

Publications Andreas Binder

Reviewed articles in scientific journals:

- [1] Binder, A.: *Untersuchung zur magnetischen Kopplung von Längs- und Querachse durch Sättigung am Beispiel der Reluktanzmaschine*. Archiv f. Elektrotechn. 72 (1989), p.277-282
- [2] Binder, A.; Lechner, A.; Mayer, W.: *Regelung kleiner Windaggregate auf maximale Leistungsabgabe*. e&i 106 (1989), p.425-428
- [3] Binder, A.: *Angenäherte Berechnung des zweidimensionalen gesättigten Luftspaltfelds bei Drehstrom-Asynchronmaschinen im Leerlauf*. Archiv f. Elektrotechn. 73 (1990), p.131-139
- [4] Binder, A.; Rummich, E.: *Besonderheiten bei der Selbsterregung von Asynchrongeneratoren im Inselbetrieb*. etz-Archiv 12 (1990), p.251-257
- [5] Binder, A.; Schima, H.; Schmallegger, H.: *Motor design with large air gap for centrifugal blood pumps using rare earth magnets*. Archiv für Elektrotechnik 73 (1990), p.261-269
- [6] Binder, A.: *Additional losses in converter-fed uncompensated D.C. motors - their calculation and measurement*. Archiv für Elektrotechnik 74 (1991), p.357-369
- [7] Auernhammer, E.; Binder, A.; Manowarda, M.; Spingler, H.: *Kompakte Gleichstromantriebe durch Leistungssteigerung*. etz 113 (1992), p.1342-1349
- [8] Binder, A.: *Measures to raise brush life of modern D.C.machines*. ETEP-Journal 3 (1993), H.3, p.193-200; Ergänzung 3 (1993), H.6, p.435
- [9] Binder, A.: *Comparison of the electromagnetic performance of simplex wave and lap windings*. IEEE Trans. on Energy Conversion 8 (1993) p.698-703
- [10] Binder, A.: *Magnetisch erregte Geräusche und Schwingungen bei hochausgenützten Gleichstrommaschinen*. e&i 110 (1993) p.664-670
- [11] Binder, A.: *The "Torus-Flux" motor - a novel permanent magnet synchronous machine*, Archiv für Elektrotechnik 79 (1996) p.31-38
- [12] Taylor, R.P.; Binder, A.: *Ertüchtigung der Frequenzumrichtertechnik für den Einsatz in Umrichtermotoren*, antriebstechnik 36 (1997), H.7, p.42-44
- [13] Binder, A.: *Electromagnetic Interference of Brake Stray Fields on Resolvers in Brushless D.C. Servo Drives*, Mathematics and Computers in Simulation 46 (1998), Elsevier Science B.V., p.339-347
- [14] Binder, A.; Greubel, K.; Piepenbreier, B.; Tölle, H.-J.: *Permanent-Magnet Synchronous Drive with Wide Field-Weakening Range*, ETEP-Journal 8 (1998), p.157-166
- [15] Binder, A.; Kaumann, U.; Storath, A.: *Moderne Antriebstechnik spart Energie*, Elektrik 52 (1998), H.1/2, p.47-55
- [16] Binder, A.; Aust, R., Schrepfer, A.: *Bearing Currents – A Danger to Inverter-Fed A.C. Motors ?*, Iron and Steel Engineer 76 (1999), July 1999, p.47-52

- [17] Schätzer, C.; Binder, A.; Müller, W.: *Vector Optimization of Two-Dimensional Numerical Field Problems applied to the Design of a Wind Turbine Generator*, Mathematics and Computers in Simulation 49 (1999), p.105-117, Elsevier Science B.V. in 1999
- [18] Binder, A.; Schrepfer, A.: *Lagerströme bei umrichter gespeisten Drehfeldmaschinen*, antriebstechnik 38 (1999), p.46-48
- [19] Anders, M.; Schönhoff, U.; Andresen, E.-Ch.; Binder, A.; Nordmann, R.: *Entwicklung des Stellantriebs, Simulation und Optimierung der Bildstabilität für das flugzeuggestützte Infrarotteleskop SOFIA*, thema Forschung 1/2000, p.44 – 56
- [20] Schätzer, C.; Binder, A.; Müller, W.: *Vector Optimization of a High-Speed Drive using Two-Dimensional Numerical Field Calculation*, COMPEL Vol.19, No.2, 2000, p.646 – 650
- [21] Hofmann, M.; Werle, Th.; Pfeiffer, R.; Binder, A.: *2D and 3D Numerical Field Computation of Eddy-Current Brakes for Traction*, IEEE Trans. on Magnetics, Vol.36, No. 4, July 2000, p.1758 – 1763
- [22] Schätzer, Ch.; Binder, A.; Müller, W.: *A New Approach for Solving Vector Optimization Problems*, IEEE Trans. on Magnetics, Vol.36, No. 4, July 2000, p.1071 – 1075
- [23] Binder, A.: *Switched Reluctance Drive and inverter-fed Induction Machine – a comparison of design parameters and drive performance*, Electrical Engineering, Vol.28, No.5, Aug.2000, p.239 – 238
- [24] Binder, A.; Körner, O.: *Was treibt den ICE ? – Antriebstechnik für die neue Bahn*, 2B Ing. 01/2001, p.24 - 25
- [25] Binder, A.; Werle, Th.: *Linear Motors Utilization for both Maglev and Railway Vehicles*, Communications 2/2001, p.61-67, Zilina, Slovakia
- [26] Koch, Th.; Körner, O.; Binder, A.: *Direktantriebe für Lokomotiven*, EI - Eisenbahningenieur (53) 8/2002, p.59 – 65
- [27] Binder, A.; Pollmeier, S.; Wick, A.: *Vernetzte Antriebe – aktueller Stand, Entwicklungsschwerpunkte und Trends*, etz, 7-8/2003, p.84-93
- [28] Binder, A.; Werle, Th.; Hofmann, M.: *Lineare Booster-Konzepte für die elektrische Traktion*, Elektrische Bahnen 101, 2003, p.539-547
- [29] Schneider, T.; Binder, A.: *Comparative Analysis of Limited Field Weakening Capability of Surface Mounted Permanent Magnet Machines*, IEE-Proceedings – Electrical Power Applications, vol. 151, no.1, Jan. 2004, p.76-82
- [29-1] Binder, A.: *Editorial*, Konstruktion 6 (2004), p. 3
- [30] Joksimovic, G.; Binder, A.: *Additional no-load losses in inverter-fed high speed cage induction motors*, Archiv f. Elektrotechnik (Electrical Engineering) 86 (2), 2004, p.105-116
- [31] Ade, M.; Binder, A., Neudorfer, H.: *Modellierung der parallelen Antriebsstränge für ein Hybrid-Elektrofahrzeug vom Typ „Through the road“*, e&i 121, no.4, April 2004, p.145-149
- [32] Körner, O.; Binder A.: *Feasibility of a Group Drive with Two permanent Magnet Synchronous Traction Motors for Commuter Trains*, EPE Journal, Vol. 14, no.3, 2004, p.32-37

- [33] Mütze, A.; Binder A.: *Umrichterbedingte Lagerströme in Industrieantrieben im Leistungsbereich 1...500 kW – Größenordnungen und Abhilfen*; antriebstechnik 1/2005, p.36 ... 40
- [33-1] Mütze, A.; Binder A.: *Systematic approach to bearing current evaluation in variable speed drive systems*, ETEP, Vol. 15, 2005, Wiley&Sons, p.21-7-227
- [34] Binder, A.; Wick, A.; Gold, P.W.: *Antriebssysteme: Trends – Innovationen - Mechatronik*, etz, Sonderheft 1 /2005, p.68-75
- [35] Binder, A.; Schneider, T.: *Leichtere Elektromotoren durch Hochausnutzung von Werkstoffen*, thema FORSCHUNG 1/2006, p.68-70
- [36] Klohr, M.; Binder, A., Schneider, T.: *Losses in High Speed Permanent Magnet Motor with magnetic levitation for 40000/min, 40 kW*, Int. Journal of Electrical Engineering in Transportation (IJEET), vol. 1, no. 2, 2005, p. 9-16
- [37] Gautam, N.; Rentschler, A.; Schneider, T.; Binder, A.: *Modelling and analysis of parallel connected permanent magnet synchronous generators in a small hydro power plant*, WSEAS Trans. On Power Systems 5, Vol. 1, p.825-830, May 2006
- [38] Muetze, A.; Binder, A.: *Calculation of the influence of insulated bearings and insulated inner bearing seats on circulating bearing currents in machines of inverter-based drive systems*, IEEE Transactions on Industry Applications 42, July/August 2006, p.965-973.
- [39] Schneider, T.; Binder, A.; Klohr, M.: *Fixation of Buried and Surface mounted Magnets in High-Speed Permanent Magnet Synchronous Motors*, IEEE Transactions on Industry Applications 42, July/August 2006, p. 1031-1037
- [40] Neudorfer, H.; Binder, A.; Wicker, N.: *Analyse von unterschiedlichen Fahrzyklen für den Einsatz von Elektrofahrzeugen*, e&i 123, no.7-8, 2006, p.352-360
- [41] Muetze, A.; Binder, A.: *Don't Lose Your Bearings – Mitigation techniques for bearing currents in inverter-supplied drive systems*, IEEE IAS Magazine, July/August 2006, Vol. 12, No.4, p.22-31.
- [42] Binder, A.; Neudorfer, H.; Wicker, N.: *Computational Investigation of two Hybrid Vehicle Energy Managements*, ATZ 06, 2006, Vol. 108, p.22-25
- [43] Binder, A.; Neudorfer, H.; Wicker, N.: *Rechnerische Untersuchung von zwei Energiemanagements für Hybridfahrzeuge*, ATZ 06, 2006, Vol. 108, p.502-509
- [44] Schneider, T.; Binder, A.; Chen, L.: *Design procedure of bearingless high-speed permanent magnet motors*, in: *Electromagnetic Fields in Mechatronics, Electrical and Electronic Engineering*, A. Krawczyk et al. (Eds.), IOS Press, 2006, p.473-478
- [45] Deak, C.; Binder, A.: *Highly Utilized Permanent Magnet Synchronous Machines with Tooth-wound Coils for Industrial Applications*, ELECTROMOTION, Vol. 13 (2006), p.36-41
- [46] Muetze, A.; Binder, A.; Vogel, H.; Hering, J.: *What can bearings bear? – How much current is too much?* IEEE IAS Magazine, Nov./Dec. 2006, Vol. 12, No.6, p.57-64.
- [47] Schneider, T.; Binder, A.: *Lagerlose Motoren als Hochdrehzahlantriebe*, thema Forschung 1/2007, p. 64 - 68

- [48] Schneider, T.; Binder, A.; Redemann, Ch.: *Lagerlose Motoren – eine Zukunftstechnologie?*, SEV/AES Bulletin 5/2007, p. 9 - 13
- [49] Binder, A.; Doppelbauer, M.; Gold, P.; Hofmann, W.: *Antriebssysteme: Innovationen – Trends – Mechatronik*, etz, Heft 4/2007, p. 60 – 69
- [49-1] Binder, A.: Nachrichten des VDI-Bezirksvereins Frankfurt/Main - Darmstadt, 2007
- [50] Muetze, A.; Binder: *Calculation of Circulating Bearing Currents in Machines of Inverter-Based Drive Systems*, IEEE Trans. on Ind. Electronics 54, no.2, 2007, p. 932 – 938
- [51] Balzer, G.; Binder, A.; Hartkopf, Th.; Hinrichsen, V.; Mutschler, P.; Stenzel, J.: *Elektrische Energietechnik: Schlüsseltechnologie der Zukunft*, thema Forschung 2/2007, p. 6-12
- [52] Muetze, A.; Binder: *Calculation of Motor Capacitances for Prediction of the Voltage Across the Bearings in Machines of Inverter-based Drive Systems*, IEEE-IAS Trans. Of. Ind. Appl. 43, No.3, May/June 2007, p. 665 - 672
- [53] Deak; C.; Binder, A.: *Design of Compact Permanent-Magnet Synchronous Motors with Concentrated Windings*, Revue Roumaine des Science Techniques, Serie Électrotechnique et Énergétique 52, no.2, April/June 2007, Romania, p. 183-197
- [54] Binder, A.; Sabirin, C.R.; Popa, D.D.; Craciunescu, A.: *Modelling and Control of an Active Magnetic bearing System*, Revue Roumaine des Science Techniques, Serie Électrotechnique et Énergétique 52, no.2, April/June 2007, Romania, p. 157-181
- [55] Balzer, G.; Binder, A.; Hinrichsen, V.; Mutschler, P.: *125 Jahre Elektrotechnik an der TU Darmstadt*, etz, 2007, H.9, p. 94 ... g 2/2007, p.94-98
- [56] Muetze, A.; Binder: *Techniques for Measurement of Parameters Related to Inverter-Induced Bearing Currents*, IEEE-IAS Trans. Of. Ind. Appl. 43, No.35 Sept./Oct. 2007, p. 1274-1283
- [57] Funieru, B.; Binder, A.: *Losses and Forces due to Eddy Currents in a Magnetically Non-linear Conductive Half Space*, Archiv f. Elektrotechnik (Electrical Engineering) 90, no.1, Nov. 2007, p.43-54
- [58] Muetze, A.; Binder: *Practical Rules for Assessment of Inverter-Induced Bearing Currents in Inverter-Fed AC Motors up to 500 kW*, IEEE Trans. on Ind. Electronics 54, no.3, 2007, p. 1614-1622
- [59] Aoulkadi, M.; Binder, A.: *When Loads Stray - Evaluation of Different Measurement Methods to Determine Stray Load Losses in Induction Machines*, IEEE Ind. Electronics Magazine, Vol. 2, no. 1, March 2008, p. 21-30
- [60] Aoulkadi, M.; Binder, A.: *Comparison of different evaluation methods to determine stray load losses in induction machines with eh-star method*, IEEE-IAS Trans. of Ind. Appl. 44, No.6, Nov./Dec. 2008, p. 1675-1682
- [61] Binder, A.; Muetze, A.: *Scaling Effects of Inverter-Induced Bearing Currents in AC Machines*, IEEE-IAS Trans. of Ind. Appl. 44, No.3, May/June 2008, p. 769-776
- [62] Binder, A.; Doppelbauer, M.; Gold, P.; Hofmann, W.: *Innovationen und Trends bei mechatronischen Antriebssystemen*, etz, Sonderheft S1/2009, p. 44-50

- [63] Obe, E. S.; Binder, A.: *Calculation of Rotor Currents of Single-phase Synchronous Reluctance Motor Using d - q Harmonic Balance Techniques*, Electric Power Components and Systems, Vol.37, No.9, 2009, pp. 943 ... 956
- [63-1] Gholizad, H.; Funieru, B.; Binder, A.: *Direct Modeling of Motional Eddy Currents in Highly Saturated Solid Conductors by Magnetic Equivalent Circuit Method*, IEEE Trans. on Magnetics 45, no.3, 2009, p. 1016-1019
- [64] DeGersem, H.; Henze, O.; Weiland, Th.; Binder, A.: *Simulation of wave propagation effects in machine windings*, COMPEL, Vol. 29, no. 1, 2010, p. 23-38
- [65] DeGersem, H.; Henze, O.; Weiland, Th.; Binder, A.: *Eddy-current formulation for constructing transmission-line models for machine windings*, The European Physical Journal Applied Physics, Vol. 49, 31101, 2010, EDP Sciences, 7 pages
- [66] = [33-1] Mütze, A.; Binder A.: *Systematic approach to bearing current evaluation in variable speed drive systems*, ETEP, Vol. 15, 2005, Wiley&Sons, p.217-227
- [67] Munteanu, G.; Binder, A.; Schneider, T.: *Development and Test of High-Speed Bearingless PM Synchronous Machines*, e&i Vol. 128 (2011), Issue 3, p.75-80
- [68] Obe, E. S.; Binder, A.: *Direct-phase-variable model of a synchronous reluctance motor including all slot and winding harmonics*, Energy Conversion and Management, Vol. 52 (2011), p.284-291
- [68-1] Jorks, H.V.; Gjonaj, E.; Weiland, T.; Magdun, O.: *Three-dimensional simulations of an induction motor including eddy current effects in core laminations*, IET Sci. Meas. Technol., Vol. 6, Iss. 5, 2012, p.344-349
- [69] Mirzaei, M.; Binder A.; Funieru, B.; Susic, M.: *Analytical Calculations of Induced Eddy Currents Losses in the Magnets of Surface Mounted PM Machines with Consideration of Circumferential and Axial Segmentation Effects*, IEEE Trans. on Magnetics 48, no.12, 2012, p. 4831-4841
- [70] Funieru, B.; Esteves-Albieri, G.; Binder, A.: *Design of a Reduced Size Demonstrator Used for Validation of the Direct Drive Wind Generator Loss Calculation Models*, ELECTROMOTION, Vol. 20 (2013), p.183-188
- [71] Takahashi, A.; Kikuchi, S.; Mikami, H.; Ide, K.; Binder, A.: *Reluctance Torque Utility of Line-Starting Permanent Magnet Motors*, IEEE Transaction on Energy Conversion, 2013, Vol. 28, no.4, p. 805-814
- [72] Magdun, O.; Binder, A.: *High-Frequency Induction Machine Modelling for Common Mode Current and Bearing Voltage Calculation*, IEEE Transaction on Industry Applications, 2014, Vol. 50, no.3, p. 1780-1790
- [73] Lehr, M.; Reis, K.; Binder, A.: *Comparison of axial flux and radial flux machines for the use in wheel hub drives*, e&i Vol. 132 (2015), Issue 1, p.25-32
- [74] = [49-1] Binder, A.: Nachrichten des VDI-Bezirksvereins Frankfurt/Main - Darmstadt, 2007
- [75] = [63-1] Gholizad, H.; Funieru, B.; Binder, A.: *Direct Modelling of Motional Eddy Currents in Highly Saturated Solid Conductors by Magnetic Equivalent Circuit Method*, IEEE Trans. on Magnetics 45, no.3, 2009, p. 1016-1019

- [76] Takahashi, A.; Kikuchi, S.; Mikami, H.; Binder, A.: *Asynchronous Torque of Line-Starting Permanent-Magnet Synchronous Motors*, IEEE Transaction on Energy Conversion, 2015, Vol. 30, no.2, p. 498-506
- [77] Radnai, B.; Gemeinder, Y.; Kieckbusch, T.; Sauer, B.; Binder, A.: *Schädlicher Stromdurchgang - Untersuchung des Schädigungsmechanismus und der zulässigen Lagerstrombelastung von Wälzlagern in E-Motoren und Generatoren verursacht durch parasitäre hochfrequente Lagerströme*, FVA-Heft 1127, Forschungsvorhaben Nr. 650 I, 2015, Forschungsvereinigung Antriebstechnik e.V., Frankfurt /Main
- [78] An, J.; Binder, A.: *Permanent magnet synchronous machine design for hybrid electric cars with double e-motor and range extender*. e&i 133 (2016), p.65-72
- [79] Wang, J.; Binder, A.: *Position estimation for self-sensing magnetic bearings based on the current slope due to the switching power amplifier*. EPE Journal, Vol. 26, no.4, 2016, p.125-141
- [80] Lehr, M.; Binder, A.: *Design and measurements of a permanent magnet Flux-switching-Machine for industrial applications*. e&i 134 (2017), p. 177-184
- [81] Neusüs, S.; Binder, A.: *Design of a synchronous reluctance rotor for the stator of an 11 kW induction machine*. e&i 135 (2018), p. 177-186
- [82] Dietz, D.; Messenger, G.; Binder, A.: *A 1 kW/60000 min⁻¹ bearingless PM motor with combined winding for torque and rotor suspension*. IET Electric Power Applications Journal, Volume 12, Issue 8, September 2018, pp. 1090 – 1097
- [83] Rinderknecht, S.; Binder, A.: *Doppel-E-Antrieb mit Range-Extender (DE-REX)*. Z! Das Zukunftsmagazin, 3 (2018): 30-31
- [84] Dietz, D.; Binder, A.: *Bearingless PM synchronous machine with zero-sequence current driven star point-connected active magnetic thrust bearing*, Transportation Systems and Technology 4 (1), pp. 5 ... 18
- [85] Neusüs, S.; Binder, A.: *Numerical evaluation of permanent magnet-assisted synchronous reluctance rotor topologies using a simplified magnetostatic model*. Int. Journal on Numerical Modelling (2019), 14 pages
- [86] An, J.; Gemeinder, Y.; Binder, A.: *Downsizing possibilities of a PM synchronous motor for a hybrid vehicle*. e&i 136 (2019), pp. 143 ... 152
- [87] Erd, N.; Binder, A.; Lingl, S.: *Berechnung von Energieeinsparungen durch Schwungradspeicher in Stadtbahnen*, ZEV Rail Glaser's Annalen, 2019, submitted
- [87] = [68-1] Jorks, H.V.; Gjonaj, E.; Weiland, T.; Magdun, O.: *Three-dimensional simulations of an induction motor including eddy current effects in core laminations*, IET Sci. Meas. Technol., Vol. 6, Iss. 5, 2012, p.344-349

Books or contributions in books:

- [1] Binder, A.: *Motor- und Kabelbelastung durch Umrichter*, in: Reichert, K. (Hrsg.): *Messen von Betriebsparametern elektrischer Antriebe*, RAVEL-Broschüre ISBN 3-905233-97-5 (1996) p.48-52
- [2] Binder, A.: *DC Machines*, in: Webster, J. G. (ed.): *Encyclopedia of Electrical and Electronics Engineering*, 1999, Vol. 5, p.63-77, John Wiley & Sons, Inc., New York
- [3] Reichert, K.; Binder, A.: *Elektrische Maschinen und Antriebe – Auswahl, Auslegung und Dimensionierung*, VDE-Kursreihe "Lebenslanges Lernen", 1st ed. Nov. 2000, 2nd ed. May 2001, 3rd ed. Nov. 2001, 4th ed. Nov. 2005, last edition Dec. 2014
- [4] Binder, A.: *Zusatzbeanspruchungen der Drehfeldmaschine*, in: Schroeder, D.: *Leistungselektronische Schaltungen – Funktion, Auslegung und Anwendung*, 2008, 2. Aufl., p.724-775, Springer-Verlag, Berlin – Heidelberg
- [5] Binder, A.: *Elektrische Maschinen und Antriebe – Übungsbuch*, 2012, 1. Aufl., Springer-Verlag, Berlin – Heidelberg
- [6] Binder, A.: *Elektrische Maschinen und Antriebe*, 2012, 1. Aufl., Springer-Verlag, Berlin – Heidelberg
- [7] Binder, A.: *Elektrische Maschinen und Antriebe – Übungsbuch*, 2017, 2. erweiterte Aufl., Springer-Verlag, Berlin – Heidelberg
- [8] Binder, A.: *Elektrische Maschinen und Antriebe*, 2018, überarbeitete 2. Aufl., Springer-Verlag, Berlin – Heidelberg

Reviewed conference papers:

- [1] Binder, A.; Schima, H.; Schmallegger, H.; Müller, H.; Thoma, H.: *Performance of a large air-gap brushless DC-motor for driving centrifugal bloodpumps*. Proceedings of the International Workshop on Rotary Bloodpumps, Obertauern, Austria, 1988, p.45-49
- [2] Schima, H.; Binder, A.; Thoma, H.: *Driving units with direct electromagnetic coupling for centrifugal blood pumps*. Proceedings of the XVIth Congress of the European Society for Artificial Organs, Sept. 1989, Brüssel, Belgien
- [3] Binder, A.: *Armature insulation stress of low voltage a.c. motors due to inverter supply*, Proceedings of the International Conference on Electrical Machines (ICEM), Sept. 1994, Paris, p.431-436
- [4] Binder, A.: *Design of Coils for Magnetizing Rotors with Surface Rare Earth Permanent Magnets*, Proceedings of the International Conference on Electrical Machines (ICEM), 10.-12.Sept.1996, Vigo, p.449-454
- [5] Binder, A.: *Electromagnetic Interference of Brake Stray Fields on Resolvers in Brushless D.C. Servo Drives*, Proceedings of the Electrimacs Conference, Saint Nazaire, 17.-19.Sept.1996, p.627-631
- [6] Binder, A.: *Measures to cope with a.c. motor insulation stress due to IGBT-inverter supply*, Proceedings of the IEE-Conference „Power Electronics & Variable Speed Drives (PEVD), Nottingham, 23.-25.Sept.1996, p.569-574
- [7] Jungkunz, C.; Binder, A.: *Entwurf und Bau des Prototypmagnetlagers SIMAB*, 3. Zittauer Workshop Magnetlagertechnik, 11.-12.Sept.1997, p.21-31
- [8] Ackva, A.; Binder, A.; Greubel, K.; Piepenbreier, B.: *Electric vehicle drive with surface-mounted magnets for wide field-weakening range*, European Conference on Power Electronics (EPE), Trondheim, 8.-10.Sept.1997, Vol.1, p.548-553
- [9] Binder, A.; Storath, A.: *Comparison of square-wave and sine-wave fed permanent magnet synchronous servo drives*, Proceedings of the Symposium on Power Electronics and Electrical Drives (SPEEDAM), 3.-5.Juni 1998, Sorrento, p.C3.19-C3.24
- [10] Binder, A., Schrepfer, A.: *Bearing Currents in Induction Machines due to Inverter Supply*, Proceedings of the International Conference on Electrical Machines (ICEM), Sept. 1998, Istanbul, p.586-591
- [11] Binder, A.; Aust, R., Schrepfer, A.: *Bearing Currents – A Danger to inverter-fed A.C. motors ?*, Proceedings of the Annual Convention of the American Iron and Steel Engineers (AISE), Pittsburgh, Sept.1998, 13 pages
- [12] Binder, A.: *Comparison of Switched-Reluctance and Inverter-Driven AC Drives*, Proc. of the „European Switched Reluctance Motors and Brushless Technology TOPTEC“ of the SAE, Munich, 17-18.Sept. 1998, 21 pages
- [13] Schätzer, C.; Binder, A.; Müller, W.: *Vector Optimization of Two-Dimensional Numerical Field Problems applied to the Design of a Wind Turbine Generator*, Proc. of the IGTE Symposium, Graz, Austria, Sept. 1998, 6 pages
- [14] Anders, M.; Andresen, E. C., Binder, A.: *A Novel Spherical Linear PM Motor for Direct Driving Infrared Optical Telescope*, Proc. IEEE IEMDC'99, p.528-530, May 9-12, 1999, Seattle, USA

- [15] Binder, A.; Jöckel, A.; Körner, O.; Pfeiffer, R.: *Tatzlager-Lokomotivantrieb für 200 km/h* ?, 2nd Int. Conf. – Electric Railway Systems, 23-24.3.1999, Berlin, ETG-Fachbericht, p.85-89
- [16] Binder, A.; Joeckel, A.; Koerner, O.; Pfeiffer, R.: *Optimum Torque Transmission for High-Speed Locomotives: Cardan Hollow Shaft or Axle-Hung Drive?*, Proc. European Conference on Power Electronics (EPE), 1999, Lausanne, Switzerland, 10 pages
- [17] Anders, M.; Andresen, E.-Ch.; Binder, A.: *Determination of Thrust Force Ripple of a Spherical Linear PM Motor for a Direct Telescope Drive*, Proc. European Conference on Power Electronics (EPE), 1999, Lausanne, Switzerland, 9 pages
- [18] Schätzer, C.; Binder, A.; Müller, W.: *Vector Optimization of a High-Speed Drive using Two-Dimensional Numerical Field Calculation*, Proc. ISEF'99 – 9th Int. Symp. on Electromagnetic Fields in Electr. Engineering, 1999, p.401-404, Pavia, Italy
- [19] Binder, A.; Werle, T.; Hofmann, M.; Bruno, O.; Lupo, P.: *Analytical investigations of asynchronous linear motor with conventional rail as secondary*, Proc. of VII Comprail (Computers in Railways) 2000, 11.-13.Sept. 2000, p.633 - 640
- [20] Anders, M.; Andresen, E.-Ch.; Binder, A.: *Ein sphärischer Linearmotor als Direktantrieb eines optischen Teleskops*, ETG-Tage 1999, ETG-Fachbericht 79, p.507-513
- [21] Hofmann, M.; Werle, Th.; Pfeiffer, R.; Binder, A.: *2D and 3D Numerical Field Computation of Eddy-Current Brakes for Traction*, Proc. COMPUMAG, Vol.2, p.752-753, 1999, Sapporo, Japan
- [22] Schätzer, Ch.; Binder, A.; Müller, W.: *A New Approach for Solving Vector Optimization Problems*, Proc. COMPUMAG, Vol.1, p.160-161, 1999, Sapporo, Japan
- [23] Klohr, M.; Binder, A.; Eichhorn, J.: *Bemessung und Simulation eines magnetgelagerten Permanentmagnetantriebs (MAGPERM), 40 kW, 40000/min*, 4. Workshop Magnetlager-technik, Kassel, 30.9.-1.10.1999, 7 pages
- [24] Binder, A.: *Analytical Calculation of Eddy-Current Losses in Massive Rotor Parts of High-Speed Permanent Magnet Machines*, Proceedings of the Symposium on Power Electronics and Electrical Drives (SPEEDAM), 13.-16.June 2000, Ischia, p.C2-1 ... C2-6
- [25] Binder, A.: *Comparison of Motor Types with Respect to System Integration*, Proc. Conf. on Integrated Power Systems (CIPS), 20.-21. June 2000, Bremen, p.151 - 160
- [26] Hofmann, M.; Werle, Th.; Binder, A.; Pfeiffer, R.: *Asynchronous Linear Machine for Railway Systems*, Proceedings of the International Conference on Electrical Machines (ICEM), Aug. 2000, Helsinki, p.223 - 227
- [27] Lu, T.; Binder, A.; Pfeiffer, R.: *Rotor losses in Permanent Magnet High-Speed Machines*, Proceedings of the International Conference on Electrical Machines (ICEM), Aug. 2000, Helsinki, p.608 - 612
- [28] Hagenkort, B.; Hartkopf, Th.; Binder, A.; Jöckel, S.: *Modelling a Direct Drive Permanent Magnet Induction Machine*, Proceedings of the International Conference on Electrical Machines (ICEM), Aug. 2000, Helsinki, p.1495 - 1499
- [29] Werle, Th.; Binder, A.: *Asynchronous Linear Machine as Booster for Railway Vehicles*, IEE, 8th Conf. PEVD (Power Electronics & Variable-Speed Drives), 18.-19. Sept. 2000, London, p.224-228

- [30] Anders, M.; Binder, A.: *Dynamic Model of an Airborne Permanent Magnet Direct Telescope Drive*, Proc. 1st IFAC-Conf. on Mechatronic Systems, 18.-20. Sept. 2000, Darmstadt, p.191 - 196
- [31] Schätzer, Ch.; Binder, A.: *Design Optimization of a High-Speed Permanent Magnet Machine with the VEKOPT Algorithm*, Proc. IEEE-IAS Annual Meeting, Rome, 8.-12. Oktober 2000, 6 pages
- [32] Körner, O.; Binder, A.: *Entwicklungsperspektiven des Tatzlagerantriebs für höhere Geschwindigkeiten*, Proc. Konferenz Rad 2000, 18.-20. Oktober 2000, Dresden, p.74 - 76
- [33] Lu, T.; Binder, A.; Pfeiffer, R.: *Wirkungsgradverbesserungen bei Hochdrehzahlantrieben*, Proc. Fachkonferenz Elektrische Automatisierung SPS/IPC/Drives, 28.-30. Nov. 2000, Nürnberg, p.522 - 530
- [34] Lu, T.; Binder, A.: *Experimental Investigation of the Additional Losses in Permanent Magnet High-Speed Machines under Inverter Operation*, Proc. of the Spring Annual Conf. 2001, KIEE/EMECS, 19.-21.4.2001, Jeju, Korea, p.B-10...B-15
- [35] Körner, O.; Binder, A.; Breuer, W.: *High-Performance Locomotives: What Drive for which Speed ?* Proc. of the Int. Conference for Railway Systems RAIL, Capri, 15.-17.5.2001, 2nd Vol., p.72-86
- [36] Werle, Th.; Binder, A.: *DC-Fed Railbooster for Locomotives*, 12rd Int. Symp. On Electrical Apparatus and Technologies (SIELA 2001), p.358-365, 31.5-1.6.2001, Plovdiv, Bulgaria
- [37] Binder, A.; Koch, Th.: *Permanent-magnet synchronous direct drive for high speed trains*, 4th Int. Symp. On Adv. Electromech. Motion Sys., p.287-292, 19.-20.6.2001, Bologna
- [38] Koch, Th.; Binder, A.: *Energy Saving with High Speed Trains propelled by Direct Permanent Magnet Synchronous Drive*, PCIM 2001, 19-21.6.2001, Nürnberg
- [39] Werle, Th.; Hofmann, M.; Binder, A.: *Asynchronous Linear Machine with Massive Iron as Secondary*, PCIM 2001, 19-21.6.2001, Nürnberg, 6 pages, CD-ROM
- [40] Hofmann, M.; Binder, A.; Pfeiffer, R.: *Investigations on a Linear Induction Machine for Railway Applications*, IEEE-IEMDC 2001, p.20-26, MIT, Cambridge, Massachusetts, 17.-20.6.2001
- [41] Klohr, M.; Binder, A., Hinkelmann, Ch: *State space control of a high speed rotor on active magnetic bearings*, 10th Int. Symp. On Electromagnetic Fields in Electrical Engineering ISEF 2001, p. 593-598, 20-22.9.2001, Cracow, Poland
- [42] Werle, Th.; Binder, A.: *DC-Actuator with Massive Iron as Secondary*, 3rd Int. Symp. On Linear Drives for Industry Application LDIA 2001, p.52-56, 17-19.10.2001, Nagano, Japan
- [43] Koch, Th.; Binder, A.: *Permanent Magnet Gearless Traction Drive for German High Speed Train ICE 3*, Int. Conf. On Power Electronics ICPE 2001, p. 756-760, 15-17.10.2001, Seoul, Korea
- [43-1] Koch, Th.; Binder, A.: *Permanent Magnet Gearless Traction Drive for German High Speed Train ICE 3*, Korea-Germany Joint Symposium on Advanced Power Electronics, Oct.2001, p.49-53
- [44] Koch, Th.; Körner, O.; Binder, A.: *Direktantriebe für Lokomotiven*, 5. Int. Schienenfahrzeugtagung „Rad 2002“, 20.-22.2.2002, Dresden
- [45] Muetze, A.; Binder, A.: *Investigation of the difference between bearing currents in 11 kW and 110 kW inverter-fed induction motors*, PCIM 2002, 14.-16.5.2002, Nürnberg, 6 pages, CD-ROM

- [46] Lu, T.; Binder, A.: *Losses in inverter-fed permanent magnet high-speed machines*, Proceedings of the Symposium on Power Electronics and Electrical Drives (SPEEDAM), p.C5-39-C5-44, 11.-14.June 2002, Ravello, Italy
- [47] Klohr, M.; Binder, A.: *Design of Carbon Fiber Bandages for High Speed Permanent Magnet Rotors*, Proceedings of the Symposium on Power Electronics and Electrical Drives (SPEEDAM), p.B7-13-B7-18, 11.-14.June 2002, Ravello, Italy
- [48] Koch, Th.; Binder, A.: *Permanent magnet machines with fractional slot winding for electric traction*, Proceedings of the International Conference on Electrical Machines (ICEM), 6 pages, 25.-28. Aug. 2002, Bruges, Belgium
- [49] Muetze, A.; Binder, A.: *Systematic approach to bearing current evaluation in variable speed drive systems*, Proceedings of the International Conference on Electrical Machines (ICEM), 6 pages, 25.-28. Aug. 2002, Bruges, Belgium
- [50] Lu, T.; Binder, A.: *Analytical and experimental analysis of losses in inverter-fed permanent-magnet high-speed machines with surface-mounted magnets*, Proceedings of the International Conference on Electrical Machines (ICEM), 6 pages, 25.-28. Aug. 2002, Bruges, Belgium
- [51] Werle, Th.; Hofmann, M.; Binder, A.: *Booster concepts for increase of tractive effort*, 17th Int. Conf. On Magnetically Levitated Systems and Linear Drives MAGLEV 2002, 3.-5.9.2002, Lausanne, Switzerland, 6 pages, CD-ROM
- [52] Jöckel, A.; Koch, Th.; Binder, A.: *Getriebelose Antriebe für den ICE der nächsten Generation*, VDE Kongreß 2002, p.433-439, 21.-23.10.2002, Dresden
- [53] Binder, A.: *Hochtourige Antriebe mit Permanentmagnetmaschinen und aktiver Magnetlagerung*, In: Tagungsband VDMA "Technik im Dialog –Mechatronik – Chancen und Herausforderungen für die Automatisierungstechnik", 9 pages, Frankfurt/Main, Deutschland, 21.2.2003
- [53-1] Mütze, A.; Binder, A.: *Experimental evaluation of mitigation techniques for bearing currents in inverter-supplied drive systems – Investigations on induction motors up to 560 kW*, Proc. of the Int. Conf. IEEE-IEMDC, 1.-4.6.2003, Madison, Wisconsin, paper no. 10-1-3 (10381), 6 pages, CD-ROM
- [54] Meinert, M.; Binder, A.: *Inrush-Modelling of a single-phase 1-MVA-HTS (High Temperature Superconducting)-Transformer for Rail Vehicles*, IEEE-PES 2003 General Meeting, July 13-17, Toronto, Canada
- [54-1] Mütze, A.; Binder, A.: *Influence of cable and filter configurations on bearing currents in inverter-fed induction motors 11 kW to 500 kW*, Int. Power Conversion & Intelligent Motion (PCIM) Conf., 20-22 May 2003, Nuernberg, Germany, Vol. Intelligent Motion: pp. 41-46
- [55] Körner, O.; Binder, A.: *Feasibility of a Group Drive with Two permanent Magnet Synchronous Traction Motors for Commuter Trains*, 10th Europ. Conf. On Power Electronics and Applications (EPE 2003), 2-4 Sept., Toulouse, France
- [56] Mütze, A.; Binder, A.: *High-Frequency Stator Ground Currents of Inverter-fed Squirrel-cage Induction Motors up to 500 kW*, 10th Europ. Conf. On Power Electronics and Applications (EPE 2003), 2-4 Sept., Toulouse, France

- [57] Meinert, M.; Binder, A: *Operational Influences on the Behaviour of the 1 MVA-High Temperature Superconducting (HTS)-Transformer for Rail Vehicles by an Actual IGBT-Converter*, 10th Europ. Conf. On Power Electronics and Applications (EPE 2003), 2-4 Sept., Toulouse, France
- [58] Rentschler, A.; Binder, A: *Dynamic Simulation of Wound Rotor Induction Machines in an Object oriented Environment using DYMOLA/MODELICA*, Proc. Of the 3rd IASTED Int. Conf. On Power and Energy Systems EuroPES 2003, Sept.3-5, Marbella, Spain, p. 386-390.
- [59] Schneider, T.; Binder, A: *Evaluation of New Surface Mounted Permanent Magnet Synchronous Machine with Finite Element Calculations*, XI Int. Symp. On Electromagnetic Fields in Electrical Engineering (ISEF 2003), 18-20.Sept., Maribor, Slovenia
- [60] Funieru, B.; T.; Binder, A: *Force Generation and Magnetic Stray Flux of Linear DC Actuator for Electric Traction Applications*, 4th Int. Symp. On Linear Drives for Industry Application (LDIA2003), 8-10.Sept., Birmingham, UK, pp.183-186
- [61] Rastogi, A.; Binder, A: *Doubly Fed Induction Generator in Wind Power Plants*, Center of Excellence Conf., Institute of Electric Machines, 25.-27.11.2003, Warsaw, Poland
- [62] Hackmann, W.; Binder, A: *Design and Performance Measurements of PM Wheel-hub drive including Cross-saturation and Minimum Loss Operation*, 5th Int. Symp. On Advanced Electromechanical Motion Systems (ELECTROMOTION 2003), 26-28.Nov, Marrakesh, Morocco, p.325-329
- [63] Binder, A., Zamzow, P.; Löser, F.: *Investigation of Influence of Asymmetries on Currents in Long Stator Winding of TRANSRAPID Linear Motor*, Proc. Of the Symp. On Power Electronics, Electrical Drives, Automation & Motion (SPEEDAM), 16.-18.6.2004, Capri, Italy, vol.1, p.T3B-13 – T3B-16 (full version 6 pages on CD-ROM)
- [64] Aoulkadi, M.; Binder, A.: *Reverse Rotation Test for the Measurement of Stray load losses in 1.5 MW Squirrel-cage induction Generators*, Proc. Of the Symp. On Power Electronics, Electrical Drives, Automation & Motion (SPEEDAM), 16.-18.6.2004, Capri, Italy, vol.2, p.F4B-1 – F4B-4 (full version 6 pages on CD-ROM)
- [65] Binder, A.: *High-Speed Drives with Permanent Magnet Machines and Active Magnetic Bearings*, Proc. Of the German-Corean Symp. 2004 on Power Electronics and Electrical Drives, 27-29.6.2004, Aachen, Germany, p. 43-49
- [66] Binder, A.; Klohr, M.; Lu, T.; Hackmann, W.: *High-Speed Drives with Permanent Magnet Machines and Active Magnetic Bearings*, 11th Int. Power Electronics and Motion Control Conf. (EPE-PEMC), 2-4.9.2004, Riga, Latvia, (full version 6 pages on CD-ROM)
- [67] Hackmann, W., Binder, A.: *Comparison of Induction Motor, Permanent Magnet Motor and Transversal Flux Motor for Wheel Hub Drives in Street Cars*, 11th Int. Power Electronics and Motion Control Conf. (EPE-PEMC), 2-4.9.2004, Riga, Latvia, (full version 6 pages on CD-ROM)
- [68] Klohr, M.; Binder, A., Schneider, T.: *Losses in High Speed Permanent Magnet Motor with magnetic levitation for 40000/min, 40 kW*, Proc. Of the 16th Int. Conf. On Electrical Machines (ICEM), 5-8.9.2004, Krakow, Poland, vol.1, p.93-94, (full version 6 pages on CD-ROM)
- [69] Hackmann, W., Binder, A.: *Asynchronous Wheel Hub Motor with Massive Rotor Iron and Open Rotor Slots for Wheel Hub Drives in Street Cars*, Proc. Of the 16th Int. Conf. On Electrical Machines (ICEM), 5-8.9.2004, Krakow, Poland, vol.2, p.213-214, (full version 6 pages on CD-ROM)

- [70] Mütze, A.; Binder, A.: *Practical Rules for Assessment of Inverter-Induced Bearing Currents in Inverter-Fed AC-Motors up to 500 kW*, Proc. Of the 16th Int. Conf. On Electrical Machines (ICEM), 5-8.9.2004, Krakow, Poland, vol.2, p.405-406, (full version 6 pages on CD-ROM)
- [71] Funieru, B.; Binder, A.: *Designing of an electromagnetic actuator for railway applications using FE programs*, Proc. Of the 11th Int. Symp. On Numerical Field Calculation in Electrical Engineering (IGTE), Graz, 13.-15.9.2004, p.346-351
- [72] Binder, A.: *Befestigung von vergrabenen vs. Oberflächenmagneten bei Hi-Speed-Permanentmagnetmotoren*, Tagungsband des 3. Techn. Tages „Antriebstechnik – Technologie für die Zukunft“, 15.-16.9.2004, Wernigerode
- [73] Hackmann, W.; Binder, A.: *Außenläufer-Transversalflussmaschinen für Radnabenantriebe in Straßenbahnen*, Tagungsband der Konf. „Elektrisch-mechanische Antriebssysteme“, 6.-7.10.2004, Fulda, VDE-Verlag, p.523-535
- [74] Rastogi, A.; Binder, A.: *Entwurfsmethodik für doppeltgespeiste Asynchron-Windgeneratoren im Leistungsbereich bis 5 MW*, Tagungsband der Konf. „Elektrisch-mechanische Antriebssysteme“, 6.-7.10.2004, Fulda, VDE-Verlag, p.657-670
- [75] Mütze, A.; Binder, A.: *Calculation of circulating bearing currents in machines of inverter-based drive systems*, Proc. Of the 39th IEEE IAS Annual Conf.; vol.2, p.720-726, Seattle, Washington, USA, October 3-7, 2004
- [76] Mütze, A.; Binder, A.; Vogel, H.; Hering, J.: *Experimental evaluation of the endangerment of ball bearings due to inverter-induced bearing currents*, Proc. Of the 39th IEEE IAS Annual Conf.; vol.3, p.1989-1995, Seattle, Washington, USA, October 3-7, 2004
- [77] Meinert, M.; Binder, A.: *Active Damping of inrush and DC-currents for High Temperature Superconducting (HTS)-Transformers on Rail vehicles*, Applied Superconductivity Conference ASC 3-8.10.2004, Jacksonville, Florida, USA, paper no. 3 LI 05 (5 pages)
- [78] Neudorfer, H.; Binder, A.; Ade, M.: *Energieeinsparungspotential bei Hybridfahrzeugen durch den Einsatz von innovativen elektrischen Antriebssystemen*, VDE Kongress, 18.-20.10.2004 Berlin, Fachtagungsberichte Band 1, p.459-465
- [79] Rentschler, A.; Binder, A.: *Dynamic simulation of induction machines taking into account winding distribution, slotting and saturation effects*, 5th Int. El. Machines and Drives Conf. (IEEE-IEMDC), 15-18 May 2005, San Antonio, Texas, pp.999-1005
- [80] Muetze, A.; Binder, A.: *Calculation of motor capacitances for prediction of discharge currents in machines of inverter-based drive systems*, Proc. of the 5th Int. El. Machines and Drives Conf. (IEEE-IEMDC), 15-18 May 2005, San Antonio, Texas, pp. 264-270
- [81] Muetze, A.; Binder, A.: *Calculation of the influence of insulated bearings and insulated inner bearing seats on circulating bearing currents in machines of inverter-based drive systems*, Proc. Of the 5th Int. El. Machines and Drives Conf. (IEEE-IEMDC), 15-18 May 2005, San Antonio, Texas, pp. 1068-1074
- [82] Rentschler, A.; Binder, A.: *Dynamic simulation of torque ripple, caused by magnetic air gap asymmetries in induction machines*, Int. Power Conversion & Intelligent Motion (PCIM) Conf., 7-9 June 2005, Nuernberg, Germany, pp.506-511

- [83] Aoulkadi, M.; Binder, A.: *Comparison of different measurement methods for stray load losses in cage induction machines: input-output method, RRT-method and eh-star-method*, IEEE 40th Int. Universities Power Engineering Conference, 7-9 Sept. 2005, Cork, Ireland, CD-ROM, 6 pages
- [84] Aoulkadi, M.; Binder, A.: *The eh-star method for determination of stray load losses in cage induction machines*, 4th Int. Conf. on Energy Efficiency in Motor Drive Systems (EEMODS), 5-8 Sept. 2005, Heidelberg, Germany, CD-ROM, 10 pages
- [85] Werner, U.; Binder, A.: *Dynamic analysis due to eccentricity in asynchronous machines*, 5th IEEE Int. Symp. On Diagnostics for Electric Machines, Power Electronics and Drives (IEEE-SDEMPED), 7-9 Sept. 2005, Vienna, Austria, p.125-130
- [86] Binder, A.; Schneider, T.: *Permanent magnet synchronous generators for regenerative energy conversion – a survey*, 11th European Conf. on Power Electronics and Applications (EPE), 11-14 Sept. 2005, Dresden, Germany, CD-ROM, paper no. 761, 10 pages
- [87] Muetze, A.; Binder, A.: *Generation of High-Frequency Common Mode Currents in Machines of Inverter—Based Drive Systems*, 11th European Conf. on Power Electronics and Applications (EPE), 11-14 Sept. 2005, Dresden, Germany, CD-ROM, paper no. 492, 10 pages
- [88] Aoulkadi, M.; Binder, A.; Joksimović, G.: *Additional losses in high-speed induction machine – removed rotor test*; 11th Europ. Conf. On Power Electronics and Applications (EPE 2005), 12-14 Sept., Dresden, Germany, CD ROM, paper no. 610, 10 pages
- [89] Schneider, T.; Binder, A.; Chen, L.: *Design Procedure of Bearingless High-Speed Permanent Magnet Motors*, Int. Symp. on Electromagnetic Fields in Mechatronics, Electrical and Electronic Engineering (ISEF), 15-17 Sept. 2005, Baiona, Spain, CD-ROM, paper no. EE-3.12, 6 pages
- [90] Funieru, B.; Binder, A.: *Comparison of Measurements and Calculations of a DC Linear Actuator Designed for Railway Applications*, 5th Int. Symp. on Linear Drives for Industrial Applications (LDIA), 25-28 Sept. 2005, Awaji Yumebutai, Hyogo, Japan, p.496-499
- [91] Suess, M.; Anders, M.; Binder, A.: *A Spherical Linear Motor as Direct Drive of an Airborne Optical Infrared Telescope*, 5th Int. Symp. on Linear Drives for Industrial Applications (LDIA), 25-28 Sept. 2005, Awaji Yumebutai, Hyogo, Japan, p. 528-531
- [92] Schneider, T.; Binder, A.: *Fixation of buried and surface mounted magnets in high speed permanent magnet synchronous motors*, 40th IEEE IAS Annual Meeting, Hongkong, China, 2-6 Oct. 2005, Proc. pp. 2843-2848
- [93] Muetze, A.; Binder, A.: *Techniques for Measurement of Parameters Related to Inverter-Induced Bearing Currents*, 40th IEEE IAS Annual Meeting, Hongkong, China, 2-6 Oct. 2005, pp. 1390-1397
- [94] Funieru, B.; Binder, A.: *Linear DC Actuator used as a Tractive Booster for wheel-grip loss situation*, Int. Conf. on Ship Propulsion and Railway Traction Systems (SPRTS), 4-6 Oct. 2005, Bologna, Italy, CD-ROM, 6 pages
- [95] Deak, C.; Binder, A.: *Highly Utilized Permanent Magnet Synchronous Machines with Tooth-wound Coils for Industrial Applications*, 6th Int. Symp. on Electromechanical Motion Systems (ELECTROMOTION), 27-29 Sept. 2005, Lausanne, Switzerland, CD-ROM, 6 pages, paper no.150
- [96] Binder, A.: *HF-gerechte Installation von Lüftungsanlagen mit Frequenzumrichter-Regelung*, Jahrestagung, Tagungsband „Förderkreis Stalklimatetechnik“, Rendsburg, 5.-6.10.2005

- [97] Binder, A.; Schneider, T.; Redemann, Ch.: *Lagerlose Motoren – eine Zukunftstechnologie ?*, Proc. Of the ASB Congress (Antreiben- Steuern –Bewegen), 21.-22.2.2006, Stuttgart, Germany, 12 pages, CD-ROM
- [98] Cui, X.; Funieru, B.; Binder, A.: *PM Generator No-Load Additional Loss Calculation Using FE Models with an Equivalent Current Layer*, Proc. Of the 6th Int. Conf. on Computational Electromagnetics, 4.-6.4.2006, Aachen, Germany, p. 103-104
- [99] de Gersem, H.; Mütze, A.; Binder, A.; Weiland, Th.: *Finite Element Simulation of the Common-Mode Flux in Inverter-fed Induction Machines*, Proc. Of the 6th Int. Conf. on Computational Electromagnetics, 4.-6.4.2006, Aachen, Germany, p.107-108
- [100] Deak; C.; Binder, A.: *Design of Compact Permanent-Magnet Synchronous Motors with Concentrated Windings*, Proc. Of the 10th Int. Conf. on Optimisation of Electrical and Electronic Equipment (OPTIM), 18.-19.5.2006, Brasov, Romania, p.9-14
- [101] Binder, A.; Sabirin, C.R.; Popa, D.D.; Craciunescu, A.: *Modelling and Control of an Active Magnetic bearing System*, Proc. Of the 10th Int. Conf. on Optimisation of Electrical and Electronic Equipment (OPTIM), 18.-19.5.2006, Brasov, Romania, p.37-44
- [102] Aoulkadi, M.; Binder, A.: *Evaluation of Different Measurement Methods to Determine Stray Load Losses in Induction Machines*, Proc. Of the Symp. On Power Electronics, Electrical Drives, Automation & Motion (SPEEDAM), 24.-26.5.2006, Taormina, Italy, S1-13 – S1-18
- [103] Cui, X.; Funieru, B.; Binder, A.: *Calculation of No-Load Additional Losses in the Rotor of StrafloMatrix Synchronous Turbine-Generators*, Proc. Of the Symp. On Power Electronics, Electrical Drives, Automation & Motion (SPEEDAM), 24.-26.5.2006, Taormina, Italy, 6 pages, S3-33 – S3-38
- [104] Werner, U.; Binder, A.: *Rotor dynamic analysis of asynchronous machines including the Finite-Element-Method for engineering low vibration motors*, Proc. Of the Symp. On Power Electronics, Electrical Drives, Automation & Motion (SPEEDAM), 24.-26.5.2006, Taormina, Italy, S33-20 – S33-28
- [105] Feng, L.; Binder, A.; Rentschler, A.; Paweletz, A.; Guenther, D.: *Fault Investigation of Permanent Magnet Synchronous Machine for x-by-wire Application*, Proc. Of the CES/IEEE-PELS Int. Power Electronics and Motion Control Conf.; 13-16-8.2006, Shanghai, China, 5 pages, CD-ROM
- [106] Rastogi, A.; Binder, A.: *Analytical versus Numerical magnet circuit calculation of PM machines at high load saturation*, Proc. of the International Conference on Electrical Machines (ICEM), 2.-5.9.2006, Chania, Greece, 6 pages, CD-ROM
- [107] Deak, C.; Binder, A.; Magyari, K.: *Magnet Loss Analysis of Permanent-Magnet Synchronous Motors with Concentrated Windings*, Proc. of the International Conference on Electrical Machines (ICEM), 2.-5.9.2006, Chania, Greece, 6 pages, CD-ROM
- [108] Feng, L.; Rentschler, A.; Binder, A.; Paweletz, A.: *Fault model of an Inverter-fed PM motor for x-by-wire systems*, Proc. of 4th IFAC Symposium on Mechatronic Systems, 12.-14.9.2006, Heidelberg, Germany, 6 pages, CD-ROM
- [109] Ade, M.; Neudorfer, H.; Binder, A.: *Modellierung des elektrischen Antriebsstrangs von Hybrid-Elektrofahrzeugen*, Tagungsband der Konf. „Elektrisch-mechanische Antriebssysteme“, 27.-28.9.2006, Böblingen, VDI-Berichte 1963, VDI-Verlag, p.141-154

- [110] Werner, U.; Binder, A.: *Rotordynamische Auslegung von überkritisch betriebenen Asynchronmaschinen unter Berücksichtigung der Fundamentsteifigkeit*, Tagungsband der Konf. „Elektrisch-mechanische Antriebssysteme“, 27.-28.9.2006, Böblingen, VDI-Berichte 1963, VDI-Verlag, p.533-546
- [111] Binder, A.; Deak, C.; Schneider, T.: *Erhöhung der Drehmomentdichte von Permanentmagnetmotoren durch Einsatz von Zahnspulentechnologie und intensivierter Kühlung*, 5. Technischer Tag der VEM-Gruppe, 12.-13.9.2006, Wernigerode, CD-ROM
- [112] Binder, A.; Deak, C.: *Increased Torque Density of Permanent-Magnet Motors Using Concentrated Winding and Intensive Cooling*, PCIM 2007, Nürnberg, 6 pages, CD-ROM
- [113] Ade, M.; Binder, A.; Neudorfer, H.: *Elektrische und thermische Simulationsmodelle flüssigkeitsmantelgekühlter Asynchron- und Permanentmagnet-Synchronmaschinen für den Einsatz in Hybrid-Elektrofahrzeugen*, Proc. Of the Conf. “Neue ele. Antriebskonzepte für Hybridfahrzeuge“, 20.-21.3.2007, München, p. 378 - 387
- [114] Binder, A.; Muetze, A.: *Scaling Effects of Inverter-Induced Bearing Currents in AC Machines*, Proc. Of the 6th Int. El. Machines and Drives Conf. (IEEE-IEMDC), 15-18 May 2007, Antalya, Turkey, p. 1477 - 1483
- [115] Aoulkadi, M.; Binder, A.: *Comparison of different evaluation methods to determine stray load losses in induction machines with eh-star method*, Proc. Of the 6th Int. El. Machines and Drives Conf. (IEEE-IEMDC), 15-18 May 2007, Antalya, Turkey, p. 519 - 524
- [116] Cui, X.; Binder, A.; Schlemmer, E.: *Straight-Flow Synchronous Generator Design for Small Hydro Power Plants*, Proc. of the Int. Conf. Clean Electrical Power (IEEE-ICCEP), Capri, Italy, May 21-23, 2007, p. 323 - 328
- [117] Schlemmer, E.; Ramsauer, F.; Binder, A.: *HYDROMATRIX and StrafloMatrix – Electric Energy from Low Head Hydro Potential*, Proc. of the Int. Conf. Clean Electrical Power (IEEE-ICCEP), Capri, Italy, May 21-23, 2007, p. 329 - 334
- [118] Funieru, B.; Binder, A.: *Analysis of the force output and generated losses of a linear DC actuator supplied with a power electronic converter*, Proc. COMPUMAG, 2007, paper no. PB8-22, CD-ROM, Aachen, Germany
- [119] Aoulkadi, M.; Binder, A.: *Influence Of Unbalanced Impedance On Stray Load Loss Determination With Eh-Star Method*, Proc. of the 4th Int. Conf. on Energy Efficiency in Motor Drive Systems (EEMODS), 10-13 June 2007, Beijing, China, Vol. II, p. 542-553
- [120] Binder, A.; Guellich, P.; Funieru, B.; Knopik, T.: *Ausnutzung der Eisenremanenz zur Positionserfassung beim Auswuchten von Kleinrotoren*, Proc. of the Conf. “Innovative Klein- und Mikroantriebstechnik”, 2007, Augsburg, p. 81-86
- [121] Knopik, T.; Binder, A.; Güllich, P.: *Rotor angle detection via shaft iron remanence for the balancing process of small rotors*, 6th IEEE Int. Symp. On Diagnostics for Electric Machines, Power Electronics and Drives (IEEE-SDEMPED), 6-8 Sept. 2007, Cracow, Poland, p.291-296
- [122] Petrovic, L.; Binder, A.; Deak, C.; Irimie, D.; Reichert, K.; Purcarea, C.: *Numerical methods for Calculation of Eddy Current Losses in permanent magnets of Synchronous Machines*, ISEF, Prague, 13.-15. Sept. 2007, p. 275-26 (digest), full paper 6 pages: CD-ROM, published in IOS Press: Advanced Computer Techniques in Applied Electromagnetics, paper no. B.1-3

- [123] Henze, O.; Rocks, A.; De Gersem, H.; Weiland, Th.; Hinrichsen, V.; Binder, A.: *A network model for inverter-fed induction-motor drives*, 12th European Conf. on Power Electronics and Applications (EPE), 2-5 Sept. 2007, Aalborg, Denmark, CD-ROM, paper no. 867, 10 pages
- [124] Chevailler, M.; Binder, A.: *Short-circuit faults in distributed and concentrated windings of PM synchronous motors*, 12th European Conf. on Power Electronics and Applications (EPE), 2-5 Sept. 2007, Aalborg, Denmark, CD-ROM, paper no. 332, 10 pages
- [125] Janjic, B.; Binder, A.; Bischoff, V.; Ludwig, G.: *Design of PM integrated motor-drive system for axial pumps*, 12th European Conf. on Power Electronics and Applications (EPE), 2-5 Sept. 2007, Aalborg, Denmark, CD-ROM, paper no. 383, 10 pages
- [126] Binder, A.; Aoulkadi, M.: *Die eh-Stern-Methode – ein alternatives Messverfahren für die lastabhängigen Zusatzverluste in Asynchronmaschinen*, 6. Techn. Tag „Antriebstechnik – Technologie für die Zukunft“, 4.-6.9.2007, Wernigerode, CD-ROM
- [127] Magdun, O.; Binder, A.; Rocks, A.; Henze, O.: *Prediction of Common Mode Ground Current in Motors of Inverter-based Drive Systems*, ACEMP'07 and ELECTROMOTION'07 Joint meeting, 10-12 Sept. 2007, Bodrum, Turkey, p. 806-811
- [128] Binder, A.: *High Speed Drives*, ACEMP'07 and ELECTROMOTION'07 Joint meeting, 10-12 Sept. 2007, Bodrum, Turkey, p.9-16
- [129] Gholizad, H.; Funieru, B.; Binder, A.; Mirsalim, M.: *A modified magnetic equivalent circuit method for circulating the motional eddy current*, 6th Int. Symp. On Linear Drives for Industry Application LDIA 2007, 16-19.9.2007, Lille, France, short paper: p. 37-38, long paper: 6 pages, CD-ROM
- [130] Schneider, T.; Binder, A.: *Design and Evaluation of a 60000 rpm Permanent magnet Bearingless High Speed Motor*, 7th Int. Conf. On Power Electronics and Drive Systems (IEEE-PEDS), 27-30 Nov. 2007, Bangkok, Thailand, 6 pages, CD-ROM, paper no. 72
- [131] Binder, A.: *Energiesparen mit moderner Antriebstechnik – Potentiale und technische Möglichkeiten*, Int. ETG-Kongress 2007, Fachkonferenz “Hybridantriebstechnik – Energieeffiziente elektrische Antriebe”, 23.-24. Oktober 2007, Karlsruhe, ETG-Fachbericht 107, p. 17-26
- [132] Funieru, B.; Binder, A.: *Design of a linear transversal flux DC actuator used for railway applications*, Korea-Germany Joint Symposium on Power Electronics, 18-21 Oct. 2007, POSTECH Int. Center, Pohang, Korea, p. 25-30
- [133] Schneider, T.; Binder, A.: *Umrichtergespeiste Hochdrehzahlantriebe*, Proc. Of the ASB Congress (Antreiben-Steuern-Bewegen), 19.-20.2.2008, Stuttgart, Germany, 14 pages, CD-ROM
- [134] Schneider, T.; Petersen, J.; Binder, A.: *Influence of Pole Pair Combinations on High-Speed Bearingless Permanent Magnet Motor Performance*, Proc. of the International Conference Power Electronics, Machines and Drives (PEMD), 2008, York, England, p. 707-711
- [135] Neudorfer, H.; Wicker, N.; Binder, A.: *Comparison of three different electric POWER TRAINS for the use in hybrid electric vehicles*, Proc. of the International Conference Power Electronics, Machines and Drives (PEMD), 2008, York, England, p. 510-514

- [136] Gholizad, H.; Funieru, B.; Binder, A.: *Direct Modeling of Motional Eddy Currents in Highly Saturated Solid Conductors by Magnetic Equivalent Circuit Method*, Proc. of the 13th Biennial IEEE Conf. on Elektromagn. Field Comp. (CEFC), 11.-15.5.2008, Athens, Greece, 6 pages (CD-ROM)
- [137] Deak, C.; Petrovic, L.; Binder, A.; Mirzaei, M.; Irimie, D.; Funieru, B.: *Calculation of eddy current losses in permanent magnets of synchronous machines*, Proc. Of the Symp. On Power Electronics, Electrical Drives, Automation & Motion (SPEEDAM), 11.-13.6.2008, Ischia, Italy, paper no. MEM201, p. 26-31 (CD-ROM)
- [138] Binder, A.: *Potentials for Energy Saving with Modern Drive Technology –a Survey*, Proc. Of the Symp. On Power Electronics, Electrical Drives, Automation & Motion (SPEEDAM), 11.-13.6.2008, Ischia, Italy, per no. SUR186, p. 90 – 95 (CD-ROM)
- [139] Binder, A.; Mirzaei, M.: *Permanent magnet savings in high speed electrical motors*, Proc. Of the Symp. On Power Electronics, Electrical Drives, Automation & Motion (SPEEDAM), 11.-13.6.2008, Ischia, Italy, paper no. BD_185, p. 1276 - 1281 (CD-ROM)
- [140] Henze, O.; Cay, Z.; Magdun, O.; DeGersem, H.; Weiland, T.; Binder, A.: *A Stator Coil Model for Studying High-Frequency Effects in Induction Motors*, Proc. Of the Symp. On Power Electronics, Electrical Drives, Automation & Motion (SPEEDAM), 11.-13.6.2008, Ischia, Italy, paper no. MEM086, p. 609 - 613 (CD-ROM)
- [141] Sabirin, C.; Binder, A.: *Rotor Levitation by Active Magnetic Bearing Using Digital State Controller*, 13th Int. Power Electronics and Motion Control Conf. (EPE-PEMC), 1.-3.9.2008, Poznan, Poland, pp. 1648 - 1655 (full version 6 pages on CD-ROM)
- [142] DeGersem, H.; Henze, O.; Weiland, Th.; Binder, A.: *Transmission-Line Modelling of Wave Propagation Effects in Machine Windings*, 13th Int. Power Electronics and Motion Control Conf. (EPE-PEMC), 1.-3.9.2008, Poznan, Poland, pp. 2416 - 2423 (full version 6 pages on CD-ROM)
- [143] Takahashi, A.; Kikuchi, S.; Wakui, S.; Miyata, K.; Mikami, H.; Ide, K.; Binder, A.: *Transient-Torque Analysis for Line-Starting Permanent-Magnet Synchronous Motors*, Proc. of the International Conference on Electrical Machines (ICEM), 6.-9.9.2008, Vilamoura, Portugal, 6 pages, CD-ROM
- [144] Munteanu, G.; Binder, A.: *Parasitic radial rotating force in magnetically levitated cage induction machines*, Proc. of the International Conference on Electrical Machines (ICEM), 6.-9.9.2008, Vilamoura, Portugal, 6 pages, CD-ROM
- [145] Hagen, R.; Binder, A.; Aoulkadi, M.; Bradley, K.: *Comparison of measured and analytically calculated stray load losses in standard cage induction machines*, Proc. of the International Conference on Electrical Machines (ICEM), 6.-9.9.2008, Vilamoura, Portugal, 6 pages, CD-ROM
- [146] Janjic, B.; Binder, A.; Bischof, V.; Ludwig, G.: *Entwurf und Bau eines magnetgelagerten integrierten Pumpenantriebs*, Tagungsband der Konf. „Elektrisch-mechanische Antriebssysteme“, 23.-24.9.2008, Böblingen, VDE/ETG-Fachbericht, p. 41-46, VDE-Verlag, Offenbach
- [147] Cui, X.; Funieru, B.; Binder, A.: *3D Thermal Calculation of a Straight-Flow Permanent Magnet Synchronous Generator*, Proc. of the IGTE Symposium, Graz, Austria, Sept. 2008, p. 117 - 122, CD-ROM
- [148] Funieru, B.; Binder, A.: *Thermal Design of a Permanent Magnet Motor used for Gearless Railway Traction*, Proc. of the 34th Ann. Conf. of the IEEE Industrial Electronics Society (IECON 2008), 10-13 Nov. 2008, Orlando, Florida, USA, p. 2061-2066

- [149] Petrovic, L.; Binder, A.; Deak, C.; Irimie, D.; Reichert, K.; Purcarea, C.: *Numerical methods for Calculation of Eddy Current Losses in permanent magnets of Synchronous Machines*, Advanced Computer Techniques in Applied Electromagnetics, S. Wiak et al. (Eds.), IOS Press, 2008, p. 116-123
- [150] Takahashi, A.; Kikuchi, S.; Miyata, K.; Wakui, S.; Mikami, H.; Ide, K.; Binder, A.: *Torque separation for line-starting permanent magnet synchronous motors*, IEEJ - Technical Meeting on Rotating Machinery, Nov. 2008, Tokio, IEE Japan, paper number: RM08-110, p. 13-18
- [151] Binder, A.: *Technische Optimierungspotentiale bei elektrischen Antriebssystemen*, IHK –Fachforum “Kosten- und Energiesparen durch effiziente elektrische Antriebe”, 20.1.2009, Nuernberg, in: Schriften und Arbeitspapiere der IHK Nürnberg für Mittelfranken, Nr. 4254/09
- [152] Mirzaei, M.; Binder, A.; Qu, Y.: *Performance Computations of Direct Drive High Power Permanent Magnet Synchronous Machines with Different Rotor and Stator Structures for Locomotive Traction Applications*, PCIM 2009, 12.-14. May 2009, Nuernberg, p. 83-88, CD-ROM
- [153] Hagen, R.; Knopik, T.; Binder, A.: *Comparison of numerical and analytical simulation of saturated zig-zag flux in induction machines*, Proc. Of the 7th Int. El. Machines and Drives Conf. (IEEE-IEMDC), 3-6 May 2009, Miami, USA, p. 1325-1330
- [154] Binder, A.: *Elektromotorische Antriebe für Hybrid- und Elektrofahrzeuge*, Tagungsband 1. VDI-Wissensforum Hybrid- und Elektroantriebe für Kraftfahrzeuge, 22.-23.6.2009, Frankfurt/Main, 20 pages
- [155] Mirzaei, M.; Binder, A.; Funieru, B.: *Acoustic noise calculation for high-speed PM motors*, 8th Int. Symp. On Advanced Electromechanical Motion Systems (ELECTROMOTION 2009), 1-3. July, 2009, Lille, France, paper OS1-4, no. EM09EPECJS-061_DE
- [156] Deak, C.; Binder, A.; Funieru, B.; Mirzaei, M.: *Extended field weakening and overloading of high-torque density permanent magnet motors*, IEEE Energy Conversion Congress and Exposition (ECCE 2009), 20.-24.9.2009, San Jose, USA, p. 2347-2353
- [157] Magdun, O.; Binder, A.; Purcarea, C.; Rocks, A.; Funieru, B.: *Modelling of Asymmetrical Cables for an Accurate Calculation of Common Mode Ground Currents*, IEEE Energy Conversion Congress and Exposition (ECCE 2009), 20.-24.9.2009, San Jose, USA, p. 1075-1082
- [158] Ade, M.; Binder, A.: *Modelling the drive train for two Parallel Hybrid Electric Vehicles in MATLAB/Simulink*, 5th IEEE International Vehicle Power and Propulsion Conference, September 7-10, 2009, Dearborn, Michigan, 48128 USA, paper no. 224, p. 592-600
- [159] Morrison, P.; Binder, A.; Funieru, B.; Sabirin, C.: *Drive train design for medium-sized zero emission electric vehicles*, 13th Europ. Conf. On Power Electronics and Applications (EPE 2009), 8-10 Sept., Barcelona, Spain, paper no. 226, 10 pages
- [160] Magdun, O.; Binder, A.; Purcarea, C.; Rocks, A.: *High-Frequency Induction Machine Models for Calculation and Prediction of Common Mode Stator Ground Currents in Electric Drive Systems*, 13th Europ. Conf. On Power Electronics and Applications (EPE 2009), 8-10 Sept., Barcelona, Spain, paper no. 223, 8 pages, CD-ROM
- [161] Purcarea, C.; Mutschler, P.; Magdun, O.; Rocks, A.; Binder, A.: *Time Domain Simulation Models for Inverter-Cable System in Electrical Drives*, 13th Europ. Conf. On Power Electronics and Applications (EPE 2009), 8-10 Sept., Barcelona, Spain, paper no. 103, 10 pages, CD-ROM

- [162] Binder, A.; Knopik, T.; Hagen, R.: *Comparison of numerical and analytical calculations of the cage induction motor performance including zig-zag flux saturation*, EEMODS 2009, 14.-17.9.2009, Nantes, France, 12 pages, CD-ROM
- [162-1] Binder, A.: *Hochausgenutzte Permanentmagnetsynchronmaschinen für industrielle Anwendungen*, 8. Technischer Tag der VEM-Gruppe, 29.-30.9.2009, Wernigerode, CD-ROM
- [163] Mirzaei, M.; Binder, A.; Funieru, B.: *Erhöhung der Drehmomentdichte hochpoliger Permanentmagnet-Synchron-Zahnspulenmotoren durch Nutzung des Reluktanzmoments*, Int. ETG-Kongress (VDE), 27.-28.10.2009, Düsseldorf, Germany, p. 23-28
- [164] Deak, C.; Binder, A.; Funieru, B.: *High torque density permanent magnet motors with big field weakening capability*, Int. ETG-Kongress (VDE), 27.-28.10.2009, Düsseldorf, Germany, p. 17-22
- [165] Magdun, O.; Binder, A.: *Calculation of Roller and Ball Bearing Capacitances and Prediction of EDM Currents*, IECON 2009, 3.-5.11.2009, Porto, Portugal, p. 1051-1056
- [166] Gessese, Y.; Binder, A.: *Axially slit high-speed solid-rotor induction motor technology with copper end-rings*, ICEMS 2009, 15.-18.11.2009, Tokyo, Japan, paper no. LS3F-1, 6 pages, CD-ROM
- [167] Funieru, B.; Binder, A.: *Simulation of the Winding Overhangs in Permanent Magnet Synchronous Machines*, Proc. of the 17th Conf. on Comp. of Electromagn. Fields COMPUMAG 2009, 22.-26.11.2009, Florianopolis, Brazil, paper no. OD1.3, p. 895-896
- [168] Binder, A.; Magdun, O.; Gemeinder, Y.: *EDM Bearing Currents in Inverter-Fed AC Machines*, VDE/ETG-Workshop "Stromrichtergespeiste Elektromaschinen", 8. 2. 2010, Univ. Hannover, Germany, p.73-85
- [169] Munteanu, G.; Binder, A., Schneider, T.; Funieru, B.: *No-load tests of a 40 kW High-Speed Bearingless Permanent Magnet Synchronous Motor*, 20th Int. Symp. On Power Electronics, Ele. Drives, Automation and Motion SPEEDAM 2010, 14.-16. June 2010, Pisa, Italy, p. 1460-1465
- [170] Gessese, Y.; Binder, A.: *Analysis of the effect of radial surface grooves on motor losses of high speed solid rotor induction motor*, 20th Int. Symp. On Power Electronics, Ele. Drives, Automation and Motion SPEEDAM 2010, 14.-16. June 2010, Pisa, Italy, p. 1762-1767
- [171] Mirzaei, M.; Binder, A.; Deak, C.: *3D Analysis of Circumferential and Axial Segmentation Effect on Permanent Magnet Eddy Current Losses in Permanent Magnet Synchronous Machines with Concentrated Windings*, ICEM 2010, 6.-8. Sept. 2010, Rome, Italy, paper no. RF-007021, 6 pages, CD-ROM
- [172] = [53-1] Mütze, A.; Binder, A.: *Experimental evaluation of mitigation techniques for bearing currents in inverter-supplied drive systems – Investigations on induction motors up to 560 kW*, Proc. of the Int. Conf. IEEE-IEMDC, 1.-4.6.2003, Madison, Wisconsin, paper no. 10-1-3 (10381), 6 pages, CD-ROM
- [173] Takahashi, A.; Kikuchi, S.; Miyata, K.; Wakui, S.; Mikami, H.; Ide, K.; Binder, A.: *Dynamic and Steady-State Performance of Line-Starting Permanent Magnet Motors*, ICEM 2010, 6.-8. Sept. 2010, Rome, Italy, paper no. RF-005363, 6 pages, CD-ROM
- [174] Magdun, O.; Binder, A.; Gemeinder, Y.: *Investigation of Influence of Bearing Load and Bearing Temperature on EDM Bearing Currents*, IEEE-ECCE 2010, Atlanta, Georgia, 12.-16. Sept. 2010, paper no. EC-0456, p. 2733-2738

- [175] Schneider, T.; Binder, A.: *Entwurf und experimentelle Untersuchung eines lagerlosen permanenterregten Synchron-Hochdrehzahlmotors für 60000/min*, 8. ETG/GMM-Fachtagung „Innovative Klein- und Mikroantriebstechnik“, 22.-23. Sept. 2010, Würzburg, Germany, p. 31-36
- [176] Gessese, Y.; Binder, A.: *Design and analysis of specific high-speed solid rotor induction motor with copper end rings*, IEEE-CEFC 2010, 9.-12.5.2010, Chicago, 4 pages, CD-ROM, paper no. 1336, IEEE 978-1-4244-7061-7/10
- [177] = [54-1] Mütze, A.; Binder, A.: *Influence of cable and filter configurations on bearing currents in inverter-fed induction motors 11 kW to 500 kW*, Int. Power Conversion & Intelligent Motion (PCIM) Conf., 20-22 May 2003, Nuernberg, Germany, Vol. Intelligent Motion: pp. 41-46
- [178] Magdun, O.; Binder, A.: *Representation of Iron Core and Dielectric Losses for Calculation of Common Mode Stator Ground Currents in Inverter-Fed AC Machines*, OPTIM 2010, May 20-22, Brasov, Romania, p. 371-376
- [178-1] Binder, A.; Knopik, T.: *Elektromotorische Antriebe für Hybrid- und Elektrofahrzeuge*, Tagungsband 3. VDI-Wissensforum „Hybrid- und Elektroantriebe für Kraftfahrzeuge“, 9.-10.06.2010, Frankfurt/Main, 15 pages
- [178-2] Binder, A.; Knopik, T.: *Elektromotorische Antriebe für Hybrid- und Elektrofahrzeuge*, E-MOTIVE, Expertenforum Elektrische Fahrzeugantriebe (FVA), 7.-8.9.2010, Darmstadt, CD-ROM, 15 pages
- [178-3] Funieru, B.; Binder, A.: *Simulation of the Air gap in 3D Models of Electrical machines*, Proc. of the 14th Int. IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Graz, Austria, 19.-22.9.2010, p. 373 - 378, CD-ROM
- [179] Magdun, O.; Gemeinder, Y.; Binder, A.: *Prevention of Harmful EDM Currents in Inverter-Fed AC Machines by Use of Electrostatic Shields in the Stator Winding Overhang*, Proc. of the Int. Conf. IECON 2010, Nov. 7-10, Glendale, USA, p.956-961
- [180] Mirzaei, M.; Funieru, B.; Binder, A.: *Analysis of contact resistance effect between magnet segments on eddy current losses*, Proc. of the 8th Int. Conf. on Computation in Electromagnetics CEM 2011, 11-14.4.2011, Wroclaw, Poland, p. 66-67
- [181] Gholizad, H.; Binder, A.: *Analytical Modelling of variable Impedance Induction Machines*, Proc. of the Int. Conf. IEEE-IEMDC, 15.-18.5.2011, Niagara Falls, Canada, paper no. 15693-676407, 6 pages, CD-ROM
- [182] Binder, A.; Funieru, B.; Mirzaei, M.; Zamzow, B.; Waidhauser, R.: *Forces Analysis in a Large Linear Synchronous Motor*, 8th Int. Symp. On Linear Drives for Industry Application LDIA 2011, 3.-6.7.2011, Eindhoven, Netherlands, paper no. 242
- [183] Funieru, B.; Mirzaei, M.; Binder, A.: *Full and Simplified Loss Calculation FEM Models for Segmented Surface Permanent Magnet Machines*, Proc. of the Int. Conf. COMPUMAG, 12.-15.7.2011, Sydney, Australia, paper PD5.2 (ID 785)
- [184] Mink, F.; Binder, A.: *Parametric Model of PMSM Considering the Influence of Magnetic Saturation*, Korea-Germany Joint Symposium on Power Electronics, 24-29 Aug. 2011, TU München, p. 67-73
- [185] Knopik, T.; Binder, A.: *Prediction of the sound power levels of squirrel cage induction machines in different operation points taking into account mechanical boundary conditions for modal analysis*, Proc.

of the European Conference on Power Electronics (EPE2011), 30.8.-1.9.2011, Birmingham, UK, paper no. 0001, 10 pages, CD-ROM

- [186] Magdun, O.; Gemeinder, Y.; Binder, A.; Reis, K.: *Calculation of Bearing and Common-Mode Voltage for Prediction of Bearing Failures Caused by EDM Currents*, 8th IEEE Int. Symp. On Diagnostics for Electric Machines, Power Electronics and Drives (IEEE-SDEMPED), 5-8 Sept. 2011, Bologna, Italy, 6 pages, CD-ROM
- [187] Knopik, T.; Binder, A.: *Investigations on a combined star-polygon poly-phase winding for an induction machine to reduce parasitic harmonic effects*, Proc. of the 7th Int. Conf. on Energy Efficiency in Motor Drive Systems (EEMODS), 12.-14.9.2011, Alexandria, USA, p.1-14, CD-ROM
- [188] Gholizad, H.; Binder, A.: *Measurement results of a Variable Impedance Induction Motor prototype*, Tagungsband der Konf. „Elektrisch-mechanisch-hydraulische Antriebssysteme“, 13.-14.9.2011, Nürtingen, VDI-Berichte 2138, VDI-Verlag, p.13-22
- [189] Knopik, T.; Binder, A.: *Einsatz einer mehrphasigen Wicklung in Stern-Polygon-Mischschaltung für Kurzschlussläufer-Asynchronmotoren zur Steigerung der Energieeffizienz*, Tagungsband der Konf. „Elektrisch-mechanisch-hydraulische Antriebssysteme“, 13.-14.9.2011, Nürtingen, VDI-Berichte 2138, VDI-Verlag, p.23-34
- [190] Knopik, T.; Binder, A.: *Measurement proofed analytical and numerical models for calculation of the teeth flux pulsations and harmonic torques of skewed squirrel cage standard induction machines*, IEEE Energy Conversion Congress and Exposition (ECCE 2011), 17.-22.9.2011, Phoenix, Arizona, USA, p.162-169
- [191] Munteanu, G.; Binder, A.; Schneider, T.: *Losses Measurement of a 40 kW High-Speed Bearingless PM Synchronous Motor*, IEEE Energy Conversion Congress and Exposition (ECCE 2011), Phoenix, Arizona, USA, 17-22.9.2011, p.722-729
- [192] Binder, A.; Munteanu, G.: *Entwicklung und Erprobung von lagerlosen Hochdrehzahl-PM-Synchronmaschinen*, 10. Technischer Tag der VEM-Gruppe, 27.-28.9.2011, Wernigerode, CD-ROM
- [193] Dewenter, S.; Binder, A.; Holub, K.-H.: *Green Move – Hybridbusse für Darmstadt*, Techn. Tagung „Hybridnahverkehrsbusse“, 27.-28.9.2011, Haus der Technik, p. 1-14
- [194] = [178-1] Binder, A.; Knopik, T.: *Elektromotorische Antriebe für Hybrid- und Elektrofahrzeuge*, Tagungsband 3. VDI-Wissensforum „Hybrid- und Elektroantriebe für Kraftfahrzeuge“, 9.-10.06.2010, Frankfurt/Main, 15 pages
- [195] = [178-2] Binder, A.; Knopik, T.: *Elektromotorische Antriebe für Hybrid- und Elektrofahrzeuge*, E-MOTIVE, Expertenforum Elektrische Fahrzeugantriebe (FVA), 7.-8.9.2010, Darmstadt, CD-ROM, 15 pages
- [196] Binder, A.; Knopik, T.: *Elektromotorische Antriebe für Hybrid- und Elektrofahrzeuge*, Tagungsband 3. VDI-Wissensforum „Hybrid- und Elektroantriebe für Kraftfahrzeuge“, 16.-17.11.2011, Frankfurt/Main, 15 pages
- [197] Mink, F.; Kubasiak, N.; Ritter, B.; Binder, A.: *Parametric Model and Identification of PMAM Considering the Influence of Magnetic Saturation*, OPTIM 2012, 24-26.5.2012, Brasov, Romania, paper no. RD-000582, 9 pages, CD-ROM

- [198] Gholizad, H.; Binder, A.: *Design and Modelling of a Variable Impedance Induction Motor*, SPEEDAM 2012, 20.-22.6.2012, Sorrento, Italy, p. 120-125
- [199] Munteanu, G.; Binder, A.; Dewenter, S.: *Five-Axis Magnetic Suspension with Two Conical Air Gap Bearingless PM Synchronous Half-Motors*, SPEEDAM 2012, 20.-22.6.2012, Sorrento, Italy, p. 1246-1251
- [200] Magdun, O.; Binder, A.: *An iron Core Impedance Model for Calculating High Frequency Common Mode Currents and Shaft Voltages in Inverter-Fed AC Machines*, SPEEDAM 2012, 20.-22.6.2012, Sorrento, Italy, p. 135-140
- [201] Magdun, O.; Binder, A.: *The High-Frequency Induction Machine Parameters and Their Influence on the Common Mode Stator Ground Current*, ICEM 2012, 2-4.9.2012, Marseille, 6 pages, CD-ROM
- [202] Funieru, B.; Binder, A.: *Simulation of Electrical Machines End Effects with Reduced Length 3D FEM Models*, ICEM 2012, 2-4.9.2012, Marseille, 6 pages, CD-ROM
- [203] Takahashi, A.; Kikuchi, S.; Mikami, H.; Ide, K.; Binder, A.: *d-q- Space Vector Analysis for Line-Starting Permanent Magnet Synchronous Motors*, ICEM 2012, 2-4.9.2012, Marseille, 6 pages, CD-ROM
- [204] Strauch, M.; Klumpp, N.; Binder, A.: *Parameteridentifikation und Modellierung von Lithium-Eisen-Phosphat-Akkumulatoren für die Verwendung in Modellen elektrischer Fahrzeuge*, Tagungsband zur Elektromobilitätsausstellung (EMA) 21.-22.9.2012, Nürnberg
- [205] Binder, A.; Munteanu, G.: *Fünffachsig magnetische Lagerung mit zwei konischen lagerlosen PM-Synchron-Halbmotoren*, 11. Technischer Tag der VEM-Gruppe, 25.-26.9.2012, Wernigerode, CD-ROM
- [206] Dewenter, S.; Binder, A.; Strauch, M.: *Simulation model for a serial hybrid bus and comparison with measurements of the real bus*, IEEE-VPPC 2012, Oct. 9-12, Seoul, Korea, p. 863-868
- [207] Strauch, M.; Dewenter, S.; Binder, A.; Nam, K. H.: *Calculation of the electromagnetic characteristics of an electrically excited synchronous motor for an EV*, IEEE-VPPC 2012 Oct. 9-12, Seoul, Korea, p. 1086-1091
- [208] Munteanu, G.; Binder, A.: *Bearingless PM Motor Levitation Systems*, Proc. of the Int. Conf. ICEMS 2012, 22.-24.10.2012, Sapporo, Japan, 6 pages, CD-ROM (invited)
- [209] Funieru, B.; Binder, A.: *Design of a PM Direct Drive Synchronous Generator used in a Tidal Stream Turbine*, Proc. of the Int. Conf. Clean Electrical Power (IEEE-ICCEP), Alghero, Sardegna, Italy, 11.-13. 6. 2013, p.197-202
- [210] Binder, A.: *Hochdrehzahlantriebe und mögliche Einsatzgebiete*, Technisches Kolloquium „Welten von morgen“, 27.6.2013, WITTENSTEIN motion control GmbH, Igersheim-Harthausen
- [211] Magdun, O.; Blatt, S.; Binder, A.: *Calculation of Stator Winding Parameters to Predict the Voltage Distributions in Inverter Fed AC Machines*, 9th IEEE Int. Symp. On Diagnostics for Electric Machines, Power Electronics and Drives (IEEE-SDEMPED), 27-30 Aug. 2013, Valencia, Spain, p.697-703
- [212] Wang, J.; Binder, A.: *Self-sensing magnetic bearings using multiple sampling of currents alone*, Proc. European Conference on Power Electronics (EPE), 3.-5.9.2013, Lille, France, paper no. 0210, 10 pages, CD-ROM

- [213] Janjic, B.; Binder A.: *Optimierung eines magnetisch gelagerten integrierten Antriebs für eine Axialpumpenstufe aus strömungstechnischer Sicht*, Elektrisch-mechanisch-hydraulische Antriebssysteme 2013, 17-18.9.2013, Nürtingen, p.108-115
- [214] Magdun, O.; Binder A.: *Rotor Impedance of the High-Frequency Circulating Bearing Current Path in Inverter-Fed AC Machines*, IEEE Energy Conversion Congress and Exposition (IEEE-ECCE 2013), 15-19.9.2013, Denver, Colorado, USA, p. 3512-3519
- [215] Gemeinder, Y.; Magdun, O.; Binder, A.: *Schmierstoffeinfluss auf EDM-Lagerströme und Maßnahmen zu ihrer Verringerung*, 12. Technischer Tag der VEM-Gruppe, 24-25.9.2013, Wernigerode, CD-ROM
- [216] Wang, J.; Binder, A.: *Current slope calculation in FPGA for sensorless control technique and associated slope based predictive precise current control*, United Symp. SLED 2013 & PRECEDE 2013, 17.-19.10.2013, Munich, Germany, 8 pages, CD-ROM
- [217] An, J.; Binder, A.; Sabirin, C. R.: *Loss measurement of a 30 kW High Speed Permanent Magnet Synchronous Machine with Active Magnetic Bearings*, Proc. of the Int. Conf. ICEMS 2013, 22-24.10.2013, Busan, Korea, p. 905-910
- [218] Knopik, Th.; Binder, A.; Lehr, M.: *Auslotung maximal erreichbarer Wirkungsgrade von vierpoligen Käfigläufer-Normasynchronmotoren im Leistungsbereich von 15 kW*, Int. ETG-Kongress 2013, 5.-6.11. 2013, Berlin, Deutschland, 8 pages, CD-ROM
- [219] Reis, K.; Binder, A.: *Radnabenantriebe als Antriebskonzept für Elektrofahrzeuge*, Tagung „Elektrische Antriebstechnologie für Hybrid- und Elektrofahrzeuge“, expert-Verlag, Editor: Haus der Technik Essen Fachbuch Bd. 131, München, 26-27.11.2013, p.72-84
- [220] König, R.; An, J.; Binder, A.; Rinderknecht, S.: *Effizienzsteigerung durch optimale Abstimmung von Getriebe und E-Maschine am Beispiel des Two-Drive-Transmission*, Tagung „Elektrische Antriebstechnologie für Hybrid- und Elektrofahrzeuge“, expert-Verlag, Editor: Haus der Technik Essen Fachbuch Bd. 131, München, 26-27.11.2013, p.85-97
- [221] Mink, F.; Binder, A.; Beineke, St.; Lutz, J.: *Regelung von PM-Synchronmaschinen unter Berücksichtigung von Sättigungseffekten*, Proc. Fachkonferenz Elektrische Automatisierung SPS/IPC/Drives, 26.-28. Nov. 2013, Nürnberg, 10 pages, CD-ROM
- [222] Reis, K.; Lehr, M.; Binder, A.: *Comparison of axial-flux and radial-flux machines for use in wheel-hub drives*, Tagung „Advanced E-Motor Technology 2014“, Frankfurt/Main, 25-26.02.2014
- [223] Messenger, G.; Binder, A.: *Comparison of conventional and modified winding for high speed bearingless permanent magnet synchronous motor applications*, Proc. Of the 14th Int. Conf. on Optimisation of Electrical and Electronic Equipment (OPTIM), 22.-24.5.2014, Brasov, Romania
- [224] Deusinger, B.; Lehr, M.; Binder, A.: *Determination of efficiency of permanent magnet synchronous machines from summation of losses*, Proceedings of the Symposium on Power Electronics and Electrical Drives (SPEEDAM), 18.-20.6.2014, Ischia, Italy, p. 613-618
- [225] Binder, A.: *Analytische Auslegung der fremderregten Synchronmaschine*, ECPE-Cluster-Seminar “Die fremderregte Synchronmaschine”, 1.-2. 7. 2014, Nürnberg, 38 Seiten
- [226] Wang, J.; Binder, A.: *Position Estimation for Self-Sensing Magnetic Bearings Based on Double Detection of Current Slopes*, Proc. of the 14th Int. Symp. on Magnetic Bearings (ISMB 2014), Linz, Austria, 11.-14.8.2014, p. 673-678

- [227] Messenger, G.; Gemeinder, Y.; Binder, A.: *Synthetic test-bench for measurement of bearing-currents in inverter fed drives*, Proc. EPE-ECCE 2014, 26.-29.8.2014, Lappeenranta, Finland, 10 pages
- [228] Funieru, B.; Binder, A.: *3D numerical calculation method of electrical machines with time efficient air gap coupling and stabilized torque and force calculation*, Proceedings of the International Conference on Electrical Machines (ICEM), 3.-5. Sept. 2014, Berlin, p. 948-954
- [229] Reis, K.; Binder, A.: *Development of a permanent magnet outer rotor direct drive for use in wheel-hub drives*, Proceedings of the International Conference on Electrical Machines (ICEM), 3.-5. Sept. 2014, Berlin, p. 2418-2424
- [230] Gemeinder, Y.; Schuster, M.; Binder, A.; Radnai, B.; Sauer, B.: *Calculation and validation of a bearing impedance model for ball bearings and the influence on EDM-currents*, Proceedings of the International Conference on Electrical Machines (ICEM), 3.-5. Sept. 2014, Berlin, p. 1798-1804
- [231] Binder, A.; Candors, W.-R.: *High-Speed Drives*, Tutorial at the International Conference on Electrical Machines (ICEM), 3.-5. Sept. 2014, Berlin
- [232] Reis, K.; Binder, A.: *Konzeptvergleich: Direktmotoren vs. Getriebe-Motoren als Radnabenantriebe*, 13. Technischer Tag der VEM-Gruppe, 30.9.-1.10.2014, Wernigerode, CD-ROM
- [233] Lehr, M.; Reis, K.; Binder, A.: *Comparison of axial-flux and radial-flux machines for use in wheel-hub drives*, JMAG Users Conf.; 24.9.2014, Frankfurt/Main, Germany
- [234] An, J.; König, R.; Binder, A.: *Drive concept and motor design of a double E-drive for hybrid electric vehicles*, Tagung „Advanced E-Motor Technology 2015“, Frankfurt/Main, 24-26.02.2015
- [235] An, J.; Binder, A.: *Design of Interior Permanent Magnet Synchronous Machine for Two-Drive-Transmission*, Proc. of the 3rd Int. Conf. on Electrical Systems for Aircraft, Railway, Ship propulsion and Road vehicles (ESARS), 3.-5. 3. 2015, Aachen, Germany, paper no. SS3.3.4, 6 pages, CD-ROM
- [236] = [43-1] Koch, Th.; Binder, A.: *Permanent Magnet Gearless Traction Drive for German High Speed Train ICE 3*, Korea-Germany Joint Symposium on Advanced Power Electronics, Oct.2001, p.49-53
- [237] = [162-1] Binder, A.: *Hochausgenutzte Permanentmagnetsynchronmaschinen für industrielle Anwendungen*, 8. Technischer Tag der VEM-Gruppe, 29.-30.9.2009, Wernigerode, CD-ROM
- [238] = [178-3] Funieru, B.; Binder, A.: *Simulation of the Air gap in 3D Models of Electrical machines*, Proc. of the 14th Int. IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Graz, Austria, 19.-22.9.2010, p. 373-378, CD-ROM
- [239] Lehr, M.; Neusüs, S.; Binder, A.: *Design and parametric modelling of a synchronous reluctance machine*, JMAG Users Conf.; 27.-28.5.2015, Frankfurt/Main, Germany
- [240] Wang, J.; Binder, A.; Messenger, G.; Becker, T.: *Control interference of electrical machines with double-star winding systems driven by independent inverter controllers*, 17th Europ. Conf. On Power Electronics and Applications (EPE 2015), 8-10 Sept. 2015, Geneva, Switzerland, 10 pages, CD-ROM
- [241] Messenger, G.; Binder, A.: *Evaluation of a Dual Half-Pitched Three-Phase Bearingless High-Speed Permanent Magnet Synchronous Motor Prototype*, Proc. of the Conf. “Innovative Klein- und Mikroantriebstechnik”, 14.-15.9.2015, Köln, p.83-88

- [242] Lehr, M.; Binder, A.: *Vergleich verschiedener elektrischer Maschinen mit Permanentmagneten im Stator zum Einsatz als Industrieantrieb*, 14. Technischer Tag der VEM-Gruppe, 15.-16.9.2015, Wernigerode, Germany
- [243] Deusinger, B.; Binder, A.: *Indirect efficiency determination of permanent magnet synchronous machines for sine wave and inverter operation*, 9th Int. Conf. on Energy Efficiency in Motor Drive Systems (EEMODS), 15-17 Sept. 2015, Helsinki, Finland, 14 pages, CD-ROM
- [244] Schuster, M.; Binder, A.: *Comparison of different inverter-fed AC motor types regarding common-mode bearing currents*, IEEE Energy Conversion Congress and Exposition (ECCE 2015), 21.-24.9.2015, Montreal, Canada, p.2762-2768
- [245] Lehr, M.; Binder, A.: *Auslegung einer permanentmagneterregten Flux-Switching-Maschine als Industrieantrieb*, VDI/VDE-Tagungsband der Konf. „Antriebssysteme – Elektrik, Mechanik, Fluidtechnik in der Anwendung“, 11.-12.11.2015, Aachen, 14 pages, CD-ROM
- [246] Messenger, G.; Binder, A.: *Six-Axis Rotor Magnetic Suspension Principle for Permanent Magnet Synchronous Motor with Control of the Positive, Negative and Zero-Sequence Current Components*, Proceedings on Advances in Magnetics (AIM), 14.-16. März 2016, Bormio, Italy, 8 pages, CD-ROM
- [247] Reis, K.; Binder, A.: *Comparison of direct drive and high speed drive concepts for the use in wheel-hub-drives*, Proc. of the 8th International Conference Power Electronics, Machines and Drives (PEMD), 19.-21.4.2016, Glasgow, UK, England, 6 pages, CD-ROM
- [248] Li, X.; Erd, N.; Binder, A.: *Evaluation of Flywheel Energy Storage Systems for Residential Photovoltaic Installations*, Proceedings of the Symposium on Power Electronics and Electrical Drives (SPEEDAM), 22.-24.Juni 2016, Capri, Italy, p.255-260
- [249] An, J.; Binder, A.: *Analysis of sudden short-circuit of interior permanent magnet synchronous machines*, Proceedings of the Symposium on Power Electronics and Electrical Drives (SPEEDAM), 22.-24.Juni 2016, Capri, Italy, p.255-260
- [250] Lehr, M.; Woog, D.; Binder, A.: *Design and measurements of a prototype axial flux machine*, Proc. Powersys UG, 2016, 9-10. June 2016, Aix-en-Provence, France, CD-ROM
- [251] Deusinger, B.; Binder, A.: *Different rotor geometry concepts for high pole count permanent magnet machines with buried magnets*, 24th Int. Workshop on Rare-Earth and Future Permanent Magnets and their Applications (REPM), 29.8.-1.9.2016, Darmstadt, Germany, 6 pages
- [252] Messenger, G.; Binder, A.: *Observer based Pole Placement Control for a Double Conical High-Speed Bearingless Permanent Magnet Synchronous Motor*, 17th Europ. Conf. On Power Electronics and Applications (EPE 2016), 4-7 Sept., Karlsruhe, Germany, CD-ROM, 10 pages
- [253] Schuster, M.; Masendorf, D.; Binder, A.: *Two PMSMs and the influence of their geometry to common-mode bearing currents*, Proceedings of the International Conference on Electrical Machines (ICEM), 4-7 Sept. 2016, Lausanne, Switzerland, p. 2128-2134
- [254] Lehr, M.; Woog, D.; Binder, A.: *Design, construction and measurements of a permanent magnet axial flux machine*, Proceedings of the International Conference on Electrical Machines (ICEM), 4-7 Sept. 2016, Lausanne, Switzerland, p. 1606-1612

- [255] Bergmann, G.; Binder, A.: *Design Guidelines of Bearingless PMSM with Two Separate Poly-Phase Windings*, Proceedings of the International Conference on Electrical Machines (ICEM), 4-7 Sept. 2016, Lausanne, Switzerland, p. 2590-2596
- [256] Binder, A.: *High frequency effects in inverter-fed AC electric machinery*, Tutorial at the International Conference on Electrical Machines (ICEM), 4-7 Sept. 2016, Lausanne, Switzerland, published via Internet
- [257] An, J.; Gemeinder, Y.; Binder, A.: *Doppel-E-Antrieb mit Range-Extender (DE-REX)*, 8. Expertenforum E-Motive (FVA), 7.-8.9.2016, Schweinfurt, Germany
- [258] Gemeinder, Y.; Binder, A.: *Analyse von Betriebsparametereinflüssen auf Lagerströme durch Monitoring*, 15. Technischer Tag der VEM-Gruppe, 18.-19.10.2016, Wernigerode, CD-ROM
- [259] An, J.; Gemeinder, Y.; Viehmann, A.; König, R.; Fischer, S.; Binder, A.; Rinderknecht, S.; Beidl, Ch.: *Doppel-E-Antrieb mit Range-Extender (DR-REX) – System-Auslegung und Betriebsstrategien am Beispiel der eingesetzten Permanentmagnet-Synchronmaschinen*, Tagungsband VDI-Tagung „Innovative Antriebe 2016“, 23.-24.11.2016, Dresden, p.51-65
- [260] Lehr, M.; Binder, A.; Ohl, E.: *Design and Construction of a permanent magnet excited Flux-Switching-Machine*, 6th Electric Drives Production Conference and Exhibition, 30.11.-1.12.2016, Nürnberg, Germany, p.112-117
- [261] [= 80 article] Lehr, M.; Binder, A.: *Auslegung und Vermessung einer permanentmagneterregten Flux-Switching-Machine als Industrieantrieb (Design and measurements of a permanent magnet Flux-switching-Machine for industrial applications)*. More Drive Symp. 25-26.1.2017, ÖVE, Wien, Österreich
- [262] Erd, N.; Li, X.; Binder, A.: *Power Flow Simulation of Flywheel Energy Storage Systems for Tramways*, ICREPQ 2017, 4.-6.4. 2017, Malaga, Spain, 5 pages, CD-ROM
- [263] Neusüs; S.; Binder, A.: *Shaping and dimensioning of the flux barriers in synchronous reluctance machines*, Proc. Of the Int. Conf. on Optimisation of Electrical and Electronic Equipment (OPTIM), 25.-27.5.2017, Brasov, Romania, p. 509-516
- [264] Messenger, G.; Binder, A.: *Derivation of forces and force interferences in a Double Conical High-Speed Bearingless Permanent magnet Synchronous Motor*, Proc. IEEE IEMDC'17, May 21-24, 2017, Miami, USA, 8 pages, CD-ROM
- [265] Binder, A.; Schuster, M.; Erd, N.: *Expected du/dt-effects in electrical machines fed by SiC-inverter*, Proc. Of the German-Corean Symp. 2017 on Power Electronics and Electrical Drives, 30.6.-1.7. 2017, Berlin, Germany, 24 slides
- [266] Li, X.; Erd, N.; Binder, A.: *Design and Calculation of a 130 kW High-Speed Permanent Magnet Synchronous Machine in Flywheel Energy Storage Systems for Urban Railway Applications*, Proc. of the Int. Conf. Clean Electrical Power (IEEE-ICCEP), Santa Margherita Ligure, Italy, June 27-29, 2017, 8 pages, CD-ROM
- [267] Deusinger, B.; Binder, A.: *Quantitative Analysis and Finite Element Modeling for Indirect Efficiency Determination of Permanent Magnet Machines*, 10th Int. Conf. on Energy Efficiency in Motor Drive Systems (EEMODS), 6-8 Sept. 2017, Rome, Italy, 13 pages, CD-ROM

- [268] Schuster, M.; Binder, A.: *Bearing currents of a 2.4 kW-PM synchronous motor fan drive with integrated frequency inverter*, Proc. EPE-ECCE EUROPE 2017, 11-14 Sept., Warsaw, Poland, CD-ROM, 10 pages
- [269] Gemeinder, Y.; Binder, A.: *Konstruktion und Aufbau einer IPMSM für den Doppel-E-Antrieb mit Range Extender (DE-REX)*, 10. Tagung „El. Antriebstechnologie für Hybrid- und Elektrofahrzeuge“, Haus der Technik, 27.-28. 9. 2017, Würzburg, 10 pages, CD-ROM
- [270] Dietz, D.; Binder, A.: *Critical review on the benefits of C- and E-Core Flux-Switching-PM-Machines*, Proc. 19th Int. Conf. El. Drives & Power Electr. (EDPE 2017), 4-6 Oct., Dubrovnik, Croatia, CD-ROM, 9 pages
- [271] Deusinger, B.; Binder, A.: *Bestimmung des Wirkungsgrads von permanentmagneterregten Synchronmaschinen im Einzelverlustverfahren*, 16. Technischer Tag der VEM-Gruppe, 10.-11.10.2017, Wernigerode, CD-ROM
- [272] Neusüs, S.; Binder, A.: *Design studies of synchronous reluctance machines*, JMAG Users Conf. 2017; 8.11.2017, Paris, France, 27 slides
- [273] Li, X.; Erd, N.; An, J.; Messenger, G.; Binder, A.: *Design of a High-Speed Flywheel Energy Storage Demonstrator*, Konf. „Antriebssysteme 2017 – Elektrik, Mechanik, Fluidtechnik in der Anwendung“, 22.-22.11.2017, Karlsruhe, ETG-Fachbericht 154, p. 19-24
- [274] An, J.; Binder, A.: *Operation strategy with thermal management of E-machines in pure electric driving mode for twin-drive-transmission (DE-REX)*, IEEE-VPPC 2017, Dec. 11-14, Belfort, France, 6 pages, CD-ROM
- [275] Lehr, M.; Dietz, D.; Binder, A.: *Electromagnetic design of a permanent magnet Flux-Switching-Machine as a direct-driven 3 MW wind power generator*, Int. Conf. on Industrial Technology (ICIT 2018), 20. – 22. Feb. 2018, Lyon, France, 6 pages, CD-ROM
- [276] Deusinger, B.; Binder, A.: *Indirekte Wirkungsgradbestimmung von Permanentmagnet-Synchronmaschinen*, Workshop: Echtzeitanalyse und Leistungsmessung von el. Maschinen und Stromrichtern, Aschaffenburg, 13.3.2018, Vortrag, 35 slides
- [277] Neusüs, S.; Binder, A.: *Numerical Evaluation of permanent Magnet Assisted Synchronous Reluctance Rotor Topologies using a Simplified Magnetostatic Model*, Proceedings of the Int. Symposium on Electric and magnetic Fields (EMF 2018), 10.-12. April 2018, Darmstadt, Germany, 6 pages
- [278] Lehr, M.; Binder, A.: *Comparison of Different Synchronous Machines with Stator-Side Permanent Magnets for Industrial Drive Application*, 9th Int. Conf. on Power Electronics, Machines and Drives (PEMD 2018), 17. – 19. April 2018, Liverpool, UK, 7 pages, CD-ROM
- [279] Schuster, M.; Binder, A.: *Comparison of an 1.1 kW-induction machine and a 1.5 kW-PMSM regarding common mode bearing currents*, Proceedings of the Symposium on Power Electronics and Electrical Drives (SPEEDAM), 20.-22. June 2018, Amalfi, Italy, 6 pages
- [280] Neusüs, S.; Binder, A.: *Operation Strategy and Efficiency Map Calculation of a Synchronous Reluctance Motor*, Proceedings of the International Conference on Electrical Machines (ICEM), 3-6 Sept. 2018, Alexandroupoli, Greece, p. 318-324

- [281] Erd, N.; Binder, A.: *Eddy Currents in Solid Rotor under Spatially Intermittent Feeding of the Stator Winding*, Proceedings of the International Conference on Electrical Machines (ICEM), 3-6 Sept. 2018, Alexandroupoli, Greece, p. 178-184
- [282] Erd, N.; Binder, A.: *Numerical and Analytical Analysis of Wave Harmonics under Spatially Intermittent Feeding*, Proceedings of the International Conference on Electrical Machines (ICEM), 3-6 Sept. 2018, Alexandroupoli, Greece, p. 297-303
- [283] Gemeinder, Y.; An, J.; Binder, A.: *Concept Study of the electrical machines for the twin-drive range-extender propulsion system (DE-REX)*, 10th Expert Forum E-MOTIVE, Int. Conf. on Electric Vehicle Drives, Stuttgart, 12.-13. Sept. 2018, p. 67-71
- [284] Dietz, D.; Binder, A.: *Bearingless PM synchronous machine with zero-sequence current driven star point-connected active magnetic thrust bearing*, Proceedings of the International Conference MAGLEV, 5-8 Sept. 2018, St. Petersburg, Russia, 20 pages
- [285] [= 86 article] Binder, A.: *Downsizing possibilities of a PM synchronous motor for a hybrid vehicle*. More Drive Symp. 23-24.1.2019, ÖVE, Wien, Österreich
- [286] Erd, N.; Binder, A.; Lingl, S.: *Berechnung von Energieeinsparungen durch Schwungradspeicher in Stadtbahnen*, 45. Tagung „Moderne Schienenfahrzeuge“, Graz, 14.-17. April 2019
- [287] Neusüs, S.; Binder, A.: *Experimental comparison of Synchronous Reluctance Motor with and without Ferrite Magnet Assistance*, Proc. IEEE IEMDC'19, May 11-15, 2019, San Diego, USA, p. 1464...1471
- [288] Dietz, D.; Binder, A.: *Comparison between a bearingless PM motor with separated and combined winding for torque and lateral force generation*, Proc. European Conference on Power Electronics (EPE), 2.-6.9.2019, Genova, Italy, 6 pages
- [289] Li, X.; Mittelstedt, Ch.; Binder, A.: *Critical Considerations for the Design of Light-weight Flywheel Rotors with Composite Materials*, Proc. of the Int. Conf. on Mechanics of Composites MECHCOMP, 2019, Lisbon, Portugal, 1-4 July 2019 (ppt)
- [290] Dietz, D.; Binder, A.: *Influence of PM-Material on the parameter uncertainty of Bearingless Synchronous Machines*, ETG-Fachbericht 159, "Innovative Klein- und Mikroantriebstechnik", 10.-11.9.2019, Würzburg, p. 80-85
- [291] Gemeinder, Y.; Viehmann, A.; An, J.; Binder, A.; Rinderknecht, S.: *Ergebnisse der Erprobung des Doppel-E-Antriebs mit Range Extender (DE-REX) und Potential bei den verwendeten E-Maschinen*, 11. Tagung „El. Antriebstechnologie für Hybrid- und Elektrofahrzeuge“, Haus der Technik, 17.-18. 9. 2019, Würzburg, 14 pages
- [292] Neusüs, S.; Binder, A.: *Vergleich der synchronen Reluktanzmaschine ohne und mit Ferritmagnete in den Flussbarrieren*, 17. Technischer Tag der VEM-Gruppe, 18.-19.9.2019, Wernigerode, CD-ROM
- [293] Gemeinder, Y.; Weicker, M.; Binder, A.: *EDM-Lagerströme und mögliche Abhilfemaßnahmen im elektrischen Traktionssystem*, VD-Fachkonferenz „Der E-Motor im elektrifizierten Antriebsstrang“, 6.-7.11.2019, Nürnberg (ppt)
- [xxx] Li, X.; An, J.; Erd, N.; Gemeinder, Y.; Binder, A.: *Rotor Design of a High-speed Surface Mounted Permanent Magnet Synchronous Machine in a Flywheel System*, Proc. of the 22nd Int. Conf. on Electrical Machines and Systems (ICEMS), 2019, Harbin, China, 11-14 August 2019, p. xx-xx, submitted

