

Wissenschaftliche Arbeiten und Patente

Veröffentlichungen/Vorträge auf IEEE Konferenzen und in IEEE Zeitschriften:

P. Klein, K. Hoffmann, B. Lemaitre

“Description of the Bias Dependent Overlap Capacitance at LDD MOSFETs for Circuit Applications”

International Electronic Devices Meeting, IEDM 1993, pp. 493-497.

P. Klein, K. Hoffmann, B. Lemaitre

“A Short Channel Charge LDD-MOSFET Model for Analog and Digital Circuits with Low Overdrive Voltage”

Custom Integrated Circuits Conference, CICC 1995, pp. 229-232.

P. Klein, K. Hoffmann

“Influence of Submicron LDD-MOSFET Charge Effects on Low Power Circuits”

VLSI-TSA 1995.

P. Klein, K. Hoffmann, O. Kowarik

“An EEPROM Compact Circuit Model”

Custom Integrated Circuits Conference, CICC 1996.

P. Klein

“A Consistent Parameter Extraction Method for Deep Submicron MOSFETs”

European Solid-State Device Research Conference, ESSDERC 1997, pp. 665-668.

P. Klein

“A Compact-Charge LDD-MOSFET Model”

IEEE Transactions on Electron Devices, Vol. 44, No. 9, Sep. 1997, pp. 1483-1490.

F. Schuler, P. Klein, K. Hoffmann, O. Kowarik

“Influence of the Poly Gate Depletion Effect on Programming EEPROM Cells”

Simulation of Semiconductor Processes and Devices, SISPAD 1998.

E. Gondro, F. Schuler, P. Klein

“A Physics Based Resistance Model of the Overlap Regions in LDD-MOSFETs”

Simulation of Semiconductor Processes and Devices, SISPAD 1998.

F. Schuler, P. Klein, K. Hoffmann, O. Kowarik

“Source-Drain-C(V)-behavior of short channel LDD-MOSFETs”

European Solid-State Device Research Conference, ESSDERC 1998.

R. Brederlow, W. Weber, R. Jurk, C. Dahl, S. Kessel, J. Holz, W. Sauert, P. Klein, B. Lemaitre, D. Schmitt-Landsiedel, and R. Thewes

“Influence of Fluorinated Gate Oxides on the Low Frequency Noise of MOS Transistors under Analog Operation”

European Solid-State Device Research Conference, ESSDERC 1998.

P. Klein

“An Analytical Thermal Noise Model of deep submicron MOSFET’s for Circuit Simulation with Emphasis on the BSIM3v3 SPICE Model”

European Solid-State Device Research Conference, ESSDERC 1998.

E. Gondro, P. Klein, F. Schuler, O. Kowarik

“A Non-Linear Description of the Bias Dependent Parasitic Resistances of Quarter Micron MOSFETs”

1998 IEEE International Conference on Semiconductor Electronics, ICSE’98.

E. Gondro, P. Klein, F. Schuler

“An Analytical Source-and-Drain Series Resistance Model of Quarter Micron MOSFETs and its Influence on Circuit Simulation”

International Symposium on Circuits and Systems, ISCAS 1999.

P. Klein

“An Analytical Thermal Noise Model of Deep Submicron MOSFET’s”

IEEE Electron Device Letters, Vol. 20, No. 8, August 1999.

R. Thewes, R. Brederlow, C. Schlünder, P. Wiczorek, A. Hesener, B. Ankele, P. Klein, S. Kessel, W. Weber

“Device Reliability in Analog CMOS Applications”

International Electronic Devices Meeting, IEDM 1999, Invited Paper.

F. Schuler, M. Kerber, P. Klein, W. Molzer, A. v. Schwerin, and G. Tempel

“Long Time Estimation of Failure Rates due to low Temperature Charge Loss”

2000 Non-Volatile Semiconductor Memory Workshop, IEEE 2000 NVSMW.

P. Klein, F. Schuler

“A New Mobility Model for Circuit Simulation in Pocket Implanted MOSFET’s”

ICMTS 2000.

G. Knoblinger, P. Klein, U. Baumann

“Thermal Channel Noise of Quarter and Sub-Quarter Micron NMOS FET’s”

ICMTS 2000.

G. Knoblinger, P. Klein, M. Tiebout

“A New Model for Thermal Channel Noise of Deep Submicron MOSFET’s and its Application in RF-CMOS Design”

Symposium on VLSI Circuits 2000.

E. Gondro, O. Kowarik and P. Klein

“When do we need Non-Quasistatic CMOS RF-Models?”

Custom Integrated Circuits Conference, CICC 2001.

G. Knoblinger, P. Klein, M. Tiebout

“A New Model for Thermal Channel Noise of Deep Submicron MOSFET’s and its Application in RF-CMOS Design”

IEEE Transactions on Solid State Circuits, Vol. 36, No. 5, May. 2001, pp. 831 - 837.

P. Klein and S. Chladek

“A New Surface Mobility Model for Pocket Implanted Quarter Micron n-MOSFET’s and Below”

8th IEEE International Conference on Electronics Circuits and Systems, ICECS 2001

Dissertation:

Peter Klein

“Analytisches LDDMOS-Transistor Ladungsmodell für CAD-Anwendungen”

Dissertation, Februar 1996.

Patente/Patentanmeldungen:

Mehrere Patente / Patentanmeldungen auf den Gebieten der Halbleitertechnologie und der analogen / HF-analogen Schaltungstechnik

- *“Realisierung integrierter Kapazitäten hoher Güte mittels schmaler, dicht gepackter Verdrahtungsleitungen auf einer oder mehreren Metallisierungsebene(n)”*
- *“Strom-Interface nach CMOS - Mischern”*
- *“An active, linear, low-noise zero- or low-intermediate frequency (IF) mixer”*
- *“A high dynamic, low noise CMOS transconductance mixer using low voltage MOS transistors”*
- *“A low power, low noise CMOS direct down conversion demodulator for mobile communications”*

Veröffentlichungen/Beiträge zu Europäischen Förderprojekten:

P. Klein, K. Hoffmann, B. Lemaitre

“Description of the Bias Dependent Overlap Capacitance at LDD MOSFETs for Circuit Applications”

Jessi AC 41 Verbundprojekt, Technology Assessment, Final Report, Phase 2, 1992-1994, Förderkennzeichen 01 M 2871 G.

P. Klein, B. Lemaitre

“Evaluation of the BSIM3v3 Model as a Possible CMOS-Model in the JESSI AC41 Technology Assessment Flow”

Jessi AC 41 Verbundprojekt, Technology Assessment, Final Project Report, Phase 3, 1995-1997, Förderkennzeichen 01 M 2871 G.

P. Klein, K. Hoffmann

“Influence of Submicron LDD-MOSFET Charge Effects on Low Power Circuits”

Jessi AC 41 Verbundprojekt, Technology Assessment, Final Project Report, Phase 3, 1995-1997, Förderkennzeichen 01 M 2871 G.

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Jessi AC 41 Verbundprojekt, Technology Assessment, Final Project Report, Phase 3, 1995-1997, Förderkennzeichen 01 M 2871 G.

P. Klein, K. Hoffmann, B. Lemaitre

“A Short Channel Charge LDD-MOSFET Model for Analog and Digital Circuits with Low Overdrive Voltage”

Jessi AC 41 Verbundprojekt, Technology Assessment, Final Project Report, Phase 3, 1995-1997, Förderkennzeichen 01 M 2871 G.

P. Klein

“A Consistent Parameter Extraction Method for Deep Submicron MOSFETs”

Jessi AC 41 Verbundprojekt, Technology Assessment, Final Project Report, Phase 3, 1995-1997, Förderkennzeichen 01 M 2871 G.

Mehrere Vorträge/Beiträge in internationalen Kreisen/Gremien:

Diverse Vorträge auf den Meetings des Compact Model Councils (CMC), Homepage:

<http://www.eigroup.org/cmc/>

Stand: Oktober 2001