Curriculum Vitae

Alex Gavryushkin

3rd December 2015

Contacts

Address:	Computational Evolution Group Department of Computer Science The University of Auckland Private Bag 92019 Auckland 1142, New Zealand
Office:	Science Centre 303.367
Phone:	+64 9 373 7599 ext. 85506
Homepage:	http://alex.gavruskin.com
Email:	a.gavruskin@auckland.ac.nz
Residency Status:	New Zealand permanent resident
Date of Birth:	18th January 1983

Education

2009	Ph. D. in Mathematics from Sobolev Institute of Mathematics, Novosibirsk Thesis advisor: Professor Sergei S. Goncharov
2006	M. S. in Mathematics from Novosibirsk State University (with Honours)
2004	B. S. in Mathematics from Novosibirsk State University (with Honours)
2000	Gold Medal High School Diploma, Novokuznetsk

Professional Activity

February 2012–present	Research Fellow	The University of Auckland (NZ) Department of Computer Science
February 2015–present	Affiliate	Fred Hutchinson Cancer Research Centre (US) Computational Biology Programme
August 2013–July 2014	Lecturer	Auckland University of Technology (NZ) School of Computer and Mathematical Sciences
November 2012–June 2013	Research Visitor	National University of Singapore School of Computing
September 2009–December 2014	Senior Lecturer	Irkutsk State University (RF) Institute of Mathematics and Computer Science
September 2009–November 2009	Research Visitor	University of Notre Dame (US) Department of Mathematics
April 2009–August 2009	Research Assistant	Sobolev Institute of Mathematics (RF)
September 2006–July 2009	GTA	Novosibirsk State University (RF)

Awards

2011 Dr of Science Scholarship for three years
(This Award is a Russian analogue of New Zealand's Rutherford Discovery Fellowship)
2009 Siberian Fund for Algebra and Logic Award (2005–2009)
2008 Award for excellence in teaching (at ACM-ICPC North-Eastern European Regional Contest)
2007 Siberian Mathematical Journal Award (from Sobolev Institute of Mathematics)
2006 Best Student Scientific Work Award (from Novosibirsk State University)
2005 Maltsev Award (from Novosibirsk State University)

Publications

- A. Gavryushkin and A. Drummond. The space of ultrametric phylogenetic trees. *arXiv preprint* arXiv:1410.3544. Submitted to *Journal of Theoretical Biology* in September 2015. Software is available at https://github.com/gavruskin/tauGeodesic

- T. Stadler, T. Vaughan, A. Gavryushkin, S. Guindon, D. Kühnert, G.E. Leventhal, and A. Drummond. How well can the exponential-growth coalescent approximate constant-rate birth-death population dynamics? *Proceedings of the Royal Society B: Biological Sciences,* 282, 1806, 2015.

- P. Gavryushkin, Z. Popov, K. Litasov, and A. Gavryushkin. Unbiased crystal structure prediction of NiSi under high pressure. *Journal of Applied Crystallography,* 48, 3, 906–908, 2015.

- A. Gavryushkin, B. Khoussainov, and F. Stephan. Reducibilities among equivalence relations induced by recursively enumerable structures. *Theoretical Computer Science,* DOI: 10.1016/j.tcs.2015.11.042, 2015.

- A. Gavryushkin. Decidable models of small theories. *Lobachevskii Journal of Mathematics,* 36, 4, 446–449, 2015. In press. *arXiv preprint* arXiv:1504.01180, 2015.

- A. Gavryushkin, B. Khoussainov, M. Kokho, and J. Liu. Dynamic algorithms for monotonic interval scheduling problem. *Theoretical Computer Science,* Vol. 562, 227–242, 2014.

- A. Gavryushkin and A. Nies. Universality for left-computably enumerable metric spaces. *Lobachevskii Journal of Mathematics,* 35, 4, 292–294, 2014.

- A. Gavryushkin, B. Khoussainov, M. Kokho, and J. Liu. Dynamic interval scheduling for multiple machines. *ISAAC 2014, Springer LNCS,* Vol. 8889, 235–246, 2014.

- A. Gavryushkin, S. Jain, B. Khoussainov, and F. Stephan. Graphs realised by r. e. equivalence relations. *Annals of Pure and Applied Logic,* 165, 7, 1263–1290, 2014.

- A. Gavryushkin, B. Khoussainov, M. Kokho, and J. Liu. Dynamising interval scheduling: the monotonic case. *Combinatorial Algorithms,* LNCS 8288, 178–189, 2013.

- A. Gavryushkin and B. Khoussainov. On decidable and computable models of theories. *Springer LNCS* Vol. 7921, 200–209, 2013.
- A. Gavryushkin, S. Jain, B. Khoussainov, and F. Stephan. Graphs realised by r. e. equivalence relations. *The Nature of Computation—CiE,* 110–119, 2013.
- A. Gavryushkin. On constructive models of theories with linear Rudin-Keisler ordering. *Journal of Logic and Computation,* 22, 4, 793–805, 2012.
- A. Gavryushkin. Computable models of Ehrenfeucht theories. *CRM Documents*, Centre de Recerca Matemàtica, Bellaterra (Barcelona), Vol. 11, 67–77, 2012.
- A. Gavryushkin. A new spectrum of computable models. *Bulletin of ISU. Series: mathematics,* 4, 4, 7–20, 2010.
- A. Gavryushkin. Computable limit models. *Programs, Proofs, Processes—CiE,* 188–193, 2010.
- A. Gavryushkin. Computable limit models for Ehrenfeucht theories. *Bulletin of ISU. Series: mathematics,* 3, 2, 56–61, 2009.
- A. Gavryushkin. Computable models of theories with linear Rudin-Keisler ordering. *Bulletin of NSU. Series: mathematics, mechanics, informatics,* 9, 2, 30–37, 2009.
- A. Gavryushkin. Spectra of computable models for Ehrenfeucht theories. *Algebra and Logic,* 46, 3, 149–157, 2007.
- A. Gavryushkin. On complexity of Ehrenfeucht theories with computable model. *Logical Approaches to Computational Barriers—CiE,* 105–108, 2006.
- A. Gavryushkin. Complexity of Ehrenfeucht models. *Algebra and Logic,* 45, 5, 289–295, 2006.

Invited Talks

November	2015	*Computational Biology Group Seminar* at ETH—Zürich	Seminar talk
February	2015	*Matsen Group Seminar* at Fred Hutchinson Cancer Research Centre	Seminar talk
February	2015	*Workshop on Networks of Life* at the University of Canterbury	Workshop talk
June	2014	*Algebra and Mathematical Logic: Theory and Applications* in Kazan	Special session talk
November	2013	*Randomness Workshop* at the University of Auckland	Workshop talk
November	2012	National University of Singapore	Seminar talk
March	2012	Auckland University of Technology	Seminar talk

October	2011	*Maltsev Meeting* in Novosibirsk	Plenary talk
October	2011	Logic Seminar at Cornell University	Seminar talk
September	2011	*Southern Wisconsin Logic Colloquium*	Seminar talk
November	2009	Computational Logic Seminar at CUNY Graduate Centre	Seminar talk
October	2009	Logic Seminar at Cornell University	Seminar talk
October	2009	Logic Seminar at the University of Notre Dame	Seminar talk
November	2007	*Maltsev Meeting* in Novosibirsk	Plenary talk
September	2006	Algebra and Logic Seminar at Novosibirsk State University	Seminar talk
June	2005	Notre Dame and Novosibirsk Universities Joint Seminar on Constructive Models	Seminar talk
November	2004	Algebra and Logic Seminar at Novosibirsk State University	Seminar talk

Contributed Talks

October	2015	*Alan Wilson Centre Annual Meeting* at Massey University	Long talk
February	2015	*The Interface of Mathematics and Biology NZ Phylogenomics Meeting* in Dunedin	Long talk
February	2014	*Workshop on Networks of Life* at the University of Canterbury	Participant
June	2013	*Mathematical and Computational Evolutionary Biology* in Montpellier	Participant
July	2013	*Computability in Europe* in Milan	Two contributed talks
July	2011	*Infinity Conference* in Barcelona	Contributed talk
July	2011	*Logic Colloquium* in Barcelona	Contributed talk
July	2010	*Logic Colloquium* in Paris	Contributed talk
June	2010	*Computability in Europe* in Azores	Contributed talk
May	2010	*Maltsev Meeting* in Novosibirsk	Contributed talk
August	2009	*Logic Colloquium* in Sofia	Contributed talk
June	2008	*Computability in Europe* in Athens	Contributed talk
July	2007	*Logic Colloquium* in Wroclaw	Contributed talk
July	2006	*Computability in Europe* in Swansea	Contributed talk

Grants

2012–2013 Associate Investigator of an FRDF grant from the University of Auckland. Contract # 2795185 for $200,000.

2011–2013 Principal Investigator and Coordinator of a Russian Government Grant. Contract # 16.740.11.0567 for US$50,000.

2010–2012	Principal Investigator and Coordinator of a Russian Government Grant. Contract # П1227 for US$65,000.
2006–2010	Participant of a Russian Fund for Fundamental Research Grant.
2003–2009	Participant of a Russian President Grant.

Travel Grants

2012–2013	School of Computing, National University of Singapore
2011	University of Chicago, University of Wisconsin–Madison, and Cornell University
2011	Participation in the Logic Colloquium 2011
2010	Participation in the Logic Colloquium 2010
2010	Participation in the Computability in Europe 2010
2009	University of Notre Dame, Cornell University, and NYC University
2009	Participation in the Logic Colloquium 2009
2008	Participation in the Computability in Europe 2008
2008	Participation in the Summer School Marktoberdorf 2008
2007	Participation in the Logic Colloquium 2007
2006	Participation in the Computability in Europe 2006

Students

2015–2016	Lena Collienne	Intern	The University of Auckland (University of Greifswald)
2015–2016	Edwardo Reynolds	Intern	The University of Auckland

Teaching

2012–2014	The University of Auckland	Discrete Structures in Maths and CS (CompSci 225)
2013–2014	Auckland U of Technology	Engineering Mathematics I and II (715001/716001)
2013–2013	Auckland U of Technology	Finite Mathematics (715205)
2012–2012	Auckland U of Technology	Theory of Computation (717300)
2012–2012	The University of Auckland	Software Engineering Theory (SoftEng 211)
2010–2011	Irkutsk State University	Computable Model Theory
2009–2010	Irkutsk State University	Model Theory
2009–2011	Irkutsk State University	Mathematical Logic
2010–2011	Irkutsk State University	Discrete Mathematics
2009–2010	Irkutsk State University	Theory of Computation
2006–2009	Novosibirsk State University	Theory of Algorithms
2007–2009	Novosibirsk State University	Theoretical Programming
2007–2009	Novosibirsk State University	Mathematical Logic
2007–2008	Novosibirsk State University	Number Theory

Service to Department and University

2013	Auckland–Novosibirsk Workshop on Algebra, Logic, Geometry, and Combinatorics	Co-Chair of the Programme Committee
2009	Maltsev Meeting	Organising Committee
2007	Mathematics in the Modern World	Organising Committee
2007	Domains VIII and Computability Over Continuous Data Types	Organising Committee
2005	Asian Logic Conference	Organising Committee

I am a regular reviewer for *AMS Mathematical Reviews* and a referee for highly reputable journals and conferences such as

- *Genome Biology and Evolution*
- *Journal of Mathematical Biology*
- *LICS Symposium*

This CV: https://gavruskin.github.io/AGcv.pdf