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Wireless Communications, Signal Processing and Networking (WiSPNET), 22 - 24 March 2017, accepted and to be published

2. Erfan Majeed, Ziad Youssef, Markus Mueck, Ingolf Karls, Christian Drewes, Guido Bruck and Peter Jung: "Impact of Antenna Configuration in Three-Dimensional Modulation Using Beam Hopping", *International Conference on Wireless Communications, Signal Processing and Networking* (WiSPNET), 22 - 24 March 2017, accepted and to be published

3. Ziad Youssef, Erfan Majeed, Markus Dominik Mueck, Ingolf Karls, Christian Drewes, Guido Bruck and Peter Jung: "Concept Design of Medium Access Control for Spectrum Access Systems in 3.5 GHz", *International Conference on Wireless Communications, Signal Processing and Networking* (WiSPNET), 22 - 24 March 2017, accepted and to be published

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11 Journal Publications until 2009

11.1 Invited Papers

1. CDMA – ein günstiges Vielfachzugriffsverfahren für frequenzselektive und zeitvariante Mobilfunkkanäle. Invited contribution, Nachrichtentechnik, Elektronik, vol. 41 (1991), pp. 223-227, 234. Co-authors: P.W. Baier, A. Klein.

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.

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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.

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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.

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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. Hessamian-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.

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.

11.2 Regular Papers

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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.

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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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8. Dependence of the error performance of turbo–codes on the interleaver structure in short frame transmission systems. Electronics Letters, vol. 30 (1994), pp. 287-288. Co-author: M.M. Naßhan.

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10. Maximum–likelihood detector for coherent receiver antenna diversity. Frequenz, vol. 48 (1994), pp. 94-99. Co-authors: B. Steiner, Y. Ma.

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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.

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32. JD-Entzerrung auf Symbolbasis. German patent application DE 0010106391A1, 29 August 2002. Co-inventors: T. Kella, J. Plechinger, T. Ruprich, M. Schneider.

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33. Transmitting/receiving apparatus method for fast frequency hopping in orthogonal frequency division multiplexing system and method therefor. Korea/Japan/USA/PCT patent application 2004-0025133, 12 April 2004. Co-inventors: G.H. Bruck, T. Faber, T. Scholand, Y. Cho, J. Lee, J. Cho, M.D. Katz.

34. Transmitting/receiving apparatus method for fast frequency hopping using cyclic frequency hopping pattern in orthogonal frequency division multiplexing system and method thereof. Korea/Japan/USA/PCT patent application 2004-0025137, 12 April 2004. Co-inventors: G.H. Bruck, T. Faber, T. Scholand, Y. Cho, J. Lee, J. Cho.

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36. Frequenzgenerator. International patent application WO 2004/049574A1, 10 June 2004, Japanese patent application 2004-554259, 20 June 2005. Co-inventors: N. Christoffers, B. Hosticka, R. Kokozinski.

37. Vorrichtung und Verfahren zum Abwärtsmischen eines Eingangssignals in ein Ausgangssignal. International patent application WO 2004/066512A1, 5 August 2004. Co-inventor: S. Sappok.

38. Apparatus and method for calculation of LLR in a orthogonal frequency division multiplexing communication system using linear equalizer. Korea patent application 2004-0110792, 22 December 2004. Co-inventors: G.H. Bruck, T. Faber, T. Scholand, Y. Cho, J. Lee, J. Cho, Y. Kim.

39. Method and apparatus for transmitting/receiving a signal in a fast frequency hopping-orthogonal frequency division multiplexing communication system. Korea patent application 2005-0029629, 27 December 2004. International patent application WO 2006/071056 A1 und US-application 2006/0268675 A1 (11/317,239), 27 December 2005. Co-inventors: G.H. Bruck, T. Faber, T. Scholand, Y. Cho, J. Lee, J. Cho, Y. Kim.

40. Method and apparatus for transmitting control information and data symbol in OFDM system. Korea patent application 2005-0023565, 22 March 2005. European patent application 05823637.3-1237, 1 August 2007. WO 2006/071056 A1, Co-inventors: G.H. Bruck, T. Faber, T. Scholand, Y. Cho, J. Lee, J. Cho, F. Khan.

41. Apparatus and method for calibration of multiple antenna system. Korea patent application 2005-0026827, 30 March 2005. Co-inventors: E. Lee, Eric Ann, S.H. Kim, B.Y. Kim, H.W. Lee.

42. Method and apparatus for transmitting/receiving a signal in a fast frequency hopping-orthogonal frequency division multiplexing communication system. Korea patent application 2005-0029629, 8 April 2005. Co-inventors: G.H. Bruck, T. Faber, T. Scholand, Y. Cho, J. Lee, J. Cho.

43. Beam-forming apparatus and method using a spatial interpolation based on regular spatial sampling. Korea/USA patent application 2005-0029630, 8 April 2005. Co-inventors: A. Seebens, A. Burnic, A. Hessamian-Alinejad, T. Scholand, E. Lee, Eric Ann, S.H. Kim, B.Y. Kim, H.W. Lee.

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47. Reconfigurable quality of service monitoring for messaging in mobile communications networks WIPO (World Intellectual Property Organization) patent application WO 2006136375A1, 28 December 2006. Co-inventors: C. Begall, G. Bruck, A. Waadt.

48. Method and devices for routing messages. European patent application 06818594.1-1244-PCT/EP2006011006, 16 November 2006. Co-inventors: G.H. Bruck, A. Waadt, T. Trapp, C. Begall, M. Kowalzik.

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59. Vorrichtung zum Schätzen einer Aufenthaltsposition eines Mobilfunkendgerätes. European patent application 08014243.3-2412, 1 October 2008. Co-inventors: G.H. Bruck, A. Waadt.

60. Vorrichtung und Verfahren zur Kontrolle einer motorisierten Vorrichtung. European patent application 08004620.4-2421, 12 March 2008. International application WO 2009/112211 A2. Co-inventor: G.H. Bruck.

61. A master transceiver apparatus and a slave transceiver apparatus for determining a range information. European patent application 09005539.3, EP 2 244 098 A1, 20 April 2009. Co-inventors: A. Vießmann, E. Scheiber, C. Kocks, G.H. Bruck.

62. Verfahren und Vorrichtung zum Synthetisieren eines Klanges. German patent application 102009019843.1, 4 May 2009. Co-inventor: G.H. Bruck.

63. A circuit for providing a soft output. European patent application 09007209.1, EP 2 257 011 A1, 29 May 2009. Co-inventor: G.H. Bruck.

64. Digital receiver, digital transmitter, method for operating a digital receiver or a digital transmitter and computer program. European patent application 09007172.1, 30 June 2009. Co-inventor: A. Vießmann, A. Waadt, C. Spiegel, C. Kocks, A. Burnic.

65. Konzept zur senderseitigen Vorverzerrung im Frequenzbereich. European patent application 09008764.4-1237, 3 July 2009. Co-inventor: A. Burnic.

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67. An apparatus and method operative for providing traffic information on a traffic area. European patent application 09009831.0, 29 July 2009. Co-inventors: A. Waadt, G.H. Bruck.

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69. Method and device for transmitting and receiving communication signal". Patent application CN 0001 0137 4136 A. Infineon Technologies AG. 25. Feb. 2009. Co-inventor: G.H. Bruck, T. Scholand und C. Spiegel.

70. Patentanmeld. US 2009/0279622 A1. Infineon Technologies AG. 12. Nov. 2009. Co-inventor: G H. Bruck, T. Scholand und C. Spiegel.

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73. Apparatus and Method for Detecting Signal in Cognitive Radio System by using Zero Crossing Detection". Patent application KR 1020 1010 4019 A. Samsung Electronics Co. Ltd. 16. März 2009. Co-inventor: C. Shan, F. M. Xu, E. T. Lim et al.

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13 Conference Publications until 2009

13.1.1 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.

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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.

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.

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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.

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 (WPMC 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. Proccedings 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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30. Novel block decision feedback equalizers for MIMO-OFDM used in UTRA LTE for UTRA LTE. Proccedings 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.

31. Traffic congestion estimation service exploiting mobile assisted positioning schemes in GSM networks. Proccedings 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.

32. A Petri nets based design of cognitive radios using distributed signal processing. Proccedings of the 6th International Conference on Mining Science & Technology (ICMST 2009), 18-20 October 2009, Xuzhou, China. Co-authors: C. Spiegel, A. Vießmann, A. Burnic, C. Kocks, A. Waadt, E. Scheiber, K. Statnikov, G.H. Bruck.

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 Communication Technologies (ISABEL 2009), 24-27 November 2009, Bratislava, Slovak Republic. Co-authors: D. Xu, Z. Bai, A. Waadt, G.H. Bruck.

36. An implementation-friendly synchronization algorithm for DVB-T2. 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.

37. A novel threshold selection for hypotheses tests in cognitive radios. 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.

38. Log-likelihood ratio based signal sensing strategy for cognitive radios. 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.

39. An overview of positioning systems and technologies. 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.

40. A localization and tracking application for UWB. Proceedings of the Second International Symposium on Applied Sciences in Biomedical and Communication

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Technologies (ISABEL 2009), 24-27 November 2009, Bratislava, Slovak Republic. Co-authors: C. Kocks, E. Scheiber, D. Xu, A. Vießmann, S. Wang, G.H. Bruck.

41. A Java implementation of localization and tracking for UWB. 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: S. Wang, A. Waadt, S. Rickers, C. Kocks, D. Xu, A. Vießmann, G.H. Bruck.

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.

13.1.2 Solicited Papers

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

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.

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