

# Alexander Statnikov

**E-mail:** [Alexander.Statnikov@med.nyu.edu](mailto:Alexander.Statnikov@med.nyu.edu)

**Website:** <http://www.statnikov.org>

**Office:** 1 (212) 263-3641

**Fax:** 1 (212) 263-5995

**Cell:** 1 (615) 545-3685

**Work address:**

333 E38th Street, 6th Floor,  
Center for Health Informatics and Bioinformatics,  
New York University Langone Medical Center,  
New York, NY 10016, USA

---

## Research Interests

- Developing, testing, and applying computational causal discovery methods for molecular, clinical, imaging and multi-modal data of high-dimensionality;
- Building, optimizing, and validating molecular signatures and other predictive models for personalized medicine.

## Current Academic Affiliation and Positions

- **Assistant Professor**, *Center for Health Informatics and Bioinformatics, Department of Medicine, Division of Clinical Pharmacology*, July 2009 - Present
- **Director**, *Computational Causal Discovery Laboratory*,
- **Benchmarking Director**, *Best Practices Integrative Informatics Consultation Service (BPIC)*,
- **Affiliate**, *Computational Biology Graduate Training Program and the Sackler Institute of Graduate Biomedical Sciences*,

New York University Langone Medical Center, New York, New York.

## Education

**Ph.D.**, Biomedical Informatics (GPA 3.9), *Vanderbilt University*, Nashville, Tennessee, December 2008

**Master of Science**, Biomedical Informatics (GPA 3.9), *Vanderbilt University*, Nashville, Tennessee, August 2005

**Master of Science**, Applied Mathematics (GPA 3.9), *Case Western Reserve University*, Cleveland, Ohio, August 2002

**Bachelor of Science**, Mathematics (GPA 3.6), *Case Western Reserve University*, Cleveland, Ohio, August 2001

Applied Mathematics (GPA 3.9), *Moscow State Institute of Electronics and Mathematics*, Moscow, Russia, September 1996 - July 1999

## Professional Work Experience

**Senior Scientific Programmer**, *Discovery Systems Laboratory, Department of Biomedical Informatics, Vanderbilt University Medical Center*, Nashville, Tennessee, May 2002 - May 2009

<b>Scientific Programmer</b> , <i>Zyxbio, LLC</i> , Cleveland, Ohio.	February 2002 - May 2002
<b>Research Assistant and Programmer</b> , <i>Department of Mathematics, Case Western Reserve University</i> , Cleveland, Ohio.	May 2000 - May 2002
<b>Research Assistant and Programmer</b> , <i>Mechanical Engineering Research Institute, Russian Academy of Sciences</i> , Moscow, Russia.	February 1997 - August 1999
<b>Programmer and System Administrator</b> , <i>NPO Stroysservice Ltd.</i> , Moscow, Russia.	December 1998 - August 1999

## Consulting

*Prediction Sciences, LLC* (La Jolla, California): Proteomic-based stroke diagnosis biomarker discovery and diagnostics signatures development.

*Discovery Holdings, LLC* (Nashville, Tennessee): Machine learning algorithms development.

## Publications

### Peer-Reviewed Articles\*:

1. Narendra V, Lytkin NI, Aliferis CF, **Statnikov A**. A Comprehensive Assessment of Methods for De-Novo Reverse-Engineering of Genome-Scale Regulatory Networks. *Genomics*, 2010.
2. **Statnikov A**, Lytkin NI, McVoy L, Weitkamp JH, Aliferis CF. Using Gene Expression Profiles from Peripheral Blood to Identify Asymptomatic Responses to Acute Respiratory Viral Infections. *BMC Research Notes*, 2010 Oct 20; 3(1): 264.
3. **Statnikov A**, Aliferis CF. Analysis and Computational Dissection of Molecular Signature Multiplicity. (*Cover Article*) *PLoS Computational Biology*, 2010; 6(5): e1000790.
4. Espinosa L, Cathelin S, D'Altri T, Trimarchi T, **Statnikov A**, Guiu J, Rodilla V, Inglés-Esteve J, Nomdedeu J, Bellosillo B, Besses C, Abdel-Wahab O, Kucine N, Sun SC, Song G, Mullighan CC, Levine RL, Rajewsky K, Aifantis I, Bigas A. The Notch/Hes1 Pathway Sustains NF- $\kappa$ B Activation through CYLD Repression in T Cell Leukemia. *Cancer Cell*, 2010 Sep 14; 18(3): 268-281.
5. **Statnikov A**, McVoy L, Lytkin N, Aliferis CF. Improving Development of the Molecular Signature for Diagnosis of Acute Respiratory Viral Infections. *Cell Host & Microbe*, 2010 Feb 18;7(2):100-1.
6. Guyon I, Pellet JP, **Statnikov A**. Development of Projects for the Causality Workbench. 12th National Conference on Artificial Intelligence. *The Association for the Advancement of Artificial Intelligence (AAAI) Spring Symposium*, 2010.
7. Aliferis CF, **Statnikov A**, Tsamardinos I, Mani S, Koutsoukos X. Local Causal and Markov Blanket Induction Algorithms for Causal Discovery and Feature Selection for Classification. Part I: Algorithms and Empirical Evaluation. *Journal of Machine Learning Research*, 11(Jan):171- 234, 2010.

---

\* Following the practice in biomedical informatics and computer science, this section includes peer-reviewed articles published in journals and in major, rigorously peer-reviewed biomedical informatics and computer science conference proceedings (the acceptance rates of most computer science conferences in the present vitae range from less than 25% to less than 5%).

8. Aliferis CF, **Statnikov A**, Tsamardinos I, Mani S, Koutsoukos X. Local Causal and Markov Blanket Induction Algorithms for Causal Discovery and Feature Selection for Classification. Part II: Analysis and Extensions. *Journal of Machine Learning Research*, 11(Jan):235 - 284, 2010.
9. **Statnikov A**, Aliferis CF. TIED: An Artificially Simulated Dataset with Multiple Markov Boundaries. *Journal of Machine Learning Research Workshop and Conference Proceedings, Volume 6: Causality: Objectives and Assessment (NIPS 2008)*, 6:249-256, 2010.
10. Mani S, Aliferis CF, **Statnikov A**. Bayesian Algorithms for Causal Data Mining. *Journal of Machine Learning Research Workshop and Conference Proceedings, Volume 6: Causality: Objectives and Assessment (NIPS 2008)*, 6:121-136, 2010.
11. Aliferis CF, **Statnikov A**, Tsamardinos I, Schildcrout JS, Shepherd BE, Harrell FE. Factors Influencing the Statistical Power of Complex Data Analysis Protocols for Molecular Signature Development from Microarray Data. *PLoS ONE*, 2009; 4(3): e4922.
12. Fananapazir N, **Statnikov A**, Aliferis CF. The FAST-AIMS Clinical Mass Spectrometry Analysis System. *Advances in Bioinformatics*, vol. 2009, Article ID 598241, 2009.
13. **Statnikov A**, Wang L, Aliferis CF. A Comprehensive Comparison of Random Forests and Support Vector Machines for Microarray-Based Cancer Classification. *BMC Bioinformatics*, 2008; 9:319.
14. **Statnikov A**, Li C, Aliferis CF. A Statistical Reappraisal of the Findings of an Esophageal Cancer Genome-Wide Association Study. *Cancer Research*, 2008; 68: 3074-3075.
15. Guyon I, Aliferis CF, Cooper GF, Elisseeff A, Pellet JP, Spirtes P, **Statnikov A**. Design and Analysis of the Causation and Prediction Challenge. *Journal of Machine Learning Research Workshop and Conference Proceeding, Volume 3: Causation and Prediction Challenge (WCCI 2008)*: 3:1-33, 2008.
16. **Statnikov A**, Li C, Aliferis CF. Effects of Environment, Genetics and Data Analysis Pitfalls in an Esophageal Cancer Genome-Wide Association Study. *PLoS ONE*, 2007; 2(9): e958.
17. **Statnikov A**, Aliferis CF. Are Random Forests Better than Support Vector Machines for Microarray-Based Cancer Classification? *AMIA Annual Symposium*, 2007.
18. Aliferis CF, **Statnikov A**, Tsamardinos I. Challenges in the Analysis of Mass-Throughput Data: A Technical Commentary from the Perspective of Statistical Machine Learning. *Cancer Informatics*, 2007 Feb 16;2:133-62.
19. Aphinyanaphongs Y, **Statnikov A**, Aliferis CF. A Comparison of Citation Metrics to Machine Learning Filters for the Identification of High Quality MEDLINE Documents. *Journal of the American Medical Informatics Association*. 2006 Jul-Aug; 13: 446-455.
20. **Statnikov A**, Hardin D, Aliferis CF. Using SVM Weight-Based Methods to Identify Causally Relevant and Non-Causally Relevant Variables. *Neural Information Processing Systems (NIPS) 2006 Workshop on Causality and Feature Selection*, 2006.
21. Tsamardinos I, **Statnikov A**, Brown LE, Aliferis CF. Generating Realistic Large Bayesian Networks by Tiling. *19<sup>th</sup> International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 2006.
22. Levy S, **Statnikov A**, Aliferis CF. Biomarker Selection from High-Dimensionality Data. *Pharmaceutical Discovery*. 2005 Microarray Supplement, 2005 Sep; 37-44.
23. **Statnikov A**, Tsamardinos I, Dosbayev Y, Aliferis CF. GEMS: A System for Automated Cancer Diagnosis and Biomarker Discovery from Microarray Gene Expression Data. *International Journal of Medical Informatics*. 2005 Aug; 74(7-8): 493-501.
24. **Statnikov A**, Aliferis CF, Tsamardinos I, Hardin D, Levy S. A Comprehensive Evaluation of Multicategory Classification Methods for Microarray Gene Expression Cancer Diagnosis. *Bioinformatics*. 2005 Mar; 21(5): 631-43.

25. Aphinyanaphongs Y, Tsamardinos I, **Statnikov A**, Hardin D, Aliferis CF. Text Categorization Models for High-Quality Article Retrieval in Internal Medicine. *Journal of the American Medical Informatics Association*. 2005 Mar-Apr; 12(2): 207-16.
26. Duda S, Aliferis CF, Miller R, **Statnikov A**, Johnson K. Extracting Drug-Drug Interaction Articles from MEDLINE to Improve the Content of Drug Databases. *AMIA Annual Symposium*, 2005.
27. **Statnikov A**, Aliferis CF, Tsamardinos I. Methods for Multi-Category Cancer Diagnosis from Gene Expression Data: A Comprehensive Evaluation to Inform Decision Support System Development. *Studies in Health Technology and Informatics*. 2004; 107(Pt 2): 813-817.
28. Aliferis CF, Tsamardinos I, **Statnikov A**. HITON: A Novel Markov Blanket Algorithm for Optimal Variable Selection. *AMIA Annual Symposium*, 2003.
29. Tsamardinos I, Aliferis CF, **Statnikov A**. Time and Sample Efficient Discovery of Markov Blankets and Direct Causal Relations. *9<sup>th</sup> ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, 2003.
30. Aliferis CF, Tsamardinos I, Massion P, **Statnikov A**, Fananapazir N, Hardin D. Machine Learning Models for Classification of Lung Cancer and Selection of Genomic Markers Using Array Gene Expression Data. *16<sup>th</sup> International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 2003.
31. Tsamardinos I, Aliferis CF, **Statnikov A**. Algorithms for Large Scale Markov Blanket Discovery. *16<sup>th</sup> International Florida Artificial Intelligence Research Society (FLAIRS) Conference*, 2003.
32. Frey L, Fisher D, Tsamardinos I, Aliferis CF, **Statnikov A**. Identifying Markov Blankets with Decision Tree Induction. *Third IEEE International Conference on Data Mining (ICDM)*, 2003.
33. Aliferis CF, Tsamardinos I, **Statnikov A**, Brown LE. Causal Explorer: A Probabilistic Network Learning Toolkit for Biomedical Discovery. *International Conference on Mathematics and Engineering Techniques in Medicine and Biological Sciences (METMBS)*, 2003.
34. Aliferis CF, Tsamardinos I, Massion P, **Statnikov A**, Hardin D. Why Classification Models Using Array Gene Expression Data Perform So Well: A Preliminary Investigation of Explanatory Factors. *International Conference on Mathematics and Engineering Techniques in Medicine and Biological Sciences (METMBS)*, 2003.

#### Books:

35. **Statnikov A**, Aliferis CF, Hardin DP, Guyon I. A Gentle Introduction to Support Vector Machines in Biomedicine, Volume 1: Theory and Methods. (Submitted) World Scientific Publishing, Singapore: 2010.
36. **Statnikov A**, Aliferis CF, Hardin DP, Guyon I. A Gentle Introduction to Support Vector Machines in Biomedicine, Volume 2: Applications. (In preparation) World Scientific Publishing, Singapore: 2010.
37. Guyon I, Aliferis CF, Cooper GF, Elisseeff A, Pellet JP, Spirtes P, **Statnikov A** (editors). Challenges in Machine Learning, Volume 1: Causation and Prediction Challenge. (In press) Brookline, Massachusetts: *Microtome Publishing*, 2010.
38. Guyon I, Dror G, **Statnikov A**, Vincent L (editors). Challenges in Machine Learning, Volume 3: Active Learning and Experimental Design. (In press) Brookline, Massachusetts: *Microtome Publishing*, 2011.

#### Book Chapters:

39. Guyon I, Aliferis CF, Cooper GF, Elisseeff A, Pellet JP, Spirtes P, **Statnikov A**. Causality Workbench. In *Causality in the Sciences*. Edited by Illari PM, Russo F and Williamson J. (In press) Oxford University Press, 2011.
40. **Statnikov A**, Tsamardinos I, Brown LE, Aliferis CF. Causal Explorer: A Matlab Library of Algorithms for Causal Discovery and Variable Selection for Classification. In *Challenges in Machine Learning. Volume 1: Causation and Prediction Challenge*. Edited by Guyon I, Aliferis CF, Cooper GF, Elisseeff A, Pellet JP, Spirtes P and Statnikov A. (In press) Brookline, Massachusetts: *Microtome Publishing*, 2010.

#### Peer-Reviewed Software Presentations:

41. **Statnikov A**, Tsamardinos I, Aliferis CF. Using the GEMS System for Supervised Analysis of Cancer Microarray Gene Expression Data. *AMIA Annual Symposium*, 2005.
42. **Statnikov A**, Tsamardinos I, Aliferis CF. Using the GEMS System for Cancer Diagnosis and Biomarker Discovery from Microarray Gene Expression Data. *12<sup>th</sup> National Conference on Artificial Intelligence (AAAI)*, 2005.
43. **Statnikov A**, Tsamardinos I, Aliferis CF. Using GEMS for Cancer Diagnosis and Biomarker Discovery from Microarray Gene Expression Data. *13<sup>th</sup> Annual International Conference on Intelligent Systems for Molecular Biology (ISMB)*, 2005.

#### Posters:

44. Zimmerman LJ, Slebos R, Coleman JA, Aliferis CF, Hardin DP, **Statnikov A**, Liebler DC. Assessment of Plasma Proteome Stability. *Clinical Proteomic Technologies for Cancer 2009 Annual Meeting*, 2009.
45. Zimmerman LJ, Coleman JA, Hardin DP, **Statnikov A**, Aliferis CF, Liebler DC. Development of Metrics for Assessment of Plasma Quality. *57th ASMS Conference on Mass Spectrometry and Allied Topics*, 2009.
46. Kokkotou E, Lois A, Triggs C, Conboy L, McDougall L, **Statnikov A**, Aliferis CF, Pothoulakis C, Kaptchuk T, Lembo A. Serum Biomarker Analysis of Placebo Responses in Patients with Irritable Bowel Syndrome. *Neurogastroenterology and Motility Joint International Meeting*, 2008.
47. Aliferis CF, **Statnikov A**, Tsamardinos I, Kokkotou E, Massion PP. Application and Comparative Evaluation of Causal and Non-Causal Feature Selection Algorithms for Biomarker Discovery in High-Throughput Biomedical Datasets. *Neural Information Processing Systems (NIPS) 2006 Workshop on Causality and Feature Selection*, 2006.
48. Aliferis CF, **Statnikov A**, Massion PP. Pathway Induction and High-Fidelity Simulation for Molecular Signature and Biomarker Discovery in Lung Cancer Using Microarray Gene Expression Data. *APS Conference: Physiological Genomics and Proteomics of Lung Disease*, 2006.
49. **Statnikov A**, Tsamardinos I, Aliferis CF. Using GEMS for Cancer Diagnosis and Biomarker Discovery from Microarray Gene Expression Data. *13<sup>th</sup> Annual International Conference on Intelligent Systems for Molecular Biology (ISMB)*, 2005.

#### Technical Reports:

50. **Statnikov A**, Kasparova E, Aliferis CF. Applying Decision Support Models in the Presence of Incomplete Evidence. Technical Report DSL TR-06-02, *Department of Biomedical Informatics, Vanderbilt University*, 2006.
51. **Statnikov A**, Tsamardinos I, Aliferis CF. New Efficient and Correct Algorithms for Identification of Direct Causal Relationships and Markov Blankets from Data. Technical Report DSL TR-06-01, *Department of Biomedical Informatics, Vanderbilt University*, 2006.
52. Tsamardinos I, Aliferis CF, **Statnikov A**, Brown LE. Scaling-Up Bayesian Network Learning to Thousands of Variables Using Local Learning Technique. Technical Report DSL TR-03-02, *Department of Biomedical Informatics, Vanderbilt University*, 2003.
53. **Statnikov A**, Tsamardinos I, Aliferis CF. An Algorithm for Generation of Large Bayesian Networks. Technical Report DSL TR-03-01, *Department of Biomedical Informatics, Vanderbilt University*, 2003.
54. Aliferis CF, Tsamardinos I, **Statnikov A**. Large-Scale Feature Selection Using Markov Blanket Induction for the Prediction of Protein-Drug Binding. Technical Report DSL TR-02-06, *Department of Biomedical Informatics, Vanderbilt University*, 2002.

#### Theses:

55. **Statnikov A**. Algorithms for Discovery of Multiple Markov Boundaries: Application to the Molecular Signature Multiplicity Problem. Ph.D. Thesis. *Department of Biomedical Informatics, Vanderbilt University*, Advisor: Dr. Constantin F. Aliferis, Committee Members: Dr. Gregory F. Cooper, Dr. Douglas P. Hardin, Dr. Daniel R. Masys, Dr. Ioannis Tsamardinos, December 2008.
56. **Statnikov A**. Automatic Cancer Diagnostic Decision Support System for Gene Expression Domain. Master's Thesis. *Department of Biomedical Informatics, Vanderbilt University*, Advisors: Dr. Constantin F. Aliferis and Dr. Ioannis Tsamardinos, August 2005.
57. **Statnikov A**. Numerical Methods for Image Reconstruction for the Calibration of the NASA-Glenn Icing Research Wind Tunnel: A Computer-Based Approach. Master's Thesis. *Department of Mathematics, Case Western Reserve University*, Advisor: Dr. Steven H. Izen, August 2002.

#### Patents:

58. **Statnikov A**, Aliferis CF. A Computer Implemented Method for Determining All Markov Boundaries and Its Application for Discovering Multiple Maximally Accurate and Non-Redundant Predictive Models. *United States Patent Application*, 2010.
59. **Statnikov A**, Aliferis CF. Computer Implemented Method for Discovery of Markov Boundaries from Datasets with Hidden Variables. *United States Patent Application*, 2010.
60. Aliferis CF, Statnikov A. Local Causal and Markov Blanket Induction Method for Causal Discovery and Feature Selection from Data. *United States Patent Application*, 2010.
61. **Statnikov A**, Aliferis CF, Tsamardinos I, Fananapazir N. Method and System for Automated Supervised Data Analysis. *United States Patent Application*, 2006.

#### Papers in Preparation or under Review:

- Lytkin NI, McVoy L, Weitkamp JH, Aliferis CF, **Statnikov A**. Expanding the Understanding of Biases in Development of Clinical-Grade Molecular Signatures: A Case Study in Acute Respiratory Viral Infections. (Submitted), 2010.

- Shmelkov E, Tang Z, Aifantis I, **Statnikov A**. Assessing Quality and Completeness of Human Signal Transduction and Transcription Regulation Pathways on a Genome-Wide Scale. (Submitted), 2010.
- Alekseyenko AV, Lytkin NI, Ai J, Padyukov L, Aliferis CF, **Statnikov A**. Causal Graph-Based Predictive Modelling of Rheumatoid Arthritis from Genome-Wide Association Data. (Submitted), 2010.
- Guyon I, **Statnikov A**, et al. Time Series Analysis with the Causality Workbench. (Submitted), 2010.
- Feig JE, Vengrenyuk Y, Wu C, Reiser V, Puig O, **Statnikov A**, Aliferis CF, Garabedian MJ, Fisher EA. Regression of Atherosclerosis is Characterized by a Specific Molecular Re-Programming of the Transcriptome. (In preparation), 2010.

(The list of publications in the field of *Multicriteria Analysis* is available upon request)

## Educational Activities

### Graduate Students:

- Varun Narendra (M.D./Ph.D. student): Advisor
- Evgeny Shmelkov (Ph.D. student): Rotation Advisor
- Thang Le (Ph.D. student, Department of Computer Science, Rutgers University): Ph.D. Committee Member
- Kassatihun Gebre-Amlak (M.D. student, Vanderbilt University): Emphasis Research Program Mentor.

### Courses:

- Lecturer in “*Molecular Signaling and Drug Development*” course, Computational Biology Graduate Training Program, *New York University School of Medicine*: April 2010
- Co-instructor for “*Introduction of Translational and Clinical Bioinformatics*” section in the Pathology Resident Training, Department of Pathology, *New York University School of Medicine*: September - November 2009
- Co-instructor for “*Biomedical Artificial Intelligence*” course, Department of Biomedical Informatics, *Vanderbilt University*: January - February 2009
- Lecturer in “*Biomedical Artificial Intelligence*” course, Department of Biomedical Informatics, *Vanderbilt University*: March 2008
- Instructor of undergraduate Mathematics courses “*Elementary Functions and Analytic Geometry*” and “*Calculus I*”, Department of Mathematics, *Case Western Reserve University*: August 2001 - May 2002
- Teaching assistant, Department of Mathematics, *Case Western Reserve University*: January 2000 - May 2001

### Tutorials:

- Tutorial “*A Gentle Introduction to Support Vector Machines in Biomedicine*” at the *AMIA Annual Symposium*, 2010
- Tutorial “*A Gentle Introduction to Support Vector Machines in Biomedicine*” at the *AMIA Annual Symposium*, 2009
- Tutorial “*Support Vector Machines without Tears*” at the *AMIA Annual Symposium*, 2008

## Grants

### Active:

3R01 AR056667201S1 (Cronstein) NIH “The Pharmacology of Dermal Fibrosis” Role: Co-Investigator	1/15/09-12/31/13 \$220,000	1.2 calendar
1 I01 CX000242-01 (Massion) Department of Veterans Affairs “Molecular Biomarkers of Small Cell Lung Cancer Behaviour” Role: Co-Investigator	10/1/09- 9/30/13 \$188,000	2.4 calendar
1 U54 RR024386-01A2 (Cronstein) NIH/NCRR “NYU-HHC Clinical Translation Science Award” Role: Bioinformatics Service Manager	07/14/09 – 03/31/14 \$3,879,473	2.4 calendar
(Pass) NIH/NCI “North American Mesothelioma Early Detection Research Network Grant” Role: Co-Investigator	07/01/10 -	0.3 calendar

### Pending:

NYU/Columbia Lung Cancer SPORE (Rom) NIH/NCI Role: Co-Investigator	4/1/11-3/31/14 \$2,929,160	0.6 calendar
R01 PA-10-067 (Cronstein) NIH “Purinergic Pharmacology of Liver Disease” Role: Co-Investigator	4/1/11-3/31/16 \$248,000	1.2 calendar
R01 RFA-PAR 10-126 (Pass) NIH/NCI “Prognostication of Malignant Pleural Mesothelioma using Biomolecular Integration” Role: Co-Investigator	4/01/11-3/31/16 \$824,013	1.2 calendar

## Scientific Reviewer Activities

### Journals:

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>▪ Bioinformatics</li> <li>▪ BMC Bioinformatics</li> <li>▪ British Journal of Cancer</li> <li>▪ Computational Statistics and Data Analysis</li> <li>▪ Decision Support Systems</li> </ul> | <ul style="list-style-type: none"> <li>▪ FEBS Letters</li> <li>▪ IEEE Transactions on Knowledge and Data Engineering</li> <li>▪ Inflammation</li> </ul> |
|---|---|

- Journal of the American Medical Informatics Association
- Journal of Artificial Intelligence Research
- Journal of Biomedical Informatics
- Journal of Clinical and Laboratory Medicine
- Journal of Machine Learning Research
- Methods of Information in Medicine
- Nucleic Acids Research
- Pattern Recognition Letters
- PLoS Genetics

### **Conferences:**

- American Medical Informatics Association (AMIA) 2011 Summit on Translational Bioinformatics
- 2010 International Joint Conference on Neural Networks (IJCNN)
- American Medical Informatics Association (AMIA) 2010 Fall Symposium
- American Medical Informatics Association (AMIA) 2009 Fall Symposium
- 15<sup>th</sup> ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD 2009)
- Pacific Symposium on Biocomputing (PSB) 2009
- 22<sup>nd</sup> Annual Conference on Neural Information Processing Systems (NIPS 2008)
- American Medical Informatics Association (AMIA) 2008 Fall Symposium
- European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD 2008)
- IEEE World Congress on Computational Intelligence (WCCI 2008)
- American Medical Informatics Association (AMIA) 2007 Fall Symposium
- 3<sup>rd</sup> Indian International Conference on Artificial Intelligence (IICAI 2007)
- American Medical Informatics Association (AMIA) 2006 Fall Symposium
- 10<sup>th</sup> Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2006)
- 11<sup>th</sup> ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD 2005)

### **Books:**

- “*Computational Intelligence in Bioinformatics*” (Editor in Chief: Arpad Kelemen)

## **Honors and Awards**

- ISMB 2005 Best Poster Award (June 2005)
- Medinfo 2004 Student Paper Competition, Gold Medal (September 2004)
- Vanderbilt University Medical School Dean’s Scholarship (September 2004 - December 2008)
- American Mathematical Society Waldemar J. Trjitzinsky National Award (May 2000)
- Case Western Reserve University Dean’s Honors List (2000)

## **Professional and Scientific Societies**

- AAAI (American Association for Artificial Intelligence): 2005 - Present
- AAAS (American Association for the Advancement of Science): 2007 - Present
- ACM (Association for Computing Machinery): 2008 - Present
- AMIA (American Medical Informatics Association): 2003 - Present
- AMS (American Mathematical Society): 2001 - Present
- ASA (American Statistical Association): 2008 - Present
- ISCB (International Society for Computational Biology): 2004 - Present

## Scientific Leadership and Community Service

- AMIA (American Medical Informatics Association) 2010 Fall Symposium: Scientific Program Committee Member
- AISTATS 2010 (Artificial Intelligence in Statistics) Active Learning and Experimental Design Workshop: Organizing Committee Member
- Co-Organizer of the “*Active Learning Challenge*”: 2010
- Co-Organizer of the “*Causality Challenge #2: Potluck*”: 2008
- NIPS 2008 (Neural Information Processing Systems) Causality Workshop: Organizing Committee Member
- Co-Organizer of the “*Causality Challenge #1: Causation and Prediction*”: 2007 - 2008
- AMIA (American Medical Informatics Association) Genomics Workgroup Student Representative: 2005 - 2007

## Other Experience

- **Webmaster**, *Department of Mathematics, Case Western Reserve University*: January 2000 - May 2002
- **Webmaster**, *Department of Mechanical Engineering, Cleveland State University*: December 2000 - May 2001

## Personal

- Born in Moscow, Russia, 1979
- United States citizen
- Fluent in English and Russian