

Sergey Aganezov

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Education

- 08/2013 – **Ph.D. student**, Department of Mathematics, *The George Washington University*, Washington, DC, USA, **GPA: 4.0 / 4.0**.
present
- 09/2013 – **M.S. (*summa cum laude*) in Applied Mathematics and Computer Science**, *ITMO University*, St. Petersburg, Russia, **GPA: 4.0 / 4.0**.
06/2015
Thesis **Multi genome scaffolding based on comparative gene orders analysis**. Advisor: Dr. Max Alekseyev.
- 09/2010 – **Advanced Training Degree**, *St. Petersburg Academic University – Nanotechnology Research and Education Center of the Russian Academy of Sciences*, St. Petersburg, Russia, **GPA: 3.92 / 4.0**.
05/2013
This training constituted 288 academic hours and involved professional training in applied computer science.
- 09/2011 – **Advanced Training Degree**, *Computer Science Center*, St. Petersburg, Russia, **GPA: 3.85 / 4.0**.
05/2013
My major was theoretical computer science and area of interest's contained algorithms optimization, application of path finding algorithms to phylogenetic problems in computational biology.
- 09/2009 – **B.S. (*summa cum laude*) in Applied Mathematics and Computer Science**, *ITMO University*, St. Petersburg, Russia, **GPA: 4.0 / 4.0**.
06/2013
Thesis **Combinatorial problems of three genomes in bioinformatics**. Advisor: Dr. Max Alekseyev.

Experience

- 01/2016 – **Course Instructor**, *Python and Algorithms in Bioinformatics*, *The George Washington University*, Washington, DC, USA.
05/2016
Teaching a recitation course for graduate students.
- 08/2013 – **Graduate Research Assistant**, *Computational Biology Institute*, *The George Washington University*, Ashburn, VA, USA.
present
Research in comparative genomics and genome assembly. Algorithm development and optimization; complexity analysis.
- 01/2014 – **M.S. Student Project Curator**, *Computational Biology Institute*, *The George Washington University*, Ashburn, VA, USA.
05/2014
I led a team project with Nadiya Sitdykova, an M.S. bioinformatics student, on genome scaffolding problem. Our work resulted in a paper accepted for publication in *Computational Biology and Chemistry* journal.

Languages

Russian Native
English Advanced

Honors and Awards

- 09/2015 – **VSTC Research Scholarship**, *The George Washington University*, Washington, DC, USA.
05/2016

- 03/2015 **Marvin Green Prize**, Department of Mathematics, *The George Washington University*, Washington, DC, USA.
- 01/2015 **Conference Travel Grant**, Office of Graduate Student Assistantships and Fellowships, *The George Washington University*, Washington, DC, USA.
- 09/2012 – 05/2013 **Academic Fellowship**, *Computer Science Center*, St. Petersburg, Russia.
- 09/2009 – 05/2013 **Academic Fellowship**, *ITMO University*, St. Petersburg, Russia.

Publications

- **S. Aganezov** and Max A. Alekseyev. Multi-genome Scaffolds Co-Assembly Based on the Analysis of Non-uniform Gene Orders and Genomic Repeats. (2016) (submitted).
- Y. Liu, S. Hsu, **S. Aganezov**, Max A. Alekseyev et al. Transcriptome Sequencing Based Annotation and Homologous Evidence Based Scaffolding of Anguilla Japonica Draft Genome. *BMC Genomics* 17(Suppl 1), (2016) doi:10.1186/s12864-015-2306-6.
- P. Avdeev, S. Jiang, **S. Aganezov**, F. Hu, and M. A. Alekseyev. Reconstruction of ancestral genomes in presence of gene gain and loss. 2016 (in press).
- **S. Aganezov** N. Sitdykova, AGC Consortium, M. A. Alekseyev. Scaffold assembly based on genome rearrangement analysis. *Computational Biology and Chemistry*, 2015 dx.doi.org/10.1016/j.compbiolchem.2015.02.005.
- D. E. Neafsey, R. M. Waterhouse, M. R. Abai, **S. Aganezov**, M. A. Alekseyev et al. Highly evolvable malaria vectors: the genomes of 16 Anopheles mosquitoes. *Science* 347(6217) (2015), 1258522, doi:10.1126/science.1258522.
- **S. Aganezov** and M. A. Alekseyev. On pairwise distances and median score of three genomes under DCJ. *BMC Bioinformatics* 13(Suppl 19) (2012) S1, doi:10.1186/1471-2105-13-S19-S1.

Presentations

- **Scaffold Assembly Based on the Analysis of Gene Orders and Genomic Repeats**, *The 13th Annual Rocky Mountain Bioinformatics Conference (ROCKY)*, Aspen, CO, USA, December 10-12, 2015.
- **Scaffold Assembly Based on the Analysis of Gene Orders and Genomic Repeats**, *5th Workshop on Computational Advances for Next Generation Sequencing (CANGS)*, Miami, FL, USA, October 15-17, 2015.
- **Scaffold assembly based on genome rearrangement analysis**, *Knots In Wasington XL*, Georgetown University, Washington, DC, USA, March 9-11, 2015.
- **Scaffold assembly based on genome rearrangement analysis**, *The Thirteenth Asia Pacific Bioinformatics Conference*, Microelectronics and Information Systems Research Center, Kuang-Fu Campus, Chiao Tung University, HsinChu, Taiwan, January 21-23, 2015.
- **Varying resolution synteny blocks in large scale phylogenetics**, *Research Days*, The George Washington University, Washington, DC, USA. April 1 – 2, 2014.
- **Varying resolution synteny blocks construction in large scale phylogenetics**, *The Advancing Computational Biology @ Howard University Symposium*, Howard University, Washington, DC, USA, March 26, 2014.
- **Varying resolution synteny blocks construction in large scale phylogenetics**, *The 9th International Conference on Bioinformatics*, Georgia Tech, Atlanta, GA, USA, April 2 – 4, 2014.
- **Varying resolution synteny blocks construction**, *The CSHL Annual Meeting on Genome Informatics*, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, USA, October 30 – November 3, 2013.
- **On pairwise distances and median score of three genomes under DCJ**, *Computer Science Club, POMI RAS*, St. Petersburg, Russia, November 5, 2012.

- **On pairwise distances and median score of three genomes under DCJ.** *The 10th Annual RECOMB Satellite Workshop on Comparative Genomics*, Niteroi, Brasil, October 17 – 19, 2012.

Computer skills

- 6 years **Programming**, *Python 2.7 / 3.x (+ Django / Flask), Java, Kotlin, Git, bash.*
- 4 years **Document sys**, *LaTeX, Beamer, MS Office, Graphviz.*
- 8 years **Operational sys**, *Windows, Mac OSX, Linux.*

References

Dr. Max A. Alekseyev

- Department of Mathematics & Computational Biology Institute at George Washington University, Associate professor
- Email: maxal@gwu.edu

Dr. Alexander Kulikov

- Laboratory of Mathematical Logic, Steklov Institute of Mathematics at St. Petersburg, Russia, researcher
- Email: kulikov@logic.pdmi.ras.ru

Prof. Igor Popov

- NRU ITMO, St. Petersburg, Professor, Dr. Sci. Phys. and Maths., Chairman of admission board, Head of Further Mathematics department
- Email: popov@mail.ifmo.ru