

## Publications of Prof. Dr.-Ing. Volker Sommer

- C. Thomas, E. Mirzaei, B. Wudka, L. Siefke, V. Sommer: "Service-Oriented Reconfiguration in Systems of Systems Assured by Dynamic Modular Safety Cases", Dependable Computing - EDCC 2021 Workshops pp. 12-29, 2021, ISBN: 978-3-030-86507-8
- L. Siefke, V. Sommer, B. Wudka, C. Thomas: "Robotic Systems of Systems Based on a Decentralized Service-Oriented Architecture", Robotics, 9, 78, pp. 1-10, 2020, ISSN 2218-6581
- B. Wudka, C. Thomas, L. Siefke, V. Sommer: "A Reconfiguration Approach for Open Adaptive Systems-of-Systems", IEEE Int. Symposium on Software Reliability Engineering Workshops (ISSREW), 2020, pp. 219-222, ISBN 978-1-7281-9871-2
- V. Sommer: "A Closed-Form Error Model of Straight Lines for Improved Data Association and Sensor Fusing", Sensors, Vol. 18, Issue 4, pp. 1-20, 2018, ISSN 1424-8220
- T. Langbehn, M. Fischer, V. Sommer: „Reliable Automatic Calibration of Omni-Cams with Multi-Hypothesis Extended Kalman-Filters“, Journal of Automation and Control Engineering, Vol. 2, No. 4, pp 422-427, 2014, ISSN 2301-3702
- V. Sommer, I. Dengler: "Effiziente Berechnung von Winkelhistogrammen zur Lokalisierung mobiler Roboter mittels Scan Matching", Forschungsbericht 2011, Beuth HS Berlin
- I. Dengler, V. Sommer: "Vergleich von Algorithmen zur Detektion linearer Konturen in simulierten Entfernungsprofilen", Forschungsbericht 2011, Beuth HS Berlin
- V. Sommer: "Analyse des diskreten Kalman-Filters mittels Orthogonalitätsbedingung", Forschungsbericht 2010, Beuth HS Berlin
- V. Sommer: "Lokalisierung und Kartenbildung für autonome mobile Roboter basierend auf der Korrelation von Entfernungsprofilen an Referenzpositionen", Forschungsbericht 2006, TFH Berlin
- V. Sommer, A. Röcher: „A New Exploration Strategy for Mobile Robots based on a Cost Function Approach“, IROS 2003, Proceedings of the 2003 IEEE/RSJ Intl. Conf. on Intelligent Robots and Systems (0-7803-7860-1), pp. 1697-1702
- M. Purat, A. Klein, V. Sommer, R. Köhn, T. Ulrich, M. Haardt, S. Oestreich: „Die UTRA TDD Funkschnittstelle: Die physikalische Übertragungsschicht und deren Systemparameter“, Telekom Praxis, 6/2001, pp. 21-26
- M. Purat, A. Klein, V. Sommer, R. Köhn, T. Ulrich, M. Haardt, S. Oestreich: „Die UTRA TDD Funkschnittstelle: Grundlegendes zu Systemstruktur und Funktion“, Telekom Praxis, 5/2001, pp. 25-31
- M. Haardt, A. Klein, S. Oestreich, M. Purat, T. Ulrich, V. Sommer: „The physical layer of UTRA TDD“, VTC2000-Spring. IEEE 51<sup>st</sup> Vehicular Technology Conference Proceedings (Cat. No.00CH37026) Vol. 2, pp. 1175-1180
- M. Haardt, A. Klein, R. Köhn, M. Purat, S. Oestreich, T. Ulrich, V. Sommer: „The TD-CDMA based UTRA mode“, IEEE Journal on Selected Areas in Communications, Vol. 18, pp. 1375-1385, 2000

- V. Sommer, J. Hedrich, K. Weigel, O. Perillieux, K. Heime: "Observation and Modelling of RTS in InAlAs/InGaAs/InP HFETs" Solid State Electronics, Vol.38, No. 11, pp. 1917-1922, 1995
- V. Sommer: "Neue Verfahren zur Simulation und automatisierten Erfassung der Signal- und Rauscheigenschaften von HFET", Dissertation RWTH Aachen, Fakultät für Elektrotechnik, 1995, Verlag Shaker, ISBN 3-8265-0901-5
- V. Sommer, K. Heime: „Ein neuer Ansatz zum Verständnis des HF-Rauschens im Sättigungsbereich von Feldeffekttransistoren“, Vortrag auf der 59. Jahrestagung der DPG, Berlin, März 1995
- A. Mesquida Küsters, C. Puls, R. Wüller, A. Behres, A. Kohl, V. Sommer, K. Heime: „High-performance Al-free In(0.75)Ga(0.25)P/InP/In(x)Ga(1-x)As/InP (X>=53%) backside doped split channel HFETs with 0.25 micron T-gates“, Electronics Letters, Vol. 31, No. 5, pp. 409-411, 1995
- V. Sommer, A. Kohl, K. Weigel, A. Mesquida Küsters and K. Heime: "Low-Frequency Noise Phenomena in InP-Based HFETs Related to Stress Induced Degradation and Interface Properties", Vortrag auf der '7th International Conference on InP and Related Materials', Sapporo, Japan, Mai 1995, Proceedings (Cat. No. 95CH35720), pp. 857-860
- R. Hövel, E. Steimetz, S. Mannheim, V. Sommer, J. Woitok, J. Finders, K. Heime: „The n-type doping of GaAs/Al(ind x)Ga(ind 1-x)As and growth of two-dimensional electron gas structures with DEA1H-NMe(ind 3) as Al source“, Journal of Crystal Growth, Vol. 146, No. 1-4, pp. 515-520
- V. Sommer: "A New Method to Determine the Source Resistance of FET from Measured S- Parameters under Active-Bias Conditions", IEEE Transactions on Microwave Theory and Technique, Vol. 43, March 1995, pp. 504-510
- V. Sommer, K. Heime: "A New Physical HFET Model for Circuit Simulation of Sub- $\mu$  Devices Including Distributed Parasitic Effects and Non-linear Charge Control", Workshop on CAE, Modelling and Measurement Verification in conjunction with IEEE Microwave 94, London, Oktober 1994, p. 74
- A. Mesquida Küsters, A. Kohl, S. Brittner, V. Sommer, K. Heime: „Effect of indium mole fraction on charge control, DC and RF performance of single quantum-well InP/In/sub x/Ga/sub 1-x/As/InP (0.53<=x<=0.81)“, IEEE Proceedings 6th International Conference on InP and Related Materials, St. Barbara (CA), USA, März 1994, Proceedings (Cat. No.94CH3369-6), pp. 323-326
- V. Sommer, P.-B. Albert, T. Zerbe, A. Schnell, A. Mesquida Küsters, K. Heime: "Characterization of Hetero Interfaces in InP/In<sub>7</sub>sGazAs/InP HFETs by Means of Digital Signal Processing of Measured Low Frequency Noise Spectra", IEEE Proceedings 6th International Conference on InP and Related Materials, St. Barbara (CA), USA, März 1994, Proceedings (Cat. No.94CH3369-6), pp. 415-418
- A. Mesquida Küsters, A. Kohl, R. Müller, V. Sommer, K. Heime: „Double-heterojunction lattice matched and pseudomorphic InGaAs HEMT with delta-doped InP supply layers and p-InP barrier enhancement layer grown by LP-MOVPE“, IEEE Electron Device Letters, Vol. 14, No. 1, pp.36-39, 1993
- A. Mesquida Küsters, T. Funke, V. Sommer, R. Wüller, S. Brittner, A. Kohl, K. Heime: „0.5 micron gate length InP/In(0.75)Ga(0.25)As/InP pseudomorphic HEMT with high DC and RF performance“, Electronics Letters, Vol. 29, No. 10, pp. 841-842, 1993
- V. Sommer, T. Funke, P. Kellendonk, K. Heime: "Determination and Evaluation of Physical Equivalent Circuits including Parasitic Effects for InP/InGaAs/InP HFET in the

temperature range from 300K down to 80K" 1st International Workshop of European Research Network on Physics and Technology of Mesoscopic Systems, Würzburg, Oktober 1993

- A. Mesquida Küsters, A. Kohl, V. Sommer, R. Müller, K. Heime: „Optimized double heterojunction pseudomorphic InP/In(x)Ga(1-x)As/InP ( $0.64 \leq x \leq 0.82$ ) p-MODFET's and the role of strain in their design“, IEEE Transaction on Electron Devices, Vol. 40, No. 12, pp. 2164-2170, 1993
- A. Mesquida Küsters, A. Kohl, S. Brittner, T. Funke, V. Sommer, K. Heime: „A new Al-free HFET structure: The pseudomorphic p-InP/n-InP/In/sub 0.75/GaAs double heterostructure delta-doped HEMT“, 5th International Conference on InP and Related Materials, Paris, IEEE Proceedings pp. 473-476, April 1993
- V. Sommer , W. Guse: "A New Method of Edge Oriented Image Segmentation“, VISICOM '91, Picture Coding Symposium 91, Session 8-14, Tokio, Japan, pp. 225-228, September 1991
- V. Sommer: "Kantenorientierte Bildsegmentierung zur Unterstützung einer objektbezogenen Codierung von Videosequenzen“, Diplomarbeit am Institut für Nachrichtentechnik, RWTH Aachen, Dezember 1990