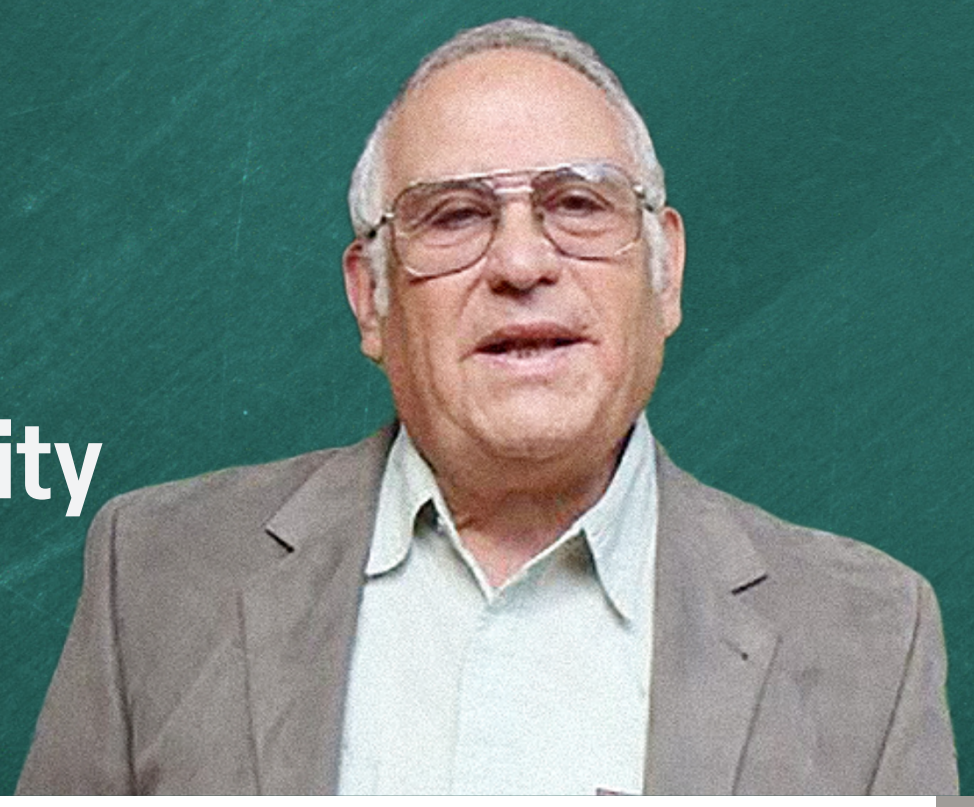
BRIN MATHEMATICS RESEARCH CENTER

Workshop: Modern Topics in Probability

OCTOBER 17 - 21, 2022



Speakers

Yuri Bakhtin, NYU
Gerard Ben Arous, NYU
Zdzislaw Brzezniak, University of York
Amarjit Budhiraja, UNC Chapel Hill
Amir Dembo, Stanford University
Barbara Gentz, Bielefeld University
Massimiliano Gubinelli, Bonn University / Oxford
Wenqing Hu, Missouri University S&T
Konstantin Khanin, University of Toronto
Davar Khoshnevisan, University of Utah
Yuri Kifer, Hebrew University
Elena Kosygina, Baruch College
Nikolai Krylov, University of Minnesota
Xue-Mei Li, Imperial College
Stanislav Molchanov, UNC Charlotte
James Nolen, Duke University
Lenya Ryzhik, Stanford University
Michael Salins, Boston University
Marta Sanz-Solé, Universitat de Barcelona
Scott Smith, Chinese Academy of Science
Isaac Sonin, UNC Charlotte
Panagiotis Souganidis, University of Chicago
Konstantinos Spiliopoulos, Boston University
Lorenzo Zambotti, Sorbonne Université
Ofer Zeitouni, Weitzmann Institute / NYU

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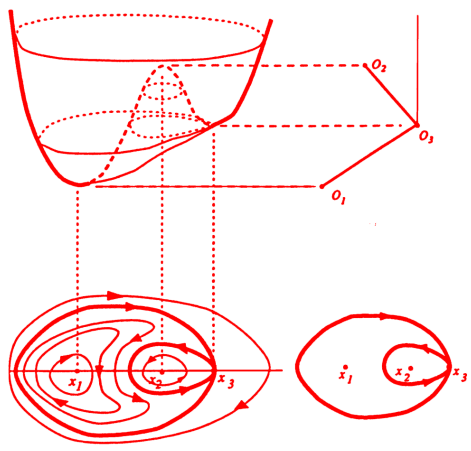
About the Workshop



The goals of this conference are to bring together some of the leading experts in stochastic analysis and PDEs, dealing in particular with the study of the asymptotic properties of stochastic systems with multiple scales, to present their recent research and exchange ideas, and to provide an opportunity for graduate students and young researchers to be exposed to these fields. This conference will be also an occasion to celebrate Mark Freidlin and his many fundamental contributions to the study of various aspects of the theory of random perturbations of dynamical systems.

Organizers

Sandra Cerrai, University of Maryland
Dima Dolgopyat, University of Maryland
Yu Gu, University of Maryland
Leonid Koralov, University of Maryland

DEPARTMENT OF MATHEMATICS

Contents

Schedule at a Glance

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00					
	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
9:00	Ofer Zeitouni	Amir Dembo	Davar Khoshnevisan	Marta Sanz-Solé	Yuri Bakhtin
10:00	Amarjit Budhiraja	Xue-Mei Li	Barbara Gentz	Nicolai Krylov	James Nolen
11:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
	Konstantin Khanin	Lorenzo Zambotti	Boris Vainberg	Elena Kosygina	Yuri Kifer
12:00	Lunch	Lunch	Lunch (on your own)	Lunch	
					Wenqing Hu
13:00					
14:00	Michael Salins	Scott Smith	Zdzislaw Brzezniak	Lenya Ryzhik	
15:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	
	Shalin Parekh	Lukas Wessels	Panagiotis Souganidis	Shuo Yan	
16:00					
	Konstantinos Spiliopoulos	Isaac Sonin		Stanislav Molchanov	
17:00					

Workshop Overview

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Workshop Schedule

Monday, October 17, 2022

8:30 - 8:55 Breakfast

8:55 - 9:00 Doron Levy (University of Maryland/Director, Brin MRC)
Opening

9:00 - 9:45 Ofer Zeitouni (Weitzmann Institute/New York Univesity)
Branching Brownian motion in R^d

10:00 - 10:45 Amarjit Budhiraja (University of North Carolina Chapell Hill)
Invariant distributions of the infinite atlas model: domains of attraction and extremality

10:45 - 11:15 Coffee Break

11:15 - 12:00 Konstantin Khanin (University of Toronto)
Coalescing fractional Brownian motions and the KPZ problem

12:00 - 2:00 Lunch

2:00 - 2:45 Michael Salins (Boston University)
Global solutions to stochastic reaction-diffusion equations with superlinear forcing

2:45 - 3:15 Coffee Break

3:15 - 3:45 Shalin Parekh (University of Maryland)
KPZ fluctuations of sticky Brownian motion

4:00 - 4:45 Konstantinos Spiliopoulos (Boston University)
Metastability and exit problems for systems of stochastic reaction-diffusion equations

Tuesday, October 18, 2022

8:30 - 9:00 Breakfast

9:00 - 9:45 Amir Dembo (Stanford University)
Universality for diffusions interacting through a random matrix

10:00 - 10:45 Xue-Mei Li (Imperial College)
Fractional averaging and fractional dynamics

10:45 - 11:15 Coffee Break

11:15 - 12:00 Lorenzo Zambotti (Sorbonne Université)
Hairer's Reconstruction Theorem and multi-level Schauder estimates without regularity structures.

12:00 - 2:00 Lunch

2:00 - 2:45 Scott Smith (Chinese Academy of Sciences)
Large N limits via stochastic quantization

2:45 - 3:15 Coffee Break

3:15 - 3:45 Lukas Wessels (Georgia Tech/TU Berlin)
Necessary and sufficient conditions for optimal control of semilinear stochastic partial differential equations

4:00 - 4:45 Isaac Sonin (University of North Carolina Charlotte)
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12:15 - 1:00 Wenqing Hu (Missouri University of Science and Technology)
On the posterior distribution of a random process conditioned on observing the empirical frequencies: the i.i.d and finite Markov chain case

1:00 - 1:05 Workshop Closing

Abstracts of talks

Branching Brownian motion in R^d

Ofer Zeitouni

Weitzmann Institute/New York Univesity

Monday, October 17, 2022 @ 9:00 AM

We consider branching Brownian motion in R^d and prove convergence in law of its (centered) maximum modulus, as well as the associated extremal process. As Mallein observed in 2015, this has centering which differs from the Freidlin-Gartner centering. Based on joint work with J. Berestycki, Y. Kim, E. Lubetzky and B. Mallein.

Invariant distributions of the infinite atlas model: domains of attraction and extremality

Amarjit Budhiraja

University of North Carolina Chapell Hill

Monday, October 17, 2022 @ 10:00 AM

The infinite Atlas model describes a countable system of competing Brownian particles where the lowest particle gets a unit upward drift and the rest evolve as standard Brownian motions. The stochastic process of gaps between the particles in the infinite Atlas model does not have a unique stationary distribution and in fact there is a one parameter family $\{p(a), a > 0\}$ of product form mutually singular stationary distributions. We say that an initial distribution of gaps is in the weak domain of attraction of the stationary measure $p(a)$ if the time averaged laws of the stochastic process of the gaps, when initialized using that distribution, converge to $p(a)$ weakly in the large time limit. We provide general sufficient conditions on the initial gap distribution of the Atlas particles for it to lie in the weak domain of attraction of $p(a)$ for each a. Results on extremality and ergodicity of $p(a)$ will also be presented. This is joint work with Sayan Banerjee.

Coalescing fractional Brownian motions and the KPZ problem

Konstantin Khanin

University of Toronto

Monday, October 17, 2022 @ 11:15 AM

In this talk we will discuss asymptotic statistical properties of iterated random 1D monotone maps. In the large time limit the iterates converge to the space of random piecewise constant maps. Such maps are determined by two point fields which are the images of the real line under the action of the map itself and the action by its image. In the case of independent maps the iterates under diffusive scaling converge to the time-1 map for a process of coalescing Brownian motions. We shall present the result on the rate of convergence. This result implies that the law of time-1 maps for coalescing Brownian motions can be viewed as a stable fixed point for a naturally defined renormalization operator. We will also consider large-scale point fields which appear in the context of the KPZ problem. These point fields are geometrical objects formed by points of mass concentration, and by shocks separating the sources of the concentration points. One can introduce similarly defined point fields for the process of coalescing fractional Brownian motions (cfBM). In the last part of the talk we will present theoretical arguments and numerical evidence in support of the conjecture that statistics of these points fields have the same large-time limit. This would indicate that two objects may, in fact, belong to the same universality class.

Global solutions to stochastic reaction-diffusion equations with superlinear forcing

Michael Salins

Boston University

Monday, October 17, 2022 @ 2:00 PM

I identify some sufficient conditions on the reaction term and multiplicative term of a stochastic reaction-diffusion equation that guarantee that the solutions to the equation never explode. Both terms can grow superlinearly.

KPZ fluctuations of sticky Brownian motion

Shalin Parekh

University of Maryland

Monday, October 17, 2022 @ 3:15 PM

Sticky Brownian motion is a type of diffusion consisting of many interacting particles, where each individual particle behaves as standard Brownian motion but collectively the different particles may stick together and separate repeatedly. The sticky interaction makes the system physically interesting and difficult to study. We show that a singular stochastic SPDE called the KPZ equation arises as the fluctuations limit of a large number of sticky Brownian particles in the moderate deviation regime.

Metastability and exit problems for systems of stochastic reaction-diffusion equations

Konstantinos Spiliopoulos

Boston University

Monday, October 17, 2022 @ 4:00 PM

We develop a metastability theory for a class of stochastic reaction-diffusion equations exposed to small multiplicative noise. We consider the case where the unperturbed reaction-diffusion equation features multiple asymptotically stable equilibria. When the system is exposed to small stochastic perturbations, it is likely to stay near one equilibrium for a long period of time, but will eventually transition to the neighborhood of another equilibrium. We are interested in studying the exit time from the full domain of attraction (in a function space) surrounding an equilibrium and therefore do not assume that the domain of attraction features uniform attraction to the equilibrium. This means that the boundary of the domain of attraction is allowed to contain saddles and limit cycles. Our method of proof is purely infinite dimensional, i.e., we do not go through finite dimensional approximations. In addition, we address the multiplicative noise case and we do not impose gradient type of assumptions on the nonlinearity. We prove large deviations logarithmic asymptotics for the exit time and for the exit shape, also characterizing the most probable set of shapes of solutions at the time of exit from the domain of attraction.
This is joint work with Michael Salins.

Universality for diffusions interacting through a random matrix

Amir Dembo

Stanford University

Tuesday, October 18, 2022 @ 9:00 AM

Consider a system of N stochastic differential equations interacting through an N-dimensional matrix J of independent random entries (starting at an initial state whose law is independent of J). We show that the trajectories of a large class of observables which are averaged over the N coordinates of the solution, are universal. That is, for a fixed time interval the limit of such observables as N grows, essentially depends only on the first two moments of the marginal distributions of entries of J. Concrete settings for which such universality holds include aging in the spherical Sherrington-Kirkpatrick spin-glass and Langevin dynamics for a certain collection of Hopfield networks. This talk is based on joint works with Reza Gheissari, Alice Guionnet, Eyal Lubetzky and Ofer Zeitouni.

Fractional averaging and fractional dynamics

Xue-Mei Li

Imperial College

Tuesday, October 18, 2022 @ 10:00 AM

In this talk we discuss how to deal with correlated noise in mutli-scale stochastic dynamics. Slow/fast system of stochastic differential equations with white noise is a popular mathematical model and fruitful topic, to which Mark Freidlin has made invaluable contributions. Time series data indicated time correlated noise. We set out to solve this problem, here we present a Fractional Averaging theorem for Stationary increment self-similar Gaussian noise with decay of correlation of the order t^{2H-2}, $H \in (1/3, \frac{1}{2}) \cup (\frac{1}{2}, 1)$. The results interpolate between stochastic averaging ($H = 1/2$) and homogenisation ($H = -1$) case, the effective motion is given by a single formula for $H \in (1/3, 1)$. We borrow techniques developped in and around rough path theory. This allows to show new results even for the classical stochastic averaging case.

Hairer's Reconstruction Theorem and multi-level Schauder estimates without regularity structures.

Lorenzo Zambotti

Sorbonne Université

Tuesday, October 18, 2022 @ 11:15 AM

Martin Hairer's regularity structures are a recent discovery and, despite their spectacular applications, they are still relatively little known in the mathematical community. Recently, in joint work with F. Caravenna and L. Broux/F. Caravenna we have revisited the main analytical tools of this theory with the aim of making these notions both more general and simpler to understand. The aim of this talk is to present the main ideas of this construction.

Large N limits via stochastic quantization

Scott Smith

Chinese Academy of Sciences

Tuesday, October 18, 2022 @ 2:00 PM

I will discuss some applications of stochastic quantization to large N problems for Phi4 type models. Based on joint work with Hao Shen, Rongchan Zhu, and Xiangchan Zhu.

Necessary and sufficient conditions for optimal control of semilinear stochastic partial differential equations

Lukas Wessels

Georgia Tech/TU Berlin

Tuesday, October 18, 2022 @ 3:15 PM

In this talk, we consider the following optimal control problem of stochastic partial differential equations (SPDEs). Minimize

$$J(s,x;u) := \mathbb{E}\left[\int_s^T \int_\Lambda l(x_t^u(\lambda), u_t)\mathrm{d}\lambda\mathrm{d}t + \int_\Lambda h(x_T^u(\lambda))\mathrm{d}\lambda\right]$$

subject to

$$\begin{cases} \mathrm{d}x_t^u = [\Delta x_t^u + b(x_t^u, u_t)]\mathrm{d}t + \sigma(x_t^u, u_t)\mathrm{d}W_t, \quad t \in [s,T], \\ x_s^u = x \in L^2(\Lambda). \end{cases}$$

First we apply the spike variation method which relies on introducing the first and second order adjoint state. We give a novel characterization of the second order adjoint state as the solution to a backward SPDE on the space $L^2(\Lambda) \otimes L^2(\Lambda) \cong L^2(\Lambda^2)$. Using this representation, we prove the maximum principle for controlled SPDEs. As another application of our characterization of the second order adjoint state, we derive additional necessary optimality conditions in terms of the value function. These results generalize a classical relationship between the adjoint states and the derivatives of the value function to the case of viscosity differentials.The last part of the talk is devoted to sufficient optimality conditions. We show how the necessary conditions lead us directly to a non-smooth version of the classical verification theorem in the framework of viscosity solutions.This talk is based on joint work with Wilhelm Stannat [W. Stannat, L. Wessels, *Peng's maximum principle for stochastic partial differential equations*, SIAM J. Control Optim., 59 (2021), pp. 3552–3573] and [W. Stannat, L. Wessels, *Necessary and Sufficient Conditions for Optimal Control of Semilinear Stochastic Partial Differential Equations*, https://arxiv.org/abs/2112.09639, 2022].

A Tribute to my PhD Advisor in a trajectory of one of his students

Isaac Sonin

University of North Carolina Charlotte

Tuesday, October 18, 2022 @ 4:00 PM

In this talk I give a brief survey of some of my old and recent results: Degenerate Equations and Diffusion Processes; Decomposition-Separation Theorem in the theory of nonhomogeneus Markov chains: Markov Chain Tree Theorem and some others. The common thread in these results is that all they are related directly or indirectly to results and interests of my PhD advisor - Mark I. Freidlin outside of theory of Large Deviations

Optimal regularity of SPDEs with additive noise

Davar Khoshnevisan

University of Utah

Wednesday, October 19, 2022 @ 9:00 AM

We present some recent work with Marta Sanz Solè on optimal regularity theory for stochastic PDEs that are driven by an additive noise.

Noise-induced synchronization in circulant networks of weakly coupled oscillators

Barbara Gentz

Bielefeld University

Wednesday, October 19, 2022 @ 10:00 AM

We will address the question of synchronization in finite-size systems of coupled harmonic oscillators. For commensurate oscillators and circulant coupling structures we will show that weak multiplicative-noise coupling can amplify some of the system's eigenmodes and thus lead to asymptotic eigenmode synchronization. Joint work with Christian Wiesel.

Cluster of Bloch waves in three-dimensional periodic media

Boris Vainberg

University of North Carolina Charlottsville

Wednesday, October 19, 2022 @ 11:15 AM

We consider acoustic wave propagation through a periodic array of small inclusions of arbitrary shape. A technique will be discussed allowing to derive and rigorously justify the asymptotic behavior (with respect to the size of the inclusions) of solutions and the dispersion relation (the relation between the time and space frequencies). The rigorous analysis reveals a new physical effect: the existence of exceptional frequencies for which the solution is a cluster of waves propagating in different directions with different frequencies so that the dispersion relation cannot be defined uniquely. The results are joint with Yu. Godin.

Reflection of stochastic evolution equations in infinite dimensional domains

Zdzislaw Brzezniak

University of York

Wednesday, October 19, 2022 @ 2:00 PM

I will speak about the existence and uniqueness of solutions of stochastic evolution equations (SEEs) with reflection in an infinite dimensional ball. Our framework is sufficiently general to include e.g. stochastic Navier-Stokes equations. The talk will be concluded with a short list of open questions. Based on a joint work with T. Zhang.

Deterministic surface growth models

Panagiotis Souganidis

University of Chicago

Wednesday, October 19, 2022 @ 3:15 PM

This talk is about the asymptotic behavior of large classes of (hyperbolically and parabolically) scaled deterministic surface growth models that are monotone and equivariant under translations by constants, The limits are solutions of degenerate elliptic partial differential equations which typically are discontinuous in some gradient directions consistent with Finsler metrics, such as the crystalline infinity Laplacian.

Linear SPDEs driven by Levy generators: optimal regularity of the solution

Marta Sanz-Solé

Universitat de Barcelona

Thursday, October 20, 2022 @ 9:00 AM

AbstractWe consider parabolic and hyperbolic SPDEs on $(0,\infty)\times\mathbb{R}^d$ of the form

$$\partial_t u = \mathcal{L}u + g(u) + \dot{F} \qquad \text{and} \qquad \partial_t^2 u = \mathcal{L}u + c + \dot{F}$$

with suitable initial data, forced with a space-time homogeneous Gaussian noise $\dot{F}$ that is white in its time variable and correlated in its space variable, and where $\mathcal{L}$ is the generator of a non-degenerate d-dimensional Lévy process X. We will exhibit optimal Hölder continuous conditions for the respective random-field solutions. These conditions are stated in terms of indices that describe thresholds on the integrability of some functionals of the characteristic exponent of the process X with respect to the spectral measure of the spatial covariance of $\dot{F}$. This talk is based on joint with Davar Khosnevishan.

Estimates in L_p for solutions of SPDEs with coefficients in Morrey classes

Nicolai Krylov

University of Minnesota

Thursday, October 20, 2022 @ 10:00 AM

For solutions of a certain class of SPDEs in divergence form we present some estimates of their L_p-norms and the L_p-norms of their first-order derivatives. The main novelty is that the low-order coefficients are supposed to belong to certain Morrey classes instead of L_p-spaces. Our results are new even if there are no stochastic terms in the equation.

Stochastic homogenization of viscous Hamilton-Jacobi equations with non-convex Hamiltonians in one space dimension

Elena Kosygina

Baruch College and the CUNY Graduate Center

Thursday, October 20, 2022 @ 11:15 AM

Recently constructed counterexamples showed that homogenization of viscous and non-viscous Hamilton-Jacobi equations in stationary ergodic random media can fail in dimensions 2 or higher if the momentum part of the Hamiltonian has a strict saddle point (while the Hamiltonian is super-linear as $|p| \to \infty$). It is expected that in one space dimension the non-convexity of the Hamiltonian should not be an obstacle to homogenization. We shall discuss a homogenization result for a large class of one-dimensional viscous Hamilton-Jacobi equations. The talk is based on joint work with Andrea Davini (Sapienza Università di Roma) and Atilla Yilmaz (Temple University).

Quantitative steepness, semi-FKPP reactions and pushmi-pullyu fronts

Lenya Ryzhik

Stanford University

Thursday, October 20, 2022 @ 2:00 PM

We will discuss a seemingly previously unnoticed algebraic structure of a large class of reaction-diffusion equations and use it to study the long time behavior of the solutions and their convergence to traveling waves in the pulled and pushed regimes, as well as at the pushmi-pullyu boundary. One such new object is the shape defect function, which, indirectly, measures the difference between the profiles of the solution and the traveling wave. While one can recast the classical notion of steepness of solutions in terms of the positivity of the shape defect function, its positivity can, surprisingly, be used in numerous quantitative ways. This is a joint work with J. An and C. Henderson.

Fast oscillating random perturbation of Hamiltonian system

Shuo Yan

University of Maryland

Thursday, October 20, 2022 @ 3:15 PM

We consider coupled fast-slow stochastic processes, where the averaged slow motion is given by a two-dimensional Hamiltonian system with multiple critical points. On a proper time scale, the evolution of the first integral converges to a diffusion process on the corresponding Reeb graph, with certain gluing conditions specified at the interior vertices. This limiting process is similar to that in the case of additive white noise perturbations of Hamiltonian systems considered by Freidlin and Wentzell, but now the analysis of the behavior near the critical points requires new interesting techniques.

Several new results on the Dickman distribution

Stanislav Molchanov

University of North Carolina Charlotte

Thursday, October 20, 2022 @ 4:00 PM

The Dickman (or Dickman-Goncharov) distribution is popular in applied probability, but nor well known in "pure mathematics". There are several versions of this concept under the same name. The analysis shows that two central versions have only a superficial similarity and the original Dickman distribution in the number theory is principally different from the Dickman-Penrose - Wade distribution in the theory of random graphs.
We will discuss these differences and extend Penrose-Wade results to general random walks on the affine group Aff(R). The talk will be based on the work of the speaker with M. Grabchak(UNCC) and V. Panov (HSE, Moscow).

Rare transitions in noisy heteroclinic networks

Yuri Bakhtin

New York University

Friday, October 21, 2022 @ 9:00 AM

Metastability in noisy heteroclinic networks. Hierarchy of transition times: powers of the small noise strength. Applications to homogenization. Local limit theorems based on Malliavin calculus. Joint work with Hong-Bin Chen and Zsolt Pajor-Gyulai.

The Fleming-Viot process with McKean-Vlasov dynamics

James Nolen

Duke University

Friday, October 21, 2022 @ 10:00 AM

The Fleming-Viot particle system consists of N identical particles diffusing in a domain. Whenever a particle hits the boundary, that particle jumps onto another particle in the interior. It is known that this system provides a particle representation for both the Quasi-Stationary Distribution (QSD) and the distribution conditioned on survival for a given diffusion killed at the boundary of its domain. I will describe recent work extending these results to the case of
McKean-Vlasov dynamics. We prove that the law conditioned on survival of a given McKean-Vlasov process killed on the boundary of its domain may be
obtained from the hydrodynamic limit of the corresponding Fleming-Viot particle system. We also show that if this McKean-Vlasov process converges to a QSD as time increases, such a QSD may be obtained from the stationary distributions of the corresponding N-particle Fleming-Viot system in the limit of large N. This is joint work with Oliver Tough.

Strong diffusion approximations in averaging

Yuri Kifer

Hebrew University

Friday, October 21, 2022 @ 11:15 AM

It is known since 1960ies (R.Khasminskii) that the slow motion X^ε in the time-scaled multidimensional averaging setup $\frac{dX^\varepsilon(t)}{dt} = \frac{1}{\varepsilon}B(X^\varepsilon(t), \xi(t/\varepsilon^2)) + b(X^\varepsilon(t), \xi(t/\varepsilon^2))$, $t \in [0,T]$converges weakly as $\varepsilon \to 0$ to a diffusion process provided $EB(x, \xi(s)) \equiv 0$ where $\xi$is a sufficiently fast mixing stochastic process when mixing is considered with respect to theσ-algebras generated by the process itself. The latter reduces substantially applications todynamical systems (where $\xi(t) = T^t\omega$ for a flow T^t) and more recently I.Melbourne (Warwick) with various co-authors studied weakconvergence under more applicable to dynamical systems assumptions which required use of therough paths theory. I will discuss new results (some of them with P.Friz) about strong convergencein the above setups and their discrete time counterparts which yield new applications and some of them also rely on the rough paths theory. As a byproduct of this study we obtain almost sureinvariance principles and then laws of iterated logarithm for iterated sums and iterated integrals.

On the posterior distribution of a random process conditioned on observing the empirical frequencies: the i.i.d and finite Markov chain case

Wenqing Hu

Missouri University of Science and Technology

Friday, October 21, 2022 @ 12:15 PM

We consider here the question of recovering the posterior distribution of a random process conditioned on observing the empirical frequencies of the outcomes. We find that, under a rather broad assumption of the dependence structure of the process, such as "independence" or "Markovian dependence", the posterior marginal distribution of the process at a given time index can be identified as some empirical distribution calculated from the observed empirical frequencies of the process' outcomes. We show by two examples including the i.i.d. sequence with discrete values and a finite Markov chain, that a certain "conditional symmetry" given by the observation of the empirical frequencies leads to the desired posterior distribution result. Our results are about finite-time observations, and we further investigate its infinite-time limit connecting with the idea of Gibbs conditioning. Finally, since our results demonstrate the importance of empiricial frequency in understanding the information behind data, we use the Large Deviations Principle (LDP) to construct a general notion of "data-driven entropy", from which we can apply the formalism of thermodynamics to data sciences. The talk is based on joint work with Professor Hong Qian.

The Brin Mathematics Research Center

The Brin Mathematics Research Center is a research center that sponsors activity in all areas of pure and applied mathematics and statistics. The Brin MRC was funded in 2022 through a generous gift from the Brin Family. The Brin MRC is part of the Department of Mathematics at the University of Maryland, College Park.

Activities sponsored by the Brin MRC include long programs, conferences and workshops, special lecture series, and summer schools. The Brin MRC provides ample opportunities for short-term and long-term visitors that are interested in interacting with the faculty at the University of Maryland and in experiencing the metropolitan Washington DC area.

The mission of the Brin MRC is to promote excellence in mathematical sciences. The Brin MRC is home to educational and research activities in all areas of mathematics. The Brin MRC provides opportunities to the global mathematical community to interact with researchers at the University of Maryland. The center allows the University of Maryland to expand and showcase its mathematics and statistics research excellence nationally and internationally.

List of Participants

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