

KONSTANTINOS SPILIOPOULOS

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ACADEMIC POSITIONS

- Brown University, Division of Applied Mathematics starting July 2009
Prager Assistant Professor

EDUCATION

- Ph.D in Mathematical Statistics May 2009
University of Maryland (UMD), College Park, MD, USA
Thesis: Asymptotic Problems for Stochastic Processes with Reflection and Related PDE's
Advisor: Dr. Mark Freidlin
Cumulative G.P.A.: 4.00/4.00
- MA in Mathematical Statistics Sep 2004-May 2006
University of Maryland, College Park, MD, USA
Advisor: Dr. Mark Freidlin
Cumulative G.P.A.: 4.00/4.00
- BSc (5 years Diploma with Thesis) in Applied Mathematics Sep 1999-June 2004
National Technical University of Athens, Greece
School of Applied Mathematics and Physical Sciences
Thesis: Extension of Itô Formulae to Sobolev Spaces and some Applications
Advisor: Dr. Ioannis Spiliotis
Cumulative G.P.A.: 9.36/10, *Rank in class*: 1st

RESEARCH INTERESTS

- *Stochastic processes and partial differential equations*. In particular:
 - Asymptotic problems for stochastic processes and partial differential equations (PDE's)
 - Reaction-diffusion equations (RDE's) and wave front propagation
 - Asymptotic problems for stochastic PDE's and in particular for stochastic RDE's
 - Statistical inference for stochastic processes and sequential analysis
- *Applications to*:
 - propagation in thin waveguides
 - mathematical biology
 - financial mathematics

PUBLICATIONS

- "Wiener Process with Reflection in Nonsmooth Narrow Tubes", 2008, submitted.
- "Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains" (with M. Freidlin), 2008, *Asymptotic Analysis*, Volume 59, Number 3-4, pp. 227-249.
- "A note on the Smoluchowski-Kramers Approximation for the Langevin Equation with Reflection", 2007, *Stochastics and Dynamics*, Vol. 7, No. 2, pp. 141-153.
- "Method of Moments Estimation of Ornstein-Uhlenbeck Processes Driven by General Lévy Process", 2008, in preparation, part of it is on [arXiv:0807.2832](https://arxiv.org/abs/0807.2832) [[math.PR](https://arxiv.org/archive/math)].

DISTINCTIONS, AWARDS AND GRANTS

- Monroe Martin Talk Award in the presentation competition of the 2008-2009
Spotlight on Graduate Research at the University of Maryland

- Awarded Department of Mathematics Dissertation Fellowship, University of Maryland Fall 2008
- Seymour Goldberg Paper Award for paper submitted in Spotlight on Graduate Research at the University of Maryland 2007-2008
- Levermore Foundation Travel Grant, University of Maryland 2007
- Goldhaber Travel Grant, Graduate School, University of Maryland 2006
- Block Grant Fellowship from the Department of Mathematics of the University of Maryland 2004-2006
- Award from Eygenidio Foundation for outstanding Greek students that are pursuing graduate studies 2004-2005
- Three times awarded from the Technical Chamber of Greece for academic excellence at the School of Applied Mathematics and Physical Sciences of the National Technical University of Athens, Greece 2003-2005
- Three times awarded from the Greek State Scholarships Foundation for academic excellence at the School of Applied Mathematics and Physical Sciences of the National Technical University of Athens, Greece 2003-2005

INVITED TALKS AND LECTURES

- *Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains and Wave Front Propagation* April 2009
Department of Mathematics at the University of Illinois at Urbana-Champaign
- *Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains and Wave Front Propagation* April 2009
Department of Statistics at Warwick University, England
- *Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains and Wave Front Propagation* January 2009
Department of Statistics and Applied Probability and the Center for Financial Mathematics and Statistics at the University of Santa Barbara
- *Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains and Wave Front Propagation* October 2008
Applied Partial Differential Equations Research Interaction Team at UMD
- *Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains and Wave Front Propagation* September 2008
School of Applied Mathematics and Physics, National Technical University of Athens, Greece
- *Lectures in Homogenization with Probabilistic Methods* May 2007-2008
Invited lectures in Advanced Analytic Methods with Applications (Graduate course at UMD)
- *Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains*, Invited talk, Graduation Conference, Dept. Of Math, UMD May 2008
- *Wave Front Propagation In Narrow Domains* April 2008
Invited talk, Graduate Research Interaction Day, UMD
- *Log Prices following General Lévy Driven Ornstein- Uhlenbeck Processes* November 2007
Talk, Mathematical Finance Research Interaction Team, UMD
- *Probabilistic Approach in Homogenization: An Introduction* September 2007
Talk, Graduate Students Statistics and Probability Seminar, UMD
- *Wave Propagation In Narrow Tubes* September 2007
Talk, Summer School "De Ludo Aleae" on Probability, Universita' "La Sapienza" Roma, Italy
- *The Smoluchowski-Kramers Approximation for the Langevin Equation with Reflection* June 2006
Talk, Large Scale Stochastic Dynamics and Interaction with Kinetic Theory Foundation for Research and Technology, Heraklion Crete, Greece

TEACHING EXPERIENCE

- *Instructor* for Asymptotic Problems for Stochastic Processes and PDE's Fall 2009
Brown University (graduate topics course)

- *Instructor* for Calculus I (undergraduate) Summer 2008
University of Maryland at College Park
- *Discussion leader* for Calculus III, Introduction to Differential Equations, 2006-2008
College Algebra
University of Maryland at College Park

SOME OTHER SEMINARS AND CONFERENCES THAT I HAVE ATTENDED

- Participant at the 12th International Conference on Hyperbolic Problems: June 9-13, 2008
Theory, Numerics, Applications, CSCAMM, UMD
- Participant at the Mathematical Finance Conference October 2006
in honor of the 60th Birthday of Dilip B. Madan, UMD

OTHER ACADEMIC SERVICES AND SEMINAR ORGANIZATIONS

- *Co-organizer* of the Graduate Student Statistics and Probability seminar at UMD
- *Judge* for the written Spotlight Competition on Graduate Research at UMD during 2006-2007
- *President* of the Hellenic Graduate Student Organization Digenis at the UMD from November 2006 till November 2007
- *Treasurer* of the Hellenic Graduate Student Organization Digenis at the UMD from November 2004 till November 2006

MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

- American Mathematical Society September 2004-present
- Institute of Mathematical Statistics February 2007-present

PROFESSIONAL EXPERIENCE

- *Internship in Risk Management* July-Aug 2003
Athens Derivative Clearing House, Athens, Greece
 - (i) Exchange-traded derivative products
 - (ii) Development of a C application that reads all investor positions and margin parameters and produces their margin requirements (It is being used for intraday margin calculations and analysis of what-if margin scenarios)
- *Internship in Mathematical Theory of Control and it's Applications to Economics* May 2003
Moscow State Aviation Institute, Moscow, Russia
 - (i) Mathematical Optimal Control
- *Internship in P2P Networks* June-Aug 2002
University of Rostock, Rostock, Germany
 - (i) Software simulations for information search in a P2P community
 - (ii) Analysis of the results of two approaches for information search (random search and information related search)
- *Assistant in Computer Laboratories* Sep-Dec 2000
National Technical University of Athens, Athens, Greece
 - (i) Supervision and organization of laboratory exercises

SKILLS

- *Languages:* Greek (native), English (fluent), German (intermediate), French (basic knowledge)
- *Computer Skills:* C, C++, Html, Splus, R, SAS, Matlab, Mathematica, Latex, Microsoft Office, Windows XP, Linux