

VADIM YU. KALOSHIN

CURRICULUM VITAE

Birthdate: September 12, 1972
Birthplace: Kharkov, Ukraine (former Soviet Union)
Nationality: Russian

EDUCATION

B.A. Moscow State University, Moscow, Russia, 1994. Thesis Advisor: Yu.S.Ilyashenko, Thesis title: *Prevalent properties of dynamical systems*.
M.A. Princeton University, 1997.
Ph.D. Princeton University, January 2001. Thesis title: *Growth of number of periodic orbits of generic diffeomorphisms*. Thesis Advisor: *John N. Mather*.

POSITIONS

1989–1994 undergraduate student, Moscow State University, Moscow, Russia
1994–1996 graduate student, Moscow State University, Moscow, Russia
1996–2000 graduate student, Princeton University
2000–2001 visiting scholar Courant, New York University and American Institute of Mathematics Research Fellow
2001–2002 C.L.E. Moore Instructor MIT and AIM Research Fellow
2002–2004 Member IAS, AIM Research Fellow, and Associate Professor Caltech
2004–2005 AIM Research Fellow and Associate Professor Caltech
2005–present Associate Professor Caltech

INVITED TALKS

1. First Latin American Congress of Mathematics, sectional talk, Rio, Brazil, 08/2001;
2. New Directions in Dynamical Systems (satellite of ICM), plenary talk, Kyoto, Japan, 08/2002;
3. EquaDiff 2003 (congress on differential equations), plenary talk, Hasselt, Belgium, 07/2003;
4. International Congress in Mathematical Physics, sectional talk, Lisbon, Portugal, 07/2003;
5. The AMS Spring Meeting, Western Section, plenary talk, San Francisco, 04/2006;
6. International Congress of Mathematicians, sectional talk, Madrid, Spain, 08/2006.

ORGANIZATION OF CONFERENCES AND RESEARCH PROGRAMS

- fall, 2002 A semester long program on Arnold Diffusion at Princeton, supported by American Institute of Mathematics, Clay Mathematics Institute, and Princeton University;
- October, 2002 Conference on Arnold Diffusion and Dynamical Systems at Princeton University. Participants of the conference include L. Cafarelli, A. Chenciner, J.-P. Eckmann, H. Eliasson, H. Hofer, A. Katok, Y. Katznelson, M. Lyubich, G. Margulis, J. Milnor, D. Ornstein, P. Rabinowitz, D. Sullivan, J. Xia, J.-C. Yoccoz.
- December, 2003 Conference on Hilbert 16-th Problem at Independent University of Moscow, Russia.
- April, 2004 (jointly with John Mather) Section on “Variational Methods in Classical Mechanics” in AMS meeting at Rider University.
- April, 2006 (jointly with Anton Gorodetski) Section on “On Lyapunov exponents” in AMS meeting at San Francisco University.

VISITING POSITIONS

- August, 1999 IMPA, Rio, Brazil;
- January, 2000 College de France, Paris, France
- July, 2001 University Autonoma de Madrid, Madrid, Spain
- September, 2003 Insitute of Henri Poincare, Paris, France.

HONORS

- 1994 Graduated from Moscow State University with Diploma cum laude
- 1994-1995 A Soros Graduate Student Award
- 1995-1996 A Fellowship of Prime Minister of Russia
- 1995-1996 A Soros Graduate Student Award
- 1996-1997 The 1st Year Science & Math Merit Fellowship w/ a Merit Prize of \$3,000
- 1999-2000 An Alfred Sloan Dissertation Fellowship
- 2000-2005 American Institute of Mathematics Five-Year Fellowship
- 2001 Prize of Moscow Mathematical Society
- 2003-2006 NSF Grant No. DMS-0300229, 05/2003–05/2006
- 2004-2006 An Alfred Sloan Research Fellowship

PROFESSIONAL SERVICE

Inventiones Mathematicae, Member of Editorial Board.

INVITED TALKS

- fall, 1995 Princeton; University of Maryland at College Park.
- fall, 1997 Cornell (2 talks).
- spring, 1998 Pennsylvania State University; SUNY at Stony Brook.
- fall, 1998 Cornell.
- fall, 1999 Dijon, France; University of Paris d'Orsay, Paris, France; SUNY at Stony Brook; University of Chicago (2 talks).
- spring, 2000 University of Pennsylvania.
- fall, 2000 Pennsylvania State University; Yale; University of Toronto, Canada.
- spring, 2001 University Paris 13, France; University of Geneva, Switzerland; University of Paris d'Orsay, Paris, France; L'École Polytechnique, Paris, France; L'École Normale Supérieure, Lyon, France; University of Rennes, France; University of Warwick, England; KTH, Stockholm, Sweden; Stanford; Caltech.
- fall, 2001 Harvard; MIT.
- spring, 2001 Harvard; MIT; Boston University; Northeastern; University of Milan Bicocca.
- fall, 2002 University of Chicago (2 talks).
- spring, 2002 Northwestern; University of Texas at Austin; ETH, Zurich, Switzerland; University of Geneva, Switzerland; Scuola Normale Superiore di Pisa, Italy.
- fall, 2003 University of Paris d'Orsay, Paris, France; University of Chicago (2 talks); KTH, Stockholm, Sweden.
- spring, 2004 Joint UCLA-Caltech Analysis seminar; Princeton (2 talks); Stanford (2 talks); Institute for Advanced Studies.
- fall, 2004 Joint UCLA-Caltech Analysis seminar.
- spring, 2005 Harvard; Courant; UC Irvine.
- fall, 2005 University Jussieu Paris, France; Yale; University of Maryland at College Park.
- spring, 2006 University of Maryland, Penn State University.
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DEPARTMENT COLLOQUIA AND SPECIAL LECTURES

Universite de Bourgogne, Dijon, France, September, 1999;
 L'École Normale Supérieure, Lyon, France, October, 1999;
 University of Maryland at College Park, October, 1999;
 Pennsylvania State University, October, 2000;
 Joint Courant/IBM/Princeton/Stony Brook/Yale Dynamical Systems Colloquium, October, 2000;

Cornell University, November, 2000;
 College de France, January, 2001;
 California Institute of Technology, May, 2001;
 Stanford, May, 2001;
 Brandeis-Harvard-MIT-Northeastern Joint Mathematics Colloquium, September, 2001;
 University of Arizona at Tucson, October, 2001;
 University of Michigan at Ann Arbor, November, 2001;
 Caltech, January, 2002;
 University of Texas at Austin, February, 2002;
 Berkeley, November, 2003;
 Moscow Mathematical Society, Moscow, Russia, March, 2003;
 Distinguished Lecture in Dynamical Systems, 2 lectures, Tel Aviv University, December, 2004;
 Brown, February, 2005;
 Pennsylvania State University, April, 2005;
 State University of New York at Stony Brook, April, 2005;
 Pennsylvania State University, November, 2005;
 University of South California, November, 2005;
 Princeton University, December, 2005;
 University of Maryland, March, 2006;
 Stanford University, April, 2006.

MINICOURSES

1. *The Hilbert-16th problem and Bifurcation of elementary polycycle*, Dijon, France, September, 1999, minicourse of 5 lectures;
2. *Stretched exponential estimates on growth of # of periodic points for diffeomorphisms with probability one*, Pennsylvania State University, December, 1999, minicourse of 6 lectures;
3. *The Hilbert-16th problem and an estimate of cyclicity of elementary polycycle*, CRM, Monreal, Canada, June, 2000, minicourse of 5 lectures;
4. *Growth of the number of periodic points*, CRM, Monreal, Canada, July, 2002, minicourse of 5 lectures;
5. *Aubry-Mather theory*, Winter School, Mayorca, Spain, February, 2003.
6. *Arnold diffusion*, Institute Henry Poincare, Paris, France, September, 2003, minicourse of 8 lectures.

TEACHING

UNDERGRADUATE CLASSES

Introductory Calculus, fall, 2002, MIT;
 Mathematical chaos, spring 2004 & 2005, Caltech.

GRADUATE CLASSES

Hamiltonian systems, spring, 2001, Courant Institute;
 Dynamical systems, spring, 2002, MIT;
 Aubry-Mather theory and Arnold diffusion, fall, 2002, Princeton;
 Aubry-Mather theory and KAM theory, spring, 2003, Caltech;
 Weak KAM theory, fall, 2003, Caltech;

Hamiltonian systems, spring, 2005, Caltech.

Stochastic differential equations with applications to finance, spring, 2006, Caltech.

Instabilities in the 3 body problem, spring, 2006, Caltech.