

CURRICULUM VITAE (short) 2020

Boris A. Khesin

1. Education:

- 1986 M.Sc. (University Diploma) with honors in mathematics,
Moscow State Univ., Russia
- 1989 Ph.D. (Candidate of Science) in mathematics, Moscow State Univ., Russia
Thesis title: “Normal Forms and Versal Deformations
of Evolution Differential Equations.”
Thesis adviser: Prof. V.I.Arnold, Steklov Math. Inst., Moscow

2. Employment:

- 2002 - present Professor of Mathematics, University of Toronto
- 1996 - 2002 Associate Professor, University of Toronto
- 1997 - 1998, 2012 Member, The Institute for Advanced Study, Princeton
- 1992 - 1996 Assistant Professor, Yale University
- 1990 - 1992 Morrey Assistant Professor, University of California at Berkeley

Visiting Positions (1–5 months)

- 1992-2018, 6 times IHES, Bures-Sur-Yvette, France
- 2017 MIT, Cambridge, USA
- 2009-2017, 3 times Weizmann Institute, Israel
- 2014 Simons Center SCGP, Stony Brook, USA
- 2014 Max-Planck Institut, Leipzig, Germany
- 2004, 2013 Bernoulli Center, Lausanne, Switzerland
- 2002-2012, 4 times Ecole Polytechnique, Paris, France
- 1994-2011, 8 times Max-Planck Institut, Bonn, Germany
- 1999-2013, 3 times MSRI, Berkeley, USA
- 2009 Observatoire de la Côte d’Azur, Nice, France
- 2008 CRM, Barcelona, Spain
- 2007 Universities of Tokyo and Fukuoka, Japan
- 2005 Ecole Normale Superieure, Lyon, France
- 2004 Universite de Geneve, Switzerland
- 2003 Universite de Nice, France
- 2002 Universite d’Angers, France
- 2002 ESI, Vienna, Austria
- 2000 LAPP, Annecy, France
- 1997-2000, 3 times Yale University, New Haven, USA
- 1996 ETH, Zurich, Switzerland
- 1995 RIMS, Kyoto, Japan
- 1993 Universite Paris VII, France
- 1992, 2012 Isaac Newton Institute, Cambridge, UK

3. Research Areas:

Infinite-dimensional Lie groups;
Mathematical physics: hydrodynamics, integrable systems;
Global analysis: Poisson geometry, gauge theory

4. Teaching experience:

1990 - present Graduate and undergraduate courses;
2010 - present Hamiltonian Dynamics Seminar;
1998 - present Symplectic Geometry Seminar (with M. Gualtieri, L. Jeffrey,
Y. Karshon, and E. Meinrenken)
1996 - 1997 Differential Systems Seminar (with V. Jurdjevic)
1993 - 1996 Seminar "Geometry, symmetry, and physics"
(with I. Frenkel, G. Moore, and G. Zuckerman)
1991 - 1992 Symplectic Geometry Seminar (with A. Givental and A. Weinstein)

5. Awards/Honors/Lecture Series:

2020 Simons Fellow, Simons Foundation, NY, USA
2019 Series of 3 lectures, ICMAT, Madrid, Spain
2019 Series of 2 lectures, Gökova, Turkey
2018 Chaire Pierre Bonelli, IHES, France
2017 Simons Fellow, Simons Foundation, NY, USA
2013 Series of 3 lectures, NZMRI, New Zealand
2012 Member, The Institute for Advanced Study, Princeton
2011 William Spencer Lecture, Kansas State University
2010 Series of 4 lectures, Weizmann Institute, Israel
2009 NSERC Grant Accelerator Supplement Award
2006 - 2007 Clay Mathematics Institute Book Fellow
2007 Research fellow of JSPS, Japan
2003 Series of 3 lectures, Ecole Polytechnique, France
2002 Series of 4 lectures, CIRM, Marseille, France
2001 Series of 4 lectures, CIME, Cetraro, Italy
2000 Series of 2 lectures, Cambridge, UK
2000 Invited talk at the Royal Society, London
1999 Premier's Research Excellence Award, Ontario, Canada
1999 The McLean Award, University of Toronto
1997 - 1998 Andre-Aisenstadt Mathematics Prize and Lecture, Montreal, Canada
1997 - 2001 Alfred P. Sloan Research Fellowship
1997 - 1998 Member, The Institute for Advanced Study, Princeton
1997 Poincare lecture series, Fields Institute, Toronto
1995 - 1996 Yale Junior Faculty Fellowship
1986 Winner in Undergraduate Student Research Competition,
Moscow State University, Moscow, Russia

6. Graduate students (current position):

Eugene Ha 2003 M.S. (Springer Math Editor)

Dmitry Donin	2008 Ph.D. (Financial Math, Toronto)
Paul Lee	2009 Ph.D. (Assist. Prof., Chinese Univ. of Hong Kong)
Victor Goulart	2016 Ph.D. (Pontif. Univ. Catol., Rio de Janeiro, Brazil)
Cheng Yang	2017 Ph.D. (McMaster Univ., Hamilton, and FI, Toronto, Canada)
Daniel Fusca	2018 Ph.D. (lecturer, Univ. of Toronto, Canada)
Daniel Nackan	2019 M.S. (PhD student, Yale University, USA)

7. Postdocs (supervised and co-supervised):

Friedrich Wagemann	2000-2001	Ely Kerman	2000-2002
Petr Pushkar	2000-2002	Liviu Mare	2002-2003
Boris Begun	2001-2004	Hamed Maroofi	2002-2004
Martin Pinsonnault	2002-2005	Gregoire Loeper	2003-2004
Robert Wendt	2003-2005	Young-Heon Kim	2004-2008
Pavel Bachurin	2006-2008	Jeremy Wong	2006-2008
Alfonso Grasia-Saz	2007-2010	Alex Castro	2010-2011
Feride Tiglay	2010-2012	Fedor Soloviev	2010-2015
Jaimal Thind	2011-2012	Roberto Santos-Silva	2011-2012
Klas Modin	2012-2014	Mehdi Mousavi	2012-2014
Izosimov Anton	2014-2017	Alexander Shapiro	2016-2019
Cheng Yang	2017-2020	Francisco Torres de Lizaur	2020-2023

8. Editorial boards:

2004 - present	Springer series “Encyclopaedia of Mathematical Sciences,” subseries “Mathematical Physics”;
2004 - present	Journal “Dynamics of Partial Differential Equations”
2007 - present	Journal “Symmetry, Integrability and Geometry: Methods and Applications” (SIGMA)
2007 - present	Springer project “Collected Works of V.Arnold,” Editor-in-Chief

9. Organizing Scientific Programs and Conferences:

Programs:

Spring 2014	“Quantum anomalies, topology, and hydrodynamics,” Simons Center, NY
2004 - 2005	“Geometry of string theory,” Fields Institute (FI), Toronto
2001 - 2002	“Groups and geometry,” CRM, Montreal
Spring 2001	“Symplectic topology, geometry, and gauge theory,” FI, Toronto
Fall 2000	“Infinite-dimensional Lie theory and its applications,” FI, Toronto;

Workshops and Conferences:

April 2021	Infinite-dimensional Riemannian geometry and stochastic geometric mechanics, ICMS, Edinburgh, UK
January 2018	”Dynamics and integrability of nonholonomic and non-Hamiltonian systems,” Padova, Italy
June 2016	“Integrability and near-integrability in geometry,” CMO, Oaxaca, Mexico
June 2015	“Integrability in mechanics and geometry,” ICERM, Providence, RI
November 2014	“Legacy of Vladimir Arnold,” FI, Toronto
May 2014	“Geometrical aspects of hydrodynamics,” Simons Center, NY

October 2011	“Dynamical systems and classical mechanics,” ICMS, Edinburgh, UK
October 2009	“Geometry of integrable and nonintegrable dynamics,” AMS meeting, PennState, USA
August 2008	“30 years of bihamiltonian systems,” Banach Center, Poland
January 2007	“Nonholonomic mechanics and integrability,” Banff, Alberta
June 2005	“Integrable systems and string theory,” CMS meeting, Waterloo
November 2001	“Infinite-dimensional Lie groups,” CRM, Montreal
March 2001	“Symplectic and contact topology, quantum cohomology, and symplectic field theory,” FI/CRM, Toronto–Montreal
January 2001	“Quasi-classical and Quantum structures,” FI, Toronto
September 2000	“Hamiltonian systems,” AMS meeting, Toronto
June 1997	“Symplectic geometry,” FI, Toronto

10. Administrative/outreach work:

1998-1999, 2012-2015	Colloquium Chair, University of Toronto
1996 - present	Committees: Tenure-track Appointments, CRC Appointments, PDF Appointments, Tenure/promotion, Outreach, Library, etc.
2004 - present	Chair of PhD Exams, Arts and Sciences, Engineering Faculty
2006 - present	Lectures/lessons at Palmerston, Forest Hill, and Brown PS, ICS, Sigma and CapeCod Summer Camps

11. List of publications - Books:

1. *Geometry of infinite-dimensional groups.* (with R.Wendt) *Ergebnisse der Mathematik und Grenzgebiete 3.Folge, vol. 51, Springer-Verlag, 2009, xviii+304pp.* (hardcover and softcover editions); Russian translation: *MCCME, 2014, 368pp.*
2. *Lectures on topological fluid mechanics.* (with M.Berger, L.Kauffman, K.Moffatt, R.Ricca, and De W.Sumners) *Lecture Notes in Math., vol. 1973, Springer-Verlag, 2009, 221pp.*
3. *Topological methods in hydrodynamics.* (with V.I.Arnold) *Applied Math. Series, vol. 125, Springer-Verlag, 1998, xv+374pp.*; Second printing 1999, xv+376pp.; Third printing: *World Publ. Corp., Beijing, 2009*; Russian translation: *MCCME, 2007, 392pp.*

Over 80 refereed papers, 9 nonrefereed papers, 1 translated book,
and 8 edited volumes and journal issues.

12. Contact/personal information:

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