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Наши публикации про булевы функции, формулы, логические схемы, арифметические полиномы, автоматы и программные реализации на английском языке

На Западе выйдет книга *Stankovic R., Astola J., Shalyto A., Strukov A.* Reprints from the Early Days of Information Sciences. Early Work in Switching Theory and Logic Design in USSR. В ней, в частности, есть ссылка на книгу **Шалыто А.А. Логическое управление. Методы аппаратной и программной реализации алгоритмов». СПб., Наука, 2000. 780 с.** (Shalyto A. A. Logic Control. Hardware and Software Algorithm Implementation. St. Petersburg: Nauka (Science), 2000. 780 p. In Russian), изданная только на русском языке (http://is.ifmo.ru/books/log_upr/1). Однако по многим главам имеются статьи на английском языке, которые, возможно, будут интересны читателям книги. Кроме того, ниже перечислены работы по рассматриваемой тематике, не вошедшие в книгу, демонстрирующие то, что работы в этой области в новых постановках продолжаются в России по сей день.

1. Формульный метод синтеза комбинационных схем из произвольных логических элементов

1.1. *Artyukhov V. L., Kopeikin G. A., Shalyto A. A.* Estimation of the Logical Efficiency of Integrated Microcircuitry // Automatic Control and Computer Sciences. 1981. Vol. 22. No 1, pp.32-34.

1.2. *Artyukhov V. L., Kopeikin G. A., Shalyto A. A.* Bounds On The Realization Complexity Of Boolean Formulas By Tree Circuits Of Tunable Modules // Automation and Remote Control. 1981. Vol. 42, No 11. Part 2, pp. 1532-1537. http://is.ifmo.ru/articles_en/shalyto_articles/1982.pdf

2. Мультиплексорный метод реализации булевых функций схемами из произвольных логических элементов

2.1. *Shalyto A. A.* Multiplexor Method for Realization of Boolean Functions by Circuits Composed of Arbitrary Logical Elements // Journal of Computer and Systems Sciences International. 2003. Vol. 42. No 1, pp.101-105.

2.2. *Shalyto A. A.* Decomposition of Boolean Functions with Respect to the Right-Most Input Variables of Truth Tables // Journal of Computer and Systems Sciences International. 2003. Vol.42. No 4, pp.555-561.

3. Методы построения многофункциональных логических модулей

3.1. *Shalyto A. A.* Methods for Constructing Multifunctional Logic Modules // Journal of Computer and Systems Sciences International. 2004. Vol. 43. No 6, pp.923-935.

4. Модули, универсальные в классе самодвойственных функций и в «близких» к ним классах

4.1. *Shalyto A. A.* Modules which Are Universal in the Class of Self-Dual Functions and in Close Classes // Journal of Computer and Systems Sciences International. 2001. Vol. 40. No 5, pp.782-792.

5. Модули, универсальные в классе всех булевых функций

5.1. *Shalyto A. A.* Modules with Paraphrase the Input Variables That are Universal in Class of All Boolean Functions // Journal of Computer and Systems Sciences International. 1997. Vol. 36. No 5, pp.794-801.

6. Оценка функциональных возможностей программируемых логических матриц

6.1. *Artyukhov V. L., Shalyto A. A., Kuznetsova O. S.* Evaluation of the Functional Capabilities of Programmable Logical Arrays // Automatic Control and Computer Sciences. 1985. Vol. 26. No 2, pp. 69-73.

7. Однородные модули из элементов с двусторонней проводимостью и реализация комбинационных схем

7.1. *Shalyto A. A.* Multifunctional Logic Modules Consisting of Elements with Bilateral Conductance // Journal of Computer and Systems Sciences International. 2006. Vol. 45. No 1, pp. 73-76.
http://is.ifmo.ru/articles_en/JCSS73.pdf

8. Реализация булевых формул и булевых функций однородными структурами

8.1. *Artyukhov V. L., Shalyto A. A.* Realization of Boolean Formulas by Uniform Multiplexor and Majority Cascades // Journal of Computer and Systems Sciences International. 1996. Vol. 35. No 5, pp. 805-815.

8.2. *Shalyto A. A.* Realization of Boolean Formulas and Boolean Functions by Homogeneous Structures // Journal of Computer and Systems Sciences International. 2002. Vol. 41. No 2, pp.264-273.

9. Реализация булевых формул в базисе И, ИЛИ, НЕ линейными бинарными графами

9.1. *Kuznetsov B. P., Shalyto A. A.* Realization of Boolean Formulas by Linear Binary Graphs. I. Synthesize and Analysis // Journal of Computer and Systems Sciences International. 1994. Vol. 33. No 5, pp.132-142.

9.2. *Kuznetsov B. P., Shalyto A. A.* Realization of Boolean Formulas by Linear Binary Graphs. II. Estimations of Number and Total Length of Paths // Journal of Computer and Systems Sciences International. 1995. Vol. 34. No 3, pp.144-153.

9.3. *Kuznetsov B. P., Shalyto A. A.* Realization of Boolean Formulas by Linear Binary Graphs. III. Optimization of Number and Total Length of Paths // Journal of Computer and Systems Sciences International. 1995. Vol. 34. No 5, pp.214-223.

10. Методы построения бинарных графов для автоматов без памяти

10.1. *Kuznetsov B. P., Shalyto A. A.* Linearized Graph Algorithms for Boolean Formulas: Independent-Fragment Design Method // Automation and Remote Control. 1998. Vol. 59. No 9, pp. 1317-1326.
http://www.mathnet.ru/php/archive.phtml?wshow=paper&jrnid=at&paperid=2794&option_lang=eng

11. Программная реализация автоматов с памятью

11.1. *Sagalovich Yu. L., Shalyto A. A.* Binary Programs and Their Realization by Asynchronous Automata // Problems of Information Transmission. 1987. Vol. 23, No 1, pp. 89-96.

http://is.ifmo.ru/articles_en/old/binary-programs-1987.pdf

11.2. *Shalyto A. A.* Algorithmic Graph Schemes and Transition Graphs: Their Application in Software Realization of Logical Control Algorithms. Part 1. // Automation and Remote Control. 1996. Vol. 57, No 6. pp. 891-897. http://is.ifmo.ru/articles_en/shalyto_articles/1996_2.pdf

11.3. *Shalyto A. A.* Algorithmic Graph Schemes and Transition Graphs: Their Application in Software Realization of Logical Control Algorithms. Part 2. // Automation and Remote Control. 1996. Vol. 57, No 7, pp. 1027-1045. http://is.ifmo.ru/articles_en/shalyto_articles/1996_1.pdf

11.4. *Shalyto A. A., Tукkel N. I.* Translating Iterative Algorithms into Automation Ones // Programming and Computer Software. 2002. Vol. 28, No 5, pp. 250-260.

12. Реализация булевых функций с помощью арифметических полиномов

12.1. *Artyukhov V. L., Kondrat`ev V. H., Shalyto A. A.* Generating Boolean Functions via Arithmetic Polynomials // Automation and Remote Control. 1988. Vol. 49, No. 4. Part 2, pp. 508-515.

http://is.ifmo.ru/articles_en/shalyto_articles/1988.pdf

12.2. *Kondrat`ev V. N., Shalyto A. A.* Realization of Systems of Boolean Functions by Liner Arithmetic Polynomials //Automation and Remote Control. 1993. Vol. 54. No. 3, pp. 472-488.

12.3. *Kondrat`ev V. N., Shalyto A. A.* Realization of Boolean Functions by One Linear Arithmetic Polynomial with Masking //Automation and Remote Control. 1996. Vol. 57, No.1, pp. 127-137.

http://is.ifmo.ru/articles_en/shalyto_articles/1996_3.pdf

12.4. *Kondrat'ev V. N., Shalyto A. A.* Realizations of a System of Boolean Functions by Linear Arithmetic Polynomials //Automation and Remote Control. 1997. Vol. 58. No. 3, pp. 492-503.

13. SWITCH-технология или автоматное программирование. Алгоритмизация и программирование задач логического управления

13.1. *Shalyto A. A.* Software Automation Design: Algorithmization and Programming of Problems of Logical Control // Journal of Computer and System Sciences International. 2000. Vol. 39, No. 6, pp. 899-916. http://is.ifmo.ru/articles_en/2000/shalyto-switch-2000.pdf

13.2. *Shalyto A. A.* Logic Control and «Reactive» Systems: Algorithmization and Programming // Automation and Remote Control, 2001. Vol. 62. No. 1, pp. 1-29. http://is.ifmo.ru/articles_en/_log_control.pdf

13.3. *Shalyto A. A., N. I. Tukkel N. I.* SWITCH-Technology: An Automated Approach to Developing Software for Reactive Systems // Programming and Computer Software. 2001. Vol. 27. No. 5, pp. 260-276.

13.4. *Shalyto A. A.* SWITCH-Technology. Algorithmic and Programming Methods in Solution of the Logic Control Problems. St. Petersburg: Nauka (Science). 1998. 628 p. In Russian.

13.5. *Polikarpova N., Shalyto A.* Automata-Based Programming. St. Petersburg: Piter, 2010.176 p. In Russian.

14. Автоматная реализация выдержек времени

14.1. *Kiselev V. V., Shalyto A. A.* Study of Transients in One-Contour Logical Circuits //Journal of Computer and Systems Sciences International. 1999. Vol. 38. No. 5, pp. 693-697.

15. Исследование одномерных клеточных автоматов

15.1. *Naumov L. A., Shalyto A. A.* Classification of Structures Generated by One-Dimensional Binary Cellular Automata from a Point Embryo // Journal of Computer and Systems Sciences International. 2005. Vol. 44. No. 5, pp. 800-807. http://is.ifmo.ru/articles_en/classif_cell.pdf

16. Автоматные мультиагентные системы

16.1. *Shalyto A. A., Naumov L. A.* Automata Theory for Multi-Agent Systems Implementation / Proceedings of Internatinal Conference «Integration of Knowledge Intensive Multi-Agent Systems: Modeling, Exploration and Engineering».(KIMAS-03). Boston: IEEE Boston Section. 2003, pp.65-70. http://is.ifmo.ru/english/_aut_th.pdf

16.2. *Shalyto A. A., Naumov L. A., Korneev G.* Methods of Object-Oriented Reactive Agents Implementation on the Basis of Finite Automata / Proceedings of Internatinal Conference «Integration of Knowledge Intensive Multi-Agent Systems: Modeling, Exploration and Engineering». (KIMAS-05). Boston: IEEE Boston Section. 2003, pp.460-465. http://is.ifmo.ru/articles_en/kimas05-1.pdf

16.3. *Paraschenko D., Shalyto A., Tsarev F.* Modeling Technology for One Class of Multi-Agent Systems with Automata Based Programming / IEEE International Conference on Computational Intelligence for Measurement Systems and Applications (CIMSAs 2006). 2006, pp. 35-41. <http://is.ifmo.ru/science/CIMSAs2006-1.pdf>

17. Объектно-ориентированное программирование автоматов

17.1. *Shalyto A., Shamgunov N., Korneev G.* State Machine Design Pattern / .NET Technologies 2006. Short papers. University of West Bohemia, pp. 51-58. <http://en.youscribe.com/catalogue/educational-resources/education/quizzes-and-revision/ball-vs-sleeve-a-comparison-in-bearing-performance-1406613>

17.2. *Shopyrin D., Shalyto A.* Graphical Inheritance Notation for State-Based Classes // Programming and Computer Software. 2007. Vol. 33. No. 5, pp. 283-292. http://is.ifmo.ru/articles_en/2007_09_03_PCS283.pdf

17.3. *Klebanov A.* Automata-Based Programming Technology Extension for Generation of JML Annotated Java Card Code / Proceedings of the Second Spring Young Researchers' Colloquium on Software Engineering (SYRCoSE 2008). SPbSU. 2008. V. 1, pp. 41-44.

http://is.ifmo.ru/articles_en/klebanov_spbu.pdf

17.4. *Astafurov A. A., Shalyto A. A.* Declarative Approach to Implementing Automata Classes in Imperative Programming Languages / Proceedings of the Second Spring Young Researchers' Colloquium on Software Engineering (SYRCoSE 2008). SPbSU. 2008. V. 1, pp. 45-49.

http://is.ifmo.ru/articles_en/astafurov_syrcose_2008_published.pdf

17.5. *Timofeev K., Astafurov A., Shalyto A.* Inheritance of Automata Classes using Dynamic Programming Languages (using Ruby as an Example) / Proceedings of the Third Spring/Summer Young Researchers' Colloquium on Software Engineering (SYRCoSE 2009).

http://syrcose.ispras.ru/2009/files/18_paper.pdf

17.6. *Gubin Y., Timofeev K., Shalyto A.* Creation of Automation Classes from Graphical Models and Automatic Solutions for Inverse Problem / Proceedings of the Third Spring/Summer Young Researchers' Colloquium on Software Engineering (SYRCoSE 2009). http://syrcose.ispras.ru/2009/files/07_paper.pdf

18. Инструментальные средства для поддержки автоматного программирования

18.1. *Gurov V. S., Mazin M. A., Narvsky A. S., Shalyto A. A.* Tools for Support of Automata-Based Programming // Programming and Computer Software. 2007. Vol. 33. No. 6, pp. 343-355.

http://is.ifmo.ru/articles_en/ProCom6_07GurovLO.pdf

18.2. *Reshetnikov E.* Automata-Based Programming in Visual Studio 2005: State Machine Designer Tool / Proceedings of the Third Spring/Summer Young Researchers' Colloquium on Software Engineering (SYRCoSE 2009). http://is.ifmo.ru/articles_en/2009/reshetnikov-syrcose-2009.pdf

19. Верификация автоматных программ

19.1. *Kurbatsky E.* Verification of Automata-Based Programs / Proceedings of the Second Spring Young Researchers Colloquium on Software Engineering (SYRCoSE 2008). SPbSU. 2008. V. 2, pp. 15-17.

http://is.ifmo.ru/verification/kurbatsky_syrcose.pdf

19.2. *Kuzmin E. V., Sokolov V. A.* Modeling, Specification, and Verification of Automaton Programs // Programming and Computer Software. 2008. Vol. 34. № 1, pp. 27-43.

19.3. *Velder S., Lukin M., Shalyto A., Yaminov B.* Verification of Automaton Programs. St. Petersburg: Nauka (Science), 2011. – 242 p. In Russian.

20. Генерация автоматов с использованием генетических алгоритмов

20.1. *Lobanov P.G., Shalyto A.A.* Application of Genetic Algorithms for Automatic Construction of Finite-State Automata in the Problem of Flibs // Journal of Computer and Systems Sciences International. 2007. Vol. 46. No. 5, pp. 792-801. http://is.ifmo.ru/articles_en/lobanov.pdf

20.2. *Davydov A., Sokolov D., Tsarev F.* Application of Genetic Algorithms for Construction of Moore Automaton and Systems of Interacting Mealy Automata in «Artificial Ant» Problem / Proceedings of the Second Spring Young Researchers' Colloquium on Software Engineering (SYRCoSE 2008). SPbSU. 2008. V. 1, pp. 51-54. http://is.ifmo.ru/genalg/2008_07_03_ant.pdf

21. Генерация автоматов с использованием генетического программирования

21.1. *Davydov A., Sokolov D., Tsarev F., Shalyto A.* Application of Genetic Programming for Generation of Controllers Represented by Automata / Preprints of the 13th IFAC Symposium on Information Control Problems in Manufacturing. Moscow. 2009, pp. 684-689. http://is.ifmo.ru/articles_en/ifac-2009.pdf

21.2. *Polikarpova N., Tochilin V., Shalyto A.* Method of Reduced Tables for Generation of Automata with a Large Number of Input Variables Based on Genetic Programming // Journal of Computer and Systems Sciences International. 2010. Vol. 49. No. 2, pp. 265-282.

http://is.ifmo.ru/articles_en/polikarpova_samolet.pdf

21.3. *Aleksandrov A., Kazakov S., Sergushichev A., Tsarev F.* Genetic Algorithm for Induction of Finite Automata with Continuous and Discrete Output Actions / Proceedings of the 13th Annual Conference Companion on Genetic and Evolutionary Computation (GECCO '11). ACM, NY, pp. 775-778.

http://is.ifmo.ru/articles_en/2011/GECCO2011-Alexandrov-Kazakov-Sergushichev-Tsarev.pdf

21.4. *Aleksandrov A., Kazakov S., Sergushichev A., Tsarev F., Shalyto A.* The Use of Evolutionary Programming Based on Training Examples for the Generation of Finite State Machines for Controlling Objects with Complex Behavior // Journal of Computer and Systems Sciences International. 2013. Vol. 52. No. 3, pp. 410-425. http://is.ifmo.ru/articles_en/2013/alexandrov_samolet_en.pdf

21.5. *Buzhinsky I., Chivilikhin D., Ulyantsev V., Tsarev F.* Improving the Quality of Supervised Finite-State Machine Construction Using Real-Valued Variables / Proceedings of the 16th Genetic and Evolutionary Computation Conference companion (GECCO'14). ACM. NY, USA. 2014, pp. 1037-1040. <http://rain.ifmo.ru/~chivdan/papers/2014/buzhinsky-gecco-2014.pdf>

21.6. *Buzhinsky I., Kazakov S., Ulyantsev V., Tsarev F., Shalyto A.* Modification of the Method of Generation of Control Finite State Machines with Continuous Actions Based on Training Examples // Journal of Computer and Systems Sciences International. 2015. Vol. 54. No. 6, pp. 853-865. http://is.ifmo.ru/articles_en/2015/buzhinsky-compsys-2015.pdf

22. Генерация автоматов с использованием генетического программирования и верификации

22.1. *Tsarev F., Egorov K.* Finite State Machine Induction Using Genetic Algorithm Based on Testing and Model Checking / Proceedings of the 13th Annual Conference Companion on Genetic and Evolutionary Computation (GECCO '11). ACM. NY, pp. 759-762.

http://is.ifmo.ru/articles_en/2011/GECCO2011-Tsarev-Egorov-FSM-induction.pdf

22.2. *Chivilikhin D., Ulyantsev V., Shalyto A.* Combining Exact and Metaheuristic Techniques for Learning Extended Finite-State Machines from Test Scenarios and Temporal Properties / Proceedings of the 13th International Conference on Machine Learning and Applications (ICMLA'14). 2014, pp. 350-355.

<http://rain.ifmo.ru/~chivdan/papers/2014/2014-ICMLA-preprint.pdf>

22.3. *Chivilikhin D., Ivanov I., Shalyto A.* Inferring Temporal Properties of Finite-State Machine Models with Genetic Programming / Proceedings of Genetic and Evolutionary Computation Conference. 2015, pp. 1185-1188. http://is.ifmo.ru/articles_en/2015/gecco15-chivilikhin-ivanov-shalyto.pdf

22.4. *Ulyantsev V., Buzhinsky I., Shalyto A.* Exact Finite-State Machine Identification from Scenarios and Temporal Properties. Cornell University Library. 2016. <http://arxiv.org/abs/1601.06945>

23. Генерация автоматов на основе муравьиных алгоритмов

23.1. *Chivilikhin D., Ulyantsev V.* [Learning Finite-State Machines with Ant Colony Optimization // Lecture Notes in Computer Science. 2012. Volume 7461/2012, pp. 268-275.](http://is.ifmo.ru/articles_en/2012/ANTS12-Chivilikhin-Ulyantsev.pdf)

23.2. *Buzhinsky I., Ulyantsev V., Chivilikhin D., Shalyto A.* Inducing Finite State Machines from Training Samples Using Ant Colony Optimization // Journal of Computer and Systems Sciences International, 2014. Vol. 53. No. 2, pp. 256-266. http://is.ifmo.ru/articles_en/2014/buzhinsky-compsys-2014.pdf

24. Генерация автоматов на основе эволюционных и муравьиных алгоритмов

24.1. *Chivilikhin D., Ulyantsev V., Tsarev F.* Test-Based Extended Finite-State Machines Induction with Evolutionary Algorithms and Ant Colony Optimization / Proceedings of the 2012 GECCO Conference Companion on Genetic and Evolutionary Computation. ACM. 2012, pp. 603-606.

http://is.ifmo.ru/articles_en/2012/GECCO12-Chivilikhin-Ulyantsev-Tsarev.pdf

24.2. *Chivilikhin D., Ulyantsev V.* Learning Finite-State Machines: Conserving Fitness Function Evaluations by Marking Used Transition / Proceedings of the 12th International Conference on Machine Learning and Applications (ICMLA 2013). IEEE Computer Society, 2013, pp. 90-95.

http://is.ifmo.ru/articles_en/2013/chivilikhin-ulyantsev-icmla-2013.pdf

24.3. *Chivilikhin D., Ulyantsev V.* Learning Finite-State Machines with Classical and Mutation-Based Ant Colony Optimization: Experimental Evaluation / Proceedings of the 1st BRICS countries Congress on Computational Intelligence (BRICS-CCI'13). 2013, pp. 528-533.

<http://rain.ifmo.ru/~chivdan/papers/2013/2013-BRICS-preprint.pdf>

24.4. *Chivilikhin D., Ulyantsev V., Shalyto A.* Solving Five Instances of the Artificial Ant Problem with Ant Colony Optimization / Proceedings of the 2013 IFAC Conference on Manufacturing Modelling, Management and Control (MIM'13). SPb., Russia, 2013. Vol. 7. Part 1, pp. 1043-1048.

<http://rain.ifmo.ru/~chivdan/papers/2013/2013-MIM-Chivilikhin-Ulyantsev-Shalyto.pdf>

24.5. *Chivilikhin D., Ulyantsev V., Shalyto A.* Extended Finite-State Machine Inference With Parallel Ant Colony Based Algorithms / Proceedings of the International Student Workshop on Bioinspired Optimization Methods and their Applications (BIOMA'14). 2014, pp. 117-126.

<http://bioma.ijs.si/conference/2014/files/10-paper.pdf>

24.6. *Chivilikhin D., Ulyantsev V., Shalyto A.* Modified Ant Colony Algorithm for Constructing Finite State Machines from Execution Scenarios and Temporal Formulas // Automation and Remote Control. Vol. 77. 2016. No. 3, pp. 473-484. http://is.ifmo.ru/articles_en/2016/modified-aco-arc-2016.pdf

25. Генерация автоматов на основе решения задачи выполнимости булевой формулы

25.1. *Ulyantsev V., Tsarev F.* Extended Finite-State Machine Induction Using SAT-Solver / Proceedings of the Tenth International Conference on Machine Learning and Applications (ICMLA 2011). IEEE Computer Society, 2011. Vol. 2, pp. 346-349. http://is.ifmo.ru/articles_en/2011/ICMLA-2011-Ulyantsev-Tsarev.pdf

25.2. *Ulyantsev V., Zakirzyanov I., Shalyto A.* BFS-based Symmetry Breaking Predicates for DFA Identification / Proceedings of the 9th International Conference on Language and Automata Theory and Applications (LATA-2015). 2015, pp. 611-622.

http://link.springer.com/chapter/10.1007%2F978-3-319-15579-1_48

25.3. *Ulyantsev V., Zakirzyanov I., Shalyto A.* Symmetry Breaking Predicates for SAT-based DFA Identification. Cornell University Library. 2016. <http://arxiv.org/abs/1602.05028>

26. Применение генетических алгоритмов для тестирования автоматных программ

26.1. *Zakonov A., Stepanov O., Shalyto A.* A GA-based Approach for Test Generation for Automata-Based Programs / Proceedings of 4th Spring/Summer Young Researchers' Colloquium on Software Engineering (SYRCoSE 2010). Nizhny Novgorod, pp. 37-42. http://is.ifmo.ru/works/_syrcoze_zakonov_text.pdf

26.2. *Zakonov A., Stepanov O., Shalyto A.* GA-based and Design by Contract Approach to Test Generation for EFSMs / Proceedings of IEEE East-West Design & Test Symposium (EWDTS'10). St. Petersburg. 2010, pp.152-155. http://is.ifmo.ru/works/_ewdts_2010_zakonov.pdf

27. Применение автоматов

27.1. *Zakonov A., Shalyto A.* Automatic Extraction and Verification of State-Models for Web Applications // Lecture Notes in Electrical Engineering. 2012. V.133. Part 1, pp. 157-160. http://is.ifmo.ru/articles_en/2012/LNEE-133-Zakonov-Shalyto.pdf

27.2. *Pang C., Patil S., Yang C., Vyatkin V., Shalyto A.* A Portability Study of IEC 61499: Semantiac and Tools / Proceedings of the 12th IEEE International Conference on Industrial Informatics (INDIN'14). 2014, pp. 440-445. http://is.ifmo.ru/articles_en/2014/portability-study.pdf

27.3. *Chivilikhin D., Shalyto A., Vyatkin V.* Inferring Automata Logic From Manual Control Scenarios: Implementation in Function Blocks / Proceedings of the 13th IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA'15). 2015, pp. 307-312. http://is.ifmo.ru/articles_en/2015/2015-ISPA-chivilikhin-preprint.pdf

27.4. *Chivilikhin D., Shalyto A., Patil S., Vyatkin V.* Reconstruction of Function Block Logic using Metaheuristic Algorithm: Initial Explorations / Proceedings of the 13th IEEE International Conference on Industrial Informatics (INDIN'15). 2015, pp. 1239-1242. http://is.ifmo.ru/articles_en/2015/2015-INDIN-chivilikhin-preprint.pdf

- 27.5. *Chivilikhin D., Ivanov I., Shalyto A., Vyatkin V.* Reconstruction of Function Block Controllers Based on Test Scenarios and Verification / Proceedings of the 14th IEEE International Conference on Industrial Informatics (INDIN'16). 2016, pp.646-651. <http://rain.ifmo.ru/~chivdan/papers/2016/2016-INDIN-slides.pdf>
- 27.6. *Chivilikhin D.* Experimental Study of Automated Offline Parameter Tuning on the Example of Irace and the Traveling Salesman Problem / Proceeding of the 18th Genetic and Evolutionary Computation Conference companion, 2016, pp.45, 46.
- 27.7. *Pang C., Pakonen A., Buzhinsky I., Vyatkin V.* A Study on User-Friendly Formal Specification Languages for Requirements Formalization / Proceedings of the 14th IEEE International Conference on Industrial Informatics (INDIN 2016), 2016, pp. 676-682. <http://rain.ifmo.ru/~buzhinsky/papers/indin-2016-study.pdf>
- 27.8. *Buzhinsky I., Vyatkin V.* Plant Model Inference for Closed-Loop Verification of Control Systems: Initial Explorations. IEEE International Conference on Industrial Informatics (INDIN 2016). 2016, pp.736-739. <http://rain.ifmo.ru/~buzhinsky/papers/indin-2016-plant.pdf>