

1 Monographs

1.1 Ph.D. Dissertations

1. G. H. Bruck: Datenreduzierende Farbbildcodierung unter besonderer Berücksichtigung der Beeinflussung von Luminanz und Chrominanz durch die Gradationsvorverzerrung. Dissertation, Universität Duisburg, 1989.
2. P. Jung: Entwurf und Realisierung von Viterbi-Detektoren für Mobilfunkkanäle. Fortschrittberichte VDI, series 10, no. 238. Düsseldorf: VDI-Verlag, 1993.
3. A. Seebens: Untersuchungen zur Eignung der „Fraktalen Codierung“ für die Codierung von Audiosignalen. Berichte aus der Kommunikationstechnik. Aachen: Shaker-Verlag, 2002
4. A. Schacht: System performance gains from smart antenna concepts in CDMA. Selected Topics in Communications Technologies, Edited by Prof. Dr.-Ing. habil. Peter Jung, Aachen: Shaker-Verlag, 2005.
5. T. E. Faber: Turbo-Empfänger für digitale Mobilfunksysteme, gezeigt am Beispiel eines „Software Defined Radio“-Demonstrators. Selected Topics in Communications Technologies, Edited by Prof. Dr.-Ing. habil. Peter Jung, Aachen: Shaker-Verlag, 2005.
6. Z. Zhang: Analysis, design and optimization of RF CMOS polyphase filters. Selected Topics in Communications Technologies, Edited by Prof. Dr.-Ing. habil. Peter Jung, Aachen: Shaker-Verlag, 2005.
7. T. Scholand: Entwurf und Realisierung von multistandardfähigen Nulldurchgangsempfängerstrukturen für die drahtlose Kommunikationstechnik. Selected Topics in Communications Technologies, Edited by Prof. Dr.-Ing. habil. Peter Jung, Aachen: Shaker-Verlag, 2007.
8. A. Hessamian-Alinejad: Strategien zur Strahlformung bei Zeitduplex-Mobilfunksystemen. Selected Topics in Communications Technologies, Edited by Prof. Dr.-Ing. habil. Peter Jung, Aachen: Shaker-Verlag, 2007.
9. A. Eltaher: Electro-Optical Ranging for Short Range Applications – Design and Realization Aspects. Selected Topics in Communications Technologies, Edited by Prof. Dr.-Ing. habil. Peter Jung, Aachen: Shaker-Verlag, 2009.
10. A. Burnic: Entwurf von Kommunikationsendgeräten mit empfängerseitiger irregulärer Signaldarstellung für Funkssysteme mit asymmetrischer Lastenverteilung, Edited by Prof. Dr.-Ing. habil. Peter Jung, Aachen: Shaker-Verlag, 2010.
11. R. Herold: Ein Beitrag zur Realisierung von Systemarchitekturen für Head-Mounted Displays auf Basis bidirektionaler OLED-Mikrodisplays, Edited by Prof. Dr.-Ing. habil. Peter Jung, Aachen: Shaker-Verlag, 2011.
12. C. Spiegel: Implementierungsaspekte von Nulldurchgangsempfängern für Kurzreichweiten-Funksysteme. Dissertation, Verlag Dr. Hut, München 2012
13. X. Dong: Location-aware and Cooperative Communication in an OFDM based Ultra-wideband Radio System. Dissertation, Aachen, Shaker Verlag 2012.

List of Publications

13 February 2017



14. A. Vießmann: Implementierungsstrategien für rekonfigurierbare kognitive Funkempfänger. Dissertation, Verlag Dr. Hut, München, 2013.
15. C. Kocks: Konzeption, Implementierung und Analyse eines rekonfigurierbaren Funkempfängers. Dissertation, Verlag Dr. Hut, München, 2013.
16. S. Wang: Wireless Positioning Applications in Multipath Envrionments, Dissertation, 2014.
17. Z. Bai: Interference-Aware Receiver Design for Closed-Loop MU-MIMO Transmission in Mobile Communication Systems. Dissertation, 2015.
18. S. Rickers: Entwurf eines sondenlosen Herzschrittmachersystems mit drahtloser, induktiver Energieübertragung. Dissertation, Verlag Dr. Hut, München, 2016.
19. R. Almaharmah: Multi-Aware Cluster Head Maintenance for Mobile Ad Hoc Networks with Wireless Power Transfer Capabilities. Dissertation, Verlag Dr. Hut, München, 2016.
20. M. A. A. Al-Olofi: Transmission of Ultra-Wideband Radio system over Optical Wireless Links using Intensity Modulation Direct Detection. Dissertation, Verlag Dr. Hut, München, 2016.
21. E. Scheiber: High-Level Synthesis for Software-Defined Radio. Dissertation, 2016.

1.2 D.Sc. Dissertation (Habilitationsschrift)

P. Jung: Digitale zellulare Mobilkommunikation, Grundlagen und Beispiele. Department of Electrical Engineering, Kaiserslautern University, 1996.

1.3 Textbook

P. Jung: Analyse und Entwurf digitaler Mobilfunksysteme. Stuttgart: B.G. Teubner Verlag, 1997.

1.4 Edited Book

Z. Zvonar, P. Jung, K. Kammerlander (Editors): GSM Communications Towards Third Generation Systems. New York: Kluwer Academic Publishers, November 1998.

2 Publications in 2016

1. Stochastic Geometry for Analysis of Coordination and Cooperation in Interference-Limited Ad Hoc. Communications in Interference Limited Networks, (Editor: Wolfgang Utschick), chapter 15, pp. 347-365. Co-authors: A. Skrebtsov, G. H. Bruck and P. Jung. 2016.
2. A. Saad, N. Mansour, A. Friedrich, Z. Youssef, D. Dahlhaus, M. Sharma, R. Al Halaseh, E. Majeed, K. D. Kohrt, G. H. Bruck, R. Knorr and P. Jung. "Cognitive Radio Prototype for Industrial Applications". Proceedings 22th European Wireless Conference 2016. EW 2016 (Oulu, Finland, May 18-20,2016).

3. S. Iwelski, E. Majeed, G. H. Bruck and P. Jung. “On the Performance of Advanced Receivers in Unsynchronized Small Cell LTE Networks“. Proceedings IEEE International Conference on Communications. IEEE ICC 2016 (Kuala Lumpur, Malaysia, May 23-27, 2016).

3 Publications in 2015

1. S. Iwelski, E. Majeed, Z. Bai, G. H. Bruck and P. Jung. “Cooperative Interference Mitigation in Heterogeneous LTE Networks“. Proceedings Wireless Communications and Networking. WCNC IEEE 2015 (New Orleans, USA, March 09 - 12, 2015).
2. P. Kohlschmidt, F. Scholz, P. Jung, G.H. Bruck. “Charging circuit for an energy store of a portable electrical device“. US Patent 8970168 B3, 2015-03-03.
3. W. Chen, S. Rickers, G. H. Bruck and P. Jung. „Localization System Using Resonant Magnetic Coupling Factor for Improving Efficiency in Wireless Power Transfer“. 9th European Conference on Antennas and Propagation. EuCAP 2015. (Lisbon, Portugal, April 12 - 17, 2015).
4. X. Liu, G. H. Bruck and P. Jung. “Low complexity multi-mode signal detection for dtmb system“. Proceedings 10th International Conference on Cognitive Radio Oriented Wireless Networks (Doha, Qatar, April 21 – 23, 2015).
5. L. Luo, G. H. Bruck and P. Jung. “Music onset detection using a bidirectional mismatch procedure based on smoothly varying-Q transform“. Proceedings 138th International Audio Engineering Society Convention. Audio AES (Warsaw, Poland, May 07 - 10, 2015).
6. S. Iwelski, E. Majeed, Z. Bai, G. H. Bruck and P. Jung. „ Reliable Feedback Generation in Unsynchronized Joint-Processing CoMP Transmission Networks“. Proceedings IEEE 26th Annual International Symposium on Personal, Indoor, and Mobile Radio Communications. PIMRC (Hong Kong, China, August 30 – September 2, 2015).
7. L. Khalil, P. Jung. “Spherical Simplex Unscented Kalman Filter for RSSI-Based WLAN IEEE 802.11 n Positioning and Tracking“. Proceedings IEEE 26th Annual International Symposium on Personal, Indoor, and Mobile Radio Communications. PIMRC (Hong Kong, China, August 30 – September 02, 2015).
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9. E. Majeed, S. Iwelski, Z. Bai, G. H. Bruck and P. Jung. “Advanced Receiver Design for Interfering Small Cell Deployments in LTE Networks“. Proceedings IEEE Conference on Standards for Communications and Networking. IEEE CSCN 2015 (Tokyo, Japan, October 28 - 30, 2015).
10. L. Luo, G. H. Bruck and P. Jung. "Music Onset Detection Using a Bidirectional Mismatch Procedure Based on Smoothly Varying-Q Transform“. Audio Engineering Society Convention 138. 2015.

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4 Publications in 2014

1. S. Iwelski, B. Badic, Z. Bai, R. Balraj, C. Kuo, E. Majeed, T. Scholand, G. Bruck and P. Jung, "Feedback Generation for CoMP Transmission in Unsynchronized Networks with Timing Offset". IEEE Communications Letters 18.5, pp. 725–728. 2014.
2. S. Rickers, I. R. Navarro, G. H. Bruck, and P. Jung. "Receiver Coil Parameter Optimization Process for the Efficiency of an Implantable Inductive Power Transfer System". Proceedings 2nd Middle East Conference on Biomedical Engineering 2014. MECBME 2014 (Doha, Qatar, February 17 – 20, 2014).
3. S. Iwelski, Z. Bai, E. Majeed, G. Bruck, P. Jung, B. Badic, R. Balraj, T. Scholand and C. Kuo, "On the Performance of CoMP Transmission in Unsynchronized Networks with Timing Offset". Proceedings IEEE Wireless Communications and Networking Conference. WCNC 2014 (Istanbul, Turkey, April 6 – 9, 2014).
4. S. Iwelski, Z. Bai, E. Majeed, G. Bruck, P. Jung, B. Badic, R. Balraj, T. Scholand and C. Kuo, "Robust FFT Window Replacement in non-ideal CoMP Networks with Timing Offset". Proceedings IEEE 79th Vehicular Technology Conference. VTC2014-Spring (Seoul, Korea, May 18 – 21, 2014).
5. W. Chen, S. Rickers, Z. Bai, G. H. Bruck, and P. Jung. "Design of Spatial Transmitter for Freely Positioned Wireless Power Transfer". Proceedings 16th Biennial IEEE Conference on Electromagnetic Field Computation. CEFC 201 (Annecy, France, May 25 – 28, 2014).
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8. S. Iwelski, Z. Bai, E. H. Majeed, G. H. Bruck, P. Jung, B. Badic, T. Scholand, R. Balraj, and C.-h. Kuo. "Reliable Implicit Feedback Generation in Unsynchronized CoMP Transmission". Proceedings IEEE 25th Annual International Symposium on Personal, Indoor and Mobile Radio Communications. PIMRC (Washington D.C., USA, September 2 – 5, 2014).

9. S. Iwelski, Z. Bai, E. H. Majeed, G. H. Bruck, and P. Jung. “Impact of Antenna Configuration on Feedback Generation for non-ideal CoMP Transmission”. Proceedings IEEE 80th Vehicular Technology Conference. VTC2014-Fall (Vancouver; Canada, September 14 – 17, 2014).
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5 Publications in 2013

1. M. Elikae, Z. Bai, C. Kocks, G. H. Bruck, and P. Jung. “Wireless Power Transfer H-Bridge Design with Serial Resonance and Varying Supply Voltage”. Proceedings 2013 IEEE International Symposium on Circuits and Systems. IEEE ISCAS 2013 (Beijing, China, May 19–23, 2013).
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6. Andrey Skrebtsov, Zijian Bai, Guido H. Bruck, Peter Jung “A Novel Network Simulator based on Stochastic Spatial Models” IEEE International Conference on

List of Publications

13 February 2017



- Signal Processing and Communication Systems ICSPCS 2013, Gold Coast, Australia
December 16-18, 2013
7. Rani Al-Maharmah, Guido Bruck, and Peter Jung. "Practical Methodology for Adding New MANET Routing Protocols to OPNET Modeler". The Fifth International Conference on Advances in System Simulation, Venice, Italy October 27 – November 1 2013
 8. Mohammed A.A. Al-Olofi; Andreas Waadt; Guido H. Bruck; Peter Jung. "Design of Optical Wireless IR-UWB Systems for Low Data Rate Applications". Proc. of the 9th Advanced International Conference on Telecommunications AICT 2013, Rome, Italy, June 23 – 28 2013.
 9. Andreas Waadt; Christian Kocks; Guido H. Bruck; Peter Jung; Bernd Sachsenhauser. "Achievable Data Rates of Broadband Power Line Communications in an Underground Medium-Voltage Network". Journal of Green Engineering, Vol. 3 page 245-259, April 2013
 10. Ernest Scheiber, Guido H. Bruck, and Peter Jung. "Implementation of an LDPC decoder for IEEE 802.11n using Vivado High-Level Synthesis" 2013 International Conference on Electronics, Signal Processing and Communication Systems (ESPCO 2013), Venice, Italy, September 28 – 30, 2013

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2. H. Wieneke, G. Bruck, J. Velleuer, S. Rickers, Z. Bai, C. Kocks, P. Grandjean, P. Jung, T. Lenihan, E. Kisker. Leadless Pacing Using Induction Technology - Impact of Pulse Shape and Geometric Factors on Pacing efficiency. Heart Rhythm 2012, Boston, Massachusetts, May 9-12, 2012.
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5. C. Kocks, S. Rickers, Z. Bai, G. Bruck, P. Jung: Implantable Stimulation Device for Defibrillation and Pacing, European Patent application EP11003672
6. B. Badic, R. Balraj, T. Scholand, Z. Bai, S. Iwelski: Analysis of CQI prediction for MU-MIMO in LTE Systems, IEEE Vehicular Technology Conference (VTC2012-Spring), Yokohama, Japan, May, 2012
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List of Publications

13 February 2017



8. Z. Bai, B. Badic, S. Iwelski, R. Balraj, T. Scholand, G. Bruck, P. Jung. Interference Estimation for Multi-Layer MU-MIMO Transmission in LTE-Advanced Systems, IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'12), Sydney, Australia, September 2012
9. Dong Xu, Z. Bai, G.H. Bruck, P. Jung: Location-aided Transmit Strategy in Bidirectional Relay over MISO Rician Channels. IEEE 2012 IEEE 75th Vehicular Technology Conference, Yokohama, Japan, May 2012.
10. Duan Zhao, W. Chen, R. Almaharmah, S. Kang, S. Lim, G.H. Bruck, P. Jung. Magnetic Field Forming of Spatial Multiple Antennas for Wireless Power Transfer. The 2012 International Symposium on Antennas and Propagation, Nagoya, Japan, October, 2012.
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14. C. Begall, M. Kowalzik, T. Trapp, A. Waadt, G. H. Bruck, and P. Jung. "Method and devices for routing messages". Pat. EP 1 952 653 B1. TynTec Ltd., Douglas. July 11, 2012.
15. Y.-O. Cho, Y.-K. Kim, J.-Y. Cho, J. H. Lee, P. Jung, T. Scholand, G. H. Bruck, and T. E. Faber. "Method and apparatus for transmitting/receiving a signal in an FFH-OFDM communication system". Pat. US 8,107,356 B2. Samsung Electronics Co., Ltd. Jan. 31, 2012.
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18. P. Jung, C. Kocks, Z. Bai, S. Rickers, and G. H. Bruck. "Implantable Stimulation Device for Defibrillation and Pacing". Pat. req. EP 2 520 332 A1. G. Magnetic Pacing Technologies GmbH 47057 Duisburg. Nov. 7, 2012.
19. P. Jung, S. Rickers, Z. Bai, C. Kocks, and G. H. Bruck. "Implantable Stimulation Device for Defibrillation and Pacing". Pat. req. WO 2012/150000 A2. G. Magnetic Pacing Technologies GmbH 47057 Duisburg. Nov. 8, 2012.
20. A. Vießmann, A. Waadt, C. Spiegel, and C. Kocks. "Digital receiver, digital transmitter, method for operating a digital receiver or a digital transmitter and computer program". Pat. req. AT 539491 (T). Universität Duisburg-Essen. Jan. 5, 2012.
21. Z. Bai, B. Badic, S. Iwelski, T. Scholand, R. Balraj, P. Jung, and G. Bruck. "Joint receiver with multi-layer interference cancellation in LTE-Advanced systems (filed)". Pat. req. US 13/627,504. Intel Mobile Communications GmbH. 2012.

List of Publications

13 February 2017



22. S. Iwelski, B. Badic, Z. Bai, T. Scholand, R. Balraj, P. Jung, and G. Bruck. "APPARATUS AND METHOD FOR DECODING A RECEIVED SIGNAL (filed)". Pat. req. US 13/468.133. Intel Mobile Communications GmbH. 2012.
23. S. Iwelski, B. Badic, Z. Bai, T. Scholand, R. Balraj, P. Jung, and G. Bruck. "APPARATUS AND METHOD FOR DETERMINING A PRECODING MATRIX (filed)". Pat. req. US 13/468.169. Intel Mobile Communications GmbH. 2012.

7 Publications in 2011

1. Z. Bai, B. Badic, S. Iwelski, T. Scholand, R. Balraj, G. H. Bruck und P. Jung. On the Receiver Performance in MU-MIMO Transmission in LTE. In: Proceedings of the 7th International Conference on Wireless and Mobile Communications. ICWMC 2011 (Luxembourg, 19 - 24 June 2011).
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3. M. Horvat, Z. Bai und P. Jung. Optimum and Suboptimum 2D channel Estimation for UTRA LTE and LTE-Advanced. In: Proceedings of the International Conference on Communications, Computing and Control Applications. CCCA'11 (Hammamet, Tunisia, 3 - 5 March 2011).
4. P. Jung, G. H. Bruck, A. Waadt, A. Vießmann und F. Berens. Method for Transmitting/Receiving Payload Data with a High Data Rate, Transmitter, Receiver and Adaption Layer. Patent application WO 2011/035796 A1. Universität Duisburg-Essen; FBConsulting S.à.r.l. 31 March 2011.
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6. P. Jung, D. Xu, A. Waadt und A. Vießmann. The EUWB Open Technology Platforms for Ultra Wide Band Communications. In: IEEE International Conference on Ultra Wideband 2011 (ICUWB).
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List of Publications

13 February 2017



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19. A. Burnic and P. Jung. "Device and method for determining a data symbol in an amplitude modulated reception signal". Pat. req. AT 521180 (T). Universität Duisburg-Essen. Sept. 15, 2011.
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List of Publications

13 February 2017



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13 February 2017



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List of Publications

13 February 2017



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13 February 2017



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9.1 Invited Papers

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2. FPGA based logic synthesis of squarers using VHDL. Invited contribution, Grünbacher, Hartenstein (Eds.): "Field-Programmable Gate Arrays: Architectures and Tools for Rapid Prototyping", Lecture Notes in Computer Science 705, Berlin: Springer (1993), pp. 112-123. Co-author: G. Kempa.
3. Konzept eines CDMA-Mobilfunksystems mit gemeinsamer Detektion für die dritte Mobilfunkgeneration. Invited contribution, Nachrichtentechnik, Elektronik, part 1: vol. 45 (1995), no. 1, pp. 12-16; part 2: vol. 45 (1995), no. 2, pp. 24-27. Co-author: B. Steiner.
4. Taking the challenge of multiple access for third generation mobile radio systems – a European view. Invited contribution, IEEE Communications Magazine, (February 1996), pp. 82-89. Co-authors: P.W. Baier, A. Klein.
5. Joint detection CDMA. Invited contribution in Ramjee Prasad: "CDMA for Wireless Personal Communications", Boston: Artech House (1996), section 11.5, pp. 348-353.
6. CDMA myths and realities revisited. Invited contribution, IEICE Transactions on Fundamentals, Special Issue on Spread Spectrum Techniques and Applications, vol. E79-A (1996), pp. 1930-1937. Co-author: P.W. Baier.
7. A generalized view on multicarrier CDMA mobile radio systems with joint detection. Invited contribution, Frequenz, part I: vol. 51 (1997), issue 7-8, pp. 174-185; part II: vol. 51 (1997), issue 11-12. Co-authors: F. Berens, J. Plechinger.
8. Time Division Multiple Access (TDMA). Invited contribution, Wiley Encyclopedia of Telecommunications (John G. Proakis, Ed.), December 2002.
9. Design of terminals and infrastructure components for cognitive wireless networks – A platform perspective. Invited contribution, in COGNITIVE WIRELESS NETWORKS: Concepts, Methodologies and Visions (Editors: Frank H.P. Fitzek and Marcos Katz), chapter 16, pp. 307-325. Co-authors: A. Vießmann, A. Burnic, C. Spiegel, A. Hessian-Alinejad, A. Waadt, G.H. Bruck.
10. Petri net based controller concept for cognitive radios in wireless access networks. Invited contribution, Journal of Communications (JCM), vol. 2 (2007), no. 2, pp. 29-38. Co-authors: A. Vießmann, R. Franke, G.H. Bruck.

List of Publications

13 February 2017



11. Positioning systems and technologies. Invited contribution, in Mobile Positioning and Tracking: From Conventional to Cooperative Techniques (Editors: Simone Frattasi and Joao Figueiras), chapter 7. Co-authors: A. Waadt, G.H. Bruck, P. Jung.
12. ZigBee as a key technology for green communications. Invited contribution, in Green Communications (Editor: Ramjee Prasad), to appear. Co-authors: C. Spiegel, W. Shim, S. Rickers, R. Lee, G.H. Bruck, J. Yu, P. Jung.

9.2 Regular Papers

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2. The birefringent cavity: Laser frequency stabilization with a novel tuning scheme. Optics Communications, vol. 87 (1992), pp. 61-68. Co-authors: I.C.M. Littler, K. Bergmann.
3. On the representation of CPM signals by linear superposition of impulses in the bandpass domain. IEEE Journal on Selected Areas in Communications, vol. 10 (1992), pp. 1236-1242. Co-author: P.W. Baier.
4. Novel analysis algorithm for binary CPM with $h = 1/2$ based on Laurent's representation. European Transactions on Telecommunications and Related Technologies (ETT), vol. 3 (1992), pp. 428-433.
5. Advantages of CDMA and spread spectrum techniques over FDMA and TDMA in cellular mobile radio applications. IEEE Transactions on Vehicular Technology, vol. 42 (1993), pp. 357-364. Co-authors: P.W. Baier, A. Steil.
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9. Optimum and suboptimum channel estimation for the uplink of CDMA mobile radio systems with joint detection. European Transactions on Telecommunications and Related Technologies (ETT), vol. 5 (1994), pp. 39-50. Co-author: B. Steiner.
10. Maximum-likelihood detector for coherent receiver antenna diversity. Frequenz, vol. 48 (1994), pp. 94-99. Co-authors: B. Steiner, Y. Ma.
11. Laurent's representation of binary digital continuous phase modulated signals with modulation index $1/2$ revisited. IEEE Transactions on Communications, vol. 42 (1994), pp. 221-224.
12. Simulation of the uplink of JD-CDMA mobile radio systems with coherent receiver antenna diversity. Wireless Personal Communications – An International Journal (Kluwer), vol. 1 (1994), pp. 61-89. Co-authors: J.J. Blanz, M.M. Naßhan, P.W. Baier.

List of Publications

13 February 2017



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14. Novel low complexity decoder for turbo–codes. *Electronics Letters*, vol. 31 (1995), pp. 86-87.
15. Joint detection with coherent receiver antenna diversity in CDMA mobile radio systems. *IEEE Transactions on Vehicular Technology*, vol. 42 (1995), pp. 76-88. Co-author: J.J. Blanz.
16. Comparison of turbo–code decoders applied to short frame transmission systems. *IEEE Journal on Selected Areas in Communications*, vol. 14 (1996), pp. 530-537.
17. A unified approach to multiuser detectors for CDMA and their geometrical interpretations. *IEEE Journal on Selected Areas in Communications*, vol. 14 (1996), pp. 1595-1601. Co-author: P.D. Alexander.
18. Uplink performance of multicarrier joint detection code division multiple access. *Electronics Letters*, vol. 33 (1997), pp. 274-275. Co-author: F. Berens.
19. Uplink spectral efficiency of multicarrier joint detection code division multiple access based cellular radio systems. *Electronics Letters*, vol. 33 (1997), pp. 664-665. Co-authors: F. Berens, J. Plechinger.
20. Coverage of MC/JD-CDMA based macrocellular radio systems. *Electronics Letters*, vol. 33 (1997), pp. 656-657. Co-authors: F. Berens, J. Plechinger.
21. Results on turbo-codes for speech transmission in a joint detection CDMA mobile radio system with coherent receiver antenna diversity. *IEEE Transactions on Vehicular Technology*, vol. 46 (1997), pp. 862-870. Co-author: M.M. Naßhan.
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23. Exploitation of intracell macrodiversity in mobile radio systems by deployment of remote antennas. *International Journal of Wireless Information Networks (Plenum Press)*, vol. 4 (1997), pp. 135-145. Co-authors: B. Steiner, B. Stilling.
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25. A flexibly configurable spatial model for mobile radio channels. *IEEE Transactions on Communications*, vol. 46 (1998), pp. 367-371. Co-author: J.J. Blanz.
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27. Uplink coverage analysis of multicarrier joint detection code division multiple access based macrocellular radio systems. *IEEE Transactions on Vehicular Technology*, accepted for publication, revision in preparation. Co-author: J. Plechinger.

List of Publications

13 February 2017



28. Rate compatible punctured Turbo-Codes for future mobile radio applications. IEEE Transactions on Vehicular Technology, accepted for publication, revision in preparation. Co-authors: M. Doetsch, J. Plechinger.
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34. On the metric processing in joint source-channel decoders applied to impulsive noise environments. Electronics Letters, vol. 39 (2003), pp. 1735-1737, Co-authors: T. Faber, T. Scholand, G. Bruck.
35. Max-log-ML symbol estimation postprocessor for intermediate frequency LDI detectors. Electronics Letters, vol. 40 (2004), pp. 183-185. Co-authors: T. Scholand, A. Waadt.
36. Novel Bluetooth receiver structure deploying improved zero-crossing demodulation. IEEE Transactions on Vehicular Technology, vol. 56 (2007), pp. 661-669. Co-authors: T. Scholand, A. Waadt.
37. Application of Turbo-Codes to environments with impulsive noise. IEEE Transactions on Communications, accepted for publication, revision in preparation. Co-authors: T. Faber, T. Scholand.
38. Intermediate frequency zero-crossing detection of filtered MSK based on irregular sampling. European Transactions on Telecommunications (ETT), accepted for publication, revision submitted. Co-author: T. Scholand.
39. Fast frequency hopping OFDM concept. Electronics Letters, vol. 41 (2005), pp. 748-749. Co-authors: T. Scholand, T. Faber, A. Seebens, J. Lee, J. Cho, Y. Cho, H.W. Lee.
40. A real-time zero-crossing demodulation concept. International Journal of Wireless Personal Communications, vol. 43 (2007), pp. 157 – 183. Co-authors: T. Scholand, C. Spiegel, A. Waadt, A. Burnic.
41. Fast frequency hopping diversity scheme for OFDM based UWB systems. Electronics Letters, vol. 43 (2007), pp. 41-42. Co-authors: F. Berens, A. Rüegg, T. Scholand, A. Hessamian-Alinejad.
42. On implementation aspects of fast iterative tap amplitude and delay estimation for UMTS/WCDMA. IET Communications, vol. 1 (2007), no. 2, pp. 187-192. Co-authors: A. Burnic, T. Faber, T. Scholand.

List of Publications

13 February 2017



43. Optimal choice of the intermediate frequency for zero-crossing detectors. *Electronics Letters*, vol. 43 (2007), pp. 678-680. Co-authors: A. Waadt, T. Scholand, C. Spiegel, A. Burnic.
44. Intermediate frequency zero-crossing detectors for the Bluetooth enhanced data rate system. *Electronics Letters*, vol. 43 (2007), pp. 815-817. Co-authors: T. Scholand, C. Spiegel, A. Burnic, A. Waadt, G.H. Bruck.
45. A Software Defined Radio Realisation of DVB-T2 Receiver“. In: *Electronics Letters* 45 (24 2009), S. 1253–1254. Co-authors: A. Vießmann, A. Waadt, C. Spiegel G.H. Bruck.
46. Combined MIMO and network coding for wireless relay networks. *IET Communications*. Accepted for publication. Co-authors: Dong Xu, Zijian Bai, Andreas Waadt, Guido H. Bruck.

10 Patents and Published Patent Applications until 2009

10.1 Patents

1. Verfahren zur Erzeugung von CPM (Continuous Phase Modulation)–Signalen. German patent 4208728, 18 March 1992. Co-inventors: P.W. Baier.
2. Verfahren und Einrichtung zur Datenübertragung. German patent 4329320, 2 March 1995. Co-inventors: P.W. Baier, J.J. Blanz, A. Klein.
3. Empfangs- und Sendeverfahren für ein System zur nicht leitungsgebundenen Duplexübertragung. German patent 19510534, 2 October 1996. Co-inventors: P.W. Baier, J.J. Blanz.
4. Verfahren und Empfangseinrichtung zum Detektieren von Daten. European patent 97104786, 20 March 1997. Co-inventors: J.J. Blanz, C. Farsakh, M. Haardt, P.W. Baier.
5. Verfahren und Sendeeinrichtung zum Senden von Datensymbolen aus Teilnehmersignalen über eine Funkschnittstelle eines Mobilkommunikationssystems. European patent 97105149, 26 March 1997. Co-inventors: F. Berens, J. Plechinger, P.W. Baier.
6. System zur Funkübertragung digitaler Signale zwischen mehreren Teilnehmerstationen und einer Basisstation. German patent 19616829, 24 April 1997. European patent 895 683, 15 March 2000. Co-inventors: F. Berens, K. Kammerlander, J. Plechinger, P.W. Baier.
7. Verfahren zum Separieren eines empfangenen Signalgemisches. German patent 19623665, 30 April 1997. Co-inventors: P.W. Baier, A. Klein, B. Steiner.
8. Method and reception device for the detection of data. European patent 866568, 23 September 1998. Co-inventors: P.W. Baier, J.J. Blanz, C. Farsakh, M. Haardt.
9. Verfahren zur Datenübertragung auf Übertragungskanälen in einem digitalen Übertragungssystem. German patent 19736625, December 1998. European patent 1 005 730 B1, 4 January 2006,. Co-inventors: F. Berens, M. Doetsch, J. Plechinger.

List of Publications

13 February 2017



10. Verfahren und Einrichtung zur Abschätzung der Dienstqualität auf Übertragungskanälen in einem digitalen Übertragungssystem. German patent 19736653, 10 December 1998. Co-inventors: F. Berens, M. Doetsch, J. Plechinger.
11. Verfahren zur Paketübertragung mit einem ARQ-Protokoll auf Übertragungskanälen in einem digitalen Übertragungssystem. German patent 19736676, 10 December 1998., Co-inventors: F. Berens, M. Doetsch, J. Plechinger.
12. Verfahren zur Datenübertragung in einem digitalen Übertragungssystem bei paketvermitteltem Dienst. German patent 19736626, 10 December 1998. European patent 1 005 734, 4 January 2006. Co-inventors: F. Berens, M. Doetsch, J. Plechinger.
13. Verfahren zum Separieren eines empfangenen Signalgemisches. German patent 19616828, 25 February 1999. Co-inventors: A. Klein, P.W. Baier, J. Mayer.
14. Empfangsverfahren und Empfangseinrichtung für Mobilfunkanwendungen. German patent 19923407, 24 August 2000. Co-inventors: M. Doetsch, J. Plechinger, P. Schmidt.
15. CDMA-Empfangsverfahren und CDMA-Empfangseinrichtung für Mobilfunkanwendungen. German patent 19923408, 31 August 2000. Co-inventors: M. Doetsch, J. Plechinger, P. Schmidt.
16. Einrichtung und Verfahren zur Verarbeitung eines digitalen Datensignals in einem CDMA-Funksender. European patent 1219039, 23 July 2001. Co-inventors: M. Doetsch, T. Kella, J. Plechinger, P. Schmidt, M. Schneider.
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List of Publications

13 February 2017



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List of Publications

13 February 2017



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List of Publications

13 February 2017



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List of Publications

13 February 2017



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List of Publications

13 February 2017



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List of Publications

13 February 2017



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List of Publications

13 February 2017



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List of Publications

13 February 2017



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76. Badic, Biljana; Bai, Zijian; Balraj, Rajarajan; Bruck, Guido; Iwelski, Stanislaus; Jung, Peter; Scholand, Tobias.“ Vorrichtung und Verfahren zum Bestimmen einer Vorcodiermatrix ”. DE102013208486A1, 08.05.2013.
77. Badic, Biljana; Bai, Zijian; Balraj, Rajarajan; Bruck, Guido Horst; Iwelski, Stanislaus; Jung, Peter; Scholand, Tobias.“ EMPFÄNGER MIT MEHRSCICHT-STÖRUNGSLÖSCHUNG ”. DE102013110672A1, 26.09.2013.

11 Conference Publications until 2009

11.1.1 Invited Papers

1. Eine verallgemeinerte Darstellung von Mobilfunkkonzepten mit Multiträger-CDMA und gemeinsamer Detektion. Spread Spectrum Workshop 1996, Oberpfaffenhofen (8-9 October 1996). Co-authors: F. Berens, J. Plechinger.
2. Uplink spectral efficiency of multicarrier joint detection code division multiple access based cellular radio systems. 1997 First International Workshop on Multi-Carrier Spread-Spectrum, Oberpfaffenhofen (24-25 April 1997). Co-authors: F. Berens, J. Plechinger. Erschienen in K. Fazel, G.P. Fettweis (Eds.): Multi-Carrier Spread-Spectrum. Kluwer Academic Publishers, pp. 211-218, 1997.
3. Combined direction of arrival and channel estimation for time-slotted CDMA. Fourth IEEE International Conference on Telecommunications ICT'97, Melbourne/Australia (1997), pp. 395-400. Co-authors: J.J. Blanz, M. Haardt, P.W. Baier.
4. A pragmatic approach to rate compatible Turbo-Codes for mobile radio applications. Sixth International Conference on Advances in Communications and Control (ComCon 6), Corfu (1997). Co-authors: F. Berens, Markus Doetsch, Jörg Plechinger.
5. Advances on the application of turbo-codes to data services in third generation mobile networks. Proceedings of the International Symposium on Turbo-Codes and Related Topics, Brest (1997), pp. 135-142. Co-authors: F. Berens, Markus Doetsch, Jörg Plechinger.
6. Next generation mobile radio systems. Kleinheubacher Berichte, vol. 41 (1998).
7. Spektrale Kapazität und Effizienz von zukünftigen Mobilfunksystemen mit CDMA. ITG-Diskussionssitzung "Möglichkeiten und Grenzen digitaler Signalverarbeitung in Funksystemen", Nuremberg (1997).
8. Turbo-Codes for mobile radio systems. IEEE Fifth International Symposium on Spread Spectrum Techniques and Applications (ISSSTA'98), Keynote Speech, Sun City (1998), Co-authors: J. Plechinger, M. Doetsch.
9. Implementation aspects of mobile UMTS FDD receivers. IEE Colloquium on UMTS Terminals & Software Radio, Glasgow (1999). Co-authors: J. Plechinger, P. Schmidt.
10. Multiple access for mobile radio systems - concepts and practical implementation. Tenth International Symposium on Personal, Indoor and Mobile Radio Communications PIMRC'99, Osaka (1999). Co-author: J. Plechinger.

List of Publications

13 February 2017



11. M-Gold: A multimode baseband platform for future mobile terminals. IEEE Communication Theory Mini Conference (CTMC'99), Aptos/CA (1999). Co-author: J. Plechinger.
12. Implementation aspects of mobile UMTS FDD receivers. IEE Workshop UMTS Terminals and Software Radio, Glasgow (1999). Co-authors: J. Plechinger, P. Schmidt.
13. System on Chip in der Mobilkommunikation – Wann gibt es Ein-Chip-Handys? iBridge-Workshop, Technische Universität München (2000).
14. Mikroelektronik für die Mobilkommunikation – Ein- und Ausblicke. Keynote Speech, ITG-Workshop Mikroelektronik für die Informationstechnik, Darmstadt (2000).
15. Ein-Chip-Lösungen für die Mobilkommunikation. Workshop Technologien für den Neuen Markt des Fraunhofer-Verbundes Mikroelektronik, Berlin (2000).
16. Software Defined Radio in drahtlosen Endgeräten. ITG-Diskussionssitzung "Funksysteme", Duisburg (2001). Co-author: G.H. Bruck.
17. Software defined radio (SDR) and cognitive radio (CR). Invited contribution, Fachmesse/Workshop/Entwicklerforum für Hochfrequenzelektronik, Komponenten, Module und EMV (EEEfCOM 2006), 28-29 June 2006, Ulm. Co-authors: G.H. Bruck, A. Vießmann.
18. Synchronization, frequency correction and channel estimation in CDMA wireless systems. Invited contribution, IEEE International Symposium on Spread Spectrum Techniques (ISSSTA 2006). Co-authors: A. Burnic, A. Vießmann, T. Scholand, C. Spiegel, A. Hessamian-Alinejad, A. Seebens, G.H. Bruck.
19. Location based QoS governed services in mobile networks. The 9th Annual Symposium on Wireless Personal Multimedia Communications (WPMC2006), 17-20 September 2006, San Diego. Co-authors: A. Waadt, A. Seebens, G.H. Bruck.
20. Cognitive radio platforms for mobile multimedia. The 9th Annual Symposium on Wireless Personal Multimedia Communications (WPMC2006), 17-20 September 2006, San Diego. Co-authors: A. Burnic, T. Scholand, A. Viessmann, C. Spiegel, G.H. Bruck.
21. Cognitive radio terminal concepts. International Conference on Computers and Devices for Communication (CODEC-06), 18-20 December 2006, Kolkata (formerly Calcutta), India. Co-authors: A. Burnic, G.H. Bruck, A. Eltaher, A. Hessamian-Alinejad, T. Scholand, A. Seebens, C. Spiegel, A. Vießmann, A. Waadt.
22. Deploying Petri net based concepts on cognitive radio implementations, RADCOM2007, Hamburg. Co-authors: A. Vießmann, A. Burnic, C. Spiegel, G.H. Bruck.
23. Application of Irregular Sampling for Radio Receivers“. In: Proceedings of the EEEfCOM 2007. Fachmesse, Workshop und Entwicklerforum für Hochfrequenztechnik, Komponenten, Module und EMV (EEEfCOM 2007) (Ulm, Germany, 20 – 21 June 2007). Invited contribution. Co-authors: A. Burnic, C. Spiegel, G.H. Bruck, A. Vießmann.
24. Benefits and challenges of MIMO schemes for UTRA LTE. Broadband World Forum Europe 2007, 8 – 11 October 2007, Berlin. Co-authors: C. Spiegel, Z. Bai, G.H. Bruck, J. Berkmann, C. Drewes, B. Gunzelmann, T. Scholand.

List of Publications

13 February 2017



25. Cognitive radio prototyping. Invited contribution, Third International Conference on Cognitive Radio Oriented Wireless Networks and Communications (CROWNCOM 2008), May 2008, Singapore. Co-authors: A. Burnic, A. Vießmann, C. Spiegel, A. Waadt, K. Statnikov, Z. Bai, S. Wang, G.H. Bruck.
26. Enabling green communications using V-BLAST type MIMO schemes, A UTRA LTE based use case. Proceedings of the Wireless VITAE 2009, 17-20 May 2009, Aalborg, Denmark. Co-authors: Z. Bai, C. Spiegel, G.H. Bruck, C. Drewes, J. Berkmann, B. Gunzelmann, T. Scholand.
27. Cross-layer functionality in ultra-wideband applications, the EUWB perspective. Proceedings of the Second International Workshop on Cross Layer Design (IWCLD 2009), 11-12 June 2009, Palma de Mallorca, Spain. Co-authors: C. Kocks, A. Vießmann, S. Wang, E. Scheiber, D. Xu, G.H. Bruck, S. Zeisberg.
28. Zigbee as a key technology for green communications. Proceedings of the 12th International Symposium on Wireless Personal Multimedia Communications (WPIC 2009), 7-10 September 2009, Sendai, Japan. Co-authors: C. Spiegel, W. Shim, S. Rickers, R. Lee, J. Yu.
29. V-BLAST type MIMO schemes for UTRA LTE. Proceedings of the 6th International Conference on Mining Science & Technology (ICMST 2009), 18-20 October 2009, Xuzhou, China. Co-authors: Z. Bai, C. Spiegel, G.H. Bruck, C. Drewes, J. Berkmann, B. Gunzelmann, T. Scholand.
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31. Traffic congestion estimation service exploiting mobile assisted positioning schemes in GSM networks. Proceedings of the 6th International Conference on Mining Science & Technology (ICMST 2009), 18-20 October 2009, Xuzhou, China. Co-authors: A. Waadt, S. Wang, G.H. Bruck.
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33. MIMO with network coding in wireless relay networks: A combination of multiplexing and diversity. Proceedings of the Second International Symposium on Applied Sciences in Biomedical and Communication Technologies (ISABEL 2009), 24-27 November 2009, Bratislava, Slovak Republic. Co-authors: D. Xu, Z. Bai, A. Waadt, G.H. Bruck.
34. Analytic performance evaluation of an LTE SFBC system with Wiener channel estimation. Proceedings of the Second International Symposium on Applied Sciences in Biomedical and Communication Technologies (ISABEL 2009), 24-27 November 2009, Bratislava, Slovak Republic. Co-authors: M. Horvat, C. Carbonelli, Z. Bai.
35. A software defined radio realization of a multimedia HDTV receiver. Proceedings of the Second International Symposium on Applied Sciences in Biomedical and

List of Publications

13 February 2017



- Communication Technologies (ISABEL 2009), 24-27 November 2009, Bratislava, Slovak Republic. Co-authors: D. Xu, Z. Bai, A. Waadt, G.H. Bruck.
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 42. Low power networks - the ZigBee competition. Proceedings of the Second International Symposium on Applied Sciences in Biomedical and Communication Technologies (ISABEL 2009), 24-27 November 2009, Bratislava, Slovak Republic. Co-authors: C. Spiegel, W. Shim, S. Rickers, R. Lee, G.H. Bruck, J. Yu.
 43. UWB coverage in public transport scenarios. Proceedings of the Second International Symposium on Applied Sciences in Biomedical and Communication Technologies (ISABEL 2009), 24-27 November 2009, Bratislava, Slovak Republic. Co-authors: A. Burnic, D. Xu, M. Al-Olofi, A. Waadt, A. Vießmann.

11.1.2 Solicited Papers

1. CDMA – ein günstiges Vielfachzugriffsverfahren für frequenzselektive und zeitvariante Mobilfunkkanäle. Umdruck zur ITG-Diskussionsitzung "Der Funkkanal bei flächendeckenden Funkdiensten und seine Auswirkungen auf digitale Übertragungsverfahren", Darmstadt (1991). Co-authors: P.W. Baier, A. Klein.

List of Publications

13 February 2017



2. Simulation und Logiksynthese eines GMSK-Modulators mit dem Simulationswerkzeug SPW-HDS und den Synthesewerkzeugen von Synopsys. Kurzfassung der Vorträge zur ITG-Diskussionssitzung "Anwendung moderner Simulationswerkzeuge in der Nachrichten- und Kommunikationstechnik", Kaiserslautern (1993).
3. Novel M-detector for coherent receiver antenna diversity in GSM mobile radio systems. Proceedings of the First IEEE International Conference on Telecommunications ICT'94, Dubai (1994), pp. 51-54.
4. New results on the application of antenna diversity and turbo-codes in a JD-CDMA mobile radio system. Proceedings of the Fifth International Symposium on Personal, Indoor and Mobile Radio Communications PIMRC'94, Den Haag (1994), pp. 524-528. Co-author: M.M. Naßhan.
5. Benefits of coherent receiver antenna diversity in DCS 1800 full rate speech transmission. Proceedings of the Fifth International Symposium on Personal, Indoor and Mobile Radio Communications PIMRC'94, Den Haag (1994), pp. 204-208. Co-author: M.M. Naßhan.
6. Designing turbo-codes for speech transmission in digital mobile radio systems. Proceedings of the Second IEEE International Conference on Telecommunications ICT'95, Bali (1995), pp. 180-183. Co-author: M.M. Naßhan.
7. Benefits of directional antennas on the performance of third generation mobile radio systems. Proceedings of the Second IEEE International Conference on Telecommunications ICT'95, Bali (1995), pp. 367-370. Co-author: J.J. Blanz.
8. A joint detection CDMA mobile radio system concept developed within COST 231. Proceedings of the 45th IEEE Vehicular Technology Conference VTC'95, Chicago (1995), pp. 469-473. Co-author: B. Steiner.
9. Downlink cellular radio capacity of a joint detection CDMA mobile radio system. Proceedings of the 45th IEEE Vehicular Technology Conference VTC'95, Chicago (1995), pp. 474-478. Co-authors: M.M. Naßhan, A. Steil, A. Klein.
10. A unified approach to multiuser detectors for CDMA and their geometrical interpretations. Proceedings of the Sixth International Symposium on Personal, Indoor and Mobile Radio Communications PIMRC'95, Toronto (1995), pp. 970-974. Co-author: P.D. Alexander.
11. Anwenden von Turbo-Codes in GSM-artigen Mobilfunksystemen. Kleinheubacher Berichte, vol. 39 (1996), pp. 617-624.
12. Coherent receiver antenna diversity with directional antennas. Proceedings of the Third IEEE International Conference on Telecommunications ICT'96, Istanbul (1996), pp. 410-417. Co-authors: J.J. Blanz, A. Steil, P.W. Baier.
13. Joint Detection CDMA mit Antennendiversität: Eine Vision für die 3. Generation. Umdruck zur ITG-Diskussionssitzung "Systeme mit intelligenten Antennen – Evolution von Mobilfunksystemen", München (1996). Co-authors: P.W. Baier, J.J. Blanz, A. Steil.
14. Joint detection for multicarrier CDMA mobile radio systems – Part I: System model. Proceedings of the IEEE Fourth International Symposium on Spread Spectrum

List of Publications

13 February 2017



- Techniques and Applications ISSSTA'96, Mainz (1996), pp. 991-995. Co-authors: F. Berens, J. Plechinger.
15. Joint detection for multicarrier CDMA mobile radio systems – Part II: Detection techniques. Proceedings of the IEEE Fourth International Symposium on Spread Spectrum Techniques and Applications ISSSTA'96, Mainz (1996), pp. 996-1000. Co-authors: F. Berens, J. Plechinger.
 16. Exploitation of intracell macrodiversity in mobile radio systems by deployment of remote antennas. Proceedings of the IEEE Fourth International Symposium on Spread Spectrum Techniques and Applications ISSSTA'96, Mainz (1996), pp. 302-307. Co-authors: B. Steiner, B. Stilling.
 17. FRAMES - Hybrid Multiple Access Technology. Proceedings of the IEEE Fourth International Symposium on Spread Spectrum Techniques and Applications ISSSTA'96, Mainz (1996), pp. 320-324. Co-authors: Tero Ojanperä, Jonathan Castro, Dieter Emmer, Mikael Gudmundsson, A. Klein, G. Krämer, R. Pirhonen, L. Rademacher, J. Sköld, A. Toskala.
 18. On multicarrier CDMA mobile radio systems with joint detection and coherent receiver antenna diversity. Proceedings of the IEEE International Conference on Universal Personal Communications ICUPC'96, Cambridge (1996), pp. 61-65. Co-authors: K. Kammerlander, F. Berens, J. Plechinger.
 19. M-GOLD: A multimode baseband platform for future mobile terminals. Twenty-Eighth Annual IEEE Communication Theory Mini Conference CTMC'99, Aptos (1999). Co-author: J. Plechinger.

11.1.3 Regular Papers

1. CDMA and spread spectrum techniques versus FDMA and TDMA in cellular mobile radio applications. Proceedings of the 21st European Microwave Conference EuMC'91, Stuttgart (1991), pp. 404-409. Co-author: P.W. Baier.
2. Einfache Erzeugung von MSK-artig modulierten Signalen mit kontinuierlicher Phase (CPM). Kleinheubacher Berichte, vol. 35 (1992), pp. 687-696.
3. VLSI implementation of soft output Viterbi equalizers for mobile radio applications. Proceedings of the 42nd IEEE Vehicular Technology Conference VTC'92, Denver (1992), pp. 577-585. Co-author: P.W. Baier.
4. FPGA based logic synthesis of squarers using VHDL. Workshop-Proceedings of the FPL'92, Vienna (1992). Co-author: G. Kempa.
5. Performance of a Viterbi equalizer for time-invariant multipath reception over non-AWGN channels. Kleinheubacher Berichte, vol. 36 (1993), pp. 271-278. Co-authors: J.J. Blanz, P.W. Baier.
6. A novel algorithm for the analysis of partial response binary CPM with $h = 1/2$. Proceedings of the 43rd IEEE Vehicular Technology Conference VTC'93, Secaucus (1993), pp. 101-103.

List of Publications

13 February 2017



7. Realization of a soft output Viterbi equalizer using field programmable gate arrays. Proceedings of the 43rd IEEE Vehicular Technology Conference VTC'93, Secaucus (1993), pp. 625-628. Co-author: J.J. Blanz.
8. On the effects of quantization, nonlinear amplification and band-limitation in CDMA mobile radio systems using joint detection. Proceedings of the Fifth Annual International Conference on Wireless Communications WIRELESS'93, Calgary (1993), pp. 173-186. Co-authors: M.M. Naßhan, A. Steil, P.W. Baier.
9. Ein Konzept der Kanalschätzung, Interferenzeliminierung und Leistungsregelung für CDMA-Mobilfunksysteme. Tagungsband der ITG-Fachtagung "Mobile Kommunikation", Ulm (1993), pp. 77-88. Co-authors: B. Steiner, M.M. Naßhan, P.W. Baier.
10. Comparison of optimum detectors for coherent receiver antenna diversity in GSM type mobile radio systems. Proceedings of the Fourth International Symposium on Personal, Indoor and Mobile Radio Communications PIMRC'93, Yokohama (1993), pp. 54-58. Co-authors: M.M. Naßhan, Y. Ma.
11. Uplink channel estimation in synchronous CDMA mobile radio systems with joint detection. Proceedings of the Fourth International Symposium on Personal, Indoor and Mobile Radio Communications PIMRC'93, Yokohama (1993), pp. 123-127. Co-author: B. Steiner.
12. Coherent receiver antenna diversity for CDMA mobile radio systems using joint detection. Proceedings of the Fourth International Symposium on Personal, Indoor and Mobile Radio Communications PIMRC'93, Yokohama (1993), pp. 488-492. Co-author: J.J. Blanz, P.W. Baier.
13. Application of turbo-codes to a CDMA mobile radio system using joint detection and antenna diversity. Proceedings of the 44th IEEE Vehicular Technology Conference VTC'94, Stockholm (1994), pp. 770-774. Co-authors: M.M. Naßhan, J.J. Blanz.
14. Novel generation and suboptimum detection of quaternary full response continuous phase modulated signals. Proceedings of the 44th IEEE Vehicular Technology Conference VTC'94, Stockholm (1994), pp. 277-281.
15. Realistic simulations of CDMA mobile radio systems using joint detection and coherent receiver antenna diversity. Proceedings of the IEEE Third International Symposium on Spread Spectrum Techniques and Applications ISSSTA'94, Oulu (1994), pp. 193-197. Co-authors: J.J. Blanz, M.M. Naßhan.
16. Applying turbo-codes to the uplink in a JD-CDMA mobile radio system using coherent receiver antenna diversity. Tagungsband der ITG-Fachtagung "Codierung für Quelle, Kanal und Übertragung", München (1994), pp. 49-56. Co-author: M.M. Naßhan.
17. Comprehensive comparison of turbo-code decoders. Proceedings of the 45th IEEE Vehicular Technology Conference VTC'95, Chicago (1995), pp. 624-628. Co-author: M.M. Naßhan.
18. A flexibly configurable statistical channel model for mobile radio systems with directional diversity. Tagungsband der ITG-Fachtagung "Mobile Kommunikation", Ulm (1995), pp. 93-100. Co-authors: J.J. Blanz, P.W. Baier.

List of Publications

13 February 2017



19. Frequency hopping – spectral capacity enhancement of cellular networks. Proceedings of the IEEE Fourth International Symposium on Spread Spectrum Techniques and Applications ISSSTA'96, Mainz (1996), pp. 1267-1272. Co-authors: K. Ivanov, N. Metzner, G. Spring, H. Winkler.
20. A flexibly configurable statistical channel model for mobile radio systems with directional diversity. Proceedings of the AGARD SPP–Meeting, Athens (1996), pp. 38/1-38/11. Co-authors: J.J. Blanz, P.W. Baier.
21. FRAMES demonstrator implementation roadmap. Proceedings of the ACTS Mobile Communications Summit "European Mobile Technology towards Global Wireless Infrastructure", Granada (1996). Co-authors: T. Mäkeläinen, R. Suoranta, J. Takala, W. Baumberger, K. Sabatakakis, P. Blanc, F. Cercas, T. Coenen, P. Croft.
22. Smart antenna concepts for time-slotted CDMA. Proceedings of the 47th IEEE Vehicular Technology Conference VTC'97, Phoenix (1997), pp. 11-15. Co-authors: J.J. Blanz, R. Schmalenberger, A. Papathanassiou.
23. Performance of multicarrier joint detection CDMA mobile communications systems. Proceedings of the 47th IEEE Vehicular Technology Conference VTC'97, Phoenix (1997), pp. 1892-1896. Co-authors: F. Berens, J. Plechinger, J.J. Blanz.
24. Multicarrier joint detection CDMA mobile communications. Proceedings of the 47th IEEE Vehicular Technology Conference VTC'97, Phoenix (1997), pp. 1897-1901. Co-authors: F. Berens, J. Plechinger, P.W. Baier.
25. Uplink coverage analysis of multicarrier joint detection code division multiple access based macrocellular radio systems. Proceedings of the Eighth International Symposium on Personal, Indoor and Mobile Radio Communications PIMRC'97, Helsinki (1997), pp. 105-109. Co-authors: F. Berens, J. Plechinger.
26. Eine verallgemeinerte Darstellung von Mobilfunkkonzepten mit Multiträger-CDMA und gemeinsamer Detektion. Spread Spectrum Workshop (SSW '98), Oberpfaffenhofen (1998). Co-authors: F. Berens, J. Plechinger.
27. Coverage of macrocellular multicarrier joint detection code division multiple access. Proceedings of the 1998 International Zurich Seminar on Broadband Communications - Accessing, Transmission, Networking IZS'98, Zürich (1998), pp. 285-292. Co-authors: F. Berens, J. Plechinger.
28. Performance of FRAMES non-spread mode 1 (WB-TDMA) with turbo codes. Proceedings of the 48th IEEE Vehicular Technology Conference VTC'98, Ottawa (1998), pp. 840-844. Co-authors: F. Berens, M. Doetsch, H. Holma, J. Plechinger.
29. Uplink spectral capacity of an MC/JD-CDMA mobile radio system. Proceedings of the 48th IEEE Vehicular Technology Conference VTC'98, Ottawa (1998). Co-author: F. Berens.
30. Interference in cellular joint detection code division multiple access (JD-CDMA) mobile radio systems. Proceedings of the 48th IEEE Vehicular Technology Conference VTC'98, Ottawa (1998), pp. 1864-1868. Co-authors: F. Berens, T. Kella, J. Plechinger.

List of Publications

13 February 2017



31. JD-CDMA Mobile Station Envelope Characteristics and Spectra Results from a JD-CDMA testbed. Proceedings of the 48th IEEE Vehicular Technology Conference VTC'98, Ottawa (1998), pp. 1825-1829. Co-author: F. Berens.
32. Trends in microelectronic solutions for wireless communication of 3G and beyond. Kick-Off Meeting Wireless World Research Forum (WWRF), 6-7 March 2001, Munich. Co-authors: D. Greifendorf, J. Stammen.
33. Future microelectronics hardware concepts for wireless communication beyond 3G. Second Working Session, Wireless World Research Forum (WWRF), 10-11 May 2001, Helsinki, Finland. Co-authors: D. Greifendorf, J. Stammen.
34. Seamless interoperability of wireless technologies and smart environments with SEEWIN (Smart Environments with Embedded Wireless Internet). Third Working Session, Wireless World Research Forum (WWRF), 17-18 September 2001, Stockholm, Sweden. Co-authors: D. Greifendorf, J. Stammen.
35. A novel hardware design paradigm for mobile “software defined radio” terminals. Fifth Working Session, Wireless World Research Forum (WWRF), 7-8 March 2002, Tempe, USA. Co-authors: D. Greifendorf, S. Sappok, J. Stammen.
36. Hardware design – On the way to mobile “software defined radio” terminals. Proceedings of the Engineering of Reconfigurable Systems and Algorithms Conference (ERSA'02), 24-27 June 2002, Las Vegas, USA. Co-authors: D. Greifendorf, J. Stammen.
37. Reconfigurable radio: How to make multimedia mobile. Proceedings of the Second IASTED International Conference on Wireless and Optical Communications (WOC 2002), 17-19 July 2002, Banff/Alberta, Canada, Paper 356-078. Co-authors: D. Greifendorf, R. Kokozinski, J. Stammen.
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39. The evolution of hardware platforms for mobile “software defined radio” terminals. Proceedings of the IEEE Personal, Indoor, and Mobile Radio Conference (PIMRC 2002), 15-18 September 2002, Lissabon. Co-authors: D. Greifendorf, J. Stammen.
40. A system independent data compressor for wireless internet access. Proc. IEEE Symposium on Consumer Electronics (ISCE02), 23-26 September 2002, Erfurt. Co-authors: G.H. Bruck, A. Coers, H.-C. Müller, R. Kokozinski.
41. Robust beamforming in application to smart antennas for TD-SCDMA communications. Proceedings of the Joint Symposium onto Opto- and Microelectronic Devices and Circuits (SODC 2002), 10-16 March 2002, Stuttgart. Authors: L. Häring, A.B. Gershman, T. Kaiser, T. Scholand.
42. Adaptive Quellencodierung für drahtlose Internetverbindungen. Tagungsband der 13. ITG-Fachtagung Kommunikation in Verteilten Systemen (KiVS03), 25-28 February 2003, Leipzig. Co-authors: G.H. Bruck, A. Coers, H.-C. Müller, R. Kokozinski.

List of Publications

13 February 2017



43. Downlink beamforming concepts in UTRA FDD. Tagungsband der Kleinheubacher Tagung (Kleinheubacher Berichte), 2003. Co-authors: M. Schacht, A. Dekorsy.
44. System capacity from UMTS smart antenna concepts. Proceedings of the IEEE Vehicular Technology Conference (VTC2003-Fall), 6-9 October 2003, Orlando, USA. Co-authors: M. Schacht, A. Dekorsy.
45. New intermediate frequency zero-crossing detector for MSK signals. Proceedings of the IEEE 2003 Global Communications Conference (GLOBECOM 2003), 1-5 December 2003, San Francisco, USA. Co-author: T. Scholand.
46. Novel receiver structure for Bluetooth based on modified zero-crossing demodulation. Proceedings of the IEEE 2003 Global Communications Conference (GLOBECOM 2003), 1-5 December 2003, San Francisco, USA. Co-author: T. Scholand.
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13 February 2017



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13 February 2017



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List of Publications

13 February 2017



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List of Publications

13 February 2017

