

## Mikhail S. Burtsev

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CONTACT INFORMATION	Kurchatov NBIC Centre, Academic Kurchatov sq. 1, Moscow, 123182 Russia	<i>voice:</i> +7 (903) 5614149 <i>email:</i> burtsev.m@gmail.com <i>web:</i> www.keldysh.ru/pages/mrbur-web
RESEARCH INTERESTS	Neuromorphic and cognitive systems; Evolution of cognition; Role of learning in evolution; Selectionist theories of learning; Growth of complexity in adaptive systems	
EDUCATION	<i>Ph.D.</i> , Computer Simulations and Numerical Methods Keldysh Institute of Applied Mathematics of Russian Academy of Sciences (2005), Moscow, Russia <i>M.S.</i> , Semiconductor Engineering, Moscow Power Engineering Institute (2000), Moscow, Russia <i>B.S.</i> , Semiconductor Engineering, Moscow Power Engineering Institute (1998), Moscow, Russia	
RESEARCH EXPERIENCE	<i>Group leader</i> Department of Neuroscience, Kurchatov NBIC Centre, Moscow, Russia	Jan. 2011 – present
	<i>Senior Research Scientist</i> Department of systems development, P.K.Anokhin Institute of Normal Physiology of RAMS, Moscow, Russia	Jan. 2007 – present
	<i>Research Scientist</i> Department of non-linear dynamics, Keldysh Institute of Applied Mathematics of RAS, Moscow, Russia	Jul. 2003 – present
	<i>Senior Academic Visitor</i> Wolfson College, University of Cambridge, Cambridge, UK Host: Prof. Patrick Bateson	Mar. – Apr. 2007 Apr. – May 2008
HONORS AND AWARDS	Russian Basic Science Support Foundation Grant Russian Fund for Basic Research Grant (#03-06-06030) Russian Fund for Basic Research Grant (#02-06-06028) Santa Fe Institute Complex Systems Summer School (CSSS), Budapest Outstanding Graduate Student Award, Keldysh Institute of Applied Mathematics of RAS	2006-2007 2003 2002 2001 2001
PEER-REVIEWED PUBLICATIONS	Burtsev M.S. Adaptive learning through variation and selection. In Seel, Norbert M. (Ed.) Encyclopedia of the Sciences of Learning, Springer (accepted). Komarov, M.A., Osipov G.V., Burtsev M.S. (2010) Adaptive functional systems: Learning with chaos. Chaos 20(4), 045119. Burtsev M. (2008). Basic principles of adaptive learning through variation and selection. In Bullock S. et al. (eds.) <i>Artificial Life XI</i> , pp. 88-93. MIT Press, Cambridge, MA. Krivenko S., Burtsev M. (2007) Simulation of the Evolution of Aging: Effects of Aggression and Kin-Recognition. In F. Almeida e Costa et al. (eds.): <i>ECAL 2007, Lecture Notes in Computer Science</i> 4648, pp. 84-92. Red'ko V.G., Anokhin K.V., Burtsev M.S., Manolov A.I., Mosalov O.P., Nepomnyashchikh V.A., Prokhorov D.V. (2007) Project "Animat Brain": Designing the Animat Control System on the Basis of the Functional Systems Theory. In Butz M.V. et al. (Eds.): <i>Anticipatory Behavior in Adaptive Learning Systems, Lecture Notes in Artificial Intelligence</i> 4520, pp. 94-107. Burtsev M., Turchin P. (2006) Evolution of cooperative strategies from first principles, <i>Nature</i> 440, pp. 1041-1044.	

	Burtsev M.S. (2005) Artificial Life Meets Anthropology: A Case of Aggression in Primitive Societies. In Capcarrere M. et al. (Eds.): <i>ECAL 2005, Lecture Notes in Computer Science</i> 3630, pp. 655 – 664.	
	Burtsev M.S. (2004) Tracking the Trajectories of Evolution. <i>Artificial Life</i> 10(4), pp. 397-411.	
	Burtsev M., Korotaev, A. (2004) Evolutionary Agent-Based Model of Pre-State Warfare Patterns: Cross-Cultural Tests. <i>World Cultures</i> 15, pp. 17-38.	
	Red'ko V.G., Prokhorov D.V., Burtsev M.S. (2004) Theory of Functional Systems, Adaptive Critics and Neural Networks. In <i>Proceedings of IEEE International Joint Conference on Neural Networks 2004</i> , pp. 1787-1792.	
	Burtsev M.S. (2003) Measuring the Dynamics of Artificial Evolution. Banzhaf W. et al. (Eds.): <i>ECAL 2003, Lecture Notes in Computer Science</i> 2801, pp. 580-587.	
	Burtsev M.S., Gusarev R.V., Red'ko V.G. (2002) Investigation of Mechanisms of Goal-Oriented Adaptive Control. <i>Journal of Computer and System Sciences International</i> 41(6), pp. 890-898.	
PREPRINTS	Naumenko S., Podlazov A., Burtsev M., Malinetsky G. (2007) On the optimality of the standard genetic code: the role of stop codons. arXiv:0712.4219v1 [q-bio.PE]	
	Burtsev M.S., Red'ko V.G., Gusarev R.V. (2001) Alife Model of Evolutionary Emergence of Purposeful Adaptive Behavior. arXiv:cs/0110021v1 [cs.NE]	
INVITED PRESENTATIONS AND WORKSHOPS	1 <sup>st</sup> International Workshop on Guided Self-Organisation, CSIRO, Sydney, Australia	2008
	ISTC-RIKEN BSI Workshop, RIKEN BSI, Saitama, Japan	2008
	Seminar, AI Methodology, Perm State U, Perm, Russia	2007
	Seminar, Ecobionics, Moscow State Technical U, Moscow, Russia	2007
	Seminar, Department of Neurophysiology, Ruhr-U Bochum, Bochum, Germany	2006
	Evolution and Development Workshop, The Leir Program of Clark U, Luxembourg	2006
CONFERENCE PRESENTATIONS	Neuroinformatics, Moscow, Russia. Oral	2011
	7 <sup>th</sup> Forum of European Neuroscience, Amsterdam, Netherlands. Poster	2010
	Neuroinformatics, Moscow, Russia. Oral	2010
	Artificial Life XI, Winchester, UK. Oral	2008
	9 <sup>th</sup> European Conference on Artificial Life, Lisbon, Portugal. Poster	2007
	2 <sup>nd</sup> Conference on Mathematical Modeling of History, Moscow, Russia. Oral	2007
	Modern Problems of Biological Evolution, Moscow, Russia. Poster	2007
	Neuroinformatics, Moscow, Russia. Poster	2007
	5 <sup>th</sup> Forum of European Neuroscience, Vienna, Austria. Poster	2006
	History and Mathematics, Moscow, Russia. Oral	2006
	Neuroinformatics, Moscow, Russia. Oral	2005
	8 <sup>th</sup> European Conference on Artificial Life, Canterbury, UK. Oral	2005
	9 <sup>th</sup> Neural Computation and Psychology Workshop, Plymouth, UK. Poster	2004
	Hierarchy and Power in the History of Civilizations Conference, Moscow, Russia. Oral	2004
	National AI Conference, Tver, Russia. Oral	2004
	7 <sup>th</sup> European Conference on Artificial Life, Dortmund, Germany. Poster	2003
	Neuroinformatics, Moscow, Russia. Oral	2002
	National AI Conference, Kolomna, Russia. Oral	2002
ACADEMIC SERVICE	<i>Reviewer</i> Grants: Future and Emerging Technologies, ICT-FP7 Journals: Evolutionary Computation, Journal of Theoretical Biology Conferences: International Joint Conference on Neural Networks, Neuroinformatics <i>Program Committee</i> 1 <sup>st</sup> International Workshop on Guided Self-Organisation, CSIRO, Sydney, Australia	
OTHER ACTIVITIES	<i>Member of editorial board</i> , "Troitskii Variant", independent newspaper of Russian scientific community <i>Science writer</i> , "Computerra", weekly computer magazine, (2002-2003)	