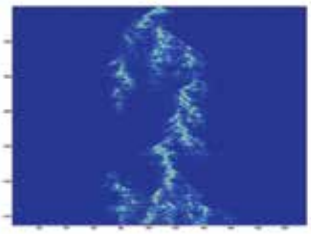
Stochastic PDEs

June 23-27, 2025

BRIN MATHEMATICS RESEARCH CENTER

About the workshop

Stochastic partial differential equations (SPDEs) represent a dynamic and rapidly evolving field in probability theory. This area has been growing steadily in the past 30 years, providing new techniques for analyzing complex systems whose behaviour is subject to random perturbations. SPDEs can be used for modelling a wide range of physical phenomena, encountered in statistical mechanics, mathematical physics, theoretical neuroscience, fluid dynamics and mathematical finance.



Organizers

Raluca Balan, University of Ottawa

Mickey Salins, Boston University

Samy Tindel, Purdue University

Participants

Hakima Bessaih, Florida International University

Le Chen, Auburn University

David Cohen, Chalmers University of Technology

Alex Dunlap, Duke University

Ioannis Gasteratos, Imperial College London

Yi Han, Massachusetts Institute of Technology

Yaozhong Hu, University of Alberta

Jingyu Huang, University of Birmingham

Juan Jimenez, University of Ottawa

Davar Khoshnevisan, University of Utah

Carlo Marinelli, University College London

Cecilia Mondaini, Drexel University

Carl Mueller, University of Rochester

Eulalia Nualart, Universitat Pompeu Fabra

Cheng Ouyang, University of Illinois at Chicago

Lluis Quer-Sardanyons, Universitat Autonoma de Barcelona

Jian Song, Shandong University

Mark Veraar, Delft University of Technology

Panqiu Xia, Cardiff University

Yimin Xiao, Michigan State University

Kazuo Yamazaki, University of Nebraska

Wangjun Yuan, Shenzhen University

Guangqu Zheng, Boston University

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Schedule at a Glance

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00					
9:00	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
	Yamazaki	Xiao	Quer-Sardanyons	Khoshnevisan	Song
10:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
	Dunlap	Cohen	Gasteratos	Mueller	Yuan
11:00	Mondaini	Marinelli	Hu	Veraar	Xia
12:00	Lunch	Lunch	Free Afternoon / DC Excursion	Lunch	Lunch on your own
13:00					
14:00	Bessaih	Han		Ouyang	Informal Discussions
15:00	Coffee Break	Coffee Break		Coffee Break	
16:00	Chen	Nualart		Zheng	
17:00	High Tea	Huang		Jimenez	
18:00					

Workshop Overview

Stochastic partial differential equations (SPDEs) represent a dynamic and rapidly evolving field in probability theory. This area has been growing steadily in the past 30 years, providing new techniques for analyzing complex systems whose behaviour is subject to random perturbations. SPDEs can be used for modelling a wide range of physical phenomena, encountered in statistical mechanics, mathematical physics, theoretical neuroscience, fluid dynamics and mathematical finance.

The workshop will bring together internationally renowned researchers working on various topics related to the theory and applications of SPDEs, to exchange the latest results and generate novel ideas for research directions and applications.

The talks will delve into the latest developments in SPDE theory, highlighting the most recent advancements. Topics may include, but are not limited to: existence and uniqueness of solutions, regularity properties, large deviations, numerical approximations, the study of regularity structures, and emerging applications of SPDEs in real-world scenarios.

Organizing committee

Raluca Balan, University of Ottawa

Mickey Salins, Boston University

Samy Tindel, Purdue University

Workshop Schedule

Monday, June 23, 2025

8:30 - 8:50 Breakfast

8:50 - 9:00 Doron Levy (University of Maryland/Director, Brin MRC)
Opening

9:00 - 9:45 Kazuo Yamazaki (University of Nebraska)
Recent Developments on the Global-in-time Solution Theory of Stochastic PDEs: Uniqueness and Non-uniqueness

10:00 - 10:30 Coffee Break

10:30 - 11:15 Alexander Dunlap (Duke University)
Viscous Shock Solutions in KPZ

11:30 - 12:15 Cecilia Mondaini (Drexel University)
Estimating the Long-Time Bias in Numerical Approximations of SPDEs

12:30 - 2:30 Lunch

2:30 - 3:15 Hakima Bessaih (Florida International University)
Synchronization in Stochastic Systems: Models and Applications

3:30 - 4:00 Coffee Break

4:00 - 4:45 Le Chen (Auburn University)
Stationary Limit of Stochastic Heat Equation

5:00 - 5:45 High Tea

Tuesday, June 24, 2025

8:30 - 9:00 Breakfast

9:00 - 9:45 Yinim Xiao (Michigan State University)
The Modulus of Non-Differentiability for Gaussian Random Fields and the Solution of a Stochastic Heat Equation

10:00 - 10:30 Coffee Break

10:30 - 11:15 David Cohen (Chalmers University of Technology)
Analysis Of A Positivity-Preserving Splitting Scheme For Some Semi-linear Stochastic Heat Equations

11:30 - 12:15 Carlo Marinelli (University College London)
Well-posedness of Some Accretive SPDEs on Spaces

12:30 - 2:30 Lunch

2:30 - 3:15 Yi Han (Massachusetts Institute of Technology)
A Weak Regularity Theory for SPDEs With Irregular Diffusion Coefficients

3:30 - 4:00 Coffee Break

4:00 - 4:45 Eulalia Nualart (Universitat Pompeu Fabra)
On the well-posedness of SPDEs with locally Lipschitz coefficients

5:00 - 5:45 Jingyu Huang (University of Birmingham)
A stochastic heat equation with non locally Lipschitz coefficients on the torus

6:30 - 8:30 Conference Dinner

Wednesday, June 25, 2025

8:30 - 9:00 Breakfast

9:00 - 9:45 Lluis Quer-Sardanyons (Universitat Autonoma de Barcelona)
Convergence in law for stochastic PDEs

10:00 - 10:30 Coffee Break

10:30 - 11:15 Ioannis Gasteratos (TU Berlin)
Uniform Attraction and Exit Problems for Stochastic Damped Wave Equations

11:30 - 12:15 Yaozhong Hu (University of Alberta)
Hyperbolic Anderson Equations with General Time Independent Gaussian noise: Stratonovich Regime

12:30 - 12:35 Group Photo

12:35 - 5:00 Free afternoon/DC excursion

Thursday, June 26, 2025

8:30 - 9:00 Breakfast

9:00 - 9:45 Davar Khoshnevisan (University of Utah)
An Invariance Principle for Some Reaction-Diffusion Equations with a Multiplicative Random Source

10:00 - 10:30 Coffee Break

10:30 - 11:15 Carl Mueller (University of Rochester)
Survival Propabilities of a Log Random String Among Obstacles

11:30 - 12:15 Mark Veraar (Delft University of Technology)
SPDEs in critical spaces

12:30 - 2:30 Lunch

2:30 - 3:15 Cheng Ouyang (University of Illinois at Chicago)
Parabolic Anderson Model on Hyperbolic Space

3:30 - 4:00 Coffee Break

4:00 - 4:45 Guangqu Zheng (Boston University)
CLT for 1D stochastic wave equations with Levy noise

5:00 - 5:45 Juan Jimenez (University of Ottawa)
Stochastic Elliptic Boundary Value Problems with Spatial Levy Noise: Path properies and Moment Estimates

Friday, June 27, 2025

8:30 - 9:00 Breakfast

9:00 - 9:45 Jian Song (Shandong University)
On a Continuum Pinning Model in Correlated Random Environment

10:00 - 10:30 Coffee Break

10:30 - 11:15 Wangjun Yuan (Shenzhen University)
Stochastic Partial Differential Equations Associated with Feller Processes

11:30 - 12:15 Panqiu Xia (Cardiff University)
Discrete Feynman-Kac Approximation for Parabolic Anderson Model Using Random Walks

12:30 - 2:30 Lunch on your own

2:30 - 4:30 Informal Discussions

Abstracts of talks

Recent Developments on the Global-in-time Solution Theory of Stochastic PDEs: Uniqueness and Non-uniqueness

Kazuo Yamazaki

University of Nebraska

Monday, June 23, 2025 @ 9:00 AM

I will discuss recent advances concerning the global-in-time solution theory, specifically uniqueness and non-uniqueness, of stochastic PDEs forced by random noise that are white in time, white in space, or space-time white noise. Non-uniqueness results have been obtained recently via the technique of convex integration while the global well-posedness in the case of space-time white noise has also seen new developments.

Viscous Shock Solutions in KPZ

Alexander Dunlap

Duke University

Monday, June 23, 2025 @ 10:30 AM

I will present some joint work with Evan Sorensen on the long-term behavior of "V-shaped" solutions for the KPZ equation, and describe how this understanding can be used to complete the classification of time-invariant measures for this equation.

Estimating the Long-Time Bias in Numerical Approximations of SPDEs

Cecilia Mondaini

Drexel University

Monday, June 23, 2025 @ 11:30 AM

I will present a general result that yields uniform-in-time error estimates for numerical approximations of SPDEs. As a consequence, this allows for estimating the long-time numerical error, namely the distance between the corresponding invariant measures. The result relies on the following two crucial assumptions on the numerical approximation: the existence of finite-time error estimates, and a discretization-uniform Wasserstein contraction for the corresponding semigroup. This will be illustrated with an application to the 2D stochastic Navier-Stokes equations, with a space-time numerical approximation given by a spectral Galerkin and semi-implicit Euler schemes. Here, the proof of finite-time error estimates required technical improvements from the related literature. This is based on joint work with Nathan Glatt-Holtz (Indiana U).

Synchronization in Stochastic Systems: Models and Applications

Hakima Bessaih

Florida International University

Monday, June 23, 2025 @ 2:30 PM

Synchronization phenomena describe the long-time behavior of systems composed of interacting particles or agents that eventually reach a common state. In this talk, we will present several stochastic models and investigate their synchronization properties under both additive and multiplicative noise. We will also explore an application to networked systems, modeled by stochastic reaction-diffusion equations on a graph.

Stationary Limit of Stochastic Heat Equation

Le Chen

Auburn University

Monday, June 23, 2025 @ 4:00 PM

In this talk, I will present recent joint work with Cheng Ouyang, Samy Tindel, and Panqiu Xia (arXiv:2412.03521). We extend the results of Yu Gu and Jiawei Li on the stationary limit of the stochastic heat equation with multiplicative noise in spatial dimensions three and higher. Our work establishes a sharper condition on the correlation structure of the noise and refines the perturbation condition for initial conditions. These findings have significant implications for directed polymers in a continuous Gaussian environment, particularly in characterizing the weak disorder regime.

The Modulus of Non-Differentiability for Gaussian Random Fields and the Solution of a Stochastic Heat Equation

Yinim Xiao

Michigan State University

Tuesday, June 24, 2025 @ 9:00 AM

We derive the exact modulus of non-differentiability for a class of anisotropic Gaussian random fields with stationary increments. This result is applicable to the solution $\{u(t,x),\, t \geq 0,\, x \in \mathbb{R}^d\}$ to the following stochastic heat equation:

$$\partial_t u(t,x) = \mathcal{L}u(t,x) + \dot{W}^H, \quad u(0,x) = 0, \quad t \geq 0, \quad x \in \mathbb{R}^d,$$

where $\mathcal{L}$ is the generator of certain Lévy process $X = \{X_t, t \geq 0\}$ taking values in $\mathbb{R}^d$ and W^H is a fractional-colored Gaussian noise. This is based on the joint work with Wensheng Wang.

Analysis Of A Positivity-Preserving Splitting Scheme For Some Semi-linear Stochastic Heat Equations

David Cohen

Chalmers University of Technology

Tuesday, June 24, 2025 @ 10:30 AM

We construct and analyze a positivity-preserving Lie-Trotter splitting scheme with finite difference discretization in space for approximating the solutions to a class of nonlinear stochastic heat equations driven by multiplicative noise.

Well-posedness of Some Accretive SPDEs on Spaces

Carlo Marinelli

University College London

Tuesday, June 24, 2025 @ 11:30 AM

We discuss existence and uniqueness of mild solutions to a class of stochastic semilinear evolution equations on spaces on bounded domains of with a nonlinear drift term given by the superposition operator generated by a monotone function on the real line with power-like growth. The noise is of additive type with respect to a cylindrical Wiener process, with diffusion coefficient not necessarily of Radonifying type. Some results for equations on with drift term satisfying weaker conditions than polynomial growth will also be touched upon.

A Weak Regularity Theory for SPDEs With Irregular Diffusion Coefficients

Yi Han

Massachusetts Institute of Technology

Tuesday, June 24, 2025 @ 2:30 PM

In this talk I discuss new well-posedness results for infinite dimensional SPDEs with diffusion coefficients that are not globally Lipschitz continuous. Under non-degeneracy assumption we achieve the well-known epsilon threshold of Holder continuity. This is particularly new for the stochastic wave equation where we further prove a small mass limit result on convergence to the heat equation. Interesting problems arise as to whether the epsilon threshold can be gotten through assuming non-degeneracy.

On the well-posedness of SPDEs with locally Lipschitz coefficients

Eulalia Nualart

Universitat Pompeu Fabra

Tuesday, June 24, 2025 @ 4:00 PM

We consider the nonlinear stochastic heat equation on the real line driven by space-time white noise. We prove that this SPDE is well posed solely under the assumptions that the initial condition is bounded and measurable, and the coefficients are locally Lipschitz continuous functions and have at most linear growth. Our method is based on a truncation argument together with moment bounds and tail estimates of the truncated solution. The results naturally generalize to the case where the coefficients are time dependent with uniform-in-time growth and oscillation properties. Additionally, our method can be extended to the stochastic wave equation. This is a join work with Davar Khoshnevisan and Mohammud Foondun.

A stochastic heat equation with non locally Lipschitz coefficients on the torus

Jingyu Huang

University of Birmingham

Tuesday, June 24, 2025 @ 5:00 PM

Consider the stochastic heat equation on the torus $\mathbb{T} := [0, 1]$,

$$\frac{\partial u}{\partial t} = \frac{1}{2}\frac{\partial^2 u}{\partial x^2} + b(u) + \sigma(u)\dot{W} \,,$$

which is driven by space-time white noise $\dot{W}$, with nonnegative and non-vanishing initial condition u_0. The b and σ are assumed to be Lipschitz away from 0 but the Lipschitz coefficients may blow up at 0. Examples of such b and σ include $b(u) = u(\log|u|)^{A_1}$ and $\sigma(u) = u(\log|u|)^{A_2}$ with $A_1 \in (0, 1)$ and $A_2 \in (0, 1/4)$. Using a stopping time argument, we show existence and uniqueness of the solution for equation with these types of coefficients. This is based on joint work with Le Chen and Wenxuan Tao.

Convergence in law for stochastic PDEs

Lluis Quer-Sardanyons

Universitat Autonoma de Barcelona

Wednesday, June 25, 2025 @ 9:00 AM

We consider the stochastic wave and heat equations in $\mathbb{R}^d$ with $d \in \{1, 2, 3\}$ and $d \geq 1$, respectively, and perturbed by an additive Gaussian noise which is white in time and has a homogeneous spatial correlation with spectral measure μ_n. We allow the Fourier transform of μ_n to be a genuine distribution. Let u^n be the solution of our equations with spectral measure μ_n. We provide sufficient conditions on the sequence $\{\mu_n\}_n$ to ensure that u^n converges in law, in the space of continuous functions, to the solution of our equations with spectral measure μ, where $\mu_n \to \mu$ in some sense. We apply our main result to various types of noises, such as fractional correlations with $H \in (0, 1)$. The talk is based on joint work with Maria Jolis (Barcelona) and Salvador Ortiz-Latorre (Oslo).

Uniform Attraction and Exit Problems for Stochastic Damped Wave Equations

Ioannis Gasteratos

TU Berlin

Wednesday, June 25, 2025 @ 10:30 AM

We are concerned with a class of wave equations with constant damping and polynomial nonlinearities that are perturbed by small, multiplicative, space-time white noise. The equations are defined on a one-dimensional bounded interval with Dirichlet boundary conditions, continuous initial position and distributional initial velocity. In the first part of this talk, we shall study the corresponding deterministic dynamics and prove that certain neighborhoods of asymptotically stable equilibria are uniformly attracting in the topology of uniform convergence. Then, we shall consider the Freidlin-Wentzell exit problem for local solutions of the stochastic damped wave equations from bounded domains D of uniform attraction. Using tools from large deviations along with novel controllability results, we obtain logarithmic asymptotics for exit times and exit places, in the vanishing noise limit, that are expressed in terms of the corresponding quasipotential. Moreover, the exit time results provide asymptotic lower bounds for the mean explosion time of local solutions. In the setting of wave equations, such asymptotics require arguments that take into account the lack of both smoothing and exact controllability that are inherent to the problem at hand. Time permitting, we shall introduce a notion of "regular" boundary points and present conditions under which the asymptotic lower and upper bounds hold match. This is joint work with Michael Salins and Konstantinos Spiliopoulos.

Hyperbolic Anderson Equations with General Time Independent Gaussian noise: Stratonovich Regime

Yaozhong Hu

University of Alberta

Wednesday, June 25, 2025 @ 11:30 AM

In this talk, I will present a joint work with Xia Chen about two results on the hyperbolic Anderson equation generated by a time-independent Gaussian noise. First one is that we prove that Dalang's condition is necessary and sufficient for existence of the solution. Second, we establish the precise long time and high moment asymptotics for the solution under the usual homogeneity assumption of the covariance of the Gaussian noise. An interesting tool is the relation between the solutions of stochastic heat and wave equations.

An Invariance Principle for Some Reaction-Diffusion Equations with a Multiplicative Random Source

Davar Khoshnevisan

University of Utah

Thursday, June 26, 2025 @ 9:00 AM

We establish the weak universality of the parabolic Anderson model via an invariance principle for a wide family of parabolic stochastic partial differential equations. We then use this invariance principle in order to provide an asymptotic theory for a wide class of non-linear SPDEs. A novel ingredient of this invariance principle is the dissipativity of the underlying stochastic PDE. This talk is based on ongoing joint work with Kunwoo Kim (POSTECH) and Carl Mueller (University of Rochester).

Survival Propabilities of a Log Random String Among Obstacles

Carl Mueller

University of Rochester

Thursday, June 26, 2025 @ 10:30 AM

This is joint work with Siva Athreya and Mathew Joseph.
A random string or polymer can be modeled by a $\mathbb{R}^d$-valued stochastic heat equation with additive spacetime white noise, with solution $(u(t,x))_{t\geq 0, x\in[0,J]}$ subject to Neumann boundary conditions. We regard J as the length of the string. Assume that there are random obstacles, independent of the string. These obstacles are balls of a fixed radius, whose centers form a Poisson point process. The string dies when any part of it touches one of the obstacles. We study the asymptotic annealed survival probability up to a fixed time T, for large values of J.
Earlier we studied asymptotic survival probabilities for fixed values of J, up to a large time T. These questions were motivated by the extensive literature on obstacle problems for Brownian motion.

SPDEs in critical spaces

Mark Veraar

Delft University of Technology

Thursday, June 26, 2025 @ 11:30 AM

In this talk I will give an overview of several recent developments on quasi- and semi-linear stochastic PDEs in critical spaces. I will present a new method to prove local and global well-posedness results, and new bootstrap method to show higher order regularity of the solution. In the talk several applications to reaction diffusion equations will be discussed in details. In particular, the new setting allows to prove global well-posedness for several systems which do not satisfy classical coercivity estimates.

Parabolic Anderson Model on Hyperbolic Space

Cheng Ouyang

University of Illinois at Chicago

Thursday, June 26, 2025 @ 2:30 PM

Consider a Parabolic Anderson model (PAM) with Gaussian noise that is white in time and colored in space, where the spatial correlation decays polynomially with order α. In Euclidean spaces with dimension greater than 2, it is well-understood that the critical value for α is 2. Specifically, for $\alpha < 2$, the second moment of the solution grows exponentially over time, while for $\alpha > 2$, there is a phase transition, from the second moment being uniformly bounded in time to exhibiting exponential growth in time when the inverse temperature increases. This critical behavior arises from the fact that in Euclidean space, Brownian motion tends to infinity at a speed of square root of t.

In this work, we explore the PAM on a hyperbolic space. Given that Brownian motion in a hyperbolic space travels at a speed of t, we expect that $\alpha = 1$ would be the critical value for the above phenomena. We confirm that this intuition is indeed correct. Furthermore, we uncover a novel phase for $\alpha < 1$ in which the second moment explodes sub-exponentially, distinct from the behavior observed in Euclidean space.

CLT for 1D stochastic wave equations with Levy noise

Guangqu Zheng

Boston University

Thursday, June 26, 2025 @ 4:00 PM

In this talk, we will present central limit theorems for 1D stochastic wave equations with pure-jump Levy white noise. This talk is based on joint works with R.M. Balan (Ottawa) and the results are motivated by recent active research on limit theorems for stochastic partial differential equations driven by Gaussian noises.

Stochastic Elliptic Boundary Value Problems with Spatial Levy Noise: Path properies and Moment Estimates

Juan Jimenez

University of Ottawa

Thursday, June 26, 2025 @ 5:00 PM

Although elliptic boundary value problems have been extensively studied in the deterministic setting and are relevant to various fields such as elasticity and electrostatics, there are comparatively few studies addressing such problems when the forcing term is a spatial heavy-tailed noise. In this talk, we explore the path properties of the random field solution to an elliptic boundary value problem driven by spatial Levy noise, subject to Dirichlet boundary conditions. Specifically, we show that the solution takes values in a fractional Sobolev space. Additionally, we study the qualitative and geometric properties of the solution's moments, which depend on the domain's geometry and on the regularity of the Levy measure associated with the noise.

On a Continuum Pinning Model in Correlated Random Environment

Jian Song

Shandong University

Friday, June 27, 2025 @ 9:00 AM

We study a class of fractional stochastic heat equations which connect with pinning models in correlated random environment. By proving the existence and uniqueness of the solution under some suitable condition, we conform the Weinrib-Halperin prediction for disorder relevance/irrelevance for the pinning model.

Stochastic Partial Differential Equations Associated with Feller Processes

Wangjun Yuan

Shenzhen University

Friday, June 27, 2025 @ 10:30 AM

For the stochastic partial differential equation $\frac{\partial}{\partial t}u = \mathcal{L}u + u\dot{W}$ where $\dot{W}$ is Gaussian noise colored in time and $\mathcal{L}$ is the infinitesimal generator of a Feller process X, we obtain Feynman-Kac type of representations for the Stratonovich and Skorohod solutions as well as for their moments. The Hölder continuity of the solutions and the regularity of the law are also studied. This is a joint work with Jian Song and Meng Wang.

Discrete Feynman-Kac Approximation for Parabolic Anderson Model Using Random Walks

Panqiu Xia

Cardiff University

Friday, June 27, 2025 @ 11:30 AM

In this talk, I will introduce a natively positive approximation method based on the Feynman-Kac representation using random walks, to approximate the solution to the one-dimensional parabolic Anderson model of Skorokhod type, with either a flat or a Dirac delta initial condition. Assuming the driving noise is a fractional Brownian sheet with Hurst parameters $H \geq 1/2$ and $H_1 \geq 1/2$ in time and space, respectively, an error analysis of the proposed method is provided. The error in L^2 norm is of order

$$O(h^{[(2H+H_1-1)\wedge 1]/2-\epsilon}),$$

where $h > 0$ is the step size in time (resp. $\sqrt{h}$ in space), and $\epsilon > 0$ can be chosen arbitrarily small. This error order matches the Hölder continuity of the solution in time with a correction order ϵ, making it 'almost' optimal. Furthermore, these results provide a quantitative framework for convergence of the partition function of directed polymers in Gaussian environments to the parabolic Anderson model.

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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Hakima Bessaih, Florida International University
Le Chen, Auburn University
David Cohen, Chalmers University of Technology
Alexander Dunlap, Duke University
Ioannis Gasteratos , TU Berlin
Yi Han, Massachusetts Institute of Technology
Yaozhong Hu, University of Alberta
Jingyu Huang, University of Birmingham
Matthew Hudes, Johns Hopkins University
Juan Jimenez, University of Ottawa
Davar Khoshnevisan, University of Utah
Sinchita Lahiri, Tulane University
Doron Levy, University of Maryland/Director, Brin MRC
Chenglin Liu , University of Maryland
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