

CURRICULUM VITAE

Name Sergey Igorevich Nikolenko

Born August 11, 1984 (Pskov, USSR)

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Research stats		<i>ID/link</i>	<i>h-index</i>	<i>Total</i>
(Feb 2017)	Web of Science	ResearcherID: I-7696-2013	7	51
	Scopus	ScopusID: 13608710100	7	64
	DBLP	http://dblp.uni-trier.de/pers/hd/n/Nikolenko:Sergey_I=.html		57
	Google Scholar	https://scholar.google.com/citations?user=_lk95cEAAAAJ	15	144

Education

1991-1994: Secondary school #5, Pskov, Russia.

1994-1998: Pskov Technical Lyceum, Pskov, Russia, *cum laude* (Gold Medal)

1998-1999: University High School, Greeley, CO, USA, *cum laude* (maximal GPA)

1999-2000: Pskov Polytechnical Institute, Pskov, Russia.

2000-2005: St.-Petersburg State University, St.-Petersburg, Russia, Department of Mathematics and Mechanics, *cum laude* (maximal GPA).

2005-2008: Ph.D. Student at the St.-Petersburg Department of Steklov Mathematical Institute at St.-Petersburg, Russia.

2009: Ph.D. from the Steklov Mathematical Institute at St. Petersburg.

Work experience	2006-2007:	Engineering intern, Google Inc.	Software development
	2006-2010:	Assistant Professor, SPSU IFMO, St. Petersburg.	Teaching
	2008-2010:	Senior Researcher, Speech Technology Center, St. Petersburg.	Research and development of speech recognition systems
	2011-2012:	Senior Researcher, Algorithmic Biology Lab, Academic University, St. Petersburg.	Research in genome assembly algorithms and software
	2011-2014:	Research Director, Surfingbird, Moscow.	Research and development of recommender systems
	2015-2016:	Senior Data Scientist, Deloitte Analytics Institute, Deloitte, Moscow.	Data analysis, research in machine learning
	2008-present:	Adjunct Professor, Academic University, St. Petersburg.	Teaching, academic research
	2008-present:	Researcher, Steklov Mathematical Institute, St. Petersburg.	Research (mathematics, computer science, applications)
	2013-present:	Senior Researcher, Laboratory for Internet Studies, National Research University Higher School of Economics, St. Petersburg.	Research (computer science and applications), teaching

Research interests Machine learning: deep learning, probabilistic graphical models, recommender systems, topic modeling, natural language processing
Algorithms for networking: competitive analysis, FIB optimization
Bioinformatics: processing mass-spectrometry data, genome assembly
Proof theory, automated reasoning, computational complexity, circuit complexity
Algebra (Chevalley groups), algebraic geometry (motives)

Books

A. L. Tulupyev, S. I. Nikolenko, A. V. Sirotkin. *Bayesian Networks: A Probabilistic Logic Approach*. St.-Petersburg, Nauka, 2006 (in Russian).

A. L. Tulupyev, S. I. Nikolenko, A. V. Sirotkin. *Bayesian Belief Networks: Logical-Probabilistic Inference in Acyclic Directed Graphs*. St.-Petersburg State University Publishing, 2009 (in Russian).

A. L. Tulupyev, S. I. Nikolenko. *Learning Systems*. Moscow, MCCME Press, 2009 (in Russian).

S. I. Nikolenko. *Provably Secure Constructions in Cryptography*. Lambert Academic Publishing, 2011.

S.I. Nikolenko. *Mechanism design theory*. Moscow, INTUIT, 2009 (in Russian).

Book chapters

S.I. Nikolenko, K. Kogan. *Single and Multiple Buffer Processing*. Encyclopaedia of Algorithms, Springer, 2014, pp. 1-9.

S.I. Nikolenko. *Provably Secure Cryptographic Constructions*. In Jaydip Sen (ed.), *Cryptography and Security in Computing, InTech*, 2012, pp. 3-22.

S.I. Nikolenko. *The Markov School in the 21st Century*. Logic in Central and Eastern Europe: History, Science and Discourse. University Press of America, 2012, pp. 388-427.

G.E. Mints, S.I. Nikolenko. *History of the Leningrad (St. Petersburg) School of Constructive Mathematics and Proof Theory*. Logic in Central and Eastern Europe: History, Science and Discourse. University Press of America, 2012, pp. 380-387.

Selected research papers

2017 P. Eugster, K. Kogan, S.I. Nikolenko, A.V. Sirotkin. *Heterogeneous Packet Processing in Shared Memory Buffers*. Journal of Parallel and Distributed Computing, published online ahead of print, 2017.

S.I. Nikolenko, K. Kogan, A. Fernández Anta. *Network Simplification Preserving Bandwidth and Routing Capabilities*. Accepted to 2017 IEEE International Conference on Computer Communications (INFOCOM 2017), 2017.

A.P. Davydov, P. Chuprikov, S.I. Nikolenko, K. Kogan. *Throughput Optimization with Latency Constraints*. Accepted to 2017 IEEE International Conference on Computer Communications (INFOCOM 2017), 2017.

2016 K. Kogan, A. López-Ortiz, S.I. Nikolenko, A.V. Sirotkin. *Online Scheduling FIFO Policies with Admission and Push-Out*. Theory of Computing Systems, vol. 58, no. 2, 2016, pp. 322-344.

S.I. Nikolenko. *Topic Quality Metrics Based on Distributed Word Representations*. Proc. 39th SIGIR, 2016, pp. 1029-1032.

K. Kogan, A. López-Ortiz, S.I. Nikolenko, G. Scalosub, M. Segal. *Large profits or fast gains: A dilemma in maximizing throughput with applications to network processors*. Journal of Network and Computer Applications, vol. 74, 2016, pp. 31-43.

D. Ignatov, S.I. Nikolenko, T. Abaev, J. Poelmans. *Online Recommender System for Radio Station Hosting Based on Information Fusion and Adaptive Tag-Aware Profiling*. Expert Systems with Applications, vol. 55, pp. 546-558, 2016.

P. Chuprikov, S.I. Nikolenko, K. Kogan. *On Demand Elastic Capacity Planning for Service Auto-scaling*. Proc. IEEE INFOCOM 2016.

K. Kogan, D. Menikkumbura, G. Petri, Y. Noh, S.I. Nikolenko, P. Eugster. *BASEL (Buffering Architecture Specification Language)*. Proc. ANCS 2016, 2016.

S.I. Nikolenko, K. Kogan, G. Retvari, E.R. Berczi-Kovacs, A. Shalimov. *How to Represent IPv6 Forwarding Tables on IPv4 or MPLS Dataplanes*. Proc. IEEE GI 2016.

K. Kogan, S.I. Nikolenko, P. Eugster, A. Shalimov, O. Rottenstreich. *FIB Efficiency in Distributed Platforms*. Proc. ICNP 2016.

- S. Koltsov, S.I. Nikolenko, O. Koltsova, S. Bodrunova. Stable Topic Modeling for Web Science: Granulated LDA. Proc. WebSci '16, ACM, 2016, pp. 342-343.
- N. Semenov, I. Zakhlebin, A. Tolmach, S.I. Nikolenko. Pseudo-Bimodal Community Detection in Twitter-Based Networks. Proc. ICUMT 2016.
- S. Koltsov, S.I. Nikolenko, O. Koltsova, V. Filipov, S. Bodrunova. Stable Topic Modeling with Local Density Regularization. Proc. INSCI 2016.
- M. Apishev, S. Koltsov, O. Koltsova, S.I. Nikolenko, K. Vorontsov. Additive Regularization for Topic Modeling in Sociological Studies of User-Generated Texts. Proc. MICAI 2016.
- R. Galinsky, A. Alekseyev, S.I. Nikolenko. Improving Neural Network Models for Natural Language Processing in Russian with Synonyms. Proc. AINL 2016.
- A. Alekseyev, S.I. Nikolenko. Predicting the Age of Social Network Users from User-Generated Texts with Word Embeddings. Proc. AINL 2016.
- E. Tutubalina, S.I. Nikolenko. *Constructing Aspect-Based Sentiment Lexicons with Topic Modeling*. Proc. AIST 2016.
- S.I. Nikolenko, A. Alekseyev. *User Profiling in Text-Based Recommender Systems Based on Distributed Word Representations*. Proc. AIST 2016.
- S.I. Nikolenko. *ARTM vs. LDA: an SVD Extension Case Study*. Proc. AIST 2016.
- 2015** K. Kogan, S.I. Nikolenko, O. Rottenstreich, W. Culhane, P. Eugster. *Exploiting Order Independence for Scalable and Expressive Packet Classification*. IEEE Transactions on Networking, published online ahead of print, 2015.
- S.I. Nikolenko, O. Koltsova, S. Koltsov. *Topic Modelling for Qualitative Studies*. Published online ahead of print, Journal of Information Science, 2015.
- R. Leon-Zayas, M. Novotny, S. Podell, C. Shepard, E. Berkenpas, S.I. Nikolenko, P.A. Pevzner, E. Lasken, D. Bartlett. *Single Cells within the Puerto Rico Trench Suggest Hadal Adaptation of Microbial Lineages*. *Applied and Environmental Microbiology*, vol. 81, no. 24, 2015, pp. 8265-8276.
- P. Chuprikov, S.I. Nikolenko, K. Kogan. *Priority Queueing with Multiple Packet Characteristics*. Proceedings of IEEE INFOCOM 2015, pp. 1418-1426.
- P. Eugster, A. Kesselman, K. Kogan, S.I. Nikolenko, A.V. Sirotkin. *Essential Traffic Parameters for Shared Memory Switch Performance*. Proc. SIROCCO 2015, LNCS vol. 9439, Springer, pp. 61-75
- E. Tutubalina, S.I. Nikolenko. *Inferring Sentiment-Based Priors in Topic Models*. Proc. MICAI 2015, LNCS vol. 9414, Springer, 2015, pp. 92-104.
- S.I. Nikolenko. *SVD-LDA: Topic Modeling for Full-Text Recommender Systems*. Proc. MICAI 2015, LNCS vol. 9414, Springer, 2015, pp. 67-79.
- S.I. Nikolenko. A Probabilistic Rating System for Team Competitions with Individual Contributions. Proc. AIST 2015, CCIS vol. 542, Springer, 2015, pp. 3-13.
- A. Semenov, A. Natekin, S.I. Nikolenko, P. Upravitelev, M. Trofimov, M. Kharchenko. Discerning Depression Propensity Among Participants of Suicide and Depression-Related Groups of Vk.com. Proc. AIST 2015, CCIS vol. 542, Springer, 2015, pp. 24-35.
- I. Zakhlebin, A. Semenov, A. Tolmach, S.I. Nikolenko. Detecting Opinion Polarisation on Twitter by Constructing Pseudo-Bimodal Networks of Mentions and Retweets. Proc. RUSSIR 2015, CCIS vol. 573, Springer, 2015.
- 2014** K. Kogan, S.I. Nikolenko, O. Rottenstreich, W. Culhane, P. Eugster. *SAX-PAC (Scalable And eXpressive Packet Classification)*. Proc. 2014 ACM conference on SIGCOMM (SIGCOMM 2014), pp. 15-26
- P. Eugster, K. Kogan, S.I. Nikolenko, A.V. Sirotkin. *Shared-Memory Buffer Management for Heterogeneous Packet Processing*. Proc. ICDCS 2014, pp. 471-480
- S. Koltsov, O. Koltsova, S.I. Nikolenko. *Latent Dirichlet Allocation: Stability and Applications to Studies of User-Generated content*. Proc. WebSci 2014, pp. 161-165

- K. Kogan, S.I. Nikolenko, P. Eugster, E. Ruan. Strategies for Mitigating TCAM Space Bottlenecks. 22nd IEEE Annual Symposium on High-Performance Interconnects (HOTI 2014), IEEE, 2014, pp. 25-32
- D. Ignatov, S.I. Nikolenko, T. Abaev, N. Konstantinova. Online recommender system for radio station hosting: experimental results revisited. Proc. WIC 2014, pp. 229-236
- K. Kogan, A. Lòpez-Ortiz, S.I. Nikolenko, G. Scalosub. Balancing Work and Size with Bounded Buffers. Proc. COMSNETS 2014, pp. 1-8
- S.I. Nikolenko, S. Koltsov, O. Koltsova. *Measuring Topic Quality in Latent Dirichlet Allocation*. Proc. Philosophy, Mathematics, Linguistics: Aspects of Interaction 2014 (PhML-2014), pp. 149-157.
- 2013** T. Alexandrov, I. Chernyavsky, M. Becker, F. von Eggeling, S.I. Nikolenko. *Analysis and Interpretation of Imaging Mass Spectrometry Data by Clustering Mass-to-Charge Images According to Their Spatial Similarity*. Analytical Chemistry, vol. 85 (23), pp. 11189-11195
- S.I. Nikolenko, A.I. Korobeynikov, M.A. Alekseyev. *BayesHammer: Bayesian clustering for error correction in single-cell sequencing*. BMC Genomics, vol. 14, Suppl. 1, S7, 2013
- S.I. Nikolenko, D. Tugaryov. *A Complete One-Way Function based on a Finite Rank Free ZxZ -module*. Journal of Mathematical Sciences, vol. 192, no. 3, pp. 307-315, 2013
- A.P. Davydow, S.I. Nikolenko. *Circuit Complexity of Linear Functions: Gate Elimination and Feeble Security*. Journal of Mathematical Sciences, vol. 188, no. 1, pp. 35-43, 2013
- E.A. Hirsch, O. Melanich, S.I. Nikolenko. *Feebly Secure Cryptographic Primitives*. Journal of Mathematical Sciences, vol. 188, no. 1, pp. 17-34, 2013 (springerlink). Zapiski nauchnyh seminarov POMI (Journal of Mathematical Sciences), vol. 399, 2012, pp. 32-64
- S. Bodrunova, S. Koltcov, O. Koltsova, S.I. Nikolenko, A. Shimorina. *Interval Semi-Supervised LDA: Classifying Needles in a Haystack*. Proc. MICAI 2013, LNCS vol. 8625, pp. 265-274, 2013
- K. Kogan, A. Lòpez-Ortiz, S.I. Nikolenko, A.V. Sirotkin. *Multi-Queued Network Processors for Packets with Heterogeneous Processing Requirements*. Proc. COMSNETS 2013
- V.A. Leksin, S.I. Nikolenko. *Semi-Supervised Tag Extraction in a Web Recommender System*. Proc. SISAP 2013, LNCS vol. 8199, pp. 206-212, 2013
- K. Kogan, S.I. Nikolenko, S. Keshav, A. Lòpez-Ortiz. *Efficient Demand Assignment in Multi-Connected Microgrids with a Shared Central Grid*. Proc. SustainIT 2013.
- K. Kogan, S.I. Nikolenko, S. Keshav, A. Lòpez-Ortiz. *Efficient demand assignment in multi-connected microgrids*. Proc. e-Energy 2013, pp. 277-278
- K. Kogan, S.I. Nikolenko, W. Culhane, P. Eugster, E. Ruan. *Towards efficient implementation of packet classifiers in SDN/OpenFlow*. Proc. HotSDN 2013, pp. 153-154
- 2012** K. Kogan, A. Lòpez-Ortiz, S.I. Nikolenko, A.V. Sirotkin. *A Taxonomy of Semi-FIFO Policies*. Proc. IPCCC 2012, pp. 295-304.
- K. Kogan, A. Lòpez-Ortiz, S.I. Nikolenko, A.V. Sirotkin, D. Tugaryov. *FIFO Queueing Policies for Packets with Heterogeneous Processing*, Proc. MedAlg 2012, LNCS vol. 7659, pp. 248-260, 2012.
- A.P. Davydow, S.I. Nikolenko. *Circuit complexity of linear functions: gate elimination and feeble security*. Zapiski nauchnyh seminarov POMI (Journal of Mathematical Sciences), vol. 399, pp. 65-87, 2012.
- E. A. Hirsch, O. Yu. Melanich, S. I. Nikolenko. *Feebly secure cryptographic primitives*. Записки . Zapiski nauchnyh seminarov POMI (Journal of Mathematical Sciences), vol. 399, 2012, c. 32-64.

- S.I. Nikolenko, D.S. Tugaryov. *A complete one-way function based on a free finite rank $(Z \times Z)$ -module*. Zapiski nauchnyh seminarov POMI (Journal of Mathematical Sciences), vol. 402, pp. 91–107, 2012.
- D.Yu. Grigoriev, S.I. Nikolenko. *Continuous hard-to-invert functions and biometric authentication*. Groups – Complexity – Cryptology, vol. 4, no. 1, pp. 19–32, 2012.
- A. Bankevich, S. Nurk, D. Antipov, A.A. Gurevich, M. Dvorkin, A.S. Kulikov, V.M. Lesin, S.I. Nikolenko, S. Pham, A.D. Prjibelski, A.V. Pyshkin, A.V. Sirotkin, N. Vyahhi, G. Tesler, M.A. Alekseyev, and P.A. Pevzner. *SPAdes: A New Genome Assembly Algorithm and Its Applications to Single-Cell Sequencing*. Journal of Computational Biology, 2012, vol. 19, no. 5, pp. 455–477.
- I.I. Chernyavsky, T. Alexandrov, P. Maass, S.I. Nikolenko. *A Two-Step Soft Segmentation Procedure for MALDI Imaging Mass Spectrometry Data*. Proc. GCB-2012, OASISs vol. 26, 2012, pp. 39–48.
- A. Fishkov, S.I. Nikolenko. *A New Click Model for Relevance Prediction in Web Search*. Proc. EEML 2012, an ICFCA 2012 workshop, 2012, pp. 45–54.
- D. Ignatov, S.I. Nikolenko, V. Zaharchuk, A. Konstantinov. *A New Recommender System for the Interactive Radio Network FMhost*. Proc. EEML 2012, an ICFCA 2012 workshop, 2012, pp. 72–85.
- I.I. Chernyavsky, T. Alexandrov, S.I. Nikolenko. *Segmentation of MALDI imaging results based on graphical models*. SPIIRAS Proceedings, vol. 21, 2012, pp. 120–142.
- S.I. Nikolenko, D.V. Serdyuk, A.V. Sirotkin. *Bayesian rating systems with additional information on tournament results*. SPIIRAS Proceedings, vol. 22, 2012, pp. 189–204.
- A. Fishkov, S.I. Nikolenko. *SCM: a new user behaviour model for web search*. SPIIRAS Proceedings, vol. 20, 2012, pp. 72–100.
- A. Fishkov, S.I. Nikolenko. *A survey of user behaviour models for search results ranking*. SPIIRAS Proceedings, vol. 22, 2012, pp. 139–175.
- 2011** S.I. Nikolenko, A.V. Sirotkin. *A New Bayesian Rating System for Team Competitions*. Proc. of the 28th International Conference on Machine Learning (ICML 2011), pp. 601–608.
- A. Davydov, S. I. Nikolenko. *Gate Elimination for Linear Functions and New Feebly Secure Constructions*. Proceedings of the 6th Computer Science Symposium in Russia (CSR 2011), LNCS vol. 6651, pp. 148–161.
- I.A. Baltiysky, S.I. Nikolenko. *Probabilistic Graphical Models of Harmony in Automated Music Analysis: a Survey*. SPIIRAS Proceedings, vol. 17, 2011, pp. 174–196.
- I.A. Baltiysky, S.I. Nikolenko. *A Probabilistic Graphical Model for the Music Harmony Similarity Problem*. SPIIRAS Proceedings, vol. 18, 2011, pp. 136–163.
- 2010** S.I. Nikolenko, A.V. Sirotkin. *Extensions of the TrueSkill™ rating system*. Proc. of the 9th Intl. Conference on Applications of Fuzzy Systems and Soft Computing (ICAFS 2010), pp. 151–160.
- I. Gnilomedov, S.I. Nikolenko. *Fuzzy computing via multiagent negotiations*. Proc. of the 9th Intl. Conference on Applications of Fuzzy Systems and Soft Computing (ICAFS 2010), pp. 210–220.
- I. Gnilomedov, S.I. Nikolenko. *Agent-Based Economic Modeling with Finite State Machines*. Proceedings of the 36th Annual Convention of the Society for the Study of Artificial Intelligence and Simulation of Behaviour (AISB 2010).
- 2009** S. I. Nikolenko, N. Semenov, K. Zainoulline. *Motivic decomposition of anisotropic varieties of type F_4 into generalized Rost motives*. Journal of K-Theory, vol. 3, 2009, pp. 85–102.
- A. Kojevnikov, S.I. Nikolenko. *On Complete One-Way Functions*. Problems of Information Transmission, vol. 45, no. 2, 2009, pp. 108–189.
- C. A. Pshenichny, S.I. Nikolenko, A.V. Yakovlev. *The event bush formalism for knowledge representation and probabilistic inference in geological hazard*

- evaluation*. Geoinformatics, no. 2, 2009, pp. 62-71.
- C. A. Pshenichny, S. I. Nikolenko, R. Carniel et al. *The Event Bush as a Semantic-based Numerical Approach to Natural Hazard Assessment (Exemplified by Volcanology)*, Computers and Geosciences, vol. 35, issue 5, 2009, pp. 1017-1034.
- E. A. Hirsch, S. I. Nikolenko. *A feebly secure trapdoor function*. Proceedings of the 4th Computer Science Symposium in Russia, LNCS vol. 5675, 2009, pp. 129-142.
- S.I. Nikolenko, A.V. Sirotkin. *Bayesian Inference in Rating Systems: a Survey*. Proceedings of IMMVII-2009, vol. 2, 2009, pp. 29-48.
- S.I. Nikolenko, K.E. Levin, Yu.Yu. Khokhlov. *Two-pass Automated Speech Recognition with Text Mining*. Proceedings of IMMVII-2009, vol. 1, 2009, pp. 192-202.
- 2008** E.A. Hirsch, A. Kojevnikov, A.S. Kulikov, S.I. Nikolenko. *Complexity of Semialgebraic Proofs with Restricted Degree of Falsity*. Journal of Satisfiability, vol. 6, 2008, pp. 53-69.
- N.A. Vavilov, S.I. Nikolenko. *A2 proof of structure theorems for Chevalley groups of type F_4* , St. Petersburg Mathematical Journal, vol 20, no. 4, 2009, pp. 527-551.
- D.Yu. Grigoriev, A. Kojevnikov, S.I. Nikolenko. *Algebraic Cryptography: New Constructions and Their Security against Provable Break*. St. Petersburg Mathematical Journal, vol. 20, no. 6, 2008, pp. 119-147.
- S. I. Nikolenko, C. A. Pshenichny, R. Carniel. *Learning Conditional Probabilities in Event Bushes with Temporal Labels*. Proceedings of iEMSS'08: International Congress on Environmental Modelling and Software, 2008.
- C. A. Pshenichny, S. I. Nikolenko, R. Carniel, A. L. Sobissevitch et al. *The Event Bush as a Potential Complex Methodology of Conceptual Modeling in Geosciences*. Proceedings of iEMSS'08: International Congress on Environmental Modelling and Software, 2008.
- A. Kojevnikov, S. I. Nikolenko. *New Combinatorial Complete One-Way Functions*. Proceedings of the 25th Symposium of Theoretical Aspects of Computer Science (STACS-2008), Bordeaux, France, 2008, pp. 457-466.
- 2007** S. I. Nikolenko, C. A. Pshenichny, A. L. Sobissevich, A. V. Yakovlev. *Spatial Volcanic Hazard Assessment by the Event Bush Method*. XXIV IUGG General Assembly, 2007. Perugia, Italy.
- Pshenichny C. A., Nikolenko S. I., Carniel R., Vaganov P. A., Khrabrykh Z. V., Moukhachov, V. P., Akimova-Shterkhun V. L., Rezyapkin A. A., Yakovlev, A.V. *The Event Bush as a Potential Core Methodology of Volcanic Hazard Assessment*. IUGG General Assembly XXIV, 2007
- 2006** S. I. Nikolenko, N. Semenov. *Chow ring structure made simple*. arXiv:math/0606335 [math.AG]
- M. R. Gavrilovich, S. I. Nikolenko, N. A. Vavilov. *Structure of Chevalley Groups: the Proof from the Book*. Journal of Mathematical Sciences, vol. 140, no. 5, 2007, pp. 626-645.
- A. L. Tulupyev, A. V. Sirotkin, S. I. Nikolenko. *Coordinated estimates of probabilities of statements in intellectual informational systems*. Priborostroenie, no. 7, 2006, pp. 20-26
- A. L. Tulupyev, S. I. Nikolenko, D. A. Nikitin, A. V. Sirotkin. *A posteriori estimates of statement probabilities in intellectual informational systems: deterministic case*. Priborostroenie, no. 11, 2006, pp. 35-39.
- A. L. Tulupyev, S. I. Nikolenko, A. V. Sirotkin. *A posteriori probability estimates with probabilistic evidence in intellectual informational systems with interval probabilities*. Priborostroenie, no. 11, 2006, pp. 39-44.
- A. L. Tulupyev, S. I. Nikolenko, A. V. Sirotkin. *Cycles in Bayesian Networks: Probabilistic Semantics and Relations with Neighboring Nodes*. SPIIRAS Proc., no. 3(1), 2006, pp. 240-263.
- A.E. Paschenko, A.L. Tulupyev, S.I. Nikolenko. *Statistical Estimates of the Probability of Contracting HIV based on Last Episodes of Risky Behaviour*. SPIIRAS Proc., no.

3(2), 2006, pp. 257-268.

2005 E. A. Hirsch, S. I. Nikolenko. *Simulating Cutting Planes proofs with restricted degree of falsity by Resolution*. Proceedings of SAT'05, Lecture Notes in Computer Science, vol. 3569, 2005, pp. 135-142.

S. I. Nikolenko, N. Semenov, K. Zainoulline. *Motivic decomposition of anisotropic varieties of type F_4 and generalized Rost motives*. ArXiv preprint math.AG/0502382.

A.L. Tulupyev, S.I. Nikolenko. *Directed Cycles in Bayesian Belief Networks: Probabilistic Semantics and Consistency Checking Complexity*. MICAI-2005 Proceedings, Lecture Notes in Artificial Intelligence vol. 3789, 2005, pp. 214-223.

S.I. Nikolenko, A.L. Tulupyev. *Probabilistic semantics of Bayesian networks in the case of a linear chain of knowledge patterns* (in Russian). SPIIRAS proceedings, issue 2, vol. 2, pp. 53-75. St.-Petersburg, Nauka, 2005.

2004 S. S. Fedin, A. Kojevnikov, B. Konev, A. S. Kulikov, S. I. Nikolenko, V. P. Orevkov. *First report on the semialgebraic prover*. PDMI preprint, 2004.

S.I. Nikolenko, A.L. Tulupyev. *Simple cycles in Bayesian belief networks: probabilistic distribution and an inconsistent assignment* (in Russian). Proc. SPIIRAS, vol. 1, no. 2, pp. 119-126. St.-Petersburg, Nauka, 2004.

2003 S. I. Nikolenko, A. V. Sirotkin. *Worst-case upper bounds for SAT: automated proof*. Proc. 15th European Summer School in Logic, Language, and Information (ESSLI 2003), pp. 225-232.

S. I. Nikolenko. *Hard satisfiable instances for DPLL-type algorithms*. Journal of Mathematical Sciences, vol. 293, p. 139-149, 2003.

Teaching Machine Learning

Cryptographic Protocols

(courses): Introduction to Machine Learning

Fundamentals of Mathematical Logic

Bayesian Inference

Model Theory

Probabilistic Graphical Models

Mechanism Design

Grants, projects Head and Principal Investigator of the Samsung research grant "User Profiling Based on Distributed Word Representations", PDMI RAS, 2016.

Head of the Russian President Grant for Young Ph.D.'s MK-7287.2016.1, 2016-2017.

Head and Principal Investigator of the Samsung research grant "User Profiling for Recommender Systems", PDMI RAS, 2015.

Head and Principal Investigator of the Samsung research grant "Recommender Systems Based on Probabilistic Graphical Models", PDMI RAS, 2014.

Head of the Russian President Grant for Young Ph.D.'s MK-6628.2012.1, 2012-2013.

Head of the Russian Fund for Basic Research grant 12-01-00450-a, 2012-2013.

Head of the Russian President Grant for Young Ph.D.'s MK-4089.2010.1, 2010-2011.

PDMI RAS representative for Governmental Contract 02.740.11.5192, 2010-2011.

INTAS Fellowship YSF 05-109-5565

Participant of several Russian Scientific Foundation grants, Russian Foundation for Basic Research grants and Governmental Contracts for Fundamental Research of the Federal Target Programme "Scientific Personnel".

Winner of the 2004 and 2003 student personal grant contest conducted by the International Soros Science Education Program (ISSEP).