

IVAN IOSSIFOV, Ph.D.

1815 JFK blvd. #1009 / Philadelphia, PA 19103

Telephone: +1 (267) 639-5198

E-mail: iossifov@dbmi.columbia.edu

Web: <http://www.dbmi.columbia.edu/~ivi7001/>

EDUCATION

- 2004–2008 **Columbia University, Ph.D.** Department of Biomedical Informatics
Advisor: Prof. Andrey Rzhetsky GPA: 4.1/4.0 (*with distinction*)
Thesis: Studying human disease with molecular network models derived from scientific literature
- 1992–1997 **Sofia University, Bulgaria, BS and MS** in Computer Science
Advisor: Prof. Darina Dicheva GPA: 5.9/6.0
Thesis: A method for agent-based visualization in information systems

WORK EXPERIENCE

- 2006 Summer Internship at *Microsoft Research*, Redmond, WA
➤ Worked on models of immune reaction to HIV.
- 2001–2004 Senior Programmer/Analyst, Department of Biomedical Informatics,
Columbia University, New York
➤ Participated in the developed, integration, and maintenance of GENEWAYS—a system for automatic extraction of molecular interactions from the literature.
➤ Developed a model of protein domain evolution for phylogenetic analyses of the domain composition of proteomes.
- 2000–2001 Team Leader, *Nemetschek LLC*, Sofia, Bulgaria
➤ Led a 10-member team of that developed business software, including a system for customer-relationship management and a portal for the construction industry.
- 1994–1999 Senior Application Developer, *DISY Inc.* Sofia, Bulgaria
➤ Worked on the design, development, deployment, and maintenance of various industrial information systems, including the supervisor systems for the Sofia subway and for a local power plant.

TEACHING EXPERIENCE

- 2005 Teaching Assistant, *Methods in Biomedical Informatics*, Columbia University
- 2005 Teaching Assistant, *Computational Biology*, Columbia University
- 2000 Lecturer, *Programming in C++*, Electrical-Engineering High School, Sofia
- 1999 Teaching Assistant, *Functional and logical programming*, Sofia University
- 1998 Teaching Assistant, *Prolog programming in AI*, Sofia University

RESEARCH INTEREST

computational biology ▪ molecular networks ▪ human genetics ▪ human disease
applied statistical and machine learning ▪ biomedical text-mining ▪ molecular evolution

PUBLICATIONS

- [1] Liu, J., Ghanim, M., Xue, L., Brown, C. D., **Iossifov, I.**, Angeletti, C., Hua, S., Nègre, N., Ludwig, M., Robert L. Camp, Perera-Alberto, M., Rimm, D. L., Xu, T., Rzhetsky, A., and White, K. P. (2008) Integrated genomic analysis of the *Drosophila* segmentation network leads to identification of a highly specific biomarker for human kidney cancer. (*submitted*)
- [2] **Iossifov, I.**, Rodriguez-Esteban, R., Mayzus, I., & Rzhetsky, A. (2008) A Peek at the Known Portion of the Human Molecular Network with the Help of an Automated Information Extraction System. (*in preparation*)
- [3] **Iossifov, I.**, Zheng, T., Baron, M., Gilliam, T. C., & Rzhetsky, A. (2007) Genetic-linkage mapping of complex hereditary disorders to a whole-genome molecular-interaction network. *Genome Research*
- [4] Cokol, M., **Iossifov, I.**, Rodriguez-Esteban, R., & Rzhetsky, A. (2007) Response by Cokol et al *EMBO rep.* **8** (9) 793
- [5] Cokol, M., **Iossifov, I.**, Rodriguez-Esteban, R., & Rzhetsky, A. (2007) How many papers should be retracted? *EMBO rep.* **8** (9) 793
- [6] Rodriguez-Esteban, R., **Iossifov, I.**, & Rzhetsky, A. (2006) Imitating manual curation of text-mined facts in biomedicine. *PLoS Comput Biol.* **2** (9) e118
- [7] Rzhetsky, A., **Iossifov, I.**, Loh, J.M., White, K.P. (2006) Micro-paradigms: Chains of collective reasoning in publications about molecular interactions. *Proc Natl Acad Sci USA*, **103** (13) 4940
- [8] Cheng, R., Juo, S.H., Loth, J.E., Nee, J., **Iossifov, I.**, Blumenthal, R., Sharpe, L., Kanyas, K., Lerer, B., Lilliston, B., Smith, M., Trautman, K., Gilliam, T.C., Endicott, J. & Baron, M. (2006) Genome-wide linkage scan in a large bipolar disorder sample from the National Institute of Mental Health genetics initiative suggests putative loci for bipolar disorder, psychosis, suicide, and panic disorder. *Mol Psychiatry.* **11** (3) 252
- [9] Cokol, M., **Iossifov, I.**, Weinreb, C., & Rzhetsky, A. (2005) Emergent behavior of growing knowledge about molecular interactions. *Nature Biotechnology*, **23** (10) 1243.
- [10] Rzhetsky, A., **Iossifov, I.**, Koike, T., Krauthammer, M., Kra, P., Morris, M., Yu, H., Duboué, P.A., Weng, W., Wilbur, W.J., Hatzivassiloglou, V., & Friedman, C. (2005) GeneWays: A system for extracting, analyzing, visualizing and integrating molecular pathway data. Book chapter in “*Databasing the Brain: From Data to Knowledge (Neuroinformatics)*”, Koslow and Subramaniam (Eds).

PUBLICATIONS (continued)

- [11] **Iossifov, I.**, Krauthammer, M., Friedman, C., Hatzivassiloglou, V., Bader, J.S., White, K.P., & Rzhetsky, A. (2004) Probabilistic pathway inference from noisy data sources. *Bioinformatics*, **20** (8) 1205.
- [12] Rzhetsky, A., **Iossifov, I.**, Koike, T., Krauthammer, M., Kra, P., Morris, M., Yu, H., Duboué, P.A., Weng, W., Wilbur, W.J., Hatzivassiloglou, V., & Friedman, C. (2004) GeneWays: A system for extracting, analyzing, visualizing and integrating molecular pathway data. *Journal of Biomedical Informatics*, **37** (1) 43.
- [13] Krauthammer, M., Kra, P., **Iossifov, I.**, Gomez, S., Hripsak, G., Hatzivassiloglou, V., Friedman, C., & Rzhetsky, A. (2002) Of truth and pathways: Chasing bits of information through myriads of articles. *Bioinformatics 18 Suppl 1*, S249–S257.
- [14] Hong, Y., Hatzivassiloglou, V., Friedman, C., **Iossifov, I.**, & Rzhetsky, A. (2002) A rule-based approach for automatically identifying gene and protein names in MEDLINE abstracts. *ISMB 2002*, Poster 240A