

## Publications

### (a) Master thesis

1. N. Göckel  
*Genetische Algorithmen für Optimierungsprobleme auf OKFDDs*, J.W.Goethe-Universität, Frankfurt am Main, 1995

### (b) Books

1. N. Drechsler.  
*Über die Anwendung Evolutionärer Algorithmen im Schaltkreisentwurf*, Ph.D. thesis, Frankfurt am Main, ISBN 3-8295-0001-7, 2000
2. R. Drechsler and N. Drechsler (Herausgeber).  
*Evolutionary Algorithms in Embedded System Design*, The Kluwer International Series on Genetic Algorithms and Evolutionary Algorithms (Consulting Editor: David Goldberg), Kluwer Academic Publisher, Dordrecht, 2002.

### (c) Journals

1. R. Drechsler, B. Becker, N. Göckel, and A. Jahnke.  
*A Genetic Algorithm for Decomposition Type Choice in OKFDDs*, In *International Journal on Artificial Intelligence Tools*, Volume 4, Number 4, pp. 525-536, Dezember 1995.
2. R. Drechsler, B. Becker, and N. Göckel.  
*A Genetic Algorithms for Variable Ordering of OBDDs*, In *IEE Proceedings Computers and Digital Techniques*, Volume 143, Number 6, pp. 364-368, November 1996.
3. R. Drechsler, B. Becker, and N. Göckel.  
*A Genetic Algorithm for RKRO Minimization*, In *Expert Systems with Applications: An International Journal*, Volume 12, Number 1, pp. 127-139, 1997.
4. R. Drechsler and N. Göckel.  
*A Genetic Algorithm for Data Sequencing*, In *Electronic Letters*, Volume 33, Number 10, pp. 843-845, May 1997.
5. R. Drechsler, B. Becker, and N. Drechsler.  
*OKFDD Minimization by Genetic Algorithms with Application to Circuit Design*, In *INTEGRATION, the VLSI Journal*, Volume 28, Issue 2, pp.121-139, 1999.
6. R. Drechsler, N. Drechsler, and W. Günther.  
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7. R. Drechsler, B. Becker, and N. Drechsler.  
*Genetic Algorithm for Minimization of fixed polarity Reed-Muller expressions*, In *IEE Proceedings Computers and Digital Techniques*, Volume 147, Number 5, September 2000.
8. M. Keim, N. Drechsler, R. Drechsler, and B. Becker.  
*Combining GAs and Symbolic Methods for High Quality Tests of Sequential Circuits*, In *Journal of Electronic Testing, Theory and Application (JETTA)*, No. 17, pp. 37-51, February 2001.
9. F. Schmiedle, N. Drechsler, D. Große, and R. Drechsler.  
*Heuristic Learning based on Genetic Programming*, In *Genetic Programming and Evolvable Machines*, Volume 3, pp. 363-388, 2002.

**(d) Book contributions**

1. R. Drechsler, N. Drechsler, B. Becker, and H. Esbensen.  
*Evolutionary Algorithms for Computer Aided Design of Integrated Circuits*, In *Soft Computing in Systems and Control Technology*, S. Tzafestas (Ed.), World Scientific Series in Robotics and Intelligent Systems - Vol. 18, 1999.
2. R. Drechsler and N. Drechsler.  
*VLSI CAD and the Integration of Evolutionary Techniques*, In *Evolution of Engineering and Information Systems and Their Applications*, L. Jain (Ed.), The CRC Press International Series on Computational Intelligence, pp. 275-311, 1999.

**(e) Conferences**

1. R. Drechsler, B. Becker, and N. Göckel.  
*A Genetic Algorithm for Minimization of Fixed Polarity Reed-Muller Expressions*, In *Proceedings of International Conference on Artificial Neural Networks and Genetic Algorithms*, pp. 392-395, Ales, 1995.
2. R. Drechsler, B. Becker, N. Göckel, and A. Jahnke.  
*A Genetic Algorithm for Decomposition Type Choice in OKFDDs*, In *Proceedings of First International IEEE Symposium on Intelligence in Neural & Biological Systems*, pp. 225-232, Washington, 1995.
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*A Genetic Algorithm for 2-Level AND/EXOR Minimization*, In *Proceedings of Synthesis and System Integration of Mixed Technologies (SASIMI'95)*, pp. 49-56, Nara, 1995.
4. R. Drechsler, B. Becker, and N. Göckel.  
*A Genetic Algorithm for RKRO Minimization*, In *Proceedings of International Symposium on Artificial Intelligence*, pp. 266-275, Monterrey, 1995.
5. R. Drechsler, B. Becker, and N. Göckel.  
*Minimization of OKFDDs by Genetic Algorithms*, In *Proceedings of International Symposium on Soft Computing*, pp. B:271-B:277, Reading, 1996.
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*A Hybrid Genetic Algorithm for the Bin Packing Problem*, In *Proceedings of International Symposium on Soft Computing*, pp. B:258-B:263, Reading, 1996.
7. N. Göckel, G. Pudelko, R. Drechsler, and B. Becker.  
*A Hybrid Genetic Algorithm for the Channel Routing Problem*, In *Proceedings of IEEE International Symposium on Circuits and Systems*, pp. IV:675-IV:678, Atlanta, 1996.
8. R. Drechsler, B. Becker, and N. Göckel.  
*A Genetic Algorithm for the Construction of Small and Highly Testable OKFDD Circuits*, In *Proceedings of Genetic Programming 96*, pp. 473-478, Stanford, 1996.
9. R. Drechsler, N. Göckel, and B. Becker.  
*Learning Heuristics for OBDD Minimization by Evolutionary Algorithms*, In *Proceedings of Parallel Problem Solving from Nature*, LNCS 1141, pp. 730-739, Berlin, 1996.
10. N. Göckel, R. Drechsler, and B. Becker.  
*Learning Heuristics for OKFDD Minimization by Evolutionary Algorithms*, In *Proceedings of Asia and South Pacific Design Automation Conference*, pp. 469-472, Makuhari, 1997.
11. N. Göckel and R. Drechsler.  
*Influencing Parameters of Evolutionary Algorithms for Sequencing Problems*, In *Proceedings of IEEE International Conference on Evolutionary Computation*, pp. 575-580, Indianapolis, 1997.

12. N. Göckel, R. Drechsler, and B. Becker.  
*A Multi-Layer Detailed Routing Approach based on Evolutionary Algorithms*, In Proceedings of *IEEE International Conference on Evolutionary Computation*, pp. 557-567, Indianapolis, 1997.
13. N. Göckel, M. Keim, R. Drechsler, and B. Becker.  
*A Genetic Algorithm for Sequential Circuit Test Generation based on Symbolic Fault Simulation (Poster)*, In Proceedings of *Genetic Programming 97*, Stanford, 1997.
14. R. Drechsler, N. Göckel, E. Mackensen, and B. Becker.  
*BEA: Specialized Hardware for Implementation of Evolutionary Algorithms (Poster)*, In Proceedings of *Genetic Programming 97*, Stanford, 1997.
15. N. Göckel, R. Drechsler, and B. Becker.  
*GAME: A Software Environment for Using Genetic Algorithms in Circuit Design*, In Proceedings of *The Forth International Conference Applications of Computer Systems (ACS'97)*, pp. 240-247, Szczecin, 1997.
16. N. Göckel and R. Drechsler.  
*An Evolutionary Algorithm for Minimizing BDDs of Incompletely Specified Functions*, In Proceedings of *The Forth International Conference Applications of Computer Systems (ACS'97)*, pp. 224-231, Szczecin, 1997.
17. M. Keim, N. Drechsler, R. Drechsler, and B. Becker.  
*Test Generation for (Sequential) Multi-Valued Logic Networks based on Genetic Algorithm*, In Proceedings of *IEEE International Symposium on Multi-Valued Logic (ISMVL'98)*, pp. 215-220, Fukuoka, 1998.
18. R. Drechsler, N. Drechsler, and W. Günther.  
*Fast Exact Minimization of BDDs*, In Proceedings of *IEEE Design Automation Conference (DAC'98)*, pp. 200-205, San Francisco, 1998.
19. N. Drechsler and R. Drechsler.  
*Exploiting Don't Cares During Data Sequencing using Genetic Algorithms*, In Proceedings of *Asia and South Pacific Design Automation Conference (ASP-DAC'99)*, pp. 303-306, Hongkong, 1999.
20. M. Keim, N. Drechsler, and B. Becker.  
*Combining GAs and Symbolic Methods for High Quality Tests of Sequential Circuits*, In Proceedings of *Asia and South Pacific Design Automation Conference (ASP-DAC'99)*, pp. 315-318, Hongkong, 1999.
21. M.A. Thornton, J.P. Williams, R. Drechsler, and N. Drechsler.  
*Variable Reordering for Shared Binary Decision Diagrams Using Output Probabilities (Poster)*, In Proceedings of *IEEE Design, Automation and Test in Europe (DATE'99)*, pp. 758-759, Munich, 1999.
22. N. Drechsler, W. Günther, and R. Drechsler.  
*Efficient Graph Coloring by Evolutionary Algorithms*, In Proceedings of *International Conference on Computational Intelligence (6th Fuzzy Days 1999)*, LNCS 1625, pp. 30-39, Dortmund, 1999.
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*A New Model for Multi-Objective Optimization in Evolutionary Algorithms*, In Proceedings of *International Conference on Computational Intelligence (6th Fuzzy Days 1999)*, LNCS 1625, pp. 108-117, Dortmund, 1999.
24. M.A. Thornton, J.P. Williams, R. Drechsler, N. Drechsler, and D.M. Wessels.  
*SBDD Variable Reordering based on Probabilistic and Evolutionary Algorithms*, In Proceedings of *IEEE Pacific Rim Conference (PACRIM'99)*, pp. 381-387, Victoria, 1999.

25. T. Schubert, E. Mackensen, N. Drechsler, R. Drechsler, and B. Becker.  
*Specialized Hardware for Implementation of Evolutionary Algorithms (Poster)*, In Proceedings of *Genetic and Evolutionary Computation Conference (GECCO-2000)*, page 369, Las Vegas, 2000.
26. R. Drechsler, N. Drechsler, E. Mackensen, T. Schubert, and B. Becker.  
*Design Reuse by Modularity: A Scalable Dynamical (Re)Configurable Multiprocessor System*, In Proceedings of *IEEE 26th EUROMICRO Conference*, pp. 425-431, Maastricht, 2000.
27. W. Günther, N. Drechsler, R. Drechsler, and B. Becker.  
*Verification of Designs Containing Black Boxes*, In Proceedings of *IEEE 26th EUROMICRO Conference*, pp. 100-105, Maastricht, 2000.
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*Multi-Objective Optimisation Based on Relation Favour*, In Proceedings of *First International Conference on Evolutionary Multi-Criterion Optimization (EMO'01)*, LNCS 1993, pp. 154-166, Zurich, 2001.
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*Heuristic Learning based on Genetic Programming*, In Proceedings of *4th European Conference on Genetic Programming (EuroGP'01)*, LNCS 2038, pp. 1-10, Lake Como, 2001.
30. F. Schmiedle, N. Drechsler, D. Große, and R. Drechsler.  
*Priorities in Multi-Objective Optimization for Genetic Programming*, In Proceedings of *Genetic and Evolutionary Computation Conference (GECCO-2001)*, pp. 129-136, San Francisco, 2001.
31. R. Drechsler and N. Drechsler.  
*Minimization of Transitions by Complementation and Resequencing using Evolutionary Algorithms*, In Proceedings of *21st IASTED International Multi-Conference Applied Informatics (AI 2003), IASTED International Conference on Artificial Intelligence and Applications (AIA 2003)*, Innsbruck, 2003.
32. M. Hilgemeier, N. Drechsler, and R. Drechsler.  
*Fast Heuristics for the Edge Coloring of Large Graphs*, In Proceedings of *Euromicro Symposium on Digital System Design (DSD 2003)*, Antalya, Turkey, 2003.
33. N. Drechsler and R. Drechsler.  
*Exploration of Sequential Depth by Evolutionary Algorithms*, In Proceedings of *IFIP International Conference on Very Large Scale Integration (VLSI 2003)*, Darmstadt, 2003.
34. M. Hilgemeier, N. Drechsler, and R. Drechsler.  
*Minimizing the Number of One-Paths in BDDs by an Evolutionary Algorithm*, In Proceedings of *Congress on Evolutionary Computation (CEC 2003)*, Canberra, Australia, 2003.

**(f) Workshops, technical reports, etc.**

1. R. Drechsler, B. Becker, and N. Göckel.  
*A Genetic Algorithms for Variable Ordering of OBDDs (Poster)*, In *International Workshop on Logic Synthesis (IWLS'95)*, pp. 5.55-5.64, Lake Tahoe, 1995.
2. R. Drechsler and N. Göckel.  
*A Genetic Algorithm for Data Sequencing*, In *Online Workshop on Evolutionary Computation*, pp. 69-72, Nagoya, 1996.
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*Learning Heuristics for OKFDD Minimization by Evolutionary Algorithms*, In *Online Workshop on Soft Computing*, Nagoya, 1996.

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*Learning Heuristics for OKFDD Minimization by Evolutionary Algorithms*, In 4. GI-Workshop "Fuzzy-Neuro-Systeme '97", pp. 60-65, Soest, 1997.
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*Learning Heuristics by Evolutionary Algorithms with Variable Size Representation*, In *ICGA'97 Workshop on Evolutionary Computation with Variable Size Representation*, East Lansing, 1997.
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*Fast Exact Minimization of BDDs*, Technischer Report 93, Universität Freiburg, 1997.
9. R. Drechsler, N. Göckel and W. Günther.  
*Fast Exact Minimization of BDDs (Abstract)*, In 33. *Workshop über Komplexitätstheorie, Datenstrukturen und effiziente Algorithmen*, Aachen, 1997.
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*A Probability Based SBDD Variable Reordering Technique*, Technical Report CSEG 98-09-001, Dept. of Computer Systems Engineering, University of Arkansas, Fayetteville, Arkansas, 1998.
13. W. Günther, N. Drechsler, R. Drechsler, and B. Becker.  
*Verification of Designs Containing Black Boxes*, In *GI/ITG Workshop "Anwendung formaler Methoden beim Entwurf von Hardwaresystemen"*, Frankfurt, 2000.
14. T. Schubert, E. Mackensen, N. Drechsler, R. Drechsler, and B. Becker.  
*Specialized Hardware for Implementation of Evolutionary Algorithms*, In *International Workshop on Boolean Problems*, Freiberg, 2000.
15. R. Drechsler and N. Drechsler.  
*GAME-HDL: Implementation of Evolutionary Algorithms using Hardware Description Languages*, In *5th European Workshop on Evolutionary Computation in Image Analysis and Signal Processing (EvoIASP2003)*, LNCS 2611, Colchester, 2003.
16. N. Drechsler, M. Hilgemeier, G. Fey, and R. Drechsler.  
*Disjoint Sum of Product Minimization by Evolutionary Algorithms*, In *1st European Workshop on Hardware Optimisation Techniques (EvoHOT)*, Coimbra, Portugal, 2004.