: “Candidate Air Interfaces and Enhancements”, MAGNET Deliverable D.3.2.2.a, Oct. 31, 2004.
- [I0D1] Olaf Albert and Christoph F. Mecklenbräuker: “*Ultra-Wideband Radio*,” ftw. Project I0 *Signal and Information Processing*, Deliverable 1.1 *1st annual progress report in WP1*, Jul.2004.
- [C3D15] Christoph F. Mecklenbräuker and Steffen Paul: “*HSDPA with MIMO enhancements*,” ftw. Project C3 *Smart Antennas for UMTS Frequency Division Duplex*, Deliverable 15, Sep.2004.
- [C3D11] Marius Pesavento, Thomas Zemen, and Christoph F. Mecklenbräuker: “*Measurement evaluation: MIMO channel parameter estimation and signal space dynamics*,” ftw. Project C3 *Smart Antennas for UMTS Frequency Division Duplex*, Deliverable 11, Sep.2003.

- [C3D9] Joachim Wehinger and Christoph F. Mecklenbräuker: “*Simulation Environment*,” ftw. Project C3 *Smart Antennas for UMTS Frequency Division Duplex*, Deliverable 9, Sep.2004.
- [C3D5] Markus Rupp and Christoph F. Mecklenbräuker: “*Antenna Array Algorithms for HSDPA*,” ftw. Project C3 *Smart Antennas for UMTS Frequency Division Duplex*, Deliverable 5, Sep.2004.
- [C3D1] Joachim Wehinger and Christoph F. Mecklenbräuker: “*Space-Time Rake receiver: algorithms, performance*,” ftw. Project C3 *Smart Antennas for UMTS Frequency Division Duplex*, Deliverable 1, Sep.2004.
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