

# Curriculum Vitae

## Sergei Maslov

### Contact:

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### Personal :

Date of birth: January 10, 1969.

Place of Birth: Moscow, Russia.

Nationality: Naturalized US citizen.

Languages: Russian - native; English - fluent;

French – working proficiency, newspaper reading without dictionary

Family status: Married, two sons (born 2002 and 2006).

### Academic degrees:

- 5/1996      **Ph. D. in Physics,**  
Department of Physics and Astronomy, State University of New York  
at Stony Brook, NY USA.  
Doctoral Dissertation Thesis:  
*Extremal Models of Evolution, Growth, and Depinning,*  
Advisor: Dr. Per Bak.
- 6/1992      **M.S. Degree in Physics and Applied Mathematics**  
**(Summa Cum Laude),**  
Department of General and Applied Physics,  
Moscow Institute of Physics and Technology,  
and Landau Institute for Theoretical Physics, Moscow, Russia.  
Thesis: *Tilted Vortex Lattice in Layered Superconductors.*  
Advisor: Prof. Valery Pokrovsky.
- 6/1989      **B.S. Degree in Physics and Mathematics (Summa Cum Laude),**  
Department of General and Applied Physics,  
Moscow Institute of Physics and Technology,  
and Kapitza Institute for Physical Problems, Moscow, Russia.

## **Appointments:**

- 8/2015-present Professor of Bioengineering and Bliss Faculty Scholar with appointments at the Department of Bioengineering, Department of Physics, Carl R. Woese Institute for Genomic Biology, and National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign, Urbana, IL, USA
- 9/2016 –present Joint appointment at the Computing, Environment, and Life Sciences (CELS) directorate, Argonne National Laboratory, IL, USA
- 8/2015 -9/2016 Joint appointment at the Department of Biology, Brookhaven National Laboratory, NY, USA
- 9/2011-8/2015 Biophysicist with tenure, Computational Biology Group Leader, Department of Biological, Environmental, and Climate Sciences , Brookhaven National Laboratory, NY, USA
- 10/2004-9/2011 Physicist with tenure, Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory, NY, USA;
- 10/2002-10/2004 Physicist, Physics Department, Brookhaven National Laboratory, NY, USA;
- 10/2000-10/2002 Associate Physicist, Physics Department, Brookhaven National Laboratory, NY, USA;
- 10/1998-10/2000 Assistant Physicist, Physics Department, Brookhaven National Laboratory, NY, USA;
- 7/1996-10/1998 Postdoctoral Research Associate, Physics Department, Brookhaven National Laboratory, NY, USA;
- 1/1995-6/1996 Teaching Assistant, Department of Physics and Astronomy, SUNY at Stony Brook, NY, USA;
- 9/1992-1/1995 Research Assistant, Brookhaven National Laboratory, NY, USA;
- 9/1992- 6/1995 Junior Research Associate, Landau Institute for Theoretical Physics, Moscow, Russia.

## **Visiting and adjunct appointments:**

- 9/2011-9/2016 Associate Chief Science Officer, DOE Systems Biology Knowledgebase, kbase.us
- 11/2013-8/2015 Adjunct Professor, Department of Biomedical Informatics, Medical School, SUNY at Stony Brook, NY, USA;

- 9/2008-8/2015 Affiliated Faculty and Executive Committee Member, Laufer Center for Physical and Quantitative Biology, SUNY at Stony Brook, NY, USA;
- 6/2004-8/2015 Adjunct Professor, Department of Physics and Astronomy, SUNY at Stony Brook, NY, USA;
- 4/2003-6/2007 Consultant, Ariadne Genomics Inc., Rockville, MD, USA;
- 12/1998-12/2002 Consultant, NEC Research Institute, Princeton, NJ, USA;
- 1-2/2011 Visiting Scientist, KITP, UC at Santa Barbara, CA, USA;
- 6/2007 Lecturer, EPFL, Lausanne, Switzerland
- 5/2007 Visiting professor, LPTHE, U. of Paris 7, France
- 1-4/2007 Visiting Scientist, KITP, UC at Santa Barbara, CA, USA
- 1-2/2003 Visiting Scientist, KITP, UC at Santa Barbara, CA, USA;
- 10/2001-1/2002 Visiting Associate Professor, University of Tokyo, Japan;
- 4/2001-6/2001 Visiting Scientist, KITP, UC at Santa Barbara, CA, USA;
- 11/2000-2/2001 Visiting Research Professor, University of Fribourg, Switzerland;
- 10-11/1993 Visiting Scientist, Weizmann Institute of Science, Rehovot, Israel;
- 12/1991-2/1992 Visiting Scientist, Brookhaven National Laboratory, Upton, NY, USA.

**Editorial boards and review panels:**

- 12/2014 Reviewer in the NIH panel for the National Institute of Biomedical Imaging and Bioengineering, Biomedical Technology Service Center (P30) grant applications.
- 3/2014-present Guest Associate Editor, PLoS Computational Biology
- 1/2013-present Associate Editor, IEEE/ACM Transactions on Comp. Biol. and Bioinformatics
- 3/2010 Invited participant and panelist in the Long Term Vision Workshop by the U.S. Department of Energy, Office of BER, Washington DC
- 10/2005-present Editorial board of Biology Direct: <http://www.biology-direct.com>
- 6/2005 Reviewer in the NIH Panel for Technology Centers for Networks and Pathways

**Honors and awards:**

- 5/2004 Presidential Early Career Award for Scientists and Engineers (PECASE), White House, Washington DC;

- 11/1992 T. A. Pond Award for the best results in comprehensive exams, Physics Department, SUNY at Stony Brook;
- 6/1992 Diploma of graduation with Distinction (Summa Cum Laude), Moscow Institute of Physics and Technology;
- 9/1986-6/1992 Fellowship for outstanding undergraduate students, Moscow Institute of Physics and Technology

**Internal panels and committees:**

- 9/2016-present Bioengineering department representative at the College of Engineering Executive Committee, University of Illinois at Urbana-Champaign
- 9/2016-present Director, M. Eng specialization in Computational Genomics, Bioengineering department, University of Illinois at Urbana-Champaign
- 9/2004-8/2015 Member of the BNL committee for organizing laboratory-wide distinguished lectures
- 9/2009-9/2012 Member of the BNL council granting lab-wide tenure

**Research support:**

**Current research support:**

- Title: Exascale Deep Learning and Simulation Enabled Precision Medicine for Cancer  
Funding organization: DOE Exascale Computing Project (ECP), and National Institutes of Health's National Cancer Institute.  
Dates of project: 10/01/2016 - present  
Goal: Develop scalable deep neural network code called the CANcer Distributed Learning Environment (CANDLE) for predictive modeling of drug response in cell lines and PDX mouse models of cancer.  
Principal Investigator: Rick Stevens (Argonne National Laboratory).
- DOE Bioenergy Research Center (BRC): Center for Advanced Bioenergy and Bioproduct Innovation (CABBI)  
Funding organization: DOE, Biological and Environmental Research (BER) program  
Dates of project: 11/01/2017 - present  
Goal: The University of Illinois and partners propose to establish the Center for Advanced Bioenergy and Bioproduct Innovation (CABBI) to accelerate the development of a U.S. bioeconomy. CABBI will conduct innovative research in Feedstock Development, Conversion, and Sustainability that integrates recent advances in genomics, synthetic biology, and computational biology to increase the value of biomass crops.  
Principal Investigator: Evan DeLucia (UIUC)

### **Completed research support:**

- Title: Genomic Science Focus Area (SFA): Systems Biology Knowledgebase  
Funding organization: DOE, Office of Biological and Environmental Research  
Dates of project: 08/05/2012 - 09/31/2016  
Role: one of three co-PIs, Associate Chief Science Officer, lead of the group including BNL, Cold Spring Harbor Laboratory and Yale University, scientific leader of the networks cross-cutting area.
- Title: Mesoscale multi-modal imaging of cell communications between microbes and plants in the rhizosphere  
Funding organization: DOE, Office of Biological and Environmental Research  
Dates of project: 10/01/2014 - 09/30/2016  
Role: senior personnel with Sean McSweeney, BNL (PI)
- Title: Tissue-specific metabolic models in plants  
Funding organization: BNL, Laboratory Directed Research & Development  
Dates of project: 10/01/2013 - 09/30/2016  
Role: co-PI with Jorg Schwender (BNL)
- Title: Identifying the mechanisms that control whole-plant nitrogen allocation: A prerequisite for bioenergy crops that thrive on marginal lands  
Funding organization: BNL, Laboratory Directed Research & Development  
Dates of project: 10/01/2013 - 09/30/2016  
Role: co-PI with Ben Babst (BNL)
- Title: Linkage between DOE Systems Biology Knowledgebase & Protein Data Bank  
Funding organization: DOE, Office of Biological and Environmental Research  
Dates of project: 8/2015/2013 - 08/2014/2014  
Role: PI
- Title: Tools and Models for Integrating Multiple Cellular Networks  
Funding organization: DOE, Office of Biological and Environmental Research  
Dates of project: 07/2015/2010 - 09/30/2013  
Role: co-PI with Mark Gerstein (Yale U.)
- Title: Theoretical research in statistical physics focused on understanding the evolution, statistical properties and dynamics of complex systems and their underlying networks.  
Funding organization: DOE, Office of Basic Energy Sciences  
Dates of project: 10/01/2008-09/30/2011  
Role: co-PI with Alexei Tsvetik (BNL)
- Title: Complex Networks Approach to Power Grid Design and Stability  
Funding organization: BNL, Laboratory Directed Research & Development  
Dates of project: 10/01/2010- 09/30/2011  
Role: PI
- Title: Presidential Early Career Award for Scientists and Engineers (PECASE) for "Dr. Maslov's contributions to physics of complex systems"  
Funding organization: DOE, Office of Basic Energy Sciences

Dates of project: 10/01/2008 - 09/30/2011

Role: PI

- Title: Systemic analysis of molecular networks  
Funding organization: NIH/NIGMS, 1 R01 GM068954-01  
Dates of project: 6/2015/2003-5/31/2007  
Role: co-PI with Ilya Mazo (Ariadne Genomics)
- Title: Self-Organized Nanoparticles for Probing Charge Transfer at Metallic/Organic Interfaces.  
Funding organization: BNL, Laboratory Directed Research & Development  
Dates of project: 10/01/2001-9/30/2004  
Role: co-PI with Myron Strongin (BNL)

**Conferences organized:**

- 6/2016 International workshop "Quantitative Laws II: From physiology to ecology, from interaction structures to collective behavior",  
Villa del Grumello, Como, Italy, co-organized with  
M. C. Lagomarsino, J. Weitz, A. Maritan and others, <http://qlsb.lakecomoschool.org>
- 6/2013 International workshop "Quantitative Laws of Genome Evolution",  
Villa del Grumello, Como, Italy, co-organized with  
M. C. Lagomarsino and others, [www.complexcomolake.it/quantitativelaws](http://www.complexcomolake.it/quantitativelaws)
- 9/2010 International workshop "Quantitative biology: from complex networks to simple models", [www.bnl.gov/qbio](http://www.bnl.gov/qbio), Montauk Yacht Club, Montauk, NY
- 9/2005 International workshop "Complex biomolecular networks: structure, evolution, and function"  
<http://www.cmth.bnl.gov/workshop/BioNetworks05>  
Montauk Yacht Club, Montauk, NY
- 6/2003 International workshop "Complex Networks in Biology from Molecules to Neurons", co-organized with D. Chklovskii, Aspen Center for Physics, CO
- 8/2003 Workshop "Field Theory Methods in Correlated Nanoscale Systems"  
(co-organized with A. Tsvelik and F. Essler)  
Brookhaven National Laboratory, Upton, NY

**Invited conference talks, seminars, and colloquia:**

- 05/2018 Invited talk at the inaugural "Theory in Biology" meeting at Boston University
- 03/2018 Invited talk at the Les Houches school "Evolution of Diversity",  
Les Houches, Chamonix, France
- 12/2017 Seminar at the MIT Physics of Living Systems, Department of Physics,  
Massachusetts Institute of Technology, Cambridge MA

- 06/2017 Invited seminar at the Department of Physics, Moscow State University
- 05/2017 Invited seminar at the Moscow bioinformatics seminar series, Department of Bioengineering and Bioinformatics, Moscow State University
- 05/2017 Invited talk at the second interdisciplinary workshop “Collective Phenomena in Graphs and Networks” (CCEGN 2017), Moscow Russia
- 03/2017 Invited seminar at the Beijing Computational Science Research Center (CSRC), Beijing, China
- 02/2017 Invited seminar at the Center for Quantitative Biology, Peking University, Beijing, China
- 02/2017 Invited talk at the IBS Symposium “Statistical Physics of Complex Systems”, KIAS, Seoul, South Korea
- 06/2016 Invited talk and class at the International school and workshop “Quantitative Laws II: From physiology to ecology, from interaction structures to collective behavior”, Villa del Grumello, Como, Italy
- 10/2015 Invited seminar at Carl R. Woese Institute for Genomic Biology University of Illinois at Urbana-Champaign, IL
- 01/2016 Talk at the "Populations, Evolution, and Physics" conference at the Aspen Center for Physics, Aspen, CO
- 12/2015 Invited talk at the “Quantitative Methods in Gene Regulations III” conference, Corpus Christi College, Cambridge U., UK
- 12/2015 Invited talk at the “Bacterial Expressions II” conference, National Centre for Biological Sciences, TIFR, Bangalore, India
- 10/2015 Colloquium “Models of Genome Evolution and Ecosystem Dynamics: Kill-the-Winner, Kill-the-Loser, and Kill-the-King ” at the National Center for Supercomputing Applications , University of Illinois at Urbana-Champaign, IL
- 8/2015 Invited talk at the “Models of Life” conference, Krogerup, Denmark
- 6/2015 Invited talk at “Mathematical Trends in Reaction Network Theory” conference, U. of Copenhagen, Denmark
- 3/2015 Colloquium “Simple Models of Complex Biological Systems”, Simons Center for Physics and Geometry, Stony Brook University
- 12/2014 Invited talk “Towards Predictive Modeling of Biological Networks and Evolution”, Laufer Center for Physical and Quantitative Biology, Stony Brook University
- 11/2014 Demo talk “Mapping Protein Universe” talk with Rick Stevens (ANL) at SC14, New Orleans, LA
- 6/2014 Invited talk at “Workshop on the Economy of a Cell: Resource Allocation, Trade-offs and Efficiency in Living Systems”, ICTP Trieste, Italy

- 6/2014 Invited talk at “Staying alive: lessons from phage and bacteria” conference, Copenhagen, Denmark
- 5/2014 Invited talk at a symposium, Biozentrum, University of Basel, Switzerland
- 2/2014 Invited talk at the XII DOE Genomic Science Contractors-Grantees Meeting, Arlington VA
- 2/2014 Invited biophysics and quantitative biology seminar, UI Urbana-Champaign, IL
- 9/2013 Department of comp. biology colloquium, McMaster Univ., Hamilton ON, Canada
- 9/2013 Department of comp. biology colloquium, Emory University, Atlanta GA
- 6/2013 Two invited talks at the international conference “Quantitative Laws of Genome Evolution”, Villa del Grumello, Como, Italy
- 6/2013 Invited talk at “NetSciReg'13 - Network Models in Cellular Regulation”, Copenhagen, Denmark
- 5/2013 Invited seminar at the Center for Models of Life, NBI, Copenhagen, Denmark
- 5/2013 Invited talk at the international workshop “Statistical Mechanics of Biological Cooperativity”, Mariehamn, Åland Islands, Finland
- 8/2012 Invited talk, public lecture, and TV interview at the workshop "Evolutionary Dynamics and Information Hierarchies in Biological Systems", Aspen Physics Institute, Aspen, CO
- 7/2012 Invited talk at the 2012 Annual Research Meeting of the DOE Office of Science Fellowship Program, BNL
- 7/2012 Invited talk at the conference "Networks in Biology, Social Sciences and Engineering", Bangalore, India
- 3/2012 Invited seminar at the Institute of Bioinformatics, University of Georgia, Athens GA
- 7/2011 Invited talk at the MCCMB 11, Moscow, Russia
- 3/2011 Invited seminar at the Stony Brook University/Cold Spring Harbor Laboratory/BNL seminar series on Evolutionary Functional Genomics, Stony Brook, NY
- 3/2011 Invited talk and chair of a symposium on contributions of networks theory to biology, Biophysical Society 55th Annual Meeting, Baltimore, MD
- 2/2011 Chairman of the session, Gordon Research Conference, "Stochastic Physics in Biology", Ventura, CA
- 2/2011 Invited talk at the KITP workshop "Microbial and Viral Evolution", UC Santa Barbara, CA



- 11/2010 Invited talk at the international meeting on Integrative Post-Genomics, IPG'10, Lyon, France
- 11/2010 Invited seminar at the Laboratory of Analytical Genetics, Université Pierre et Marie Curie, Paris, France
- 11/2010 Invited guest lecture at the joint MIT/Harvard graduate course on Quantitative Genomics, Cambridge, MA
- 11/2010 Invited talk at the Santa Fe Institute's Annual Business Network and Board of Trustees' Symposium , "Complexity of Regulation", Santa Fe, NM
- 11/2010 Invited seminar for the bioinformatics group, New York University, NY
- 10/2010 Invited seminar at the National Center for Biotechnology Information, NIH campus, Bethesda, MD
- 9/2010 Invited talk at the international workshop , "Quantitative biology: from complex networks to simple models", Montauk, NY
- 7/2010 Invited participant and panelist in the DOE Systems Biology Knowledgebase Development Workshop, Arlington, VA
- 6/2010 Invited seminar at the MRC Laboratory of Molecular Biology, University of Cambridge, UK
- 6/2010 Invited talk at the international meeting "Modeling Complex Systems", University of Manchester, UK
- 5/2010 Physics Department Colloquium, University of Rhode Island, RI
- 3/2010 Invited participant and panelist in the Long Term Vision Workshop by the U.S. Department of Energy, Office of Biological and Environmental Research, Gaithersburg, MD
- 3/2010 Invited seminar at the Karolinska Institute, Stockholm, Sweden
- 2/2010 Colloquium at the Santa Fe Institute, New Mexico
- 1/2010 Invited participant in the "Application of High Performance Computing to the DOE Joint Genomic Institute's Data Challenges", JGI, Walnut Creek, CA
- 11/2009 Invited seminar for the soft condensed matter and biophysics group, New York University, NY
- 9/2009 Invited seminar at the Medical School, University of North Carolina, Chapel Hill, NC
- 8/2009 Invited seminar at the Department of Biochemistry, University of Montreal, Canada
- 7/2009 Two invited talks at the MCCMB 09, Moscow, Russia

- 7/2009 Invited seminar at the TU Munchen, Institut fur Genomorientierte Bioinformatik, Munich, Germany
- 6/2009 Invited talk at the international conference "From biological networks to cellular function", ICTP, Trieste, Italy
- 5/2009 Invited blackboard seminar, Department of Systems Biology, Harvard Medical School, Boston, MA
- 3/2009 Invited talk at the APS March meeting, Pittsburgh, PA
- 12/2008 Invited seminar at Cold Spring Harbor Laboratory, NY
- 9/2008 Seminar at the seminar series for Laufer Center for Computational Biology/Genomics, SUNY Stony Brook
- 8/2008 Talk at the Aspen Center for Physics summer program: "Evolution: From Atoms to Organisms"
- 6/2008 Invited talk at the 2008 Whitney Symposium "Networks", General Electric Global Research, Niskayuna, NY
- 2/2008 Colloquium, "Ranking of scientific publications", American Physical Society editorial offices, Ridge, NY
- 1/2008 Talk at the Aspen Center for Physics winter conference, "Decision Making in Single Cells"
- 10/2007 Invited talk at the international conference "Computational philosophy: lessons from simple models", Niels Bohr Institute, Copenhagen, Denmark
- 6/2007 Course of four invited lectures at the Troisieme cycle en Suisse Romande, EPFL, Lausanne, Switzerland
- 6/2007 Seminar at the U. of Geneva, Switzerland
- 6/2007 Seminar at the U. of Fribourg, Switzerland
- 5/2007 Invited talk at the NetSci2007 International Conference and Workshop, New York City Hall of Science
- 5/2007 Educational tutorial at the NetSci2007 International Conference and Workshop, New York City Hall of Science
- 5/2007 Seminar at the University of Cologne, Germany
- 5/2007 Seminar at the Niels Bohr Institute, Copenhagen, Denmark
- 5/2007 Seminar at the Curie Institute, Paris, France
- 5/2007 Seminar at the Ta Ma Ra's lab, Necker Medical School, Paris, France

- 3/2007 Invited review talk at the program "Evolution of Molecular Networks", KITP, UC Santa Barbara.
- 3/2007 Seminar at the QB3, UC San Francisco
- 1/2007 Seminar at the Cold Spring Harbor Laboratory
- 12/2006 Invited talk at the Pan-American Advanced Study Institute "From disordered systems to complex systems", mar del Plata, Argentina
- 8/2006 Seminar at the Dept. of Ecology and Evolution, SUNY at Stony Brook
- 8/2006 Seminar at the Dept. of Pharmacology, SUNY at Stony Brook
- 5/2006 Invited talk at the International Workshop on the Internet Topology (WIT), UC San Diego, CA
- 5/2006 Seminar at the Center for Theoretical Biological Physics (CTBP), Dept. of Physics, UC San Diego, CA
- 3/2006 Seminar, at the Dept. of Physics, University of Fribourg, Switzerland
- 11/2005 Physics Department colloquium, SUNY at Stony Brook, NY
- 8/2005 Invited talk at the international Workshop "Physics of Life From Single Molecules to Networks", Krogerup, Denmark.
- 7/2005 Seminar, Santa Fe Institute, Santa Fe, NM
- 5/2005 Invited talk at the ICTP workshop on Structure and Function of Complex Networks, ICTP, Trieste, Italy
- 4/2005 Invited lecture at the winter school "Dynamics of Complex Interconnected Systems: Networks and Bioprocesses", Geilo, Norway
- 3/2005 Seminar,, Santa Fe Institute Santa Fe, NM
- 3/2005 Seminar, Physics Department, University of New Mexico, Albuquerque, NM
- 11/2004 Invited talk at the New York Academy of Science, New York, NY
- 7/2004 Seminar, Department of Biology, Brookhaven National Laboratory, Upton, NY
- 4/2004 Physics Department Colloquium, NYU, New York, NY
- 4/2004 Seminar, Center for Computational Biology and Bioinformatics, Columbia University, New York, NY.
- 4/2004 Seminar, Medical Department, Brookhaven National Laboratory, Upton, NY
- 3/2004 Seminar, Biozentrum, Basel, Switzerland
- 3/2004 Seminar, Dept. of Physics, EPFL, Lausanne, Switzerland
- 3/2004 Seminar, Dept. of Physics, Fribourg University, Switzerland

- 2/2004 Gordon Research Conference "Structural Functional and Evolutionary Genomics", Ventura, CA, invited speaker.
- 11/2003 International conference "In-silico biological networks: from genomics to epidemiology", Atlanta, GA, invited plenary speaker.
- 10/2003 Seminar, Biocomplexity Institute, Indiana University, Bloomington, IN
- 8/2003 Niels Bohr Summer Institute "Complexity and Criticality", Copenhagen, Denmark, invited speaker.
- 6/2003 Conference "Modeling of protein interactions in genomes", SUNY at Stony Brook, NY, invited speaker.
- 6/2003 International Workshop: "Complex Networks in Biology: from Molecules to Neurons", Aspen Center for Physics, Aspen, CO. co-organizer and speaker.
- 10/2002 Seminar, Center for Physics and Biology, Rockefeller University, New York, NY
- 8/2002 International Workshop "Dynamics of Biological Systems: From Molecules to Networks", Krogerup, Denmark.
- 8/2002 Seminar, Department of Biology, Brookhaven National Laboratory, Upton, NY
- 3/2002 International Workshop: "Concepts for Complex Adaptive Systems", Hanse Institute for Advanced Studies, Delmenhorst, Germany
- 12/2001 Seminar, Physics Department, University of Lausanne, Switzerland
- 11/2001 Series of lectures, Graduate School of Frontier Sciences, University of Tokyo, Japan
- 11/2001 Yukawa Institute International Workshop "Order, Disorder and Dynamics in Quantum Spin Systems", Yukawa Institute, Kyoto, Japan
- 7/2001 International Conference on Dynamical Networks in Complex Systems, Kiel, Germany
- 2/2001 Seminar, Institute of Physics, Prague, Czech Republic
- 2/2001 NATO Advanced Research Workshop: "Application of Physics in Economic Modeling", Prague, Czech Republic
- 1/2001 Seminar, Physics Department, University of Lausanne, Switzerland
- 12/2000 Seminar, Institute of Theoretical Physics, Fribourg, Switzerland
- 6/2000 International Workshop "Integrable models in Condensed Matter and Non-Equilibrium Physics", Centre de Recherches Mathematiques, Universite de Montreal, Canada,

- 1/2000 Physics department colloquium, University of California at San Diego, San Diego, CA

### Refereeing:

Served as a reviewer for DOE, NSF, and NIH proposals, as well as Cambridge U. Press books

Journals in the past 5 years: Science, Nature, PNAS, Nature Physics (including News & Views), Nature Communications, PLoS Biology, PLoS Comp. Biology, Nature/EMBO Molecular Systems Biology, Genome Research, Genome Biology and Evolution, BMC Systems Biology, Bioinformatics, Molecular Biology and Evolution, Biology Direct, Physical Biology, Phys. Rev. Lett., Phys. Rev. E, New J. of Physics, Physica A, J. Stat. Mech.

### Teaching:

- Spring 2016: BIOE 310, Computational Tools for Biological Data. A junior class teaching probability and statistics for bioengineers with applications in systems biology and genomics. 45 students
- Fall 2016: BIOE 505, Computational Bioengineering. A core first year graduate class teaching probability and statistics for bioengineering graduate students with applications in systems biology and genomics. 25 students
- Spring 2017: BIOE 310, Computational Tools for Biological Data. A junior class teaching probability and statistics for bioengineers with applications in systems biology and genomics. 70 students
- Fall 2018: BIOE 582, Statistics & Algorithms in Genomic Biology. A class teaching one-year MEng students the basics of probability and statistics with applications in systems biology and genomics. 7 students

### Publications:

Total >**4600 citations** based on ISI Web of Science, **h-index: 32**, Average citation per article >**50**.

Google scholar statistics:

	All	Since 2013
Citations	8671	2935
h-index	40	21
i10-index	75	46

100. Goyal A, Dubinkina V, **Maslov S** (2017) Microbial community structure predicted by the stable marriage problem. bioRxiv 235374; doi: <https://doi.org/10.1101/235374>

99. Goyal A, **Maslov S** (2017) Diversity, stability, and reproducibility in stochastically assembled microbial ecosystem (PRL under review), bioRxiv 213199; doi: <https://doi.org/10.1101/213199>

98. Avetisov V, Gorsky A, **Maslov S**, Nechaev S, Valba O (2018) Phase transitions in social networks inspired by the Schelling model, <https://arxiv.org/abs/1801.03912>.

97. Tkachenko AV, **Maslov S.** [co-corresponding author] Onset of natural selection in auto-catalytic heteropolymers (2017) bioRxiv 204826; <https://doi.org/10.1101/204826>
96. De Lazzari E, Grilli J, **Maslov S.** & Cosentino Lagomarsino M (2017) Family-specific scaling laws in bacterial genomes. *Nucleic Acids Res* 45(13):7615-7622  
<https://arxiv.org/abs/1703.09822>.
95. Arkin A, Stevens R, Cottingham R, Henry CS, Harris NL, Stevens RL, **Maslov S.** et al. (2018) The DOE Systems Biology Knowledgebase (KBase). bioRxiv preprint 096354 at <https://doi.org/10.1101/096354>, (Nature Biotechnology in press)
94. **Maslov S.** Sneppen K (2017) Severe population collapses and species extinctions in multihost epidemic dynamics. *Phys Rev E* 96(2-1):022412.
93. Dixit PD, Pang TY, **Maslov S.** [corresponding author] (2017) Recombination-Driven Genome Evolution and Stability of Bacterial Species. *Genetics* 207(1):281-295, bioRxiv 067942; <http://dx.doi.org/10.1101/067942>.
92. He F, **Maslov S.** [co-corresponding author] (2016) Pan- and core- network analysis of co expression genes in a model plant, *Scientific Reports* (2016) 6, 38956  
<http://doi.org/10.1038/srep38956>. Also available as a bioRxiv preprint 051656;  
<http://dx.doi.org/10.1101/051656>
91. **Maslov S.** Sneppen K (2017) Population cycles and species diversity in dynamic Kill-the-Winner model of microbial ecosystems, *Scientific Reports* 7, 39642, doi:10.1038/srep39642
90. Wang D, He F, **Maslov S.** Gerstein M. (2016) DREISS: Using State-Space Models to Infer the Dynamics of Gene Expression Driven by External and Internal Regulatory Networks. *PLoS Comput Biol.*; 12(10):e1005146. doi: 10.1371/journal.pcbi.1005146. PubMed PMID: 27760135; PubMed Central PMCID: PMC5070849.
89. He F, Karve AA, **Maslov S.** Babst B (2016) Large-Scale Public Transcriptomic Data Mining Reveals a Tight Connection between the Transport of Nitrogen and Other Transport Processes in Arabidopsis, *Frontiers in Plant Science* 7, 1207. doi:10.3389/fpls.2016.01207
88. He F, Yoo S, Wang D, Kumari S, Gerstein M, Ware D, **Maslov S.** [corresponding author] (2016) Large-scale atlas of microarray data reveals the distinct expression landscape of different tissues in Arabidopsis. *Plant Journal* 86, 472–480. doi:10.1111/tpj.13175.
87. **Maslov S.** Sneppen K (2015) Diversity waves in collapse-driven population dynamics, *PLoS Comput Biol*, 11(9): e1004440. doi:10.1371/journal.pcbi.1004440. [arxiv.org/abs/1503.00529](http://arxiv.org/abs/1503.00529)
86. Dixit PD, Pang TY, Studier FW, **Maslov S.** [co-corresponding author] (2015) Recombinant transfer in the basic genome of Escherichia coli. *Proc Natl Acad Sci U S A.* 112(29):9070-5. doi: 10.1073/pnas.1510839112. PubMed PMID: 26153419; PubMed Central PMCID: PMC4517234.
85. **Maslov S.** Sneppen K. (2015) Well-temperate phage: optimal bet-hedging against local environmental collapses. *Sci Rep.* 5:10523. doi: 10.1038/srep10523. PubMed PMID: 26035282; PubMed Central PMCID: PMC4451807.
84. Tkachenko AV, **Maslov S.** [co-corresponding author] (2015) Spontaneous emergence of autocatalytic information-coding polymers. *J Chem Phys.* 143(4):045102.  
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