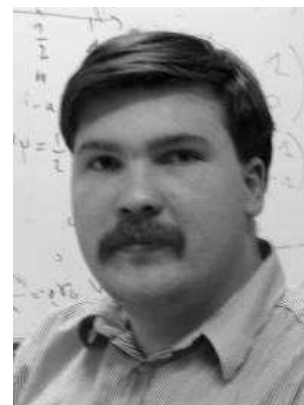


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Award: *Prix de thèse de l'Ecole Polytechnique*

Professional Experience

- Since 2006 Researcher at CNRS, **Ecole Polytechnique**, FRANCE
- 2005-2006 Post-doc research position at **University of Naples “Federico II”**, ITALY
European Marie Curie Research Training Network “Arrested Matter” (MRTN-CT-2003-504712)
Subject: *Theoretical and Numerical Study of Complex Systems Exhibiting a Structural Arrest in the Field of Soft and Colloidal Matter*
Supervisor: Prof. Antonio Coniglio
Affiliation: Department of Physics
- 2004-2005 Post-doc research position at **Université Paris-Sud**, FRANCE
Subject: *Dynamics of a Confined Diffusion of Hyperpolarized Helium-3 in the Human Pulmonary Acinus. Geometry-Image Relation and Emphysema Diagnostic*
Supervisor: Prof. Geneviève Guillot
Affiliation: Department of Medical Magnetic Resonance Researches
- 2004 - Referee for the Physical Review journals
- 2001-2004 PhD thesis at **Ecole Polytechnique**, FRANCE
Diploma: PhD, with honors and congratulations (defense on 2nd July 2004)
Subject: *Laplacian Transport towards Irregular Interfaces: A Theoretical, Numerical and Experimental Study*
Supervisor: Prof. Bernard Sapoval
Affiliation: Laboratoire de Physique de la Matière Condensée
Specialization: Theoretical physics
- 2001-2003 PhD thesis at **Saint Petersburg State University**, RUSSIA
Diploma: PhD, with honors (defense on 25th December 2003)
Subject: *Study of Relaxation in a Model Micellar Solution*
Supervisor: Prof. Aleksandr P. Grinin
Affiliation: Department of Statistical Physics
Specialization: Condensed matter physics
- 2001 Experimental work at **Saint Petersburg State University**, RUSSIA
Subject: *Electrooptical and Dynamical Properties of Polylyzine-AOT Complexes in Chloroform*
Supervisor: Prof. Andrei V. Lezov
Affiliation: Department of Polymer Physics
- 2000 Theoretical work at **Ecole Polytechnique**, FRANCE
Subject: *Properties of the Brownian Self-Transport Operator*
Supervisors: Prof. Bernard Sapoval and Prof. Marcel Filoche
Affiliation: Laboratoire de Physique de la Matière Condensée
- 1998 Theoretical work at **Ecole Supérieure d'Electricité**, FRANCE
Subject: *Thermal Modeling of DFB-DBR Laser Diodes*
Supervisors: Prof. Alain Destrez and Prof. Zeno Toffano
- 1996-1999 Assistant professor of mathematics at lyceum 239, Saint Petersburg, RUSSIA

Education

- 2000-2001 **Ecole Normale Supérieure de Paris**, Ecole Polytechnique, Paris VI, Paris VII, Paris XI
Diploma: *DEA in Theoretical Physics*
- 1999-2000 **Ecole Polytechnique**, France (last academic year)
Certificate with honors, congratulations of the jury “physics”
- 1999-2001 **Saint Petersburg State University**, Russia
Diploma: *Master of Science in Physics*, with honors
Research field: Non-equilibrium physics
Affiliation: Physics Faculty, Department of Statistical Physics
- 1995-1999 **Saint Petersburg State University**, Russia
Diploma: *Bachelor of Science in Physics*, with honors
Research field: Statistical physics and complex systems
Affiliation: Physics Faculty, Department of Statistical Physics
- 1991-1995 **Lyceum 239** specialized in mathematics and physics, Saint Petersburg, Russia
Graduate Education Certificate

Research interests

- Mathematical physics (Laplacian transfer phenomena, electrode problem, heterogeneous catalysis, random walks and Brownian motion, fractal geometry);
- Medical physics (imaging of biological tissues, NMR in porous environment, respiratory function, diffusion through semi-permeable membranes);
- Statistical physics (granular media, non-equilibrium systems, self-organization, transitive processes);
- Condensed matter physics (nucleation theory, micellization, relaxations).

Languages

Russian: mother tongue
English: fluent
French: fluent

Computer skills

Programming: C/C++, Pascal, Assembler
Software: Matlab, Maple, MathCad, TeX, Microsoft Word

Selected Papers in Peer Reviewed Journals

1. D. S. Grebenkov, *NMR survey of reflected Brownian motion*, Rev. Mod. Phys. **79** (2007, in print).
2. P. Levitz, D. S. Grebenkov, M. Zinsmeister, K. Kolwankar, B. Sapoval, *Brownian flights over a fractal nest and first passage statistics on irregular surfaces*, Phys. Rev. Lett. **96**, 180601 (2006).
3. D. S. Grebenkov, *What Makes a Boundary Less Accessible*, Phys. Rev. Lett. **95**, 200602 (2005).
4. D. S. Grebenkov, M. Filoche, B. Sapoval, M. Felici, *Diffusion-Reaction in Branched Structures: Theory and Application to the Lung Acinus*, Phys. Rev. Lett. **94**, 050602 (2005).
5. D. S. Grebenkov, *Nuclear Magnetic Resonance Restricted Diffusion between Parallel Planes in a Cosine Magnetic Field: An Exactly Solvable Model*, J. Chem. Phys. **126**, 104706 (2007).
6. D. S. Grebenkov, *Multieponential attenuation of the CPMG spin echoes due to a geometrical confinement*, J. Magn. Reson. **180**, 118-126 (2006).
7. D. S. Grebenkov, M. Filoche, B. Sapoval, *Mathematical Basis for a General Theory of Laplacian Transport towards Irregular Interfaces*, Phys. Rev. E **73**, 021103 (2006).
8. D. S. Grebenkov, G. Guillot, B. Sapoval, *Restricted Diffusion in a Model Acinar Labyrinth by NMR. Theoretical and Numerical Results*, J. Magn. Reson. **184**, 143-156 (2007).
9. D. S. Grebenkov, *Scaling Properties of the Spread Harmonic Measures*, Fractals **14** (3), 231-243 (2006).
10. D. S. Grebenkov, A. A. Lebedev, M. Filoche, B. Sapoval, *Multifractal Properties of the Harmonic Measure on Koch Boundaries in Two and Three Dimensions*, Phys. Rev. E **71**, 056121 (2005).
11. B. Sapoval, J. S. Andrade Jr, A. Baldassari, A. Desolneux, F. Devreux, M. Filoche, D. S. Grebenkov, S. Russ, *New Simple Properties of a Few Irregular Systems*, Physica A **357** (1), 1-17 (2005).
12. D. S. Grebenkov, M. Filoche, B. Sapoval, *Spectral Properties of the Brownian Self-Transport Operator*, Eur. Phys. J. B **36** (2), 221-231 (2003).
13. A. P. Grinin, D. S. Grebenkov, *Study of Relaxation in Micellar Solution by the Numerical Experiment*, Colloid Journal **65** (5), 552-561 (2003).
14. D. S. Grebenkov, *Parametric Equations of the Theory of Formation of Spherical Micelles*, J. Coll. Int. Sci. **249**, 162-171 (2002).