

A scalable technique to identify true critical paths in sequential circuits

Ubar, Raimund-Johannes; Kostin, Sergei; Jenihhin, Maksim; Raik, Jaan Proceedings 2017 IEEE 20th International Symposium on Design and Diagnostics of Electronic Circuit & Systems (DDECS) : April 19-21, 2017, Dresden, Germany 2017 / p. 152-157 : ill <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7934553>

A tool for random test generation targeting high diagnostic resolution

Osimiry, Emmanuel Ovie; Kostin, Sergei; Raik, Jaan; Ubar, Raimund-Johannes BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia 2016 / p. 79-82 : ill http://www.eester.ee/record=b2150914*est

About robustness of test patterns regarding multiple faults

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan LATW 2012 : 13th IEEE Latin-American Test Workshop proceedings : April 10th-13th, 2012, Quito, Ecuador 2012 / p. 86-91 : ill

Accurate dialysis dose evaluation and extrapolation algorithms during online optical dialysis monitoring

Fridolin, Ivo; Karai, Deniss; Kostin, Sergei; Ubar, Raimund-Johannes IEEE transactions on biomedical engineering 2013 / p. 1371-1377 : ill

Accurate NBTI-induced gate delay modeling based on intensive SPICE simulations

Kostin, Sergei; Raik, Jaan; Ubar, Raimund-Johannes; Jenihhin, Maksim MEDIAN Finale : Workshop on Manufacturable and Dependable Multicore Architectures at Nanoscale : November 10-11, 2015, Tallinn, Estonia 2015 / p. 21-26 : ill

Block-level fault model-free debug and diagnosis in digital systems

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan Proceedings of the 12th EUROMICRO Conference on Digital System Design, Architectures, Methods and Tools : Patras, Greece, August 27-29, 2009 2009 / p. 229-232 <https://ieeexplore.ieee.org/document/5350128>

Built-in self diagnosis with multiple signature analyzers in digital systems

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan Proceedings of the 9th IEEE Latin-American Test Workshop : LATW2008 : February 17-20, 2008, Puebla, Mexico 2008 / p. 29-34 : ill

Calculation of the diagnosability of digital circuits without using fault models

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 159-162 : ill

Combined fault-model free cause-effect and effect-cause fault diagnosis in block-level digital networks

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan ASQED'09 : 1st Asia Symposium on Quality Electronic Design : Kuala Lumpur, Malaysia, July 15-16, 2009 2009 / p. 385-390 <https://ieeexplore.ieee.org/document/5206232>

Comparison of two approaches to improve functional BIST fault coverage

Kostin, Sergei; Ubar, Raimund-Johannes; Gorev, Maksim; Mägi, Gunnar BEC 2014 : 2014 14th Biennial Baltic Electronics Conference : proceedings of the 14th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 6-8, 2014, Tallinn, Estonia 2014 / p. 105-108 : ill

Defect-oriented modul-level fault diagnosis in digital circuits

Kostin, Sergei; Ubar, Raimund-Johannes; Raik, Jaan Proceedings of the 2011 IEEE Symposium on Design and Diagnostics of Electronic Circuits and Systems : April 13-15, 2011, Gottbus, Germany 2011 / p. 81-86

DIAGNOZER : a laboratory tool for teaching research in diagnosis of electronic systems [Electronic resource]

Ubar, Raimund-Johannes; Kostin, Sergei; Jutman, Artur; Raik, Jaan; Wuttke, Heinz-Dietrich 2009 IEEE International Conference on Microelectronic Systems Education MSE '09 : 25-27 July 2009, San Francisco, California : [proceedings] 2009 / p. 12-15 : ill. [CD-ROM] <http://dx.doi.org/10.1109/MSE.2009.5270842>

E-learning environment for WEB-based study of testing

Ubar, Raimund-Johannes; Jutman, Artur; Raik, Jaan; Devadze, Sergei; Jenihhin, Maksim; Aleksejev, Igor; Tšepurov, Anton; Tšertov, Anton; Kostin, Sergei; Orasson, Elmet; Wuttke, Heinz-Dietrich Proceedings of the 8th European Workshop on Microelectronics Education : EWME 2010 : Darmstadt, Germany, 10-12 May 2010 2010 / p. 47-52 : ill

Embedded diagnosis in digital systems

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan 2008 26th International Conference on Microelectronics : Niš, Serbia, 11-14 May 2008 : proceedings. Vol. 2 2008 / p. 421-424 : ill

Embedded diagnosis in digital systems

Kostin, Sergei Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK kolmanda aastakonverentsi artiklite kogumik : 25.-26. aprill 2008, Voore külalistemaja 2008 / p. 81-84 : ill

Embedded fault diagnosis in digital systems with BIST

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan Microprocessors and microsystems 2008 / 5/6, p. 279-287 : ill

Environment for the analysis of functional self-test quality in digital systems

Ubar, Raimund-Johannes; Kostin, Sergei; Kruus, Helena; Aarna, Margit; Devadze, Sergei Proceedings of the Estonian Academy of Sciences 2014 / p. 151-162 : ill https://artiklid.elnet.ee/record=b2673964*est

Exact parallel critical path fault tracing to speed-up fault simulation in sequential circuits

Kõusaar, Jaak; Ubar, Raimund-Johannes; Kostin, Sergei; Devadze, Sergei; Raik, Jaan International journal of microelectronics and computer science 2018 / p. 9–18 <https://ijmcs.dmcs.pl/web/guest/vol.-9-no.-1>
https://ijmcs.dmcs.pl/documents/10630/345460/IJMCS_1_2018_2.pdf

Experimental comparison of different diagnosis algorithms in the BIST environment

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan; Kruus, Margus Proceedings of the 16th IASTED International Conference on Applied Simulation and Modelling : August 29-31, 2007, Palma de Mallorca, Spain 2007 / p. 271-276 : ill

Fast identification of true critical paths in sequential circuits

Ubar, Raimund-Johannes; Kostin, Sergei; Jenihhin, Maksim; Raik, Jaan; Jürimägi, Lembit Microelectronics reliability 2018 / p. 252-261 : ill <https://doi.org/10.1016/j.microrel.2017.11.027> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Fault diagnosis in integrated circuits with BIST

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan; Evertson, Teet; Lensen, Harri 10th Euromicro Conference on Digital System Design Architectures, Methods and Tools, DSD 2007 : 29-31 August 2007, Lübeck, Germany : proceedings 2007 / p. 604-610 : ill <http://dx.doi.org/10.1109/DSD.2007.4341530>

Fault diagnosis in the BIST environment based on bisection of detected faults

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan LATW2007 : 8th IEEE Latin-American Test Workshop : March 11-14, 2007, Cuzco, Peru 2007 / [6] p. : ill

Gate-level modelling of NBTI-induced delays under process variations

Copetti, Thiago; Cardoso Medeiros, Guilherme; Bolzani Poehls, Leticia; Vargas, Fabian; Kostin, Sergei; Jenihhin, Maksim; Raik, Jaan; Ubar, Raimund-Johannes LATS 2016 : 17th IEEE Latin-American Test Symposium, Foz do Iguacu, Brazil, 6th-9th April 2016 2016 / p. 75-80 : ill <http://dx.doi.org/10.1109/LATW.2016.7483343>

Hierarchical identification of NBTI-critical gates in nanoscale logic

Kostin, Sergei; Raik, Jaan; Ubar, Raimund-Johannes; Jenihhin, Maksim LATW2014 : 15th IEEE Latin-American Test Workshop : Fortaleza, Brazil, March 12th-15th, 2014 2014 / [6] p. : ill

Hierarchical physical defect reasoning in digital circuits

Kostin, Sergei; Ubar, Raimund-Johannes; Raik, Jaan; Brik, Marina Estonian journal of engineering 2011 / 3, p. 185-200

Hierarchical timing-critical paths analysis in sequential circuits

Jürimägi, Lembit; Ubar, Raimund-Johannes; Jenihhin, Maksim; Raik, Jaan; Devadze, Sergei; Kostin, Sergei 2018 IEEE 28th International Symposium on Power and Timing Modeling, Optimization and Simulation (PATMOS 2018) : 2 – 4 July 2018, Spain 2018 / 6 p. : ill <https://doi.org/10.1109/PATMOS.2018.8464176>

How to prove that a circuit is fault-free?

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan Proceedings : 15th Euromicro Conference on Digital System Design DSD 2012 : 5-8 September 2012, Cesme, Izmir, Turkey 2012 / p. 427-430 : ill

Identification and rejuvenation of NBTI-critical logic paths in nanoscale circuits

Jenihhin, Maksim; Squillero, Giovanni; Tihomirov, Valentin; Kostin, Sergei; Raik, Jaan; Ubar, Raimund-Johannes Journal of electronic testing : theory and applications (JETTA) 2016 / p. 273-289 : ill <http://dx.doi.org/10.1007/s10836-016-5589-x>

Identifying NBTI-critical paths in nanoscale logic

Ubar, Raimund-Johannes; Vargas, Fabian; Jenihhin, Maksim; Raik, Jaan; Kostin, Sergei; Bolzani Poehls, Leticia 16th Euromicro Conference series on Digital System Design : DSD 2013 : proceedings : 4-6 September 2013, Santander, Spain 2013 / p. 136-141 : ill

Investigations of the diagnosability of digital networks with BIST

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan 10th IEEE Latin American Test Workshop : 2-5 March 2009, Brazil 2009 / [6] p. : ill

Macro level defect-oriented diagnosability of digital circuits

Kostin, Sergei; Ubar, Raimund-Johannes; Raik, Jaan BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 149-152 : ill

Macro level defect-oriented diagnosability of digital circuits

Kostin, Sergei; Ubar, Raimund-Johannes; Raik, Jaan Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK neljanda aastakonverentsi artiklite kogumik : 26.-27. novembril 2010, Essu mõis 2010 / lk. 53-56 : ill

Multiple fault diagnosis with BDD based Boolean differential equations

Ubar, Raimund-Johannes; Raik, Jaan; Kostin, Sergei; Kõusaar, Jaak BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 77-80 : ill

Multiple stuck-at-fault detection theorem

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan Proceedings of the 2012 IEEE 15th International Symposium on Design and Diagnostics of Electronic Circuits & Systems (DDECS) : April 18-20, 2012 Tallinn, Estonia 2012 / p. 236-241 : ill

A novel random approach to diagnostic test generation

Osimiry, Emmanuel Ovie; Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan 2nd IEEE NORCAS Conference : 1-2 November 2016, Copenhagen, Denmark 2016 / [4] p. : ill <https://doi.org/10.1109/NORCHIP.2016.7792915>

On-line monitoring of dialysis adequacy using diasens optical sensor: accurate Kt/V estimation by smoothing algorithms

Talisainen, Aleksei; Kostin, Sergei; Karai, Deniss; Fridolin, Ivo; Ubar, Raimund-Johannes BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 273-276 : ill

Parallel critical path tracing fault simulation in sequential circuits

Kõusaar, Jaak; Ubar, Raimund-Johannes; Kostin, Sergei; Devadze, Sergei; Raik, Jaan Proceedings of 25th International Conference MIXED DESIGN OF INTEGRATED CIRCUITS AND SYSTEMS : MIXDES 2018 : Gdynia, Poland, June 21–23, 2018 2018 / p. 305-310 : ill <https://doi.org/10.23919/MIXDES.2018.8436880>

Rejuvenation of nanoscale logic at NBTI-critical paths using evolutionary TPG

Palermo, N.; **Tihhomirov, Valentin; Copetti, Thiago; Jenihhin, Maksim; Raik, Jaan; Kostin, Sergei** 2015 16th Latin American Test Symposium (LATS 2015) : Puerto Vallarta, Mexico, 25-27 March 2015 2015 / [6] p. : ill <http://dx.doi.org/10.1109/LATW.2015.7102405>

Self-diagnosis in digital systems = Isediagnoosivad digitaalsüsteemid

Kostin, Sergei 2012 https://www.ester.ee/record=b2757857*est

SPICE-inspired fast gate-level computation of NBTI-induced delays in nanoscale logic

Kostin, Sergei; Raik, Jaan; Ubar, Raimund-Johannes; Jenihhin, Maksim 2015 IEEE 18th International Symposium on Design and Diagnostics of Electronic Circuits & Systems DDECS 2015 : 22-24 April 2015, Belgrade, Serbia : proceedings 2015 / p. 223-228 : ill

SSBDDs and double topology for multiple fault reasoning

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan Proceedings of IEEE East-West Design & Test Symposium (EWDTS'2012) : Kharkov, Ukraine, September 14–17, 2012 2012 / p. 23-28

Synthesis of multiple fault oriented test groups from single fault test sets [Electronic resource]

Ubar, Raimund-Johannes; Kostin, Sergei; Raik, Jaan 2013 8th International Conference on Design & Technology of Integrated Systems in Nanoscale Era (DTIS) : 26-28 March 2013, Abu Dhabi, UAE 2013 / p. 36-41 : ill [CD-ROM]

Teaching research in the laboratory using diagnosis environment for digital systems

Kostin, Sergei; Ubar, Raimund-Johannes; Raik, Jaan; Aarna, Margit; Brik, Marina; Wuttke, Heinz-Dietrich 2009 EAEEIE annual conference : 20th Annual Conference of the European Association for Education in Electrical and Information Engineering : Valencia, Spain, June 22-24, 2009 2009 / p. 280-283 <https://ieeexplore.ieee.org/document/5335462>

A tool for teaching hierarchical fault diagnosis in digital circuits

Ubar, Raimund-Johannes; Kostin, Sergei; Orasson, Elmet; Evartson, Teet; Brik, Marina Proceedings of 9th European Workshop on Microelectronics Education – EWME'12 : Grenoble, France, May 9-11, 2012 2012 / p. 1-4

A tool set for teaching design-for-testability of digital circuits

Kostin, Sergei; Orasson, Elmet; Ubar, Raimund-Johannes EWME 2016 : 11th European Workshop on Microelectronics Education : May 11-13, 2016, Southampton, UK 2016 / [6] p. : ill <https://doi.org/10.1109/EWME.2016.7496466>