Boston University kspiliop@bu.edu Department of Mathematics and Statistics http://math.bu.edu/people/kspiliop/ Boston, MA, 02215, USA phone: +(617) 353-5209 ACADEMIC POSITIONS • Boston University, Department of Mathematics & Statistics July 2023-present Director of Statistics • Boston University, Department of Mathematics & Statistics February 2023-present Professor • Boston University, Department of Mathematics & Statistics May 2018-February 2023 Associate Professor • Boston University, Department of Mathematics & Statistics July 2021-July 2023 Director of Undergraduate Studies • Boston University, Department of Mathematics & Statistics July 2012-May 2018 Assistant Professor • Brown University, Division of Applied Mathematics July 2009-June 2012 Prager Assistant Professor ACADEMIC AFFILIATIONS • Member of the Center for Information and Systems Engineering (CISE), BU July 2013-present • Hariri Institute for Computing, BU July 2013-present 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** • Mathematical and computational methods for machine learning • Stochastic optimal control and optimization

- Analysis and design of stochastic algorithms and deep learning for partial differential equations
- Monte Carlo methods and development of rare event simulation methods
- Asymptotic problems for stochastic processes and PDE's including multiple scale problems and large deviations
- Metastability analysis of dynamical systems

- Interacting particle systems, agent based modeling and applications to biological systems, opinion and social dynamics
- Financial Mathematics, systemic risk and risk management, large portfolio asymptotics, stochastic volatility models and large deviations
- Network modeling and statistical inference for stochastic processes

BOOK CHAPTERS

- K. Spiliopoulos, "Importance sampling for metastable and multiscale dynamical systems", Stochastic Processes, Multiscale Modeling, and Numerical Methods for Computational Cellular Biology, (Editors: D. Holcman) ,Springer, 2017, pp 29-53.
- (2) K. Spiliopoulos, "Systemic risk and default clustering for large financial systems", Large Deviations and Asymptotic Methods in Finance, (Editors: P. Friz, J. Gatheral, A. Gulisashvili, A. Jacqier, J. Teichmann), Springer Proceedings in Mathematics and Statistics, Vol. 110 2015.

PUBLICATIONS

- Ioannis Gasteratos, Mickey Salins and K. Spiliopoulos, "Importance sampling for stochastic reactiondiffusion equations in the moderate deviation regime", Stochastics and Partial Differential Equations: Analysis and Computations, (2023), to appear.
- (2) Max Heldman, Samuel A. Isaacson, Jingwei Ma and K. Spiliopoulos, "Fluctuation analysis for particlebased stochastic reaction-diffusion models", Stochastic Processed and their Applications, Volume 167, January 2024, 104234.
- (3) Zachary Bezemek and K. Spiliopoulos, "Moderate deviations for fully-coupled multiscale weakly interacting particle systems", Stochastics and Partial Differential Equations: Analysis and Computations, Volume 12, 2024, pp. 1265-1373.
- (4) K. Spiliopoulos and Jiahui Yu, "Normalization effects on deep neural networks", 2023, AIMS Journal on Foundations of Data Science, 2023, Volume 5, Issue 3: pp. 389-465.
- (5) Justin Sirignano, Jonathan MacArt and K. Spiliopoulos, "PDE-constrained Models with Neural Network Terms: Optimization and Global Convergence", 2023, Journal of Computational Physics, Volume 481, 15 May 2023, 112016.
- (6) Solesne Bourguin, Thanh Dang and K. Spiliopoulos, "Moderate deviation principle for multiscale systems driven by fractional Brownian motion", Journal of Theoretical Probability, 36, Article number: 1 (2023).
- (7) Xiaojing Zhu, Cantay Caliskan, Dino P. Christenson, K. Spiliopoulos Dylan Walker, Eric D. Kolaczyk, "Disentangling positive and negative partisanship in affective polarization using a coevolving latent space network with attractors model", 2023, Journal of the Royal Statistical Society: Series A, Volume 186, Issue 3, July 2023, pp. 463-480.
- (8) Zachary Bezemek and K. Spiliopoulos, "Large deviations for interacting multiscale particle systems", Stochastic Processed and their Applications, Volume 155, January 2023, Pages 27-108.
- (9) Benjamin J. Zhang, Youssef M. Marzouk and K. Spiliopoulos, "Geometry-informed irreversible perturbations for accelerated convergence of Langevin dynamics", Statistics and Computing, 32, Article number: 78 (2022).
- (10) Zachary Bezemek and K. Spiliopoulos, "Rate of homogenization for fully-coupled McKean-Vlasov SDEs", 2022, Stochastics and Dynamics, Vol. 23, No. 02, 2350013 (2023).
- (11) Justin Sirignano and K. Spiliopoulos, "Online Adjoint Methods for Optimization of PDEs", 2022, Applied Mathematics and Optimization, 85, Article number: 18 (2022).
- (12) Ioannis Gasteratos, Mickey Salins and K. Spiliopoulos, "Moderate deviations for systems of slow-fast stochastic reaction-diffusion equations", Stochastics and Partial Differential Equations: Analysis and Computations, (2023), Vol.11, pp. 503–598.
- (13) Samuel A. Isaacson, Jingwei Ma and K. Spiliopoulos, "Mean Field Limits of Particle-Based Stochastic Reaction-Diffusion Models", SIAM Mathematical Analysis, Vol. 54, No. 1, (2022), pp. 453–511.
- (14) S. Bourguin, S. Gailus and K. Spiliopoulos, "Discrete-time inference for slow-fast systems driven by fractional Brownian motion", SIAM Multiscale Modeling and Simulation, Vol. 19, No. 3, (2021), pp. 1333–1366.
- (15) Samuel A. Isaacson, Jingwei Ma and K. Spiliopoulos, "How reaction-diffusion PDEs approximate the large-population limit of stochastic particle models", SIAM Applied Mathematics, Vol. 81, No. 6, (2021), pp. 2622–2657.

- (16) Jiahui Yu and K. Spiliopoulos, "Normalization effects on shallow neural networks and related asymptotic expansions", Foundations of Data Science, 3(2), (2021), pp. 151-200.
- (17) J. Sirignano and K. Spiliopoulos, "Asymptotics of reinforcement learning with neural networks", Stochastic Systems, Vol. 12, No. 1, March 2022, pp. 2–29.
- (18) M. Salins and K. Spiliopoulos, "Metastability and exit problems for systems of stochastic reactiondiffusion equations", Annals of Probability, Vol. 49, No. 5, (2021), pp. 2317–2370.
- (19) J. Sirignano and K. Spiliopoulos, "Mean field analysis of deep neural networks", Mathematics of Operations Research, Vol. 47, No. 1, (2021), pp. 120-152.
- (20) S. Bourguin, S. Gailus and K. Spiliopoulos, "Typical dynamics and fluctuation analysis of slow-fast systems driven by fractional Brownian motion", Stochastic and Dynamics, Vol. 21, No. 07, (2021), 2150030.
- (21) M. Anthropelos, S. Robertson and K. Spiliopoulos, "Optimal investment, derivative demand, and arbitrage under price impact", Mathematical Finance, Vol. 31, (2021), pp. 3-35.
- (22) M. Beck, E. Cooper, G. Lord and K. Spiliopoulos, "Selection of quasi-stationary states in the stochastically forced Navier-Stokes equation on the torus", Journal of Nonlinear Science, Volume 30, (2020), pp. 1677-1702.
- (23) K. Spiliopoulos and Jia Yang "Network effects and default clustering for large systems", Journal of Applied Mathematical Finance, Volume 26, Issue 6, (2020), pp. 523-582.
- (24) M. Morse and K. Spiliopoulos, "Importance sampling for slow-fast diffusions based on moderate deviations", SIAM Journal on Multiscale Modeling and Simulation, Vol. 18, No. 1, (2020), pp. 315–350.
- (25) K. Spiliopoulos, "Information geometry for approximate Bayesian computation", SIAM/ASA Journal on Uncertainty Quantification, Vol. 8, Issue 1, (2020), pp. 229–260.
- (26) J. Sirignano and K. Spiliopoulos, "Mean field analysis of neural networks: a law of large numbers", SIAM Journal on Applied Mathematics, Vol. 80, Issue 2, (2020), pp. 725–752.
- (27) M. Ottobre, N.S. Pillai and K. Spiliopoulos, "Optimal Scaling of the MALA algorithm with Irreversible Proposals for Gaussian targets", Stochastics and Partial Differential Equations: Analysis and Computations, Vol. 8, (2020), pp. 311–361.
- (28) J. Sirignano and K. Spiliopoulos, "Stochastic gradient descent in continuous time: a central limit theorem", Stochastic Systems, Volume 10, Issue 2, (2020), pp. 99-191.
- (29) J. Sirignano and K. Spiliopoulos, "Mean field analysis of neural networks: A central limit theorem", Stochastic Processes and their Applications, Volume 130, Issue 3, (March 2020), pp. 1820-1852.
- (30) A. Jacquier and K. Spiliopoulos, "Pathwise moderate deviations for option pricing", Mathematical Finance, Vol. 30, Issue 2, (2020), pp. 426–463.
- (31) W. Hu, M. Salins and K. Spiliopoulos, "Large deviations and averaging for systems of slow-fast stochastic reaction-diffusion equations", Stochastics and Partial Differential Equations: Analysis and Computations, Vol. 7, Issue 4, (2019), pp. 808–874.
- (32) M. Beck, E. Cooper and K. Spiliopoulos, "Selection of quasi-stationary states in the Navier-Stokes equation on the torus", 2019, Nonlinearity, Vol. 32, pp. 209–237.
- (33) J. Lu and K. Spiliopoulos, "Analysis of multiscale integrators for multiple attractors and irreversible Langevin samplers", SIAM Multiscale Modeling and simulation, Vol. 16, Issue 4, (2018), pp. 1859-1883.
- (34) J. Sirignano and K. Spiliopoulos, "DGM: A deep learning algorithm for solving partial differential equations", Journal of Computational Physics, Vol. 375, (December 2018), pp. 1339-1364.
- (35) S. Gailus and K. Spiliopoulos, "Discrete-time statistical inference for multiscale diffusions", SIAM Multiscale Modeling and simulation, Vol. 16, Issue 4, (November 2018), pp. 1824–1858.
- (36) A. Chronopoulou and K. Spiliopoulos, "Sequential Monte Carlo for fractional stochastic volatility models", Quantitative Finance, (2017), Vol. 18, Issue 3, pp. 507-517.
- (37) S. Robertson and K. Spiliopoulos, "Indifference pricing for contingent claims: Large deviations effects", Mathematical Finance, Vol. 28, Issue 1, (2018), pp. 335--371.
- (38) J. Sirignano and K. Spiliopoulos, "Stochastic gradient descent in continuous time", SIAM Journal on Financial Mathematics, Vol. 8, Issue 1, (2017), pp. 933—961.
- (39) A. Papanicolaou and K. Spiliopoulos, "Dimension reduction in statistical estimation of partially observed multiscale processes", SIAM Journal on Uncertainty Quantification, Vol. 5, (2017), pp. 1220– 1247.

- (40) W. Hu and K. Spiliopoulos, "Hypoelliptic multiscale Langevin diffusions: Large deviations, invariant measures and small mass asymptotics", Electronic Journal of Probability, Vol. 22, paper no. 55, (2017), pp. 1–38.
- (41) M. Salins and K. Spiliopoulos, "Rare event simulation via importance sampling for linear SPDE's", Stochastic Partial Differential Equations: Analysis and Computations, Vol. 5, Issue 4, (2017), pp. 652–690.
- (42) F. Fang, Y. Sun and K. Spiliopoulos, "The effect of heterogeneity on flocking behavior and systemic risk", Statistics and Risk Modelling, Vol. 34, No. 3–4, (2017), pp. 141–155.
- (43) M. Morse and K. Spiliopoulos, "Moderate deviations principle for systems of slow-fast diffusions", Asymptotic Analysis, Vol. 105, No. 3-4, (2017), pp. 97–135.
- (44) M. Anthropelos, S. Robertson and K. Spiliopoulos, "The pricing of contingent claims and optimal positions in asymptotically complete markets", Annals of Applied Probability, Vol. 27, No. 3, (2017), pp. 1778-1830
- (45) M. Salins and K. Spiliopoulos, "Markov processes with spatial delay: path space characterization, occupation time and properties", Stochastics and Dynamics, Vol. 17, No. 6, (2017), 1750042.
- (46) S. Gailus and K. Spiliopoulos, "Statistical inference for perturbed multiscale dynamical systems", Stochastic Processes and their applications, Volume 127, Issue 2, (2017), pp. 419–448.
- (47) L. Rey-Bellet and K. Spiliopoulos, "Improving the convergence of reversible samplers", Journal of Statistical Physics, Vol. 164, Issue 3, (2016), pp. 472-494.
- (48) K. Spiliopoulos, "Rare event simulation for multiscale diffusions in random environments", SIAM Multiscale Modeling and Simulation, Vol. 13, No. 4, (2015), pp. 1290–1311
- (49) P. Dupuis, K. Spiliopoulos and X. Zhou "Escaping from an attractor: importance sampling and rest points I", Annals of Applied Probability, Vol. 25, No. 5, (2015), pp. 2909—2958
- (50) Luc Rey-Bellet and K. Spiliopoulos, "Irreversible Langevin samplers and variance reduction: a large deviations approach", Nonlinearity, Vol. 28, (2015), pp. 2081–2103.
- (51) K. Spiliopoulos and Richard Sowers, "Default clustering in large pools: Large deviations", SIAM Journal on Financial Mathematics, Vol. 6, (2015), pp. 86—116.
- (52) K. Spiliopoulos, "Quenched large deviations for multiscale diffusion processes in random environments", Electronic Journal of Probability, Vol. 20, (2015), no. 15, pp. 1–29.
- (53) Luc Rey-Bellet and K. Spiliopoulos, "Variance reduction for irreversible Langevin samplers and diffusion on graphs", Electronic Communications in Probability, Vol. 20, no. 15, (2015), pp. 1—16.
- (54) K. Spiliopoulos, "Non-asymptotic performance analysis of importance sampling schemes for small noise diffusions", Journal of Applied Probability, Vol. 52, (2015), pp. 1–14.
- (55) K. Giesecke, K. Spiliopoulos, R. Sowers and J. A. Sirignano, "Large portfolio asymptotics for losses from default", Mathematical Finance, Vol. 25, No. 1, (2015), pp. 77–114.
- (56) P. Dupuis and K. Spiliopoulos, "Rare event simulation in the neighborhood of a rest point", 2014, Winter Simulation Conference, (IEEE, 2014), pp. 564–573.
- (57) A. Papanicolaou and K. Spiliopoulos, "Filtering the maximum likelihood for multiscale problems", SIAM Multiscale Modeling and Simulation , Vol. 12, No. 3, (2014) pp. 1193–1229.
- (58) K. Spiliopoulos, Kay Giesecke and Justin A. Sirignano "Fluctuations analysis for loss from default", Stochastic Processes and their Applications, Volume 124, Issue 7, (2014), pp. 2322–2362.
- (59) Sergio A. Almada and K. Spiliopoulos, "Scaling limits and exit law for multiscale diffusions", Asymptotic Analysis, Volume 87, (2014), pp. 65–90.
- (60) K. Spiliopoulos, "Fluctuation analysis and short time asymptotics for multiple scales diffusion processes", Stochastics and Dynamics, Vol. 14, No.3, (2014), 1350026.
- (61) K. Spiliopoulos and A. Chronopoulou, "Maximum likelihood estimation for small noise multiscale disffusions", Statistical Inference for Stochastic Processes, Volume 16, Issue 3, (2013), pp. 237–266.
- (62) K. Giesecke, K. Spiliopoulos and R. Sowers, "Default clustering in large portfolios: Typical events", Annals of Applied Probability, Vol. 23, No. 1, (2013), pp. 348–385.
- (63) K. Spiliopoulos, "Large deviations and importance sampling for systems of slow-fast motion", Applied Mathematics and Optimization, Vol. 67, (2012), pp. 123--161.
- (64) P. Dupuis, K. Spiliopoulos and H. Wang, "Importance sampling for multiscale siffusions", SIAM Multiscale Modeling and Simulation, Vol. 12, No. 1, (2012), pp. 1–27.
- (65) P. Dupuis and K. Spiliopoulos, "Large deviations for multiscale diffusions via weak convergence methods", Stochastic Processes and their Applications, Vol. 122, (2012), pp. 1947–1987.

- (66) K. Spiliopoulos and R. Sowers, "Recovery rates in investment-grade pools of credit assets: A large deviations analysis", Stochastic Processes and their Applications, Volume 121, Issue 12, (2011), pp. 2861–2898.
- (67) P. Dupuis, K. Spiliopoulos and H. Wang, "Rare event simulation in rough energy landscapes", 2011, Winter Simulation Conference, (IEEE, 2011), pp. 504--515.
- (68) K. Spiliopoulos, "Large deviations principle for a large class of one-dimensional homogeneous strong Markov processes", Journal of Theoretical Probability, Vol. 25, Issue 4, (2012), pp. 925–949.
- (69) K. Spiliopoulos, "Wiener process with reflection in non smooth narrow tubes", Electronic Journal of Probability, Vol. 14, Paper no. 69, (2009), pp. 2011–2037
- (70) K. Spiliopoulos, "Method of moments estimation of Ornstein-Uhlenbeck processes driven by general Lévy process", Annales de l'I.S.U.P., Volume 53 - Fascicule 2-3, (December 2009), pp. 3–19.
- (71) M. Freidlin and K. Spiliopoulos, "Reaction-diffusion equations with non-linear boundary conditions in narrow domains", Asymptotic Analysis, Vol. 59, No. 3-4, (2008), pp. 227–249.
- (72) K. Spiliopoulos, "A note on the Smoluchowski-Kramers approximation for the Langevin equation with reflection", Stochastics and Dynamics, Vol. 7, No. 2, (2007), pp. 141–153.

SUBMITTED PAPERS

- (1) Shivam Singh Dhama and K. Spiliopoulos, "Uniform in time bounds for a stochastic hybrid system with fast periodic sampling and small white-noise", 2024, submitted.
- (2) Hancong Pan, Xiaojing Zhu, Cantay Caliskan, Dino P. Christenson, K. Spiliopoulos, Dylan Walker, Eric D. Kolaczyk, "Stochastic gradient descent-based inference for dynamic network models with attractors", 2024, submitted.
- (3) Max Heldman, Samuel A. Isaacson, Qianhan Liu and K. Spiliopoulos, "Mean field limits of particlebased stochastic reaction-drift-diffusion models", 2023, submitted.
- (4) Samuel Chun-Hei Lam, Justin Sirignano and K. Spiliopoulos, "Kernel Limit of Recurrent Neural Networks Trained on Ergodic Data Sequences", 2023, submitted.
- (5) Benjamin J. Zhang, Youssef M. Marzouk and K. Spiliopoulos, "Transport map unadjusted Langevin algorithms: learning and discretizing perturbed samplers", 2023, submitted.
- (6) Solesne Bourguin and K. Spiliopoulos, "Quantitative fluctuation analysis of multiscale diffusion systems via Malliavin calculus", 2023, submitted.
- (7) Antoine Jacquier, Alexandre Pannier and K. Spiliopoulos, "On the large-time behaviour of affine Volterra processes", 2022, submitted.
- (8) J. Sirignano and K. Spiliopoulos, "Scaling Limit of Neural Networks with the Xavier Initialization and Convergence to a Global Minimum", 2019, unpublished technical note, available on arxiv.

DISTINCTIONS, AWARDS AND GRANTS

• NSF-DMS 2311500.	2023-2026
• NSF-SES 2120115.	2021-2025
• NSF-DMS 2107856.	2021-2025
• Department of Defense/ARO W911NF2010244.	2020-2025
• SIMONS fellow in mathematics award, 672441.	2020-2023
• NSF CARRER AWARD, NSF-DMS 1550918.	2016-2022
• Alfred P. Sloan Foundation support for attending the EVA 2015 conference.	2015
• Hariri Institute Junior Fellow.	2013-2017
• NSF-DMS 1312124.	2013-2017
• SIAM early career travel grant.	2011-2012
2012 SIAM Conference on Financial Mathematics & Engineering (FM12)	
• IATF travel grant, Brown University.	2011-2012
• Block travel grant for the 16th INFORMS Applied Probability Conference.	2011
• 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,	Fall 2008
University of Maryland	
• Seymour Goldberg Paper Award for paper submitted in	2007-2008
Spotlight on Graduate Research at the University of Maryland	
• 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	2004-2006
of the University of Maryland	
• 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
Editorial work	
• Associate Editor for "Machine learning for computational science and engineering".	2024-present
• Associate Editor for "SIAM Journal on financial mathematics".	2021-2027
• Editor for a special issue on "Machine Learning in Finance" for Applied Mathematical 2021	Finance. 2020-
• Associate Editor for "Applied Mathematical Finance".	2020-present
• Associate Editor for "Foundations of Data Science (an AIMS Journal").	2018-present
TEACHING EXPERIENCE	
• GRS MA884-Special topics course in probability, Boston University,	Fall 2019
• MA783-Advanced stochastic processes, Boston University, Spring 2019, Fall	2021, Fall 2022
• MA782-Hypothesis Testing, Boston University, Spring 2016, Spring 202	22, Spring 2023
• MA779-Probability Theory I, Boston University,	Fall 2024
• MA777-Multiscale Methods for stochastic processes and differential equations, Bos Spring 2018, Fall 2023	ton University,
• MA752-Mathematical Foundations of Deep Learning, Boston University,	Spring 2024
• MA583-Stochastic Processes, Boston University, Spring 2013, 2015, 20	016, 2018, 2019
• MA581-Introduction to Probability, Boston University, Spring 2	2015, Fall, 2021
• MA115-Statistics I (undergraduate), Boston University, Fall 2012, 2013, 2014, 2015, 2014, 2014, 2015, 2014, 2015, 2014, 2015, 2014, 2015, 2014, 2015	017, 2018, 2019
• GRS MA884- Topics in Multiscale Analysis: Theory, Computation and Application Boston University,	ons (graduate), Spring 2014
• Operational Research-Probabilistic Methods (undergraduate), Brown University, Sp	oring 2011,2012
• Topics on Multiscale Methods: Theory and Computation (graduate), Brown Universit	y, Fall 2011
• Topics on Averaging and Metastability with Applications (graduate), Brown Universit	Ty, Fall 2010
• Topics on Survival Analysis (graduate-independent study), Brown University,	Summer 2010
• Nonparametric Statistics (undergraduate), Brown University	Spring 2010
• Asymptotic Problems for Stochastic Processes and PDE's (graduate), Brown Universi	ty Fall 2009
• Calculus I (undergraduate), University of Maryland at College Park	Summer 2008
• <i>Discussion leader</i> for Calculus III, Introduction to Differential Equations, College Algebra, University of Maryland at College Park	2006-2008

Mentoring Experience

• Current:	
– Ankan Ganguly: Post-doctoral fellow at Boston University	Fall 2023-Summer 2026
– Shivam Singh Dhama: Post-doctoral fellow at Boston University	Fall 2023-Summer 2026
– Lanlan Liu: PhD graduate student at Boston University	Fall 2021-present
(Co-advised with Samuel Isaacson)	
Project: Analysis and computation of stochastic reaction-diffusion mo	dels for biological systems

 Hancong Pan: PhD graduate student at Boston University (Co-advised with Eric Kolaczyk) 	Spring 2022-present
Project: Analysis and computation for co-evolving latent space netwo	rk networks with attractors.
 Chen Yao: PhD graduate student at Boston University (Co-advised with Samuel Isaacson) 	Summer 2024-present
– Nikos Georgoudios: PhD graduate student at Boston University	Summer 2024-present
– Zhao Zhuo: PhD graduate student at Boston University	Summer 2024-present
Questrum Business school (Co-advised with Max Reppen) • Completed:	
– Jiahui Yu: Post-doctoral fellow at Boston University	Fall 2019-Summer 2022
 Siragan Gailus: Post-doctoral fellow at Boston University First position: Post-doctoral fellow at TU Berlin, Germany 	Fall 2018-Spring 2020
 Mickey Salins: Post-Doctoral Fellow at Boston University First position: Assistant Professor at Mathematics and Statistics De 	Fall 2015-Fall 2017 partment at BU, Boston.
 Zachary Bezemek: PhD graduate student at Boston University, Project: Interacting particle systems in multiscale environments. First position: Assistant Research Professor at Duke University, Nor 	Fall 2019-present th Carolina.
 Ioannis Gasteratos: PhD graduate student at Boston University (Co-advised with Michael Salins). Boston University 	Fall 2017-Spring 2022
Project: Moderate deviations for multiscale stochastic reaction-diffu importance sampling schemes First position: Post-doctoral fellow at Imperial College London	usion equations and related
 Jingwei Ma: PhD graduate student at Boston University (as advised with Served Issessen). Beston University 	Spring 2018-Spring 2021
Project: Stochastic reaction-diffusion problems in modelling biologic. First position: Tik-Tok	al systems
 Jia Yang: PhD graduate student at Boston University Project: "Clustering, contagion and dynamic network models" 	Spring 2017-Summer 2020
 Eric Cooper: PhD graduate student at Boston University (Co-advised with Margaret Beck) 	Spring 2014-Spring 2019
Project: 'Selection of quasi-stationary states in the Navier-Stokes eq First position: Senior Data Scientist at Sports Betting Innovative An	uation on the torus" nalytics.
 Matthew Morse: PhD graduate student at Boston University Project: "Moderate deviations and importance sampling for multisca First Position: Lecturer at Department of Mathematics and Statistic 	Fall 2014-Fall 2018 ale diffusions" cs. University of Maine.
– Siragan Gailus: PhD graduate student at Boston University	Fall 2013-Summer 2018
Thesis: "Statistical Inference for Multiscale Diffusions with Small No First position: Post-doctoral fellow, Boston University.	bise," Boston University.
 Zixin Ding: Undergraduate student Boston University 	Summer 2019
Project: "Irreversibility in stochastic gradient descent methods"	
– Weiwei Wu: Master student at Boston University,	Summer 2018
Project: "Feedback in dynamic networks".	
First position: PhD Student at University of California at San Diego).
 Quentin Chauleur: Undergraduate student, Visiting student from France, ENS de Rennes Brainette "Employation of none quent simulation methods for stachastic 	Summer 2017
Project: Exploration of rare event simulation methods for stochasti	c dynamical systems.
 – Ting Wang: Undergraduate student, Boston University. Project: "Study of irreversible perturbations in estimation." 	Summer 2017
– Fei Fang: Master student	Summer 2015
Boston University	Summer 2013
Project: "The effect of heterogeneity on flocking behavior and syster First position: PhD Student at University of North Carolina at Chap	nic risk" pel Hill.
– Yiwei Sun: Undergraduate student,	Summer 2015
Boston University Project: "The effect of heterogeneity on flocking behavior and syster	nic risk"

Summer 2012-Fall 2012

Do Young Yoon: Undergraduate student,
 Brown University continued at Boston University
 Independent Study on "Stochastic Processes"

 Abhay Sagar: MSc student, Brown University Independent Study on "Survival Analysis"

ACADEMIC SERVICE AND SEMINAR ORGANIZATION

- Referee for Stochastic and Dynamics, Applied Mathematics and Optimization, Annals of Probability, Annals of Applied Probability, SIAM Journal on Mathematical Analysis, External Evaluator for Research Proposals in Greece, Lecture Notes in Mathematics, Asymptotic Analysis, Quarterly Review of Economics and Finance, Physica D, Mathematics of Operations Research, Operations Research Letters, Journal of Theoretical Probability, Annales de l'Institut Henri Poincare (C) - Analyse non lineaire, Journal of Applied Probability, Journal of Risk, Nonlinearity, Physica A, Communications on Pure and Applied Mathematics, Mathematical Finance, Finance and Stochastics, Stochastic Systems, Operations Research, Journal of Computational Physics, Journal of Statistical Physics, Journal of Chemical Physics, SIAM Journal on Financial Mathematics, Fluctuations and Noise Letters, Bioinformatics, Journal of Computational Physics, Methodology and Computing in Applied Probability, Probability Theory and Related Fields, Communications in Mathematical Sciences, PLOS ONE, ESAIM: Mathematical Modelling and Numerical Analysis, SIAM Multiscale Modeling and Simulation.
- *Co-organizer* of a mini-symposia on mathematics in machine learning in finance during the SIAM on financial mathematics meeting at Toronto, Canada, June 4-7, 2019
- *Co-organizer* of a Special Session on Recent Advances in Stochastic Processes and Stochastic Computation during the Fall 2016 Southeastern AMS Sectional Meeting North Carolina State University, Raleigh, NC, November 12-13, 2016
- Co-organizer of the 2016 BU-Keio workshop on Probability and Statistics, 2016
- Co-organizer of the 2013 BU-Keio workshop on Probability and Statistics, 2013
- University Committees: Graduate admissions committee (2013-2022). Hiring Committees: Assistant Professor search in Probability and Stochastic Processes (2016-2017), Assistant, Associate and Full Professor search in Statistics (2015-2016), Assistant professor in Probability and Statistics (2014-2015), Post-doc position in Probability and Statistics (2014-2015). Tenure review committee (2019), Merit Committee (2019), Revising statistics and probability curriculum (2018-ongoing), Tenure and Promotion committee (2021-2022, 2022-2023), Cluster Hire in AI (2022-2023), Assistant professor in Probability and Statistics committee (2023-2024)
- Student Committees (excluding my own students): Ava J. Mauro(PhD thesis committee, Spring 2014), Zhongkai Cui (PhD Committee Chair, Fall 2012), Nikolas Kim (Undergraduate Honors Committee, Spring 2013), Ali Sanjari(PhD thesis committee, Fall 2015), Shuyang Bau (PhD thesis Committee Chair, Spring 2016), Tao Long (PhD thesis Committee reader, Spring 2018), Karoline Weber (PhD thesis Committee reader, Spring 2018), Tao Long (PhD thesis Committee reader, Spring 2018), Benjamin J. Zhang (MIT Phd student, reader in Phd thesis committee, Spring 2022), Xiaojing Zhu (PhD thesis committee reader Spring 2022), Keer Jiang (PhD thesis committee reader Summer 2022), Shurong Lin (PhD thesis committee Spring 2024)
- Previously co-organized of the Mathematics Colloquium at Boston University
- Previously co-organized the Probability and Statistics seminar at Boston University
- Previously organized the Stochastic and Probability seminar at Brown
- Previously organized the Graduate Student Statistics and Probability seminar at UMD
- Judge for the written Spotlight Competition on Graduate Research at UMD during 2006-2007
- *President/Treasurer* of the Hellenic Graduate Student Organization Digenis at UMD for the period from November 2004 till November 2007

INVITED TALKS AND LECTURES

- (1) Invited talk at November 10-15 2024, Banff workshop on "Modeling, Learning and Understanding: Modern Challenges between Financial Mathematics, Financial Technology and Financial Economics", Canada.
- (2) Invited talk at October 21-25 2024, workshop on "SIAM Conference on Mathematics of Data Science (MDS24)", Atlanda, Georgia, USA.

(3)	Invited talk at	September 13-15 2024,
	workshop on "Robust Optimization and Simulation of Complex Stochastic S dence, USA.	ystems", ICERM, Provi-
(4)	Invited talk at	May 6-10 2024,
()	workshop on "Interacting Particle Systems: Analysis, Control, Learning and Providence, USA.	Computation", ICERM,
(5)	Invited talk at	April 16 2024,
	Analysis and Probability Seminar Department of Mathematics, University of cut. USA.	f Connecticut, Connecti-
(6)	Invited talk at	November 14 2023
(7)	Data Science Seminar series at the School of Mathematics, University of Min	nnesota.
(7)	the Eastern Conference on Mathematics Finance (ECMF7) conference at N	orth Carolina State Uni-
(8)	Versity. Invited talk at	July 4-6 2023
(0)	the workshop on "Mean field limits for interacting particle systems: unifor	rm propagation of chaos,
(0)	Invited talk at	June 19-23 2023
(\mathbf{J})	Summer school on Mathematics of Machine and Statistical Learning, Natio	onal Technical University
(10)	Invited talk at	May 21-24 2023
(AFOSR Workshop on Topics at the Intersection of Deep Learning and C	Computational Nonlinear
	Control, Monterey, CA.	
(11)	Invited talk at	March 10, 2023
(10)	the One World Dynamics seminar (virtual seminar series).	D107M 19 0009
(12)	Invited talk at the Pore Events: Applysis Numerics and Applications to be held at the new	Feb 27-March 3, 2023
	Research Center, University of College Park, Maryland.	Ty established Driff Math
(13)	Invited talk at	February 15, 2023,
(1.4)	Los Alamos National Laboratory, Applied Mathematics and Plasma Physics	T-5.
(14)	Invited talk at the AMS Special Session on Stochastic Analysis and Applications Joint Mathe	January 4-7, 2023, amatical Meeting Boston
		chiatical meeting, Doston
(15)	Invited talk at	December 5, 2022,
(10)	the Emerging Capabilities and Data Science seminar of Discover Financial S	Services.
(16)	Invited talk at the Asymptotic Problems in Probability and PDF: a Conference in Hener of I	October 17-21, 2022 Mark Freidlin, University
	of Maryland College Park USA	Mark Fleidini, Oniversity
(17)	Invited talk at	October 1-2, 2022
· /	the AMS Sectional Meeting at University of Massachusetts in Amherst, MA	•
(18)	Invited talk at	August 16, 2022
(10)	Meta (former Facebook) machine learning seminar.	
(19)	Invited talk at	July 4-8, 2022
(20)	Invited talk at	June 13-16 2022
(20)	the Conference on the mathematics of complex data at KTH Royal Institute of	of Technology Stockholm.
	Sweden.	, , , , , , , , , , , , , , , , , , , ,
(21)	Invited talk at	May 13, 2022
	the Stochastics, Data and Computing Seminar in Iliniois Institute of Techno	blogy (IIT).
(22)	Invited talk at	March 26-27, 2022
(92)	the 2022 AMS Spring Sectional Meeting $(\#1177)$ at Purdue University, Wes	t Lafayette. March 24, 2022
(23)	Probability and Stochastic Analysis seminar. Obio state University	March 24, 2022
(24)	Invited talk at	November 19, 2021
()	the Department of Mathematics, Houston University.	···· ·· · · · · · · · · · · · · · · ·
(25)	Invited talk at	November 12, 2021
	the Department of Mathematics, Tulane University.	
(26)	Invited talk at	October 25, 2021
(97)	Invited talk at	October 7 2021
(4I)	III, IUUA UUIA UU	0000001, 2021

the Department of Statistics, Columbia University.

(28)	Invited talk at September 16, 2021
	the SIAM Financial Mathematics and Engineering (SIAG/FME) Seminar Series.
(29)	Invited talk at September 1-7, 2021
()	the Mathematics and Computation of Financial Engineering planned in Erice (Sicily, Italy).
(30)	Invited talk at August 13, 2021
(00)	the CRUNCH seminar at Division of Applied Mathematics. Brown University
(31)	Participant on the III December 2021
(01)	and a marken lange program on Mathematica of Deep Learning at the Isaac Newton Institute for Mathe
	semester long program on Mathematics of Deep Learning at the Isaac Newton Institute for Mathe-
(0.0)	matical Sciences in Cambridge, England.
(32)	Invited talk at June 21, 2021
	the Emerging Capabilities and Data Science seminar of Discover Financial Services.
(33)	Invited talk at June 1-4, 2021
	the session on SIAM conference on Financial Mathematics, Philadelphia, US.
(34)	Invited talk at May 23-27, 2021
· /	the session on "the interplay between dynamics and data science" at the SIAM conference on Dynam-
	ical Systems, Portland, Oregon, US,
(35)	Invited talk at March 20-21 2021
(00)	the special section on stochastic analysis at the AMS Fall Fastern Sectional Meeting
(26)	Invited talls at March 1.5, 2021
(30)	$\frac{1}{100} \frac{1}{100} \frac{1}$
	the session on Computational statistics meets computational dynamics, SIAM CSE conference.
(37)	Invited talk at February 2, 2021
	the session on Stochastic Analysis seminar at Imperial College, London, UK.
(38)	Invited talk at January 22, 2021
	the Clarkson Center for Complex Systems Science, Clarkson University.
(39)	Invited talk at January 6-9, 2021
()	SIAMMINI7 - SIAM Minisymposium on Mathematics of Machine Learning in Finance at the 2021
	JMM meeting.
(40)	Invited talk at November 16-17 2020
(40)	the workshop on Uncortainty Management and Machine Learning in Engineering Applications
(41)	Invited talls at
(41)	Invited talk at
	Probability Seminar of the Department of Mathematics of University of Otan and University of Arizona
(10)	(Joint seminar).
(42)	Invited talk at October 7 2020
	Scientific Computation Seminar at Nottingham, England, UK.
(43)	Invited talk at October 3-4 2020
	special section on turbulence and mixing in fluid dynamics at the AMS Fall Eastern Sectional l
	Meeting.
(44)	Invited talk at September 10 2020
. ,	financial mathematics seminar at Florida State University.
(45)	Invited talk at July 25 2020
(-)	Thematic day on the mean field training of multi-layer networks-One World Machine Learning Semi-
	nar
(16)	Invited talk at Sontember 2020
(40)	September 2020
(47)	L is the line of Machine Learning in Finance, imperial Conege, London (cancened due to COVID-19).
(47)	Invited talk at June 28-July 3, 2020
	BIRS Workshop Invitation: Modeling, Learning and Understanding: Modern Challenges between
	Financial Mathematics, Financial Technology and Financial Economics (cancelled due to COVID-
	19).
(48)	Invited talk at June 8-11, 2020
	Invited talk at Workshop on Mathematics for Complex Data, Stockholm, Sweden (cancelled due to
	COVID-19)
(49)	Invited talk at June 5-9, 2020
()	13th AIMS Conference on dynamical systems difference equations and applications. Atlanta (cancelled
	due to COVID 10)
(50)	$\frac{1}{12} \frac{1}{12} \frac$
(00)	$\begin{array}{llllllllllllllllllllllllllllllllllll$
(= 1)	Department of Mathematics, Turts University (cancelled due to COVID-19).
(51)	Invited talk at December 11-14, 2019
(= - `	SIAM conference on Analysis of PDEs, La Quinta, California.
(52)	Invited participant at the AIM workshop on , October 14-18, 2019

	Deep learning and partial differential equations, San Jose, California.	
(53)	Invited talk at SPA 2019 ,	July 8-12, 2019
	Stochastic Processes and their applications conference, Chicago	
(54)	Invited talk and Mini-symposium organizer at SIAM Conference ,	June 4-7, 2019
()	on Financial Mathematics and Engineering, Toronto, Canada.	
(55)	Invited talk at SIAM Conference,	May 19-23, 2019
(on Applications of Dynamical Systems at Snowbird, Utah.	
(56)	Invited talk at	April 15, 2019
(Department of Applied Probability and Statistics at Sanda Barbara (UCSB),	CA.
(57)	Colloquium talk at	March 14, 2019
(=0)	Department of Mathematics at the University of Connecticut (Uconn), Connecticut (Uconn),	ecticut.
(58)	Invited lecture at the SIAM Conference on	Feb 25-March 1, 2019
(50)	Computational Science and Engineering, Spokane, Washington.	N 1 4 7 0010
(59)	Invited lecture at Invited talk at Informs Annual Meeting 2018,	November 4-7, 2018
(co)	Phoenix, Arizona.	Qh 17 01 0010
(60)	Invited lecture at the Advances in Computational Statistical Physics	September 17-21, 2018
(c1)	Visit and lasture at Department of Mathematica Imperial College England	ce.
(01)	Visit and lecture at Department of Mathematics, Imperial Conege, England,	Aug 50-51, 2018
(02)	Numerical analysis for deterministic and stochastic differential equations	July 10-13, 2018
(63)	Invited lecture at the Mathematical Finance and Applied Probability Seminar	April 25, 2018
(00)	Department of Mathematics, University of Connecticut	
(64)	Invited lecture at the Probability and Statistics Seminar	April 23 2018
(04)	Department of Mathematics and Statistics, IJMASS at Amberst	Mpili 20, 2010
(65)	Invited lecture at the SIAM Uncertainty Quantification meeting 2018	April 16-19 2018
(00)	Garden Grove California	mpiii 10 15, 2010
(66)	Invited lecture at the AMS Spring Central Sectional Meeting	March 17-18 2018
(00)	Obio State University Columbus Obio	March 11 10, 2010
(67)	Invited lecture at Scientific Computing Seminar.	March 9, 2018
(01)	Department of Applied Mathematics, Brown University, Providence,	11001011 0, 2010
(68)	Invited lecture at Applied Mathematics Seminar.	November 21, 2017
()	Department of Mathematics, Imperial College, England.	, , , , , , , , , , , , , , , , , , , ,
(69)	Invited lecture at McGill University,	October 31 2017
()	Department of Mathematics and Statistics, Canada	
(70)	Invited lecture at the SIAM Conference on Mathematical Modelling	Aug 31-Sep 2 2017
. ,	in Finance at Imperial College, England.	
(71)	Invited lecture at Greek Stochastics 2017 conference,	July 14-17, 2017
	Milos, Greece	
(72)	Invited lecture at the Stochastic Analysis Seminar	November 25, 2016
	Department of Mathematics at Imperial College, England.	
(73)	Invited lecture at the Statistics Seminar	November 22, 2016
	Department of Mathematics at Imperial College, England.	
(74)	Invited lecture at 2016 SIAM Conference on Financial Mathematics and Engi	neering (FM16), No-
	vember 17-19, 2016,	
, ,	2016 conference in Austin, Texas.	
(75)	Co-organizing a Special Session on Recent Advances in Stochastic Processes a	and Stochastic Compu-
	tation,	November 12-13,
$(\exists c)$	Southeastern AMS Sectional Meeting North Carolina State University, Raleig	h, NC.
(76)	Invited lecture at the Applied Analysis and Computation Seminar	October 18, 2016
(77)	Department of Mathematics and Statistics at the University of Massachusetts	at Amnerst.
(11)	September 5.0, 2016	chastic approximation,
	wowkshop in ICMS Edinburgh Scotland	
(78)	Lecture at the BILKein Joint conference in Probability and Statistics	August 15 10 2016
(10)	Department of Mathematics and Statistics, Boston University	August 10-19, 2010
(70)	Invited lecture at Stochastic numerical algorithms, multiscale modeling and	high-dimensional data
(13)	analytics	July 18-99 2016
	Workshop in ICERM, Providence, USA	5 diy 10 22, 2010
(80)	Invited lecture at Greek Stochastics 2016 conference.	Julv 10-13, 2016
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Tinos, Greece

	Timos, Greece	
(81)	Invited lecture at Spatially Distributed Stochastic Dynamical Systems in Biology	June 20-24, 2016
	Workshop in Newton Institute at Cambridge, England.	
(82)	Invited lecture at the Probability Seminar	April 27, 2016
	Department of Mathematics at the University of Maryland at College Park.	
(83)	Invited lecture at the Colloquium Series on Computational and Applied Mathema	atics April 18, 2016
	Department of Mathematics at Penn State University.	
(84)	Invited lecture at the 11th International Workshop on Rare Event Simulation (RI	ESIM) March
	29-April 1, 2016	
	Eindhoven, Netherlands.	
(85)	Participant at the Seminar on Stochastic Processes 2016	March 16-19, 2016
	University of Maryland, College Park.	
(86)	Invited lecture at the 3rd CISE Graduate Student Workshop	January 14, 2016
	CISE, Boston University.	
(87)	Invited lecture at Mathematical Finance, Risk and Uncertainty Seminar	December 7, 2015
	Department of Industrial and Enterprise Systems Engineering and Mathematics	Department at the
	University of Illinois, Urbana-Champaign.	
(88)	Three Invited lectures at INFORMS Annual Meeting, Philadelphia	November 1-4, 2015
	Philadelphia	
(89)	Invited lecture at Dynamics seminar	October 19, 2015
	Department of Mathematics and Statistics, Boston University	
(90)	Invited lecture at Probability seminar	September 24, 2015
	Department of Mathematics, Duke University	
(91)	Invited lecture at 2015 Joint Statistical Meeting (JSM)	August 8-13, 2015
	Seattle, Washington	
(92)	Invited lecture at Greek stochastics 2015 conference	July 11-13, 2015
	Crete, Greece	
(93)	Invited lecture at the Extreme Value Analysis Conference	June 15-19, 2015
	University of Michigan, Michigan Ann Arbor.	
(94)	Invited lecture at the BU-Brown PDE seminar	April 8, 2015
	Department of Mathematics and Statistics, Boston University.	
(95)	Invited lecture at the Probability seminar	March 31, 2015
	Department of Mathematics, University of Tennessee.	
(96)	Invited lecture at the AMS Eastern Sectional Meeting	March 7-8, 2015
	George Town University, Washington, DC.	
(97)	Invited lecture at Hariri Institute	March 4, 2015
	Boston University.	
(98)	Invited lecture at the Applied Mathematics seminar	January 16, 2015
	Department of Mathematics, Michigan State University.	
(99)	Invited lecture at the Greek stochastics 2014 conference De	ecember 20-22, 2014
	Athens, Greece.	
(100)	Invited paper at the 2014 Winter Simulation Conference	December 7-10, 2014
	Savannah, Georgia.	
(101)	Invited lecture at the SIAM conference on Financial Mathematics No	ovember 13-15, 2014
	Chicago.	
(102)	Invited lecture at the Probability Seminar	October 28, 2014
	Department of Mathematics, Wayne State University.	
(103)	Invited lecture at the Probability and Mathematical Finance Seminar	October 20, 2014
	Department of Mathematical Sciences, Carnegie Mellon University, Pittsburgh.	
(104)	Invited participant at Systemic Risk: Mathematical Modelling and Interdisciplina	ry Approaches, Sep-
	tember 22-26, 2014	
(Isaac Newton Institute for Mathematical Sciences in England.	>
(105)	Invited lecture at the 10th International Workshop on Rare Event Simulation (R.	ESIM) August
	27-29, 2014	
(4.0)	Amsterdam, Netherlands.	
(106)	Invited lecture at the Computational methods for statistical mechanics – At th	e interface between
	mathematical statistics and molecular simulation	June 2-6, 2014
(107)	Edinburgh, Scotland.	
(107)	Invited lecture at the Probability Seminar	May 6, 2014
	UUINI, INEW IOIK.	

(108)	Invited talk at 28th New England Statistical Symposium	April 26, 2014
(109)	Invited talk at the SIAM conference on Uncertainty Quantification	April 1-4, 2014
(110)	Invited lecture at the AMS Sectional Meeting on Mathematical Finance	March 29-30, 2014
(111)	Invited lecture at the Stochastics Seminar	March 13, 2014
(112)	Invited lecture at the Joint Mathematical Meetings	January 15-18, 2014
(113)	Invited lecture at Division of Applied Mathematics	December 5, 2013
(114)	Invited lecture at Hariri Institute	November 20, 2013
(115)	Invited Colloquium lecture at Department of Statistics	November 13, 2013
(116)	Invited lecture at Math Finance Seminar	October 17, 2013
(117)	Invited lecture at AMS Sectional Meeting Program	October 12-13 2013
(118)	Tutorial lectures on <i>Monte Carlo Methods for Multiscale Problems</i> and on <i>financial networks</i>	Systemic risk in large September 20-22, 2013
<i>,</i>	BU-Keio Probability workshop, Boston University, Boston.	
(119)	<i>Escaping from an attractor: importance sampling and rest points</i> Session Chair and Speaker at SIAM Annual Meeting, San Diego, California.	July 8-12, 2013
(120)	Monte Carlo Methods for Multiscale Problems SIAM Conference on Mathematical Aspects of Material Science Philadelphia	June 9-12, 2013 Pennsulvania
(121)	Maximum Likelihood for Multiscale Diffusions The 27th New England Statistical Summarium, 27 April 2012	April 2013
(122)	Large Deviations and risk in large financial networks	April 2013
()	Workshop on Large deviations and asymptotic methods in finance, Imperial Col	llege London, England
(123)	Most Likely Path to Systemic Failure	April 2013
(124)	AMS Sectional Meeting, Boston College, Boston, 6-7 April 2013 Large Deviations and Monte Carlo Methods for Problems with Multiple Scales	March 2013
(125)	Stochastics Seminar, Mathematics Department, University of Utah Sustemic risk in large financial networks	February 2013
(120)	Stochastics Seminar, Mathematics Department, Worcester Polytechnic Institut	ie iosiaary 2010
(126)	Systemic risk in large financial networks	November 2012
$(1 \circ \mathbf{T})$	Mathematics Department, University of Michigan, Ann Arbor	N. 1 0010
(127)	Escaping from an attractor: importance sampling and rest points ICERM Workshop "Monte Carlo Methods in the Physical and Biological Scier Deserve University Descriptions.	November 2012 nces",
(128)	Session Chair for "Systemic Risk" at the 2012 Informs Annual meeting	October 2012
(129)	Sustemic risk in large financial networks	October 2012
(120)	Department of Mathematics, Rutgers University Large Deviations and Monte Carlo Methods for Problems with Multiple Scales	October 2012
(101)	Department of Mathematics, MIT	
(131)	Large Deviations and Monte Carlo Methods for Problems with Multiple Scales Department of Mathematics and Statistics, UMASS at Amherst	October 2012
(132)	Escaping from an attractor: importance sampling and rest points 2012 Data Assimilation Workshop, Oxford-Man Institute, England	September 2012
(133)	Most Likely Path to Systemic Failure SIAM Conference on Financial Mathematics and Engineering, Minnesota, Min	July 2012 neapolis.
(134)	Large Deviations and Monte Carlo Methods for Problems with Multiple Scales Department of Mathematics, University of California at San Diego.	July 2012
(135)	Large Deviations, Metastability and Monte Carlo Methods for Multiscale Proble Department of Mathematics and Statistics, Boston University.	<i>lems</i> February 2012
(136)	Large Deviations, Metastability and Monte Carlo Methods for Multiscale Problem	<i>lems</i> February 2012

	Department of Mathematical Sciences, University of Delaware.	
(137)	Large Deviations, Metastability and Monte Carlo Methods for Multiscale Problems Department of Mathematics, Virginia Tech.	January 2012
(138)	Large Deviations, Metastability and Monte Carlo Methods for Multiscale Problems Department of Statistics & Operations Research, University of North Carolina.	January 2012
(139)	Systemic Risk in Complex Networks & Asymptotic Problems for Stochastic Processes Department of Mathematical Sciences, Claremont Graduate University.	January 2012
(140)	Recent results on systemic risk in large financial networks Department of Statistics & Applied Probability, University of Santa Barbara.	January 2012
(141)	Large deviations for multiscale diffusions and fast simulation EPSRC Symposium Workshop - Multiscale Systems: Theory and Applications, Warw	December 2011 rick, England.
(142)	Default clustering in large portfolios and most likely path to failure Department of Operations Research and Financial Engineering, Princeton University.	October 2011
(143)	Most likely path to failure ENUMATH Conference 2011, Leicester, England.	September 2011
(144)	Large Deviations, Fast Simulation for Multiscale Diffusions and Rough Energy Lands Applied Probability Society Conference, KTH, Stockholm, Sweden	capes July 2011
(145)	Large Deviations and Importance Sampling for Multiscale Diffusions Department of Mathematics at Chicago University.	April 2011
(146)	Default clustering in large portfolios: typical and atypical events Department of Mathematics at Stanford University.	March 2011
(147)	Large Deviations and Importance Sampling for Multiscale Diffusions Department of Applied Physics and Applied Mathematics at Columbia University.	March 2011
(148)	Large Deviations and Importance Sampling for Multiscale Diffusions Department of Mathematics and Statistics at Boston University.	February 2011
(149)	Large Deviations and Importance Sampling for Multiscale Diffusions Rare Event Simulation Workshop in Bordeaux, France.	October 2010
(150)	Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains and Wave Front Propagation Department of Mathematics at the University of Minnesota	June 2010
(151)	Large Deviations for a Large Class of 1-D Markov Processes and Applications to Reaction Diffusion Equations Division of Applied Mathematics, Brown University	September 2009
(152)	Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains and Wave Front Propagation	April 2009
(153)	Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains and Wave Front Propagation Department of Statistics at Warwick University England	April 2009
(154)	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 M Statistics at the University of Santa Barbara	athematics and
(155)	Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains and Wave Front Propagation Applied Partial Differential Equations Research Interaction Team at UMD	October 2008
(156)	Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains and Wave Front Propagation	September 2008
(157)	Lectures in Homogenization with Probabilistic Methods Invited lectures in Advanced Analytic Methods with Applications (Graduate course at UMD)	, Greece May 2007-2008
(158)	Reaction-Diffusion Equations with Non-Linear Boundary Conditions in Narrow Domains, Invited talk, Graduation Conference, Dept. Of Math, UMD	May 2008
(159)	Wave Front Propagation In Narrow Domains Invited talk, Graduate Research Interaction Day, UMD	April 2008

(160) Log Prices following General Lévy Driven Ornstein- Uhlenbeck Processes Talk, Mathematical Finance Research Interaction Team, UMD	November 2007	
 (161) Probabilistic Approach in Homogenization: An Introduction Talk, Graduate Students Statistics and Probability Seminar, UMD 	September 2007	
 (162) Wave Propagation In Narrow Tubes Talk, Summer School "De Ludo Aleae" on Probability, Universita' "La Sapienza" Roma, Italy 	September 2007	
(163) The Smoluchowski-Kramers Approximation for the Langevin Equation with I Talk, Large Scale Stochastic Dynamics and Interaction with Kinetic Theory Foundation for Research and Technology, Heraklion Crete, Greece	Reflection June 2006	
Memberships in Professional Organizations		
• American Mathematical Society	September 2004-present	
• Institute of Mathematical Statistics	February 2007-present	
• SIAM: Society of Industrial and Applied Mathematics	2013-present	
PROFESSIONAL EXPERIENCE		
 Internship in Risk Management July-Aug 2003 Athens Derivative Clearing House, Athens, Greece (1) Exchange-traded derivative products (2) 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 Econo Moscow State Aviation Institute, Moscow, Russia Mathematical Optimal Control 	omics May 2003	
 Internship in P2P Networks University of Rostock, Rostock, Germany (1) Software simulations for information search in a P2P community (2) Analysis of the results of two approaches for information search (random related search) 	June-Aug 2002	
• Assistant in Computer Laboratories	Sep-Dec 2000	
National Technical University of Athens, Athens, Greece	*	
(1) Supervision and organization of laboratory exercises		
Skills		

- Languages: Greek (native), English (fluent), German (intermediate), French (basic knowledge)
- Computer languages: C, C++, Python, Java, R, SAS, Matlab, Mathematica