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Personal details

Gender male
Nationality german
Year of birth 1969
Place of birth Bayreuth, Germany
Current position Senior Research Associate at the Chair of High-Frequency Engineering of the Technical University of Munich

Education

7/2005 **Dr.-Ing.**, Technical University of Munich, Chair of High-Frequency Engineering.
Topic: Model Based Signal Processing for Mutually Incoherent Radar Sensors
7/1996 **Dipl.-Ing.**, Friedrich-Alexander-Universität Erlangen-Nürnberg.
Electrical Engineering, branch of study: Communications Engineering

Experience

since 6/2005 Senior Research Associate at the Chair of High-Frequency Engineering of the Technical University of Munich, third-party funds applications, research proposals, project management
10/2011–09/2016 Associate Professorship of Electromagnetic Compatibility and Wave Propagation at the Technical University of Munich
11/1996–6/2005 Research Associate and doctoral candidate at the Chair of High-Frequency Engineering of the Technical University of Munich, IT supervisor, webmaster

Research

since 10/2008 Methods for modeling of electromagnetic fields and radiation under stochastic boundary conditions, remote sensing of ground precipitation by terrestrial microwave links, signal processing for high-frequency sensors in production engineering
7/2005–9/2008 Electromagnetic properties of nano coatings, effect of mutual coupling in array antennas on system performance, system identification for efficient modeling of distributed microwave structures
6/2001–6/2005 Methods for coherent processing of radar information from multiple incoherent radar sensors, time series analysis, spectral estimation, radar using multiple frequency bands

- 4/1999–5/2001 Signal processing for array antennas, calibration, mutual coupling compensation, bearing estimation
- 11/1996–3/1999 Signal processing for a multi-functional automotive radar sensor, automatic sequence control, radar ranging, polarimetry, scattering at moving random rough surfaces, short time parameter estimation

Teaching

- since 10/2013 Graduate course “Radar Signals and Systems”
- since 10/2012 Undergraduate course “Wellenausbreitung und Übertragungstechnik (LB)”
- since 4/2012 Undergraduate course “Grundlagen der Hochfrequenztechnik (LB)”
- since 4/2009 Undergraduate course “Hochfrequenzschaltungen”
- 2009–2013 Graduate course “High-Frequency Circuit Design”
- 2004–2009 Graduate courses “Linear and Nonlinear Microwave Circuits I + II”
- since 2003 Coauthor of the textbook “Detlefsen, Siart: Grundlagen der Hochfrequenztechnik (München, Oldenbourg, 4th ed. 2012)”
- 5/1998–7/2004 Advisor for lectures and events for students of teaching degree at vocational schools (supervising tutor in “Grundlagen der Hochfrequenztechnik (LB)” and “Hochfrequenztechnik (LB)”, compilation of the lecture documents and supplementary documents, elaboration of the written exams)
- Examiner, mostly within the First State Examination in the study program “Lehramt an Beruflichen Schulen” with emphasis on electrical engineering
- 11/1996–7/2004 Supervising tutor in the lab courses “Rundfunk- und Fernsehtechnik” and “Hochfrequenztechnik/Mikrowellentechnik”

Administrative tasks

- since 10/2009 Staff and financial administration of the Chair of High-Frequency Engineering of the Technical University of Munich
- 2004–2013 Assistant Registrar of the examination board within the Department of Electrical and Computer Engineering of the Technical University of Munich
- 2006–2007 Chairman of the EMC Zürich 2007 local organizing committee
- 2004–2009 Scientific coordinator of the international study program “Master of Science in Microwave Engineering”
- 2004 TPC member of the European Conference on Wireless Technologies 2004
- 2002–2003 Reviewer and Conference Secretary of the European Conference on Wireless Technologies 2003
- 1999–2004 Organization and arrangement of the annual training seminar “Fortschritte in der Elektrotechnik und Informationstechnik” for vocational school teachers

Language proficiency

- German mother tongue
- English CEFR level B2 (independent user, vantage level)
- French CEFR level A1 (basic user, breakthrough level)

Memberships

Institute of Electrical and Electronics Engineers (IEEE)
IEEE Microwave Theory and Techniques Society (MTT-S)
MTT Technical Committee 15 (MTT-15 Microwave Field Theory)
European Microwave Association (EuMA)
International Union of Radio Science (URSI) Commission B
ITG-Fachausschuss 7.5 “Wellenausbreitung”
Verein Deutscher Ingenieure (VDI)
Deutschsprachige Anwendervereinigung TeX (DANTE e. V.)

Publications

- [1] C. Koenen, U. Siart, and T. F. Eibert: “Millimeter-Wave Gaussian Beam Shaping and Steering Phased Array Antenna”. In: *Proc. European Radar Conference (EuRAD)*. Nuremberg, Germany, October 11–13, 2017. Accepted for publication.
- [2] T. Mittermaier, U. Siart, and T. F. Eibert: “Recursive Cramér-Rao Bounds of Doppler-Based Localization in Short-Range Radar”. In: *Proc. European Radar Conference (EuRAD)*. Nuremberg, Germany, October 11–13, 2017. Accepted for publication.
- [3] S. Trummer, G. F. Hamberger, R. Koerber, U. Siart, and T. F. Eibert: “Performance Analysis of 79 GHz Polarimetric Radar Sensors for Autonomous Driving”. In: *Proc. European Radar Conference (EuRAD)*. Nuremberg, Germany, October 11–13, 2017. Accepted for publication.
- [4] C. Moroder, U. Siart, Ch. Chwala, and H. Kunstmann: “Fundamental Study of Wet Antenna Attenuation”. In: *15th International Conference on Environmental Science And Technology (CEST)*. Rhodes, Greece, August 31–September 2, 2017. Accepted for publication.
- [5] G. F. Hamberger, S. Trummer, U. Siart, and T. F. Eibert: “Circularly Polarized Antenna Array for Automotive Applications”. In: *42nd International Conference on Infrared, Millimeter and Terahertz Waves (IRMMW-THz)*. Cancún, México, August 27–September 1, 2017. Accepted for publication.
- [6] C. Koenen, U. Siart, and T. Eibert: “Computation of Reflector Contours for Gaussian Beam Shaping Phased Array Antenna Elements”. In: *IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI)*. San Diego, California, July 9–14, 2017.
- [7] D. Bok, D. Galda, and U. Siart: “A Multistatic Passive Coherent Location System with Receiver Location Constraints”. In: *International Radar Symposium (IRS)*. Prague, Czech Republic, June 28–30, 2017.
- [8] C. Koenen, U. Siart, T. F. Eibert, G. D. Conway, and U. Stroth: “A Broadband Millimeter-Wave Hollow Waveguide Coupling Structure Configured by a Wire-Eroded Metal Plug-In”. In: *IEEE Microw. Wireless Compon. Lett.* 27.5 (May 2017), pp. 434–436.
- [9] C. Koenen, U. Siart, T. F. Eibert, and G. D. Conway: “A Self-Aligning Cylindrical Sliding Short Plunger for Millimeter-Wave Rectangular Waveguides and its Application in a Reflection-Type Phase Shifter”. In: *IEEE Trans. Microw. Theory Techn.* MTT-65.2 (February 2017), pp. 449–458.
- [10] G. F. Hamberger, S. Trummer, U. Siart, and T. F. Eibert: “A Planar Dual-Polarized Microstrip 1-D-Beamforming Antenna Array for the 24 GHz Band”. In: *IEEE Trans. Antennas Propag.* AP-65.1 (January 2017), pp. 142–149.
- [11] G. F. Hamberger, S. Trummer, U. Siart, and T. F. Eibert: “A Single Layer Dual Linearly Polarized Microstrip Patch Antenna Array for Automotive Applications in the 77 GHz Band”. In: *IEEE International Symposium on Phased Array Systems and Technology (PAST)*. Waltham, MA, USA, October 18–21, 2016.

- [12] C. Koenen, U. Siart, T. Eibert, G. Conway, and U. Stroth: "Design of a Millimeter-Wave Phased Array Antenna for Gaussian Beam Shaping and Steering". In: *IEEE International Symposium on Phased Array Systems and Technology (PAST)*. Waltham, MA, USA, October 18–21, 2016.
- [13] S. Trummer, G. F. Hamberger, U. Siart, and T. F. Eibert: "A Polarimetric 76–79 GHz Radar-Frontend for Target Classification in Automotive Use". In: *Proc. European Radar Conference (EuRAD)*. London, UK, October 5–7, 2016.
- [14] T. Mittermaier, U. Siart, T. F. Eibert, and S. Bonerz: "Extended Kalman Doppler tracking and model determination for multi-sensor short-range radar". In: *Advances in Radio Science* 14 (September 28, 2016), pp. 39–46. DOI: 10.5194/ars-14-39-2016. URL: <http://www.adv-radio-sci.net/14/39/2016/> (visited on 09/28/2016).
- [15] H. Azodi, U. Siart, and T. F. Eibert: "Sparse Representation Discretization Errors in Multi-Sensor Radar Target Motion Estimation". In: *Kleinheubacher Tagung*. Miltenberg, Germany, September 26–28, 2016.
- [16] G. Hamberger, S. Trummer, U. Siart und T. Eibert: „Planares polarimetrisches Radarsystem für Automobilanwendungen“. In: *Kleinheubacher Tagung*. Miltenberg, Germany, 26.–28. September 2016.
- [17] C. Koenen, U. Siart, T. F. Eibert, G. D. Conway, and U. Stroth: "A Millimeter-Wave Phased Array Antenna for Small-Scale Plasma Turbulence Studies on ASDEX Upgrade Tokamak". In: *Kleinheubacher Tagung*. Miltenberg, Germany, September 26–28, 2016.
- [18] T. Mittermaier, U. Siart, and T. Eibert: "Target Tracking in Industrial Multi-Sensor Short-Range Radar Applications Using Doppler and Amplitude Information". In: *IEEE International Conference on Multi-sensor Fusion and Integration for Intelligent Systems (MFI)*. Baden-Baden, Germany, September 19–21, 2016.
- [19] T. Mittermaier, U. Siart, and T. Eibert: "Accuracy Analysis of Short-Range Doppler Shift Target Localization Using a Multi-Sensor Platform". In: *IEEE Radar Conference*. Philadelphia, PA, USA, May 2–6, 2016.
- [20] H. Azodi, C. Koenen, U. Siart, and T. F. Eibert: "Empirical Discretization Errors in Sparse Representations for Motion State Estimation with Multi-Sensor Radar Systems". In: *10th European Conference on Antennas and Propagation (EuCAP)*. Davos, Switzerland, April 10–15, 2016.
- [21] G. F. Hamberger, A. Drexler, S. Trummer, U. Siart, and T. F. Eibert: "A Planar Dual-Polarized Microstrip 1D-Beamforming Antenna Array for the 24 GHz ISM-Band". In: *10th European Conference on Antennas and Propagation (EuCAP)*. Davos, Switzerland, April 10–15, 2016.
- [22] C. Koenen, G. F. Hamberger, U. Siart, and T. F. Eibert: "A Volumetric Near-Field Scanner for Millimeter-Wave Antenna Measurements". In: *10th European Conference on Antennas and Propagation (EuCAP)*. Davos, Switzerland, April 10–15, 2016.
- [23] C. Koenen, U. Siart, T. F. Eibert, G. D. Conway, and U. Stroth: "A Configurable Coupling Structure for Broadband Millimeter-Wave Split-Block Networks". In: *IEEE Trans. Microw. Theory Techn.* MTT-63.12 (December 2015), pp. 3954–3961.
- [24] G. Hamberger, S. Trummer, U. Siart, and T. Eibert: "A Planar Dual-Polarized Microstrip Antenna Array in Series-Parallel Feed Configuration". In: *Loughborough Antennas and Propagation Conference*. Loughborough, UK, November 2–3, 2015.
- [25] G. Hamberger, S. Trummer, U. Siart und T. Eibert: „Untersuchung eines Antennenelementes zur Verwendung in einem planaren, zweifach linear polarisiertem Antennenarray“. In: *Kleinheubacher Tagung*. Miltenberg, Germany, 28.–30. September 2015.
- [26] T. Wächter, U. Siart, T. Eibert, and S. Bonerz: "Extended Kalman Doppler Tracking and Model Determination for Multi-Sensor Short-Range Radar". In: *Kleinheubacher Tagung*. Miltenberg, Germany, September 28–30, 2015.

- [27] T. Spreng, S. Yuan, V. Valenta, H. Schumacher, U. Siart, and V. Ziegler: “Wideband 120 GHz to 140 GHz MIMO Radar: System Design and Imaging Results”. In: *Proc. European Radar Conference (EuRAD)*. Paris, France, September 9–11, 2015.
- [28] T. Wächter, U. Siart, and T. F. Eibert: “Weighted Phase Difference Short-Time Doppler Estimation and Fixed-Gain Tracking for Industrial Sensor Applications”. In: *Proc. European Radar Conference (EuRAD)*. Paris, France, September 9–11, 2015.
- [29] U. Faz, U. Siart, T. F. Eibert, and T. Hermann: “Electric Field Homogeneity Optimization by Dielectric Inserts for Improved Material Sensing in a Cavity Resonator”. In: *IEEE Trans. Instrum. Meas.* IM-64.8 (August 2015), pp. 2239–2246. DOI: 10.1109/TIM.2015.2393397.
- [30] U. Stroth, A. Bañón Navarro, A. Biancalani, C. Bottreau, F. Clairet, S. Coda, G.D. Conway, T. Eibert, A. Fasoli, T. Görler, Ö. Gürçan, P. Hennequin, T. Happel, A. Hetzenecker, M. Hirsch, F. Jenko, W. Kasperek, A. Krämer-Flecken, C. Lechte, A. Medvedeva, D. Molina, L. Porte, D. Prisiazhniuk, U. Siart, P. Simon, C. Koenen, L. Vermare, S. Wolf, and the ASDEX Upgrade team: “Experimental turbulence studies for gyro-kinetic code validation using advanced microwave diagnostics”. In: *Nuclear Fusion* 55.8 (August 2015). DOI: 10.1088/0029-5515/55/8/083027.
- [31] U. Faz, U. Siart, and T. Eibert: “A Cylindrical Cavity Resonator for Material Measurements with Coupled Resonant Modes for Sensing and Position Offset Compensation of the Dielectric Specimen”. In: *German Microwave Conference (GeMiC)*. Nürnberg, Germany, March 16–18, 2015, pp. 36–39. DOI: 10.1109/GEMIC.2015.7107746.
- [32] C. Koenen, U. Siart, T. Eibert, G. Conway, and U. Stroth: “Broadband Amplitude Tapering for a Linear W-Band Array Antenna for Gaussian Beam-Shaping”. In: *German Microwave Conference (GeMiC)*. Nürnberg, Germany, March 16–18, 2015, pp. 202–204. DOI: 10.1109/GEMIC.2015.7107788.
- [33] C. Koenen, U. Siart, T. Eibert, G. Conway, and U. Stroth: “Methods for Optimum Aperture Tapering in a Near-Field Focusing Linear W-Band Horn Array”. In: *Fachtagung des ITG-Fachausschusses 7.5, WFMN 2015*. Chemnitz, Germany, February 10–13, 2015.
- [34] H. Kunstmann, C. Chwala, F. Keis, U. Siart, J. Seltmann, and R. Gerigk: “Precipitation Quantification by Analysis of Microwave Link Data from Commercial Cellphone Providers”. In: *Fachtagung des ITG-Fachausschusses 7.5, WFMN 2015*. Chemnitz, Germany, February 10–13, 2015.
- [35] H. Azodi, U. Siart, and T.F. Eibert: “A Fast 3-D Deterministic Ray Tracing Coverage Simulator Including Creeping Rays Based On Geometry Voxelization Technique”. In: *IEEE Trans. Antennas Propag.* AP-63.1 (January 2015), pp. 210–220. DOI: 10.1109/TAP.2014.2365572.
- [36] T. Wächter, U. Siart, T. Eibert, and S. Bonerz: “Multi-sensor Doppler radar for machine tool collision detection”. In: *Advances in Radio Science* 12 (November 10, 2014), pp. 35–41. DOI: 10.5194/ars-12-35-2014. URL: <http://www.adv-radio-sci.net/12/35/2014/> (visited on 01/11/2015).
- [37] O. Wiedenmann, R. Ramakrishnan, P. Saal, E. Kılıç, U. Siart, T. Eibert, and W. Volk: “Local microwave heating of sand molds as a means to overcome design limitations in sand mold casting”. In: *Advances in Radio Science* 12 (November 10, 2014), pp. 21–28. DOI: 10.5194/ars-12-21-2014. URL: <http://www.adv-radio-sci.net/12/21/2014/> (visited on 01/11/2015).
- [38] U. Stroth, A. Bañón Navarro, A. Biancalani, C. Bottreau, F. Clairet, S. Coda, G.D. Conway, T. Eibert, A. Fasoli, T. Görler, Ö. Gürçan, P. Hennequin, T. Happel, A. Hetzenecker, M. Hirsch, F. Jenko, W. Kasperek, A. Krämer-Flecken, C. Lechte, A. Medvedeva, D. Molina, L. Porte, D. Prisiazhniuk, U. Siart, P. Simon, C. Koenen, L. Vermare, S. Wolf, and the ASDEX Upgrade team: “Experimental turbulence studies for gyro-kinetic code validation using advanced microwave diagnostics”. In: *25th Fusion Energy Conference (FEC)*. International Atomic Energy Agency (IAEA). St. Petersburg, Russia, October 13–18, 2014.

- [39] H. Azodi, U. Siart, and T. F. Eibert: "A Study of Compressed Sensing Based Collision Detection From Multi-Sensor CW Radar Data". In: *Proc. European Radar Conference (EuRAD)*. Rome, Italy, October 8–10, 2014, pp. 269–272.
- [40] C. Koenen, U. Siart, T. Eibert, G. Conway, and U. Stroth: "Broadband Gaussian Beam-Shaping in a 32-Element Linear W-Band Horn Array". In: *Kleinheubacher Tagung*. Miltenberg, Germany, September 29–October 1, 2014.
- [41] H. Azodi, U. Siart, and T. Eibert: "Compressed Sensing for Near Range MIMO Radar in Multipath Environment". In: *IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI)*. Memphis, TN, USA, July 6–11, 2014.
- [42] K. Wang, A. Paulus, T. J. Wächter, U. Siart, and T. F. Eibert: "Compact CW Radar Transceiver Antennas with Novel Decoupling Technique Based on Neutralization". In: *8th European Conference on Antennas and Propagation (EuCAP)*. The Hague, The Netherlands, April 6–11, 2014.
- [43] H. Azodi, T. J. Wächter, U. Siart, T. F. Eibert, and S. Bonerz: "Compressed Sensing Approach for Fast Collision Warning Radar". In: *German Microwave Conference (GeMiC)*. Aachen, Germany, March 10–12, 2014.
- [44] A. Kirschner, U. Siart, J. Gütlein, and J. Detlefsen: "A Design Algorithm for MIMO Radar Antenna Setups with Minimum Redundancy". In: *International IEEE Conference on Microwaves, Communications, Antennas and Electronic Systems (COMCAS)*. Tel Aviv, Israel, October 21–23, 2013.
- [45] V. Đorđević, O. Pronić-Rančić, Z. Marinković, M. Milijić, V. Marković, U. Siart, C. Chwala, and H. Kunstmann: "ANN Applications in Detection of Precipitation Based on the Received Signal Level of Commercial Microwave Links". In: *11th International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services (TELSIKS)*. Niš, Serbia, October 16–19, 2013.
- [46] T. Spreng, U. Prechtel, B. Schönlinner, A. Meusling, U. Siart, and V. Ziegler: "UWB Near-Field MIMO Radar: Calibration, Measurements and Image Reconstruction". In: *Proc. European Radar Conference (EuRAD)*. Nuremberg, Germany, October 9–11, 2013.
- [47] U. Faz, U. Siart, T. Eibert, T. Hermann, and M. Ueding: "Improved Electric Field Distribution by Utilizing Profiled Dielectric Inserts Inside Cavity Resonators with Through-Opening for Material Stream Evaluation". In: *Kleinheubacher Tagung*. Miltenberg, Germany, September 23–25, 2013.
- [48] T. Wächter, U. Siart, T. Eibert, and S. Bonerz: "Multi-Sensor Doppler Radar for Machine Tool Collision Detection". In: *Kleinheubacher Tagung*. Miltenberg, Germany, September 23–25, 2013.
- [49] O. Wiedenmann, R. Ramakrishnan, E. Kılıç, P. Saal, U. Siart, and T. Eibert: "Local Microwave Heating as a Means to Overcome Design Limitations in Metal Casting Processes". In: *Kleinheubacher Tagung*. Miltenberg, Germany, September 23–25, 2013.
- [50] U. Siart, T. Wächter und S. Bonerz: „Radarbasierte Kollisionsverhütung in der Werkzeugmaschine“. In: *MM Maschinenmarkt* 28/29 (8. Juli 2013). Sonderausgabe zur EMO Hannover, S53–S55.
- [51] H. Azodi, U. Siart, and T. Eibert: "A Fast Three-Dimensional Deterministic Ray Tracing Coverage Simulator for a 24 GHz Anti-Collision Radar". In: *Advances in Radio Science* 11 (July 4, 2013), pp. 55–60. DOI: 10.5194/ars-11-55-2013. URL: <http://www.adv-radio-sci.net/11/55/2013/> (visited on 04/15/2017).
- [52] Ch. Chwala, H. Kunstmann, and U. Siart: "A dual-frequency dual-polarization monostatic microwave transmission experiment for precipitation and humidity observation". In: *11th International Precipitation Conference (IPC)*. Wageningen, The Netherlands, June 30–July 3, 2013.
- [53] Ch. Cherif, A. Nocke, U. Faz, U. Siart, and T. Eibert: "Non-Contact Characterization of Textile Material Compounds by Microwave Resonator Measurements". In: *13th Autex World Textile Conference*. Dresden, Germany, May 22–24, 2013.

- [54] E. Kılıç, G. Schnattinger, U. Siart, and T. Eibert: “Electromagnetic Modelling of Material Loaded Cavity Resonators with a Filling Hole for Complex Resonant Frequency Determination”. In: *URSI Commission B International Symposium on Electromagnetic Theory (EMTS)*. Hiroshima, Japan, May 20–24, 2013.
- [55] E. Kılıç, U. Siart, O. Wiedenmann, U. Faz, R. Ramakrishnan, P. Saal, and T. Eibert: “Cavity Resonator Measurement of Dielectric Materials Accounting for Wall Losses and a Filling Hole”. In: *IEEE Trans. Instrum. Meas.* IM-62.2 (February 2013), pp. 401–407.
- [56] J. Detlefsen und U. Siart: *Grundlagen der Hochfrequenztechnik*. 4. Aufl. München: Oldenbourg, 2012.
- [57] E. Kılıç, U. Siart, and T. Eibert: “Determination of Complex Resonant Frequencies of Resonators Loaded with Dielectric Materials”. In: *Proc. 42nd European Microwave Conference*. Amsterdam, The Netherlands, October 28–November 1, 2012.
- [58] K. Wang, L. Li, C. Schmidt, S. Bonerz, U. Siart, and T. Eibert: “A coaxial line based propagation channel for wireless communication between rotating machine components”. In: *10th International Symposium on Antennas, Propagation and EM Theory (ISAPE)*. Xi’an, China, October 22–26, 2012, pp. 721–724.
- [59] H. Azodi, U. Siart, and T. Eibert: “A Fast Three-Dimensional Deterministic Ray Tracing Coverage Simulator for a 24 GHz Anti-Collision Radar”. In: *Kleinheubacher Tagung*. Miltenberg, Germany, September 24–26, 2012.
- [60] U. Siart, S. Adrian, and T. Eibert: “Properties of axial surface waves along dielectrically coated conducting cylinders”. In: *Advances in Radio Science* 10 (September 18, 2012), pp. 79–84. DOI: 10.5194/ars-10-79-2012. URL: <http://www.adv-radio-sci.net/10/79/2012/> (visited on 10/07/2012).
- [61] C. Chwala, A. Gmeiner, W. Qiu, S. Hipp, D. Nienaber, U. Siart, T. Eibert, M. Pohl, J. Seltmann, J. Fritz, and H. Kunstmann: “Precipitation observation using microwave backhaul links in the alpine and pre-alpine region of Southern Germany”. In: *Hydrology and Earth System Sciences* 16.8 (August 2012), pp. 2647–2661. DOI: 10.5194/hess-16-2647-2012. URL: <http://www.hydrol-earth-syst-sci.net/16/2647/2012/>.
- [62] T. Franke, R. Blokker, W. McGlaun, J. Köppl, A. Bartsch, M. Vögerl, and U. Siart: “RF-Fingerprint of Vacuum Power Tubes (at the Example of the CQK200-4A) in Fusion Research at IPP Garching”. In: *3rd ITG International Vacuum Electronics Workshop*. Physikzentrum Bad Honnef, Germany, August 20–21, 2012.
- [63] Ch. Chwala, H. Kunstmann, S. Hipp, U. Siart, and T. Eibert: “Precipitation Observation Using Commercial Microwave Communication Links”. In: *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*. Munich, Germany, July 22–27, 2012, pp. 2922–2925. DOI: 10.1109/IGARSS.2012.6350714.
- [64] S. Hipp, U. Siart, T. Eibert, Ch. Chwala, and H. Kunstmann: “Modelling of Electromagnetic Transmission Through Rain Fields Based on Drop-Scale Scattering”. In: *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*. Munich, Germany, July 22–27, 2012.
- [65] E. Kılıç, U. Siart, and T. Eibert: “Regularized 1-D Dielectric Profile Inversion in a Uniform Metallic Waveguide by Measurement and Simulation”. In: *IEEE Trans. Microw. Theory Techn.* MTT-60.5 (May 2012), pp. 1437–1443.
- [66] E. Kılıç, U. Siart, C. Schmidt, and T. Eibert: “Characterization of Dielectric Materials Using Partially Loaded Waveguide Measurements”. In: *German Microwave Conference (GeMiC)*. Ilmenau, Germany, March 12–14, 2012.
- [67] O. Wiedenmann, R. Ramakrishnan, E. Kılıç, P. Saal, U. Siart, and T. Eibert: “A Multi-Physics Model for Microwave Heating in Metal Casting Applications Embedding a Mode Stirrer”. In: *German Microwave Conference (GeMiC)*. Ilmenau, Germany, March 12–14, 2012.
- [68] Ch. Chwala, U. Siart, S. Hipp, T. Eibert, and H. Kunstmann: “Remote sensing of precipitation and humidity using commercial microwave links and a monostatic transmission experiment”. In: *12th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment (MicroRAD)*. Rome, Italy, March 5–9, 2012.

- [69] U. Siart, S. Hipp, Ch. Chwala, T. Eibert, and H. Kunstmann: "Efficient Modelling of Rain Field Microwave Attenuation and Doppler Noise for Different Drop Size Distributions". In: *12th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment (MicroRAD)*. Rome, Italy, March 5–9, 2012.
- [70] U. Siart: "HF Hardware in a Nutshell: How Millimeter-Wave Links work". Winter School "Regional Precipitation Observation by Cellular Network Microwave Attenuation and Application to Water Resources Management". Institute for Meteorology and Climate Research, Garmisch-Partenkirchen, Germany, February 27–March 2, 2012.
- [71] U. Siart: "Theory of Millimeter Wave Scattering". Winter School "Regional Precipitation Observation by Cellular Network Microwave Attenuation and Application to Water Resources Management". Institute for Meteorology and Climate Research, Garmisch-Partenkirchen, Germany, February 27–March 2, 2012.
- [72] U. Siart: „Spindelkollisionsschutz auf Radarbasis“. Technologietagung. Ott-Jakob Spanntechnik GmbH, Lengenwang, Germany, 30. November 2011.
- [73] J. E. E. Seltmann, H. Kunstmann, Ch. Chwala, W. Qiu, U. Siart, and S. Hipp: "Exploiting commercial Cell Phone Links to measure Precipitation in Southern Germany". In: *35th Conference on Radar Meteorology*. Pittsburgh, PA, September 26–30, 2011.
- [74] J. E. E. Seltmann and U. Siart: "Measuring Radome Panel High-Frequency Properties". In: *35th Conference on Radar Meteorology*. Pittsburgh, PA, September 26–30, 2011.
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