Dmitry Kuzmin

Address: room 406, 26-1, Kirensky st, Krasnoyarsk

Phone: +7-902-921-08-91

E-mail address: dkuzmin@sfu-kras.ru

Personal Webpage (s) http://structure.sfu-kras.ru/node/1270

Google Scholar: scholar.google.com/citations

Profile on another site(s):

ORCID: https://orcid.org/0000-0003-0597-3365

Web of Science ResearcherID: AAF-8808-2019

Current Position Head. HPC Department at the Siberian Federal University, Krasnoyarsk, Russia.

Research Interests Supercomputers, high performance computing, bioinformatics

Education and Academic Degrees

- 2007 Siberian Federal University, Associate Professor,
- 2004 Krasnoyarsk State Technical University, Faculty of Informatics and Computer Science, PhD in Technical Sciences (Thesis: "Research and development of methods for performing functional parallel programs").
- *1991* Krasnoyarsk State Technical University, Masters in Technical Science

Professional Career

- 2012 – present. Siberian Federal University, Head of HPC Department
- 2010 – present. Siberian Federal University, Leader of Master's program “High-performance computing systems”
- 2008 – present. Head. Siberian Federal University, HPC Centre
- 2007-2012 Siberian Federal University, Associate Professor, Department of Computer Science
- 1994-2007 Krasnoyarsk State Technical University, Senior Lecturer, Faculty of Informatics and Computer Science
- 1991-1994 Krasnoyarsk State Technical University, Assistant Lecturer, Faculty of Informatics and Computer Science

Recent Publications

- 2019 - Kuzmin, D. A., S. I. Feranchuk, V. V. Sharov, A. N. Cybin, S. V. Makolov, Y. A. Putintseva, N. V. Oreshkova, K. V. Krutovsky, 2019 Stepwise large genome assembly approach: A case of Siberian larch (Larix sibirica Ledeb.). BMC Bioinformatics 20(Suppl. 1) doi: 10.1186/s12859-018-2570-y

  Sadovsky M., Kobets V., Khodos G., Kuzmin D., Sharov V. (2019) Reads in NGS Are Distributed over a Sequence Very Inhomogeneously. In: Rojas I., Valenzuela O., Rojas F., Ortuño F. (eds) Bioinformatics and Biomedical Engineering. IWBBIO 2019. Lecture Notes in Computer Science, vol 11465. Springer, Cham DOI https://doi.org/10.1007/978-3-030- 17938-0_25
- 2018 - A. Kolesnikova, Y. Putintseva, S. Jain, N. Oreshkova, I. Pavlov, V. Sharov, D. Kuzmin, S. Makolov, K. Krutovsky Rapid Evolution of Mitochondrial Genomes in Three CloselyRelated Armillaria Species // The Multiconference BGRS\SB-2018, 20-25.08 Novosibirsk. p. 54. 6. Yu. Putintseva, V. Sharov, D. Kuzmin, N. Oreshkova, S. Feranchuk, V. Biryukov, S. Novikova, K. Miroshnikova, S. Makolov, M. Sadovsky, K. Krutovsky Genomes of Three Conifer Species: Larix sibirica, Pinus sibirica and Pinus sylvestris // The Multiconference BGRS\SB-2018, 20-25.08 Novosibirsk. p. 71.
- 2016 - Cybin A.N., Sharov V.V., Putinceva J.A., Feranchuk S.I., Kuz'min D.A. Parallel repeats filtration algorithm of NGS Illumina data//Proceedings of the Russian higher school Academy of sciences, 2016, no. 4 (33), pp. 99–110. doi: 10.17212/1727- 2769-2016-4-99-110 Russian.

  Astrikov D.Y., Kuzmin D.A. Evaluation of effectiveness of high performance computing system with functional models// Sibirskii Gosudarstvennyi Aerokosmicheskii Universitet imeni Akademika M. F. Reshetneva. Vestnik. 2016. Vol. 17, No. 2, P. 295–301 https://elibrary.ru/item.asp?id=27371030
- 2014 - Astrikov D.Yu., Kuz'min D.A., Panasyuk A.I. Modelirovanie sistemy planirovaniya raspredelennogo vysokoproizvoditel'nogo vychislitel'nogo kompleksa [Simulation of a scheduling system of the distributed high-performance computing system]. Doklady Akademii Nauk Vysshei Shkoly Rossiiskoi Federatsii – Proceedings of the Russian Higher School Academy of Sciences, 2014, no. 2-3 (23-24), pp. 34-41.
- 2013 - Astrikov, D.U., Kuzmin, D.A., Panasyuk, A.I. Creating computing services based on HPC resources at the Siberian Federal University. (2013) Fifth International Conference "System Analysis and Information Technologies" SAIT (Krasnoyarsk, Russia): –2: 317-321. Russian.

Panasyuk, A., Astrikov, D, Kuzmin, D. (2013) Efficient use of computing resources in the processes of distributed visualization of three-dimensional models Second International Conference "Cluster Computing" CC 2013 (Ukraine, Lviv, June 3-5) 166 – 174 . http://hpc-ua.org/cc-13/files/proceedings/37.pdf. Russian.

- 2012 - Dmitry Astrikov, Dmitry Kuzmin, Alexander Panasyuk HPC as service/ The 2nd International Conference on High Performance Computing Kyiv, Ukraine | October 8-10, 2012 - p. 79-85 // http://hpc-ua.org/hpc-ua-12/files/proceedings/14.pdf

Astrikov, D., Kuzmin, D., Panasyuk, A. (2012). HPC as a service. The 2nd International Conference on High Performance Computing. Kiev, Ukraine. 79-85. http://hpc-ua.org/hpc-ua-12/files/proceedings/14.pdf. Russian.

Panasyuk, AI., Makolov, S.V., Astrikov, D.U., Kuzmin, D.A. (2012) Visualization of 3D models on supercomputing resources // Scientific Service on the Internet: the search for new solutions: Proceedings of the International Supercomputer Conference. Novorossiysk. 69-74. Russian.

Kuzmin, D.A. (2012) Siberian Federal University. Contributor to the National Supercomputer Platform, Member of the Supercomputing Consortium of Russian universities. Supercomputers, Digest, The best of 2010-2012. Pp. 46-49.

Upskilling

- 2012 (9.04.2012 – 20.04.2012) Internship in Nova University, Lisboa, Portugal. Project - 159386-TEMPUS-DE-TEMPUS-JPCR «Modernization of Master Program Network & Communications»
- 2008 Internship in Academic Computer Center CYFRONET of the University of Science and Technology, Krakow, Poland.

Projects

- 2010-2012 TEMPUS project Modernization of Master Program NETWORKS & COMMUNICATIONS"

Conferences

- 2019 - 7th International Work-Conference, IWBBIO 2019, Granada, Spain
- 2016 - THE 18th ISRAELI BIOINFORMATICS SYMPOSIUM, University of Haifa
- 2013 - Second International Conference "Cluster Computing", Kyiv, Ukraine
- 2012 - The 2nd International Conference on High Performance Computing
- 2012 - Scientific Service on the Internet: the search for new solutions: Proceedings of the International Supercomputer Conference. Novorossiysk

Patents

- V.V. Sharov, D.A. Kuzmin Program for filtering redundant genome sequences in the FASTA's format. Copyright certificate № 2018666435, 17.12.2018. Russian
- V.V. Sharov, S.V. Makolov, D.A. Kuzmin Software for NGS reads preprocessing. Copyright certificate No 2017610541, 12.01.2017. Russian
- V.V. Sharov, Y.A. Putintseva, D.A. Kuzmin Software for large genomes sequences indexation on GPU by the "FM index" Copyright certificate No 2016663584, 13.12.2016. Russian
- A.N. Tsybin, D.A. Kuzmin Y.A. Putintseva Software package for repeating sequences (repeats) filtration in NGS Illumina reads. Copyright certificate № 2015619173, 01.07.2015. Russian
- V.V. Sharov, A.N. Tsybin, S.V. Makolov, D.A. Kuzmin Software for NGS Illumina reads preparation to Assemble. Copyright certificate № 2015619381, 13.07.2015. Russian
- D.A. Kuzmin, S.V. Makolov, A.I. Panasyuk, et al. The control system for distributed visualization of cloud service "Render Farm" based on Supercomputers. Copyright certificate № 2013613033, 21.03.2013. Russian
- Full list of Patents may be found at: **scholar.google.com/citations**

Grants

- RFBR Grant №19-04-00964 (2019-2021) "Study of genetic adaptation in Siberian larch populations using genome-wide genotyping data" (PI: Konstantin V. Krutovsky);
- Siberian Federal University, grant № 14.Y26.31.0004 (2014 - 2016, extended for 2017 — 2018) "Genomics of the key boreal forest conifer species and their major phytopathogens in the Russian Federation" (PI: Konstantin V. Krutovsky); supported by Government of Russian Federation
- Memberships
- 2013 – The 3rd International Conference on High Performance Computing (HPC-UA 2013) program committee member. The Conference on Parallel and Distributed Computing Systems (PDCS 2014) program committee member.
- 2012 – 2014 - Responsible Executive from SFU in a project "Supercomputer Education" (under the HPC Consortium of Russian Universities).
- 2011 – present - Responsible Executive from the Siberian Federal University to participate in the "National Supercomputer Technology Platform."

- 2010 – present - The plenipotentiary representative of the Siberian Federal University in HPC Consortium of Russian Universities.