

Curriculum Vitae

EVELINA SHAMAROVA

Citizenship: Russian Federation

Current affiliation: Mathematics Center
(since 01.07.09) of the University of Porto (CMUP)

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POSITIONS

- (01.07.2009 – current), Researcher under the program **Ciência 2008** at the *Mathematics Center of the University of Porto (CMUP)*, Porto, Portugal

Post-Doc Positions

- (01.09.2007 - 30.06.2009), Mathematical Physics group of the University of Lisbon. Supervisor: *Ana Bela Cruzeiro*. Project: *Navier-Stokes equations and forward-backward SDEs on the group of diffeomorphisms of a torus*. Lisbon, Portugal

Short Term Visiting Post-Doc Positions

- (01.04.2007 – 31.08.2007), Post-Doc, Vienna University of Technology, Financial and Actuarial Mathematics research group, Vienna, Austria
- (01.10.2006 – 28.02.2007), Junior Research Fellow, The Erwin Schrödinger International Institute for Mathematical Physics. Vienna, Austria
- (01.01.2006 – 30.09.2006), Assistant Researcher, Fraunhofer Institute for Industrial Mathematics (ITWM), Kaiserslautern, Germany

POSTGRADUATE ACADEMIC PREPARATION AND RESEARCH

- (20.05.2005), Ph.D. in mathematics, Lomonosov Moscow State University, Faculty of Mechanics and Mathematics, Department of Theory of Functions and Functional Analysis, Moscow, Russia.
 - Specializations: Infinite dimensional analysis, stochastic analysis, functional analysis
 - Dissertation: [Surface measures and the Stokes formula in locally convex spaces](#)
 - Supervisor: Professor O. G. Smolyanov

- **Referees:** Professor E. T. Shavgulidze (Lomonosov Moscow State University)
Professor A. I. Kirillov (Russian Foundation for Basic Research)
Dr S. V. Kozyrev (Department of Mathematical Physics of Steklov
Mathematical Institute of the Russian Academy of Sciences)
RAS corresponding member I. V. Volovich (Department of Mathematical
Physics at Steklov Mathematical Institute, Chair)
- **Approbation of the Ph.D. thesis:**
The results of the Ph.D. thesis were presented at:
 - * the seminar “Infinite dimensional analysis and mathematical physics” headed by Professor O. G. Smolyanov and Professor E. T. Shavgulidze at the Faculty of Mechanics and Mathematics of MSU
 - * the seminar of academician V. S. Vladimirov and corresponding member of Russian Academy of Sciences I. V. Volovich at the Department of Mathematical Physics of Steklov Mathematical Institute of the Russian Academy of Sciences
 - * the XXV conference “Lomonosov readings” at Lomonosov MSU (2003).
- (2000–2003), Ph.D. student, Lomonosov Moscow State University, Faculty of Mechanics and Mathematics, Moscow, Russia
- (04.2003 – 03.2006), Assistant Researcher, Physics department, University of Kaiserslautern, Germany. Project: *Computer simulation of molecular dynamics*,

UNDERGRADUATE ACADEMIC PREPARATION

- (2003), **Diploma in mathematics (Dipl.-Math., M.Sc.)**, University of Kaiserslautern, Mathematics Department, Germany
 - Grade: 1.0 (highest)
 - Major subject: Stochastic Analysis
 - Thesis: Some problems related to stochastic differential equations
 - Supervisor: Professor H. v. Weizsäcker
- (1999), **Diploma in mathematics**, Lomonosov Moscow State University, Faculty of Mechanics and Mathematics, Moscow, Russia
 - Grade: Excellent
 - Major subject: Functional analysis
 - Thesis: On surface measures in locally convex spaces
 - Supervisor: Professor O. G. Smolyanov
- (1999), **Diploma in physics and computer science**, Moscow Institute of Physics and Technology (known as MIPT, MFTI, PhysTech), Faculty Of Applied Mathematics and Control Theory. Moscow, Russia. *External Department:* Keldysh Institute of Applied Mathematics of the Russian Academy of Sciences, Moscow, Russia
 - Major subject: Computer modeling in physics

PUBLICATIONS AND PREPRINTS

- E. Shamarova, *Chernoff's theorem for backward propagators and applications to diffusions on manifolds*, [arXiv: 1001.3373v1](#), preprint, **2010**
- A. B. Cruzeiro and E. Shamarova, *On a forward-backward stochastic system associated to the Burgers equation*, [arXiv: 1001.3367v1](#), Proceedings of the Workshop on Stochastic Analysis & Finance, **2009**, accepted
- A. B. Cruzeiro and E. Shamarova, *Navier–Stokes equations and forward-backward SDEs on the group of diffeomorphisms of a torus*, Stochastic Processes and their Applications, Vol. 119, Issue 12, **2009**, 4034–4060, [arXiv:0807.0421v5](#)
- E. Shamarova, *A mathematical approach to Jarzynski's identity in nonequilibrium statistical mechanics*, Infinite dimensional analysis, quantum probability and related topics, Vol. 12, No. 2 (**2009**) 213–229
- E. Shamarova, *Differential forms on locally convex spaces and the Stokes formula*, [arXiv: 0807.2200v2](#), to appear in **2009** in “Fundamental and Applied Mathematics” (in Russian), in “Journal of Mathematical Sciences (New York)” (in English)
- E. Shamarova, *Approximation of the heat kernel on a Riemannian manifold based on the Smolyanov–Weizsäcker approach* <http://www.esi.ac.at/preprints/esi1896.pdf>, ESI preprint, **2007**
- E. Shamarova, *Surface measures and the Stokes formula in locally convex spaces*, Ph.D. thesis, Moscow, **2005**
- E. Shamarova, *Constructing a Brownian sheet with values in a compact Riemannian manifold*, Math. Notes 76, No. 4, 590–596, **2004**
- E. Shamarova, *Chernoff's theorem for evolution families*, Proceedings of the conference “Lomonosov's readings” at Lomonosov MSU, 457–460, **2003**, [arXiv: 0706.4079](#)
- E. Shamarova, *Some problems related to stochastic differential equations*, Diploma thesis, Kaiserslautern, **2003**
- E. Shamarova, *Approximation of surface measures in a locally convex space*, Math. Notes 72, No. 4, 551–568, **2002**
- A. B. Cruzeiro and E. Shamarova, *Constructing the Navier-Stokes solution via forward-backward SDEs*, **in progress**
- E. Shamarova, *Brownian sheet on a compact Riemannian manifold*, **in progress**

CONTRIBUTIONS AT CONFERENCES AND SEMINAR TALKS

- *East Midlands Stochastic Analysis Seminar*, University of Warwick, Coventry, UK, August 21, 2009 (talk)
- *International Congress on Mathematical Physics* (August 3–8) and *Young Researcher Symposium* (July 31 – August 1), international conference, Prague, Czech Republic, July 31 – August 8, 2009 (talk + poster)

- [Stochastic Processes and their Applications](#), international conference, Berlin, Germany, July 27–31, 2009 (talk)
- [Stochastic Analysis and Random Dynamical Systems](#), international conference, Lvov, Ukraine, June 14–20, 2009 (talk)
- [The Second Najman Conference on Spectral Problems for Operators and Matrices](#), international conference, Dubrovnik, Croatia, May 10–17, 2009 (talk)
- [GOCPs 2008 – 8th German Open Conference on Probability and Statistics](#), Aachen, Germany, March 2008 (talk)
- [Skorokhod Space. 50 Years On](#), international conference, Kiev, Ukraine, June 2007 (talk)
- [International Congress of Mathematicians Madrid 2006](#), Madrid, Spain, August 2006 (talk)
- [31st Conference on Stochastic Processes and their Applications](#), international conference, Paris, France, July 2006 (poster)
- German open conference on probability and statistics [Frankfurter Stochastik-Tage 2006](#), Frankfurt, Germany, February 2006 (talk)
- XXV Conference “Lomonosov readings” at Lomonosov MSU, Moscow, Russia, March 2003 (talk)
- Seminar talk at the Mathematics Center of the University of Porto, University of Porto, October 2009
- Seminar talk at the center of Mathematics and Fundamental Applications, University of Lisbon, November 2008
- Seminar talk at the [Mathematical Physics group, University of Lisbon](#), September 2007
- Seminar talk at the [Erwin Schrödinger Institute for Mathematical Physics](#), Vienna, Austria, December 2006
- Seminar talk at the Institute for Mathematical Physics, Technical University of Braunschweig, Germany, July 2006
- Seminar talk at the [Department of Mathematical Physics of Steklov Mathematical Institute](#) of the Russian Academy of Sciences, Moscow, April 2005
- Seminar talk at the Mathematics Department, University of Kaiserslautern, 2003
- Seminar talk at the seminar “Infinite dimensional analysis and mathematical physics” at the faculty of Mechanics and Mathematics of Lomonosov MSU, Moscow, 2001.

Selected presentations:

- [Navier-Stokes equations and forward-backward SDEs on the group of diffeomorphisms of a torus \(PDF\)](#)
- [Constructing a Brownian sheet on a compact Riemannian manifold \(PDF\)](#)

GRANTS AND SCHOLARSHIPS

- (09.2007 – 06.2009), Portuguese Foundation for Science and Technology (FCT) research grant (University of Lisbon)
- (03.2007 – 08.2007), Austrian Science Fund (FWF) research grant (Vienna University of Technology)
- (10.2006–02.2007), Erwin Schrödinger Institute for Mathematical Physics (ESI) research grant
- (04.2003–03.2006), German Research Foundation (DFG) research grant (University of Kaiserslautern)
- (2000–2002), Mathematics International Master’s program scholarship at the University of Kaiserslautern
- (1999–2002), Ph.D. scholarship at Lomonosov Moscow State University
- (1994–1999), Student scholarship at Lomonosov Moscow State University
- (1991–1997) Student scholarship at Moscow Institute of Physics and Technology

TEACHING EXPERIENCE

- **Teaching assistant** at the University of Kaiserslautern, Germany
 - (2004–2005), tutorials in experimental physics
 - (2003), supervising external students in general physics
 - (2002–2003), tutorials in Calculus II
- (2000–2001), **Member of the admission committee for entrance examinations** at Lomonosov Moscow State University, Faculty of Mechanics and Mathematics

OTHER EMPLOYMENT

- (2005), **Assistant Researcher**, Fraunhofer Institute for Experimental Software Engineering (IESE); Tasks: C/C++ scientific programming,
- (2001–2003), **Assistant Researcher**, Robotics and Embedded Systems research group, Computer Science department, University of Kaiserslautern; Tasks: C/C++ scientific programming,

LANGUAGES

- English (fluent)
- German (fluent)
- Portuguese (intermediate)
- Italian (intermediate)
- Russian (mother tongue)

HOBBIES

Shotokan karate - Brown belt

WWW

<http://evelina.shamarova.com>