

Список литературы

[Aggarwal:2003:eh] V. Aggarwal. Evolving sinusoidal oscillators using genetic algorithms. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 67–76, Chicago, Illinois, 9–11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Aguirre:2003:eh] A. Aguirre and C. Coello. Fitness landscape and evolutionary boolean synthesis using information theory concepts. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 13–20, Chicago, Illinois, 9–11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Amaral:2003:eh] J. F. Amaral, C. Santini, R. Tanscheit, M. Vellasco, M. Pacheco, and A. Mesquita. Evolvable building blocks for analog fuzzy logic controllers. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 101–110, Chicago, Illinois, 9–11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Botelho:2003:eh] J. Botelho, B. Leonardo, P. Vieira, and A. Mesquita. An experiment on nonlinear synthesis using evolutionary techniques based only on cmos transistors. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 50–58, Chicago, Illinois, 9–11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Canham:2003:eh] A. H. Jackson R. Canham and A. Tyrrell. Robot error detection using an artificial immune system. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 199–207, Chicago, Illinois, 9–11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Coello:2003:eh] C. Coello, E. Alba, G. Luque, and A. Aguirre. Comparing different serial and parallel heuristics to design combinatorial logic circuits. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 3–12, Chicago, Illinois, 9–11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Dinerstein:2003:eh] J. Dinerstein, N. Dinerstein, and H. de Garis. Automatic multi-module neural network evolution in an artificial brain. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 273–276, Chicago, Illinois, 9–11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Gallagher:2003:eh] J. Gallagher. The once and future analog alternative: Evolvable hardware and analog computation. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 43–49, Chicago, Illinois, 9–11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Garvie:2003:eh] M. Garvie and A. Thompson. Evolution of combinational and sequential on-line self-diagnosing hardware. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 167–173, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Greenwood:2003:eh] G. Greenwood, E. Ramsden, and Saima Ahmed. An empirical comparison of evolutionary algorithms for evolvable hardware with minimum time-to-reconfigure requirements. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 59–66, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Gwaltney:2003:eh] D. Gwaltney and M. I. Ferguson. Intrinsic hardware evolution for the design and reconfiguration of analog speed controllers for a dc motor. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 81–90, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Harding:2003:eh] S. Harding and J. F. Miller. A scalable platform for intrinsic hardware and in materio evolution. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 221–224, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Jackson:2003:eh] A. H. Jackson, R. Canham, and A. M. Tyrrell. Robot fault-tolerance using and embryonic array. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 91–100, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Kamio:2003:eh] Shotaro Kamio, Hongwei Liu, Hideyuki Mitsuhashi, and Hitoshi Iba. Researches on ingeniously behaving agents. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 208–220, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL <http://ieeexplore.ieee.org/iel5/8637/27376/01217668.pdf?tp=&arnumber=1217668&isnum>

Abstract: We have been studying the techniques for evolutionary robotics and experimenting with various robots applied evolutionary methods. We have paid special attentions to real robots and multi-agent problems related to them. In this research domain, we name them as "ingeniously behaving agents"(IBA). This paper shows several techniques developed in our IBA laboratory and their experimental results applied to simulations and real robots.

- [Koza:2003:eh] J. Koza, M. Keane, and M. Streeter. the importance of reuse and development in evolvable hardware. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 33–42, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Kramer:2003:eh] G. R. Kramer and J.C. Gallagher. Improvements to the *cga enabling online intrinsic evolution in compact eh devices. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 225–234, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Louis:2003:eh] S. J. Louis. Learning for evolutionary design. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 17–21, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Plante:2003:eh] J. Plante, H. Shaw, L. Mickens, and C. Johnson-Be. Overview of field programmable analog arrays as enabling technology for evolvable hardware for high reliability systems. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 77–78, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Roggen:2003:eh] D. Roggen, S. Hofmann, Y. Thoma, and D. Floreano. Hardware spiking neural network with run-time reconfigurable connectivity in and autonomous robot. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 189–198, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Sayama:2003:eh] H. Sayama. Self-protection maintains diversity of artificial self-replicators evolving in cellular automata. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 242–254, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Sekanina:2003:eh] L. Sekanina and R. Ruzicka. Easily testable image operators: The class of circuits where evolution beats engineers. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 135–144, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

- [Shanthi:2003:eh] A. P. Shanthi and R. Parthasarathi. Exploring fpga structures for evolving fault tolerant hardware. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 174–181, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Stauffer:2003:eh] A. Stauffer and M. Sipper. Data and signals: A new kind of cellular automation for growing systems. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 235–241, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Stoica:2003:eh] A.Stoica, R.Zebulum, X.Guo, D.Keymeulen, V. Duong, and M.I.Ferguson. Silicon validation of evolution-designed circuits. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 21–25, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Takahashi:2003:eh] E. Takahashi, M. Murakawa, Y. Kasai, and T. Higuchi. Power dissipation reductions with genetic algorithms. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 111–116, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Tempesti:2003:eh] G. Tempesti, D. Mange, E. Petraglio, A. Stauffer, and Yann Thoma. Developmental processes in silicon: An engineering perspective. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 255–264, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Thomson:2003:eh] R. Thomson and T. Arslan. The evolutionary design and synthesis of non-linear digital vlsi systems. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 125–134, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Tian:2003:eh] L. Tian and T. Arslan. An evolutionary power management algorithm for soc based ehv ststems. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 117–124, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Vinger:2003:eh] K. Vinger and J. Torresen. Implementing evolution of fir-filters efficiently in an fpga. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 26–29, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Zebulum:2003:eh] R.Zebulum, A.Stoica, X.Guo, D.Keymeulen, V. Duong, and M.I.Ferguson. Experimental results in evolutionary fault-recovery for field programmable. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 182–188, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>

[Zinchenko:2003:eh] L. Zinchenko and S. Sorokin. Fitness estimations for evolutionary antenna design. In Jason Lohn, Ricardo Zebulum, James Steincamp, Didier Keymeulen, Adrian Stoica, and Michael I. Ferguson, editors, *2003 NASA/DoD Conference on Evolvable Hardware*, pages 155–166, Chicago, Illinois, 9-11 July 2003. NASA Ames Research Center, IEEE Computer Society.

URL EHW <http://ehw.jpl.nasa.gov>