# Frederi G. Viens

Professor

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## Education

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|---|---|
| Maîtrise de Mathématiques Pures | Université de Paris VII, France, Oct 1991 |
| Master in Mathematics | University of California, Irvine, Dec 1991 |
| Ph.D. in Mathematics | University of California, Irvine, June 1996 |

## Previous and present positions

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| 1997-2000. Assistant Professor (tenure track) | University of North Texas, Department of Mathematics. |
| 2000-2003. Assistant Professor (tenure track) | Purdue University, Dept. Statistics, Dept. Mathematics. |
| 2003-2008. Associate Professor (with tenure) | Purdue University, Dept. Statistics, Dept. Mathematics. |
| 2008-2015. Professor (with tenure) | Purdue University, Dept. Statistics, Dept. Mathematics. |
| 2015-2016. Program Director | National Science Foundation, Div. Mathematical Sciences. |
| 2016-2020. Department Chair | Michigan State University, Dept. Statistics & Probability. |
| 2016-pres. Professor (with tenure) | Michigan State University, Dept. Statistics & Probability. |
| 2017-pres. Director | Actuarial Science and Quantitative Risk Analytics (MSU). |
| 2018-pres. Adjunct Director | Center for Statistical Training and Consulting (MSU). |
| 2020-pres. Acting Director | Data Science MS Program (MSU) |

## Awards and honors

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| 1992-1996 | **National Defense Science and Engineering Graduate Fellow**, U.C. Irvine |
| 1996 | U.C. Irvine Connely Award for best Mathematics teaching assistant |
| 1996 | Honorary Fellow, University of Wisconsin, Probability Internship Program |
| 1996-1997 | **NSF International Opportunities Fellow**, Universitat de Barcelona, Spain |
| 1997-2000 | UNT Faculty Research Award Grants (Internal) |
| 1998-1999 | **NSF-NATO Postdoctoral Fellow**, Université de Paris VI, France |
| 2001-2014 | Purdue Research Foundation Internal Grants |
| 2002-2006 | **NSF Standard Grant** (Probability Program), summer salary and travel |
| 2004 | **Fulbright Scholar**, Research and Lecturing grant, U. de Paris XIII, France |
| 2006-2010 | **NSF Standard Grant** (Probability Program), salary, travel, grad support |
| 2005,07,08,09,11,13,18 | NSF Conference Grants (Proba, Applied Math, Stat.), travel for speakers and students |
| 2008 | Purdue College of Science Graduate Student Mentoring Award |
| 2008-2012 | **NSERC Grant Selection Committee member**, Math and Stat, Canada |
| 2009-2013 | **NSF Standard Grant** (Probability Program), salary, travel, consultants. |
| 2010-2011 | **Franklin Fellow**, U.S. Department of State, Washington DC, Science Adviser |
| 2011-2012 | **NSERC Grant Selection Committee Chair**, Pure Mathematics, Canada |
| 2012 | Purdue College of Science Team Award, for the Computational Finance Program |
| 2013-2014 | **MEC Competition,** Ministry of Education, Science and Technology, Chile |
| 2013 | **Institute of Mathematical Statistics (IMS), Fellow** |
| 2013 | **Purdue College of Science Research Award**, inaugural year |
| 2013 | **Seminar on Stochastic Processes,** Scientific committee long-term member |
| 2014-2015 | Purdue Faculty Fellowship for Study in a Second Discipline (Agricultural Economics) |
| 2014-2019 | **NSF Standard Grant** (Probability Program), salary, travel, consultants. |
| 2017-present | **Seminar on Stochastic Processes,** Scientific committee moderator |
| 2018-2021 | **ONR Standard Grant**, postdoc support, travel. |
| 2018-2021 | **NSF Standard Grant** (Statistics Program), salary, travel. |
| 2020-2025 | **USDA-NIFA Collaborative Grant,** grad student & postdoc, travel, data manager. |
| 2020-2025 | **NSF Cyberinfrastructure Research Grant** (CSSI Program), salary, postdoc, RA |
| 2021-2023 | **USDA-NIFA Collaborative Grant,** salary, travel. |
| 2021 | **IMS Quadfecta 23** (informal): https://imstat.org/2021/05/14/the-annals-quadfecta-23/ |
| 2022 | **FAP/DF International Collaborative Grant (Brazil)**, salary, travel |

## Research interests

*Probability and Stochastic Analysis:*

Stochastic Analysis
Malliavin Calculus
Regularity of Random Fields
Fractional Brownian Motion
Stochastic Volatility
Monte-Carlo and particle methods
Stochastic control
Stochastic partial differential equations
Nonlinear Stochastic Filtering
Products of Random Matrices

*Other Fields:*

Quantitative Finance
Actuarial Science
Climate Science
Agricultural economics
Mathematical Statistics
Bayesian statistics
Time Series
Agronomy / Agroecology
Hydrology
Nuclear physics
Healthcare management

## Professional membership

- *American Mathematical Society* (AMS)
- *Institute of Mathematical Statistics* (IMS)
- *Sigma Xi, the Scientific Research Society*
- *Society for Industrial and Applied Mathematics* (SIAM)
- *The Bernoulli society*

## Teaching experience

**Undergrad lower division:** College algebra, Matrix algebra, Calculus, Business calculus, Probability, Statistics.

**Undergrad upper division:** Discrete mathematics, Linear Algebra, Intermediate probability and statistics, Real Analysis, Actuarial Models (life contingencies, loss models, Black-Scholes theory).

**Graduate, MS / First year Ph.D. level:** Probability theory, Mathematical Statistics, first course in Stochastic processes, Numerical methods for stochastic processes, Mathematics of finance, Numerical methods for financial options, Predictive analytics

**Graduate, Advanced Ph.D. level:** Stochastic PDEs, Lyapunov exponents, Fractional Brownian motion, Advanced course in Stochastic Processes, Stochastic Analysis, Malliavin Calculus.

## Curriculum development

**Graduate Certificate in Quantitative Risk Analytics: co-developer, at AF Group in Lansing, MI.** Professional yearlong 4-course graduate instruction in data science and predictive analytics, taught in-house at the headquarters of a national insurance company, designed exclusively for its employees.

**Programs in Actuarial Science and in Quantitative Risk Analytics: developer and Director, at MSU.** Professional BS, mathematics, statistics, and computational training for the insurance industry.

**MS program in Data Science: developer and lead administrator at MSU: in progress.** Creation of a 2-year revenue-based tuition-sharing program aimed at industry professionals, with courses across computer science and engineering, computational mathematics, and statistics and probability. On-campus, off-site, and online modalities.

**New course:** *Probability and Statistics for Predictive Analytics*, for insurance professionals (online synchronous)

**New course:** *Probability theory*, for electrical and computer engineers (online asynchronous)

**New course:** *Malliavin Calculus and Stein's method*: the analysis of Nourdin and Peccati.

**New two-semester sequence**: *Probability theory and mathematical statistics for non-Stat MS and Ph.D. students.*

**New course:** *Actuarial Science II:* incorporation of Black-Scholes theory into Actuarial Science preparatory course for exams MLC and MFE.

**New course:** *Malliavin Calculus I and II:* including fractional Brownian motion

**New course**: *Numerical Methods for Stochastic Processes*, with applications to problems in finance, filtering, and fluid dynamics, via particle methods.

**New two-semester sequence**: *Mathematics of Finance*, including the Stochastics of Option Pricing, Stochastic Interest rate models, American options, and their Numerical Methods.

**New course:** *Introduction to Investment Science*, an introduction to financial engineering for math and stat graduate students, covering CAPM theory, VaR, Mean-Variance Portfolio Management, Credit Risk, Volatility estimation.

**Purdue Computational Finance Program: Developer and Director.** Restructured the program, designing the MS requirements, coordinating courses in Math, Stat, Mgmt, IE, Econ, advising CF MS students in Math, Stat, Engineering, Econ, AgEcon, and organizing the **2000-2010 Computational Finance seminar.**

**New course:** *Stochastic Partial Differential Equations*, A Ph.D.-research-level course on the Infinite-Dimensional Stochastic Analysis approach to SPDEs, including Gaussian regularity theory, almost-sure Lyapunov exponents, and other topics.

**New course:** *Stochastic PDEs and Fractional Brownian Motion*, continuation of previous course, including a complete introduction to Skorohod and pathwise integration w.r.t. fractional Brownian noise.

**New course contents:** *Stochastic Processes*: use of the Textbook by Daniel Revuz and Marc Yor on martingales and stochastic calculus; incorporation of advanced elements of Gaussian theory, including Skorohod integration.

**New course:** *Stochastic Processes II:* Stochastic Differential Equations, Gaussian regularity theory, Malliavin Calculus, Skorohod Stochastic Integration.

**New course:** *Design and Analysis of Financial Algorithms*: a numerical analysis and programming course for CF MS students, including state-of-the-art quant. finance programming languages and algorithms..

## Administative experience

**Director, BS Program in Actuarial Science and Quantitative Risk Analytics, Michigan State University**, 2020-present.

**Acting Director and Program development administrator, MS Degree in Data Science**, **Michigan State University,** 2020-present. Professional MS program with online, off-campus, and on-campus modalities, joint between Statistics, Computer Science, and Computational Mathematics.

**Adjunct Director, Center for Statistical Training and Consulting, Michigan State University**, 2018-present.

**Interim Director, BS Program in Actuarial Science, Michigan State University**, 2017-2020.

**Chair, Department of Statistics and Probability, Michigan State University**, 2016-2020.

**Program Director, National Science Foundation, Division of Mathematical Sciences**, 2015-2016.

Main director for Probability Program; other responsibilities included: joint panels with applied math, computational math, math bio, CAREER, FRG, MSII, INFEWS.

**Member, Purdue College of Science Faculty Committee on Diversity**, 2013-2015.

**Member, Purdue University Council on global and policy engagement**, 2012-2015.

Participated in development of new projects to increase Purdue University's faculty engagement in international activities and impact on policy-making.

**Co-Chair for Pure Mathematics, Mathematics and Statistics Evaluation Group, Discovery Grants Program, NSERC** (Canada), 2011-2012.

Co-managed budget for the Evaluation Group, managed the evaluation of approx. 150 pure mathematics proposals, worked as liaison between evaluation group members and NSERC staff and leadership.

**Science Adviser / Franklin Fellow, Bureau of African Affairs, US Department of State**, Washington DC, 2010-2011.

Formal administrative role: liaison between Africa Bureau and Bureau of Global Change (climate change). Informal administrative roles included: developing a network of State Department and other federal agency stakeholders with Africa- and Science/Technology-based portfolios; developing and covering the environment, sustainability, and energy portfolio for the Africa Bureau.

**Associate Director, Actuarial Science Undergraduate Program**, Purdue University, 2007-2010.

**Director, Computational Finance (CF) MS Program**, Purdue University, 2003-2016.

**Associate Director, Computational Finance (CF) MS Program**, Purdue University, 2000-2003.

## Publications

Authors list in alphabetical order for mathematical papers. Dagger (†) indicates non-peer-reviewed papers.

1. Jeffrey Michler; Frederi Viens; Gerald Shively. Risk, crop yields, and weather index insurance in village India. *Journal of the Agricultural and Applied Economics Association*, **2022** (1), 61–81.

2. Soukaina Douissi, Khalifa Es-Sebaiy, Frederi Viens. Asymptotics of Yule's nonsense correlation for Ornstein-Uhlenbeck paths: a Wiener chaos approach. *Electronic Journal of Statistics* **16** (1) (2022), 3176-3211.

3. Xinyi Tu, Sieglinde Snapp, Frederi Viens. A Bayesian Approach to Understand Controls on Total and Labile Soil Carbon in East African Cultivated Soils. *Geoderma* **413**, 115746 (13 pp.)

4. Ailing Gu, Shumin Chen, Zhongfei Li, Frederi G. Viens. Optimal reinsurance pricing with ambiguity aversion and relative performance concerns in the principal-agent model. *Scandinavian Actuarial Journal*, 2022, 1-26.

5. AN Kumar, P Vellaisamy, F Viens. Poisson Approximation to the Convolution of Power Series Distributions. *Probability and Mathematical Statistics*, to appear, published online May 2021, 22 pages. DOI: 10.19195/0208-4147.0.0.0

6. Xinyi Tu, James DeDecker, Frederi Viens, Sieglinde Snapp. Assessment of soil health on Michigan farms reveals drivers that include aridity, texture, crop diversity and tillage intensity. *Soil and Tillage Research*, **213** (2021), 105146 (20 pages).

7. D.R. Phillips, R.J. Furnstahl, U. Heinz, T. Maiti, W. Nazarewicz, F.M. Nunes, M. Plumlee, M.T. Pratola, S. Pratt, F.G. Viens, S.M. Wild. Get on the BAND Wagon: A Bayesian Framework for Quantifying Model Uncertainties in Nuclear Dynamics. *Journal of Physics G: Nuclear and Particle Physics.* **48** (7) (2021), 072001 (39 pages).

8. A Boloori, BB Arnetz, F Viens, T Maiti, JE Arnetz. Misalignment of Stakeholder Incentives in the Opioid Crisis. *International Journal of Environmental Research and Public Health* **17** (20) (2020), 7535.(19 pages).

9. Soukaina Douissi, Khalifa Es-Sebaiy, Fatimah Alshahrani, Frederi G Viens. AR (1) processes driven by second-chaos white noise: Berry–Esséen bounds for quadratic variation and parameter estimation. *Stochastic Processes and their Application*, published online Feb 22, 2020, 38 pages. https://doi.org/10.1016/j.spa.2020.02.007

10. P Vellaisamy, F Viens. A probabilistic approach to Adomian polynomials. *Stochastic Analysis and Applications*, **38** (6) (2020), 1045-1062, DOI: 10.1080/07362994.2020.1755312.

11. Ailing Gu, Frederi Viens, Yang Shen. Optimal excess-of-loss reinsurance contract with ambiguity aversion in the principal-agent model. *Scandinavian Actuarial Journal*, **2020** (4), 342-375. https://doi.org/10.1080/03461238.2019.1669218

12. Judith E. Arnetz, Leo Neufcourt, Sukhesh Sudan, Bengt B. Arnetz, Tapabrata Maiti, Frederi Viens. Nurse-Reported Bullying and Documented Adverse Patient Events: An Exploratory Study in a US Hospital. *Journal of nursing care quality*, **35** (3) (2020), 206-212. https://doi.org/10.1097/NCQ.0000000000000442

13. Small-time asymptotics for Gaussian self-similar stochastic volatility models. *Appl. Math. Optimization* **82** (2020), 183–223. With Archil Gulisashvili, Xin Zhang. https://doi.org/10.1007/s00245-018-9497-6 .

14. Han Wang, Sieglinde Snapp, Monica Fisher, Frederi Viens. A Bayesian analysis of longitudinal farm surveys in Central Malawi reveals yield determinants and site-specific management strategies. *PLoS One*, **14** (8) (2019), e0219296, 17 pages. https://doi.org/10.1371/journal.pone.0219296

15. Baron Law, Frederi Viens. Market Making under a Weakly Consistent Limit Order Book Model, *High Frequency*, **2** (3-4) (2019), 215-238. https://onlinelibrary.wiley.com/doi/epdf/10.1002/hf2.10050

16. Berry-Esséen bounds for parameter estimation of general Gaussian processes. *ALEA, Latin Amer. J. Probability. Math. Stat.* **16** (2019), 633-664. With Soukaina Douissi, Khalifa Es-Sebaiy.

17. A Martingale Approach for Fractional Brownian Motions and Related Path Dependent PDEs. *Annals of Applied Probability* **29** (6) (2019), 3489-3540. With Jianfeng Zhang. https://www.e-publications.org/ims/submission/AAP/user/submissionFile/34243?confirm=4d1ebd9d

18. Donsker type theorem for fractional Poisson process. *Statistics & Probability Letters* **150** (2019), 1-8. With H. Araya, N. Bahamonde, S. Torres.

19. † In memory of Larry Shepp: An editorial. *High Frequency* **2** (2) (2019), 74-75. With P Ernst.

20. L. Neufcourt, Y. Cao, W. Nazarewicz, E. Olsen, F. Viens. Neutron drip line in the Ca region from Bayesian model averaging. *Physical review letters* **122** (6) (2019), 062502.

21. † F. Viens (2019). Data, statistics and hydrology can reveal key truths about Lake Chad. *The Conversation* (Creative Commons). https://theconversation.com/data-statistics-and-hydrology-can-reveal-key-truths-about-lake-chad-110907 .

22. L. Neufcourt, Y. Cao, W. Nazarewicz, F. Viens. Bayesian approach to model-based extrapolation of nuclear observables. *Physical Review C* **98** (3) (2019), 034318.

23. Extreme-Strike Asymptotics for General Gaussian Stochastic Volatility Models. *Annals of Finance* **15** (1) (2019), 59-101. With Archil Gulisashvili, Xin Zhang.

24. Optimal rates for parameter estimation of stationary Gaussian processes. *Stochastic Processes and their Applications* **129** (9) (2019), 3018-3054. With Khalifa Es-Sebaiy. https://doi.org/10.1016/j.spa.2018.08.010

25. U.L.C. Baldos, F.G. Viens, T.W. Hertel, K.O. Fuglie. R&D spending, knowledge capital, and agricultural productivity growth: a Bayesian approach. *American Journal of Agricultural Economics* **101** (1) (2018), 291-310.

26. Ailing Gu, Frederi Viens, Haixiang Yao. Optimal robust reinsurance-investment strategies for insurers with mean reversion and mispricing. *Insurance: Mathematics and Economics* **80** (2018), 93-109.

27. Parameter Estimation of Gaussian Stationary Processes using the Generalized Method of Moments. *Electronic Journal of Statistics*, **11** (2017) 401-439. With Luis A. Barboza.

28. Asymptotic behavior of the Anderson polymer in a fractional Brownian environment. *Journal of Theoretical Probability* **31** (3) (2017), 1429-1468. With Kamran Kalbasi and Thomas Mountford.

29. Ailing Gu, Bo Yi, F. Viens. Optimal reinsurance and investment strategies for insurers with mispricing and model ambiguity. *Insurance: Mathematics and Economics*, **72** (2017), 235-249.

30. Parameter estimation for a partially observed Ornstein-Uhlenbeck process with long-memory noise. *Stochastics*, **89** (2017), 431-468. With Brahim El Onsy, Khalifa Es-Sebaiy.

31. L. Barboza, B. Li, M. Tingley, F. Viens. Discussion on temperature reconstruction with sediment core data in Ilvonen et al. *Environmetrics*, **27** (7) (2016), 428-430.

32. A third-moment theorem and precise asymptotics for stationary Gaussian sequences. *Latin American Journal of Probability and Math. Stat*, **13** (2016), 239-264. With L. Neufcourt.

33. Hawkes Processes and Their Applications to High-Frequency Data Modeling. In: *Handbook of High-Frequency Trading and Modeling in Finance*, 2016, pp.183-219. With Baron Law.

34. White Noise Analysis for the Canonical Levy Process. *Communications on Stochastic Analysis*, **9** (4) (2015), 553-577. With R. Navarro.

35. Michler, Jeffrey D.; Viens, Frederi G.; Shively, Gerald E. Risk, Agricultural Production, and Weather Index Insurance in Village South Asia. *Agricultural and Applied Economics Association*, Joint Annual Meeting, 2015. 34 pages.

36. Dynamic portfolio selection with mispricing and model ambiguity. *Annals of Finance*, **11** (1) (2015), pp 37-75, `http://dx.doi.org/10.1007/s10436-014-0252-y`. With B. Yi, B. Law, Z. Li.

37. B. Yi, F. Viens, Z. Li., Y. Zeng. Robust optimal strategies for an insurer with reinsurance and investment under benchmark and mean-variance criteria. *Scandinavian Actuarial Journal*, **8** (2015), 725-751. `http://dx.doi.org/10.1080/03461238.2014.883085`.

38. Gaussian and non-Gaussian processes of zero power variation. *ESAIM-PS (Euro J. Appl. Indus. Math. Prob. Stat.)*, **19** (2015) 414-439. `http://dx.doi.org/10.1051/ps/2014031`. With F. Russo.

39. Quadratic variations for the fractional-colored stochastic heat equation. *Elect. Journ. Probability*, **19** (2014), article no. 76, 1-51.With S. Torres, C.A. Tudor.

40. Comparison inequalities on Wiener space. *Stochastic Processes and their Applications* **124** (4) (2014), 1566-1581. With I. Nourdin, G. Peccati.

41. L. Barboza, B. Li, M. Tingley, F. Viens. Reconstructing past climate from natural proxies and estimated climate forcings using short and long-memory models. *Annals of Applied Statistics*, **8** no. 4 (2014), 1966-2001.

42. Robust Optimal Control for an Insurer with Reinsurance and Investment under Heston's Stochastic Volatility Model. *Insurance: Mathematics and Economics* **53** (2013) 601-614. With B. Yi, Z. Li, and Y. Zeng.

43. Two-dimensional stochastic Navier-Stokes equation with fractional Brownian noise. *Random Operators and Stochastic Equations*, **21** no. 2 (2013), 135-159. With L. Fang, P. Sundar.

44. General upper and lower tail estimates using Malliavin calculus and Stein's equations. In *Seminar on Stochastic Analysis, Random Fields and Applications VII*, R.C. Dalang, M. Dozzi, F. Russo editors, Progress in Probability **67,** 55-84, 2013. With R. Eden.

45. Stochastic volatility models with long-memory in discrete and continuous time. *Quantitative Finance*, **12** no. 4 (2012), 635-649. With A. Chronopoulou.

46. Estimation and pricing under long-memory stochastic volatility. *Annals of Finance*, **8** no. 2-3 (2012) 379-403. With A. Chronopoulou.

47. Portfolio optimization with discrete proportional transaction costs under stochastic volatility. *Annals of Finance*, **8** no. 2-3 (2012), 405-425. With H.-Y. Kim.

48. Arbitrage-free models in markets with transaction costs. *Electronic Communications in Probability,* **16** (2011), 614-622. With H. Sayit.

49. Self-similarity parameter estimation and reproduction property for non-Gaussian Hermite processes. *Communications on Stochastic Analysis*, **5** no. 1 (2011) 161-185. With A. Chronopoulou and C. Tudor.

50. Option pricing under a Gamma-modulated diffusion process. *Annals of Finance*, **7** no. 2 (2011), 199-219. With P. Iglesias, J. San Martín, S. Torres.

51. Mutual fund performance: false discoveries, bias, and power. *Annals of Finance*, **7** no. 2 (2011), 137-169. With N. Tuzov.

52. Stokes formula on the Wiener space and $n$-dimensional Nourdin-Peccati analysis. *Journal of Functional Analysis*, **258** no. 5 (2010), 1763-1783. With H. Airault and P. Malliavin.

53. Hurst Index Estimation for Self-similar processes with Long-Memory. *Recent Advances in Stochastic Dynamics and Stochastic Analysis*, J. Duan, S. Luo and C. Wang, editors, World Scientific, 2009; 85-112. With A. Chronopoulou.

54. Application of Malliavin calculus to long-memory parameter estimation for non-Gaussian processes. *Comptes Rendus - Mathématique*, **347**, no. 11-12 (2009), 663-666. With A. Chronopoulou and C. Tudor.

55. Variations and Hurst index estimation for a Rosenblatt process using longer filters. *Electronic Journal of Statistics*, **3** (2009), 1393-1435. With A. Chronopoulou and C. Tudor.

56. Variations and estimators for selfsimilarity parameters through Malliavin calculus. *Annals of Probability*, **37**, no. 6 (2009), 2093-2134. With C. Tudor.

57. Density estimates and concentration inequalities with Malliavin calculus. *Electronic Journal of Probability* **14** (2009), 2287-2309. With I. Nourdin.

58. Stein's lemma, Malliavin calculus, and tail bounds, with application to polymer fluctuation exponent. *Stoch. Processes Appl.* **119** (2009), 3671-3698.

59. Estimators for the long-memory parameter in LARCH models, and fractional Brownian. *Statistical Inference for Stochastic Processes*, **12** no. 3 (2009) 221-250. With M. Levine and S. Torres.

60. The fractional stochastic heat equation on the circle: Time regularity and potential theory. *Stochastic Processes and Applications*, **119** (2009), 1505-1540. With E. Nualart.

61. Variations of the fractional Brownian motion via Malliavin calculus. 2008, 13 pages. To appear in *Australian Journal of Mathematical Analysis*. With C. Tudor.

62. Sharp Estimation of the Almost Sure Asymptotic Behavior for a Brownian Polymer in a Fractional Brownian Environment. *Journal of Functional Analysis*, **255** no. 10 (2008), 2810-2860. With T. Zhang.

63. Lyapunov exponents for stochastic Anderson models with non-Gaussian noise. *Stochastics and Dynamics*, **8** no. 3 (2008) 451-473. With H.-Y. Kim and A. Vizcarra.

64. Sharp asymptotics for the partition function of some continuous-time directed polymers. *Potential Analysis*, **29** no. 2 (2008) 129-166. With A. Cadel, S. Tindel.

65. Stochastic volatility: option pricing using a multinomial recombining tree. *Applied Mathematical Finance*, **15** no. 2 (2008) 151-181. With I. Florescu.

66. Superdiffusivity for a Brownian polymer in a continuous Gaussian environment. *Annals of Probability*, **36** no. 5 (2008) 1642-1675. With S. Bézerra, S. Tindel.

67. Some applications of the Malliavin calculus to sub-Gaussian and non-sub-Gaussian random fields. *Seminar on Stochastic Analysis, Random Fields and Applications*, Progress in Probability **59**, 363-396, Birkhäuser, 2008. With A.B. Vizcarra.

68. Supremum Concentration Inequality and Modulus of Continuity for Sub-$n$th Chaos Processes. *Journal of Functional Analysis* **248** (2007) 1-26. With A.B. Vizcarra.

69. Portfolio optimization with consumption in a fractional Black-Scholes market. *Communications on Stochastic Analysis*, **1** no. 3 (2007) 357-379. With Y. Sarol, T. Zhang.

70. Space regularity of stochastic heat equations driven by irregular Gaussian processes. *Communications on Stochastic Analysis* **1** no. 2 (2007) 209-229. With O. Mocioalca.

71. Statistical aspects of the fractional stochastic calculus. *Annals of Statistics,* Vol. **35** no. 3 (2007), 1183–1212. With C.A. Tudor.

72. Ito formula for the two-parameter fractional Brownian motion using the extended divergence operator. *Stochastics, An International Journal of Probability & Stochastic Processes.* **78** (6) (2006), 443-462. With C.A. Tudor.

73. Selection of an Optimal Portfolio with Stochastic Volatility and Discrete Observations. *Transactions of the Wessex Institute on Modelling and Simulation*, **43** (2006), 371-380. With N. Batalova, V. Maroussov.

74. Sharp estimation for the almost-sure Lyapunov exponent of the Anderson model in continuous space. *Probab. Theory and Related Fields*, **135** no. 4 (2006), 603-644. With I. Florescu.

75. Time regularity of the evolution solution to the fractional stochastic heat equation. *Discrete and Continuous Dynamical Systems B*, **6** (2006) no. 4, 895-910. With Y. Sarol.

76. A Binomial Tree Approach to Stochastic Volatility Driven Model of the Stock Price. *Annals of the University of Craiova, Mathematics and Computer Science Series*, **32** (2005), 126-142. With I. Florescu.

77. Relating the almost-sure Lyapunov exponent of a parabolic SPDE and its coefficients' spatial regularity. *Potential Analysis*, **22** (2005) no. 2, 101-125. With S. Tindel.

78. Skorohod integration and stochastic calculus beyond the fractional Brownian scale (2004). *Journal of Functional Analysis,* **222** (2004) no. 2, 385-434. With O. Mocioalca.

79. Sharp Gaussian regularity on the circle, and applications to the fractional stochastic heat equation. *J. Funct. Analysis*, **217** (2004) no. 2, 280-313. With S. Tindel and C.A Tudor.

80. Convergence of a branching particle system to the solution of a parabolic Stochastic PDE. *Rand. Operators Stoch. Eqs.* **12** (2004), no. 2, 129–144. With S. Tindel.

81. Itō formula and the local time for the fractional Brownian sheet. *Electronic Journal of Probability,* **8** (2003) no. 14, 1-31. With C.A. Tudor.

82. A Monte-Carlo method for portfolio optimization under partially observed stochastic volatility. *IEEE International Conference on Computational Intelligence for Financial Engineering, 2003. Proceedings* (2003), 257 - 263. With R. Desai and T. Lele.

83. Stochastic Evolution Equations with Fractional Brownian Motion. *Probability Theory and Related Fields* **127** (2003), no. 2, 186–204. With S. Tindel., C.A. Tudor.

84. Portfolio optimization under partially observed stochastic volatility. *COMCON 8. The 8th International Conference on Advances in Communication and Control. W. Wells, Ed.* 1-12. Optim. Soft., Inc, Pub. Div., 2002.

85. Almost sure exponential behavior for a parabolic SPDE on a manifold. *Stochastic Processes and Applications* **100** (2002), no. 1-2, 53-74. With S. Tindel.

86. Regularity conditions for the stochastic heat equation on some Lie groups. *Seminar on Stochastic Analysis, Random Fields and Applications III, Centro Stefano Franscini, Ascona, September 1999.* Progress in Probability, **52** Birkhäuser (2002), 275-297. With S. Tindel.

87. Towards pathwise stochastic fast dynamo in magneto-hydrodynamics. *Fields Institute Communications* **34** (2002), 75-89. With S.B. Hazra.

88. Stochastic heat equation with white noise drift. *Annales de l'Institut Henri Poincaré Probab. Statist.* **36** (2000), no. 2, 181–218. With E. Alòs, D. Nualart.

89. Evolution equation of a stochastic semigroup with white-noise drift. *Ann. Probab.* **28** (2000), no. 1, 36–73. With D. Nualart.

90. On space-time regularity for the stochastic heat equations on Lie groups. *J. Funct. Analysis* **169** (1999), no. 2, 559–603. With S. Tindel.

91. Robustness of Zakai's equation via Feynman-Kac representations. *Stochastic analysis, control, optimization and applications,* 339–352, Systems Control Found. Appl., Birkhäuser Boston, Boston, MA, 1999. With R. Atar, O. Zeitouni.

92. Almost-sure exponential behavior of a stochastic Anderson model with continuous space parameter. *Stochastics & Stochastics Reports.* **64** (1998) 251-273. With R. Carmona.

93. Sharp upper bound on exponential behavior of a stochastic partial differential equation. *Random Operators and Stochastic Equations*, **4** no. 1 (1996) 43-49. With R. Carmona, S. Molchanov.

## Preprints and submitted papers

94. Hausdorff dimensions and Hitting probabilities for some general Gaussian processes. *Preprint*, 2021, 27 pages. With Youssef Hakiki, Mohammed Erraoui. https://arxiv.org/abs/2112.03648

95. Philip Ernst, Dongzhou Huang, Frederi Viens. Yule's "Nonsense correlation" for Gaussian random walks. *Preprint*, submitted, 39 pages, 2021. https://arxiv.org/abs/2103.06176

96. Innocensia John Massao, Frederi Viens, Sieglinde Snapp. Evidence from Malawi That Participatory Extension Can Enhance Adoption of Sustainable Intensification Technologies. *Preprint*, 21 pages, 2020.

97. Vojtech Kejzlar, Léo Neufcourt, Taps Maiti, Frederi Viens. Bayesian averaging of computer models with domain discrepancies: a nuclear physics perspective. *Preprint*, submitted, 26 pages, 2019. https://arxiv.org/abs/1904.04793.

98. Hitting probabilities for general Gaussian processes, *Preprint*, 2013, 34 pages. With E. Nualart. http://arxiv.org/pdf/1305.1758

99. A localized version of the Sherrington-Kirkpatrick model with external field. *Preprint*, 2004. With S. Tindel.

100. Precise propagation of chaos estimates for Feynman-Kac and genealogical particle models. *Preprint*, 2003. With P. del Moral and L. Miclo.

## Books, edited research volumes, and special issues

1. **Guest Associate Editor** for a special issue on Optimal stopping in memory of Larry Shepp, in *Stochastic Processes and their Applications*, 2019.
2. **Editor** for *Handbook of High-Frequency Trading and Modeling in Finance*, with I. Florescu, M.C. Mariani, H.E. Stanley. Book contains 12 refereed research articles, 435 pages, Wiley, 2016.
3. **Author** for *Mathématiques pour les sciences de la vie*. Textbook aimed at first-year college science students. With Claire David, Sami Mustafa, Nathalie Capron. 525 pages, Dunod, Paris, Aug 2014.
4. **Editor** for *Malliavin Calculus and Stochastic Analysis: a Festschrift in Honor of David Nualart*, with J. Feng, E. Nualart, Y. Hu. Book contains 25 refereed research articles, 600 pages, published by Springer V., N.Y., Feb 2013.
5. **Guest Editor** for "Modeling High-frequency data" with E.H. Stanley, M.C. Mariani, I. Florescu, a special issue published in *Quantitative Finance*, 2012. Contains 12 refereed research articles, 250 pp.
6. **Guest Editor** for "Stochastic Volatility", a special issue published in *Annals of Finance*, Vol. 8, no. 2-3, May 2012. Contains 11 refereed research articles, 275 pages.
7. **Editor** for *Handbook of Modeling High-frequency Data in Finance*, with I. Florescu and M.C. Mariani. Book contains 15 refereed research articles, 450 pages, Wiley, Dec 2011.
8. **Editor** for "A Special Issue on Gaussian Processes: Analysis and Inference", with F. Baudoin, C. Lacaux, I. Nourdin, published in *Communications on Stochastic Analysis*, Vol. 5, no. 1, March 2011. Contains 12 refereed research articles, 245 pages.

## Invited professional visits

1. Universidad de Valparaíso, Chile, Centro CIMFAV, 2 months in summer 2014. *Research.*
2. University of Paris VI, France, Laboratoire de Probabilités et Modèles aléatoires. July-Dec 2013. *Research, lecturing.*
3. Universitat Pompeu Fabra, Barcelona Business School, Spain, June 20-22 and Nov 14-16, 2013.
4. Universidad de Valparaíso, Chile, Centro CIMFAV, 2 months in summer 2013. *Research*
5. Wroclaw University of Technology, Wroclaw, Poland, June 28 - July 2, 2012. *Research, outreach.*
6. Centre interfacultaire Bernoulli, EPFL, Switzerland, May 22-26, 2012. *Research.*
7. Ecole Polytechnique, Palaiseau, France, April-June, 2012. *Lecturing.*
8. Faculté des Sciences Université Cadi Ayyad - Marrakech, Morocco, July 4, 2011. *Research, outreach.*
9. Universidad de Valparaíso, Chile, October 2010. *Research, consulting for the development of a Ph.D. program.*
10. University of Paris I Panthéon-Sorbonne, Laboratoire de Statistique Appliquée et Modélisation Stochastique. June 2009. *Research.*
11. University of Paris VI, France, Laboratoire de Probabilités, February-July 2008. *Research.*
12. University of Paris XIII, Lab. d'Analyse, Géométrie, et Applications. May 2007. *Research.*
13. University of Paris I Panthéon-Sorbonne, Laboratoire de Statistique Appliquée et Modélisation Stochastique. June 2007. *Research.*
14. University of Valparaíso, Chile, Department of Statistics and centro CIMFAV, 4 months, May-August 2006. *Research and lecturing.*

15. University of Utah, Department of Mathematics, 1 week, April 2006. *Research.*
16. University of Paris XIII, France, Lab. d'Analyse, Géométrie, et Applications, 1 month, June-July 2005. *Research.*
17. University of Paris VI, France, Laboratoire de Probabilités, 1 month, May-June 2005. *Research.*
18. University of Paris XIII, France, Lab. d'Analyse, Géométrie, et Applications, 5 months, March-July 2004. *Research and lecturing.*
19. University of Valparaíso, Chile, Department of Statistics, 3 weeks, March 2003. *Research.*
20. University of Paris VI, France, Laboratoire de Probabilités, 1 month every summer from 2000 to 2004. *Research, unpaid (office space and computing privileges).*
21. University of Paris VI, France, Laboratoire de Probabilités, 12 months, 1998-99. *Research (NSF-NATO postdoc).*
22. University of Edinburgh, Scotland, Department of Mathematics, 3 weeks, April 1997. *Spring School on SPDEs.*
23. The Technion, Haifa, Israel, Department of Electrical Engineering, 4 weeks, March 1997. *Research.*
24. University of Barcelona, Spain, Department of Statistics, 12 months, 1996-97. *Research (NSF postdoc).*

## Lectures

### Invited conference lectures

1. BIRS-CMO New Trends in Stochastic Analysis, Casa Matemática Oaxaca, Mexico, May 21-26, 2023.
2. AMS Sectional meeting, Session on Gaussian and non-Gaussian Stochastic Analysis, W. Lafayette IN, March 26-27, 2022.
3. Eastern Conference in Mathematical Finance, Rutgers University, October 14-16, 2022.
4. Market Microstructure and High Frequency Data, University of Chicago, May 18-20, 2022.
5. Project-scoping workshop "Towards Precise and Accurate Calculations of Neutrinoless Double Beta Decay", NSF, Jan 31-Feb 1, 2022 (virtual).
6. Bayesian Analysis of Nuclear Dynamics (BAND) Camp workshop, Michigan State U., Dec 13, 2021.
7. Workshop on The Role of Data and Modeling in Agriculture, Foundation for Food & Agriculture Research, Washington DC, Dec 8, 2021 (virtual).
8. Mathematical Congress of the Americas, session on "Stochastic Systems: Analysis, Numerics and Applications", held online by Universidad de Buenos Aires, Argentina, July 19-23, 2021.
9. XIII Summer Workshop in Mathematics at Universidade de Brasilia, Brazil, held online Feb 8-12, 2021.
10. The 7th Days of Econometrics for Finance conference, held online Dec 18-19, 2020, organized by the University Mohammed V in Rabat, Morocco and the ESSEC Business School in Paris, France.
11. SIAM Conference on Mathematics of Planet Earth 2020, conference held online asynchronously in July and August 2020, with synchronous discussions from Aug 3-14, 2020.
12. Workshop Statistical Inference for Stochastic PDEs, Berlin, Germany, Sep 19-21, 2019.
13. Information and Statistics in Nuclear Experiment and Theory 7th ed. (Bayesian Inference in Subatomic Physics - A Marcus Wallenberg Symposium), Gothenburg, Sweden, Sep 17-20, 2019.

14. 32nd Brazilian Colloquium on Mathematics, session on High dimensional modeling and machine learning, Rio de Janeiro, Brazil, July 28-Aug 2, 2019.
15. 23rd Brazilian School of Probability, Plenary talk, São Carlos, Brazil, July 22-27, 2019.
16. American Mathematical Society Central Sectional Meeting, Ann Arbor, MI, Oct 20-21, 2018.
17. Stochastic Analysis Workshop (Banff Int'l Rsch Station), Oaxaca, Mexico, Sep 9-14, 2018.
18. Cropping systems conference "Corn in Context", Ames, IA, July 24-25, 2018.
19. Symposium on Optimal Stopping, Rice University, Houston, TX, June 25-29, 2018.
20. Southern Regional Council on Statistics, Research Conference, Virginia Beach, VA, June 4-5, 2018.
21. 8th Int'l Workshop on High-Dimensional Data Analysis, Marrakech, Morocco, April 9-13, 2018.
22. Information and Statistics in Nuclear Experiment and Theory 5th ed., York, UK, Nov 6-9, 2017.
23. Mathematical Congress of the Americas, Session on Probability, Montreal, Canada, July 24-27, 2017.
24. Conference on Probability, Partial Differential Equations, and Financial Mathematics: plenary talk. Rutgers University, New Brunswick, NJ, May 17-19, 2017.
25. SIAM conference on Financial Mathematics and Engineering, Invited session on Algorithmic and High-Frequency Trading, Austin, TX, November 17-19, 2016.
26. Workshop on Modeling Food Systems, Oxford University, UK, July 18-21, 2016.
27. Special session on high-frequency data, Annual Meeting of the Statistical Society of Canada: Brock University in St Catherines, ON, May 29-June 1, 2016,
28. Marrakech International Conference on Probability and Statistics: plenary presentation, Université Cadi Ayyad, Marrakech, Morocco, April 25-28, 2016.
29. European Meeting of Statistics, Session on "Integration by parts formulas and convergence in total variation distance", Amsterdam, July 6-10, 2015.
30. Workshop on New Directions in Stein's Method, Institute of Mathematical Science, National University of Singapore, Singapore, May 18-29, 2015.
31. Workshop on Multiscale modeling of the food system, The American Institute of Mathematics, San José, CA, April 27-30, 2015.
32. 23rd Congress of Mathematics "Capricornio COMCA", Copiapó, Chile, Aug 6 - 9, 2014.
33. Stochastic Processes and Applications (Special session on New developments in Malliavin calculus). Universidad de Buenos Aires, Argentina, July 28 - Aug 1, 2014.
34. Workshop on Financial Engineering and Risk Management – Computational Finance: invited lecture, Sun Yat-sen University, Guangzhou, China, July 24 - 28, 2014.
35. Workshop on Financial Engineering and Risk Management – Computational Finance: 3 hour invited minicourse, Sun Yat-sen University, Guangzhou, China, July 24 - 28, 2014.
36. Barcelona Graduate School of Economics Summer Forum, Session on "Statistics, jump processes and Malliavin calculus: recent applications", U. Pompeu Fabra, Barcelona, Spain, June 25-27, 2014.
37. NSF/CBMS Conference on Stochastic PDEs, Michigan State U., Aug 19-23, 2013.
38. 6th CI2MA Focus Seminar on "Stochastic Modeling and Numerical Analysis", Universidad de Concepción, Chile, Aug 8, 2013.

39. 22nd Congress of Mathematics "Capricornio COMCA", La Serena, Chile, Jul 31 - Aug 2, 2013.
40. Conference on "High-frequency data and high-frequency trading", U. of Chicago, May 16-18, 2013.
41. CIMPA school on Statistical methods and applications in finance and insurance, Principal lecturer, College of Science and Technology, Univ. Cadi Ayyad, Marrakech, Morocco, April 8-20, 2013.
42. Seminar on Stochastic Processes, Plenary speaker, Duke U., Durham, NC, March 14-16, 2013.
43. 6th European Congress of Mathematics, Minisymposium on "Stochastic Models in Biosciences and Climatology", Krakow, Poland, July 2-7, 2012.
44. Conference on "Stochastic Analysis and Stochastic Partial Differential Equations", Banff International Research Station, Banff, Canada, April 1-6, 2012.
45. 12th Latin American Congress of Probability and Mathematical Statistics (XII CLAPEM), Plenary address, Viña del Mar, Chile, March 26-30, 2012.
46. 5th CSDA International Conference on Computational and Financial Econometrics, Session on "Volatility estimation and forecasting", University of London, UK, Dec 17-19, 2011.
47. Premières Journées de Probabilités et Statistique, Ecole Nationale des Sciences Appliquées, Plenary address, Marrakech, Morocco, December 15-17, 2011.
48. 3rd Africa Carbon Forum, Workshop on "Prioritizing mitigation actions through low carbon development planning", Marrakech, Morocco, July 4-6, 2011.
49. 7th Seminar on Stochastic Analysis, Random Fields, and Applications, Ascona, Switzerland, May 23-27, 2011.
50. AMS Western Section Meeting, Special Session on Recent Developments in Stochastic Partial Differential Equations, Las Vegas, NV, April 30 – May 1, 2011.
51. Diversity in Mathematics Conference, African Institute of Mathematical Sciences (AIMS), Cape Town, South Africa, July 14-17, 2010.
52. Journée Calcul de Malliavin. Université de Paris 6. June 15, 2010.
53. AMS Western Section Meeting, Special Session on Financial Mathematics, Principal Speaker, Albuquerque NM, April 17-18, 2010.
54. Workshop on Stochastic PDEs. Isaac Newton Institute, Cambridge University, Jan 4-8, 2010.
55. Conference on modeling high-frequency data in finance. Stevens Institute of Technology, Hoboken NJ, July 9-11, 2009.
56. Second Winter School on Applied Mathematics. City University of Hong Kong. December 9-20, 2008. Principal Lecturer, series of 10 lectures: "Elements of Stochastic and Malliavin Calculus, and Applications".
57. AMS Southern Section Meeting in Huntsville, AL (Gaussian Analysis and Stochastic Partial Differential Equations). October 25-26, 2008.
58. Workshop on Differential equations driven by fractional Brownian motion as random dynamical systems, Banff International Research Station, Canada, Sep 28 - Oct 5, 2008.
59. Malliavin Calculus and Applications. Kent State University, OH. July 7-12, 2008. Talk on July 11.
60. Malliavin Calculus and Applications. Kent State University, OH. July 7-12, 2008. Talk on July 10.
61. International Conference on Stochastic Analysis: from Mathematical Physics to Mathematical Finance. Princeton, NJ. June 13-15, 2008.

62. Conference "Journées Fractionnaires Parisiennes". University of Paris 6. June 9-10, 2008.
63. AMS Western sectional meeting in Albuquerque, New Mexico (Special Session on Financial Mathematics: The Mathematics of Financial Markets and Structures, Principal Speaker). Oct 13-14, 2007.
64. Stochastic Processes and Applications (Special Session on Stochastic Equations). University of Illinois, Aug 6-10, 2007.
65. Stochastic Processes and Applications (Special session on Stochastic Partial Differential Equations and Gaussian Analysis). University of Illinois, Aug 6-10, 2007.
66. Stochastic Processes and Applications (Special Session on Random Media). University of Illinois, Aug 6-10, 2007.
67. Conférence Dynamique Stochastique. University of Paris Panthéon-Sorbonne, June 11-12, 2007.
68. AMS Central sectional meeting in Cincinnati, Ohio (Special Session on Financial and Actuarial Mathematics), Oct 21-22, 2006.
69. AMS Western sectional meeting in Salt Lake City, Utah (Special Session on Interface of Stochastic PDEs and Gaussian Analysis), Oct 7-8, 2006.
70. Invited Mini-course on Malliavin Calculus (Principal Speaker) at the Winter School on Stochastic Analysis and Applications of the Universidad de Valparaíso, Chile, July 3-7, 2006.
71. Fifth Seminar on Stochastic Analysis, Random Fields and Applications, Principal Speaker, Ascona, Switzerland. May 30-June 3, 2005.
72. Conference on Particle and Monte Carlo Methods. University of Barcelona, July 24-25, 2004.
73. Journée "Analyse stochastique des phénomènes irréguliers". Universite de Paris 13, March 10th 2004.
74. Fourth International Symposium on Probability and its Applications, Banff, Alberta, Canada. July 31 - Aug 2, 2002. Session on Computational Methods in Finance.
75. Filtering Theory and Applications 2002, Edmonton and Jasper, Alberta, Canada. July 25-29, 2002.
76. Annual AMS meeting, San Diego, CA, Jan 6-9, 2002. Special session on partial Differential Equations and Applications.
77. Southern California Probability Symposium, Irvine, CA Nov 10-11, 2001. Theme: Stochastic Analysis and Mathematical Finance.
78. Eigth International Conference on Communications and Control, Rithymna, Crete, Grece, June 25-30, 2001. Special Session on Financial Mathematics.
79. Annual AMS meeting, New Orleans, LA, Jan 10-13 2001. Special session on Stochastic Analysis and Applications.
80. Western Regional AMS conference, San Francisco, CA, Oct 22, 2000. Special session on Probability with emphasis on Markov Chains and Random Matrices.
81. Workshop on stochastic Navier-Stokes equations, Universitat de Barcelona, Spain, July 3-7, 2000.
82. Stochastic Analysis, Random Fields and Applications, Ascona, Switzerland, Sept 20-24, 1999.
83. Workshop on Numerics and Stochastic, Fields Institute, Toronto, ON, Apr 20-24, 1999.

**Contributed conference talks**

1. Conference on Applied Statistics in Agriculture and Natural Resources, Logan, UT, May 16-19, 2022 (co-author of poster presented by Sarah Manski): "Bayesian Analysis of Agricultural Risk Mitigation via Adoption of Regenerative Soil Health Practices".
2. American Society of Agronomy International Annual Meeting, San Antonio, TX, Nov. 10-13, 2019. (co-author of poster #1463, presented by Xinyi Tu): "Integrating Bayesian Analysis in Assessing Labile and Stable C Pool on Malawi Smallholder Farm Soils".
3. 5th Congress of the Bernoulli Society, Guanajuato, Mexico, May 15-20, 2000.
4. Annual AMS Meeting, Jan 14-17, San Antonio, TX, 1999.
5. Stochastic Analysis and its Applications, May 25-30, IHP Paris, 1998.
6. Annual AMS Meeting, Jan 6-10, Baltimore, MD, 1998.
7. Infinite Dimensional Workshop, Nov 3-7, 1997, MSRI, Berkeley, CA.
8. Ecole d'Eté de Probabilités de Saint-Flour, France, July 7-23, 1997
9. Stochastic Analysis and its Applications, June 30-July 4, Univ. Barcelona, Spain, 1997.
10. Lyapunov exponents, U. Bremen, Germany. April 21-25, 1997. (Poster).
11. Stochastic PDEs and Applications - IV, CIRM, Trento, Italy. Jan 6-11, 1997. (Poster).
12. Workshop on Stochastic PDEs and Applications, Jan 3-7, 1996. USC, Los Angeles, CA
13. Ecole d'Eté de Probabilités de Saint-Flour, France, July 10-26, 1995.

**Invited seminar lectures**

1. Tulane University, Mathematics Colloquium, New Orleans, LA, Oct 14, 2021.
2. Oxford University, Stochastic Analysis and Financial Mathematics Colloquium (remote), June 1, 2020.
3. *Cancelled:* Tulane University, Mathematics Colloquium, New Orleans, LA, Apr 2, 2020.
4. Michigan State University, Physics and Astronomy Colloquium, E. Lansing, MI, Feb 13, 2020.
5. Georgetown University (remote particiption), Food Systems Seminar, Nov 6, 2019.
6. Illinois Institute of Technology, Applied Mathematics Colloq., Chicago, IL, Apr 29, 2019.
7. Fields Institute / University of Toronto, Mathematical Finance Colloq., ON, Canada, Nov 26, 2018.
8. University of Michigan, Statistics Colloquium, Ann Arbor, MI, Nov 30, 2018.
9. University of Southern California, Probability Seminar, Los Angeles, CA, Nov 27, 2017.
10. Rice University, Statistics Colloquium, Houston, TX, Oct 1, 2017.
11. University of Washington, Probability Seminar, Seattle, WA, April 24, 2017.
12. Andrews University, Pi Mu Epsilon Lecture, Mathematics dept, Berrien Springs, MI, Feb 24, 2017.
13. Michigan State University, Facility for Rare Isotope Beams, East Lansing, MI, Feb 22, 2017.
14. University of Windsor, Statistics Colloquium, Windsor, ON, Canada, Oct 27, 2016.
15. University of Southern California, Probability Seminar, Los Angeles, CA, Sep 18, 2015.

16. U.S. Department of Agriculture, Economic Research Seervice, Washington, DC, May 28, 2015.
17. University of Southern California, Mathematical Finance Colloquium, Los Angeles, CA, May 4, 2015.
18. Columbia University, Mathematical Finance Seminar, Dept. Statistics, New York, NY, Apr 16, 2015.
19. Univ. Michigan, Financial Mathematics Seminar, Dept. Mathematics, Ann Arbor, MI, Mar 25, 2015.
20. Carnegie Mellon University, Center for Probability and Computational Finance Seminar, Pittsburgh, PA, Feb 16, 2015.
21. U. Illinois at Urbana-Champaign, Department of Statistics Colloquium, Urbana, IL, October 2, 2014.
22. Universidad Católica de Valparaíso, Departamento de Estadística, graduate lecture on statistics and climate change, Valparaíso, Chile, Aug 19, 2014.
23. Sun Yat-sen University, Colloquium, School of Mathematics and Computational Science, Guangzhou, China, July 25, 2014
24. Sun Yat-sen Business School, Financial Engineering Seminar, Guangzhou, China, July 21, 2014.
25. University of Southern California, Mathematical Finance Colloquium, Los Angeles, CA, May 5, 2014.
26. U. Paris Est, Marne-la-Vallée, Groupe de travail modélisation stochastique et finance, Dec 13, 2013.
27. University of Paris 6, Probability Seminar, Dec 3, 2013.
28. Bloomberg LLP, Quantitative Finance Research Group, Oct 23, 2014.
29. University of Nancy, France, Probability Seminar, June 27, 2013.
30. Université de Paris 6, Séminaire de Maths Financières, June 6, 2013.
31. Princeton University, Center for Applied and Computational Mathematics, and Department of Operations Research and Financial Engineering, Joint Colloquium, Apr 1, 2013.
32. Johns Hopkins University, Dept. Applied Math. and Stat., Colloquium, Baltimore, MD, Feb 12, 2013.
33. Georgia Institute of Technology, Seminar on Financial Mathematics, Atlanta, GA, Sep 19, 2012.
34. Wroclaw University of Technology, Wroclaw, Poland, Mathematics colloquium (3 lectures), June 28, 29, and July 2, 2012.
35. U. de Barcelona & U. Autònoma de Barcelona, Spain, Probability seminar, May 30, 2012.
36. Université de Paris 6, Séminaire de Probabilités, May 15, 2012.
37. Columbia University, New York, NY, Risk Seminar, Dec 7, 2011.
38. City University of New York, Graduate Center, Probability Seminar, Dec 6, 2011.
39. Worcester Polytechnic Institute, Worcester, MA, Mathematics Departmental Colloquium, Nov 3, 2011.
40. Rutgers University, Mathematical Finance and Probability Seminar, Oct 11, 2011.
41. University of Luxembourg, Luxemburg, Probability Seminar, June 9, 2011.
42. University of Nancy, France, Probability Seminar, June 7, 2011.
43. Pennsylvania State University, Probability Seminar, April 15, 2011
44. University of Delaware, Probability Seminar, March 11, 2011.
45. University of Maryland at College Park, Probability Seminar, December 1, 2010.

46. Midlands State University, Gweru, Zimbabwe, University Public Lecture, August 20, 2010.
47. University of Namibia, Windhoek, Namibia, Mathematics department colloquium, July 21, 2010.
48. University of Texas at El Paso, Mathematics Department Colloquium, April 16, 2010.
49. University of Maryland at College Park, Probability Seminar, June 23, 2009.
50. Université Paris Panthéon-Sorbonne, Séminaire de probabilités, June 12, 2009.
51. Michigan State University, Statistics and Probability Colloquium, April 10, 2009.
52. Université de Rennes, Séminaire de Probabilités, June 2, 2008.
53. Université de Paris 6, Séminaire de Probabilités, March 11, 2008.
54. Université de Paris 13, Séminaire de Probabilités, March 5, 2008.
55. Université Paris Panthéon-Sorbonne, Séminaire de Probabilités, June 15, 2007.
56. Université de Paris 13, Séminaire de Probabilités. June 6, 2007.
57. Université de Paris 6, Groupe de travail Aspects Fractals, May 23, 2007.
58. Universidad Católica de Chile, Santiago. June 20, 2006. Seminario de Análisis Estocástico y Fisica Matemática.
59. U. Valparaíso, Chile, Centro de Investigaciones y Modelamiento Fenómenos Aleatorio. May 30, 2006.
60. University of Utah, Salt Lake City, Probability Seminar, April 7, 2006.
61. Kent State University, Mathematical Sciences Colloquium, March 24, 2006.
62. University of Wisconsin, Madison, Mathematics Colloquium, Feb 10, 2006.
63. University of Wisconsin, Madison, Probability Seminar, Feb 9, 2006.
64. University of Texas, Austin, Seminar in Financial Mathematics, Oct 28, 2005.
65. Indiana University, Probability and Statistics Seminar, Oct 21, 2005.
66. Institut Elie Cartan, Univ. Nancy I, France. Séminaire de Probabilités, June 27, 2005.
67. Université de Paris 13, Séminaire de Probabilités, June 29, 2005.
68. Université Paris Panthéon-Sorbonne, Matinée de Calcul Stochastique, June 17, 2005.
69. University of Utah, Salt Lake City, Probability Seminar, March 4, 2005.
70. Institut Elie Cartan, University de Nancy 1, Groupe de travail Brownien fractionnaire, April 30, 2004.
71. Laboratoire de Statistique et Probabilites, U. Toulouse, Séminaire de probas/stats. May 29, 2004.
72. Université de Paris 13, Séminaire de Probabilités, June 5, 2002.
73. Université de Bretagne Occidentale, Séminaire de Mathématiques, June 4, 2002
74. Université de Paris 6, Séminaire de Probabilités, May 28, 2002.
75. University of Illinois, Urbana-Champaign, Probability Seminar, Sep 11, 2001.
76. Texas A & M University, College Station, Undergraduate Seminar, Oct 4, 2000.
77. North Carolina State University, Probability seminar, Sep 11, 2000.

78. Texas A & M University, Commerce, Probability seminar, Nov 10, 1999.
79. Université de Paris VI, "Milieux Aléatoires", June 15, 1999.
80. University of California, Irvine, Probability seminar, Apr 26, 1999.
81. Ecole Polytechnique, Paris, Probability seminar, May 19, 1998.
82. Université de Paris VI, "Modélisation Stochastique", Mar 31, 1998.
83. Université de Paris VI, "Etude fine du Mouvement Brownien", Mar 20, 1998.
84. Ecole Nationale Supérieure des Télécommunications, Paris, Mar 10, 1998.
85. Université de Paris XIII, Probability seminar, Feb 24, 1998
86. Universite de Paris X, Probability seminar, Feb 7, 1998.
87. Technion, Haifa, Israel, Probability seminar, Mar 15, 1997.
88. Université de Marseille, France, Probability seminar, Feb 1, 1997.

**Outreach and Engagement**

- Establishment of a pan-African consortium between MSU and four sub-Saharan African universities to promote the robust development of data science, including best practices for data curation and repositories, and data-sharing agreements. Executed Sep 30, 2020.
- Presentation for "STEM pathways into insurance" conference geared at high-school teachers and counselors, Insuring MI Future, Lansing Community College, Oct 16, 2019.
- Introductory lecture on Bayesian uncertainty quantification in climatology, agricultural economics, and astrostatistics; Andrews University, Berrien Springs, MI, Feb 24, 2017.
- Presentation to early-career researchers on strategies for publishing high-impact papers, Wiley Author Workshop, Joint Mathematics Meetings, Atlanta, GA, Jan 20, 2017.
- Non-technical lecture at Colegio Saint-Dominic, Viña del Mar, on professional opportunities in probability and statistics for high-school juniors and seniors, Valparaíso province, Chile, Aug 18, 2014.
- Two non-technical lectures in the conference series "Horizon Sciences" at the University of Paris 6, France, for first-year college students in Math, CS, Physics, and Engineering: Oct 15, 2013.
  - Les statistiques Bayesiennes et le changement climatique;
  - L'analyse stochastique et les marchés financiers mondiaux.
- Invitation by City of Wroclaw, Poland, to speak in "Visiting Professors" series on two outreach topics:
  - address a group of high-school and undergraduate students on professional opportunities in mathematics and statistics. Wroclaw University of Technology, Poland, June 29, 2012.
  - public lecture on newly developed economies' foreign assistance strategies for the developing world, Wroclaw University of Technology, Poland, July 2, 2012.
- Pan-African Center for Mathematics, nomination to its Advisory Board on March 29, 2012. This center opened its doors in Dar-es-Salaam, Tanzania, in 2013, to graduate students in Mathematics (MS and Ph.D.) from across the African continent.
- Mentor for undergraduate and graduate students ("Scholars") in the National Mathematics Alliance, starting in Fall 2011.

- Collaboration on uncertainty quantification in renewable energy projects in the Kingdom of Morocco, with a focus on Concentrated Solar Power (CSP), wind mapping, and electricity storage. Interacting with the Université Cadi Ayyad, Morocco's Royal Academy of Science and Technology, and the World Bank. Started in July 2011, ongoing project.
- Mathematics tutor for a high-school senior, Pacers Academy (for teens in challenging social situations), Indianapolis, IN, Fall 2011 (25 hours).
- Science Adviser (Franklin Fellow), Department of State, Bureau of African Affairs, Office of Economic Policy (Washington, DC), working on climate change, energy, and environmental diplomacy, 2010-2011 (one year).
- Meeting with University Administrators and Science and Agriculture faculty on development strategy, Midlands State University, Gweru, Zimbabwe, August 20, 2010.
- Meeting with Science faculty on development strategy, University of Namibia, Windhoek, Namibia, July 20, 2010.
- Participation in the Discussion Panel "Statistics in a variety of forms", at the Diversity in Mathematics conference in Cape Town, South Africa, July 17, 2010.
- High-School Science Fair judge: annual International School of Indiana Science Fair, Feb 23, 2009: judged 6th, 7th, and 8th graders science projects; spoke with students in English, Spanish, and French.
- High-School Science Fair judge: annual International School of Indiana Science Fair, Feb 17, 2007: judged 6th, 7th, and 8th graders science projects; spoke with students in English, Spanish, and French.
- Service to community / medical research: free consulting for G. O'Keefe, Dept. Surgery, U. Texas Southwestern Medical Center: Designing a more efficient critical care respirator. 1998-99.

**Internal seminar talks**

Internal seminar talks include one or more talks in each of the following:

- Universitat de Barcelona, Seminari de Probabilitats
- University of North Texas
  - Mathematics Colloquium, Stochastic Lunch Seminar, Graduate Student Seminar
- Purdue University
  - Mathematics Advisory Board Council, Statistics Advisory Board Council, Statistics Colloquium, Probability Seminar, VIGRE-GAAN Seminar, Computational Finance Seminar, Science Freshman Honors Seminar, Mathematics Bridge to Research seminar, College of Science Great Issues course, Department of Agricultural Economics Colloquium.
- Michigan State University
  - Statistics and Probability Colloquium, FRIB Theory Group seminar, Probability Seminar, Quantum Information Science Forum, Physics and Astronomy Colloquium.

## Other Professional Activity

1. Committee on Special Lectures, *Institute of Mathematical Statistics*, 2021-2024.
2. Long-term Scientific Committee Moderator of the *Seminar on Stochastic Processes*, 2017-present.
3. Founding Editor and Editor-in-Chief for *High Frequency*, 2016-2019.
4. Associate Editor for:
   - *The Annals of Finance*, 2005-present
   - *Communications on Stochastic Analysis/Journal of Stochastic Analysis*, 2007-present
   - *Stochastics and Dynamics*, 2010-present
   - *The Annals of Probability*, 2011-2018.
   - *ALEA (Latin-American Journal of Probability and Mathematical Statistics)*, 2012-2022.
   - *Stochastics*, 2015-present
   - *Bernoulli*, 2016-present
   - *Electronic Journal of Statistics*, 2016-present
5. Series Editor for:
   - *Frontiers in Probability and the Statistical Sciences*, Springer V. series
6. Reviewer of manuscripts for the following professional journals:
   - Journals on probability and stochastic processes, including:
     *Annales de l'Institut Henri Poincaré (Prob & Math Stat), Stochastic Processes and Applications, Annals of Probability, Annals of Applied Probability, Electronic Journal of Probability, European Series in Applied and Industrial Mathematics: Probability and Statistics, Communication on Stochastic Analysis, Journal of Theoretical Probability, Stochastics, Stochastics and Dynamics, Journal of Stochastic Analysis and Applications, Probability Theory and Related Fields*
   - Journals on statistics, including:
     *Annals of Statistics, Statistics and Probability Letters, Statistics, ESAIM Probability and Statistics*
   - Journals on quantitative and mathematical finance and insurance, and econometrics
     *Annals of Finance, Econometric Theory, Economic Theory, Quantitative Finance, International Journal of Theoretical and Applied Finance, Insurance: Mathematics and Economics, Scandinavian Actuarial Journal.*
   - Journals on other branches of the mathematical sciences, including
     *Journal of Functional Analysis, Advances in Applied Mathematics, Potential Analysis, Electronic Journal of Differential Equations, Applied Mathematics and Optimization, Journal of Mathematical Analysis and Applications, Discrete and Continuous Dynamics Systems*
   - Journals of wide scope in the mathematical sciences, including:
     *Canadian Journal of Mathematics, Rocky Mountain Journal of Mathematics, Journal of the American Mathematical Society, Revista Matematica Iberoamericana*
   - Journals on physics and engineering
     *Journal of Physics A (mathematical and general), International Journal of Control, Automation, and Systems, Signal Processing*
   - Journals on earth sciences
     *Nature Communications, Geophysical Research Letters*
7. Reviewer of book manuscripts for: Brooks Cole, Houghton Mifflin, Springer Verlag.

8. National Science Foundation, Panel Review member
    - Division of Mathematical Sciences, one panel in each of the following years: 2007, 2009, 2010, 2011, 2013, 2021, two panels in 2019.
    - Division of Graduate Education: one panel in each of the following years: 2009, 2011.
9. National Science and Engineering Research Council (NSERC, Canada),
    - Chair, Pure Math Section, Grant Selection Committee member for Mathematics and Statistics, 2011-2012
    - Grant Selection Committee member for Mathematics and Statistics, 2009-2011.
    - Grant Selection Committee member for Mathematics, 2008-2009.
10. U.S. Civilian Research & Development Foundation, Grant Selection Committee for Mathematics, 2010.
11. National Defense Science and Engineering Graduate Fellowship program, Panel Review member, 2011, 2012.
12. Reviewer of grant proposals for:
    - *National Science Foundation*
    - *National Security Agency*
    - *National Science and Engineering Research Council (NSERC, Canada)*
    - *Mathematics of Information Technology and Complex Systems (MITACS, Canada)*
    - *U.S. Civilian Research & Development Foundation*
    - *Simons Foundation Collaboration Grants for Mathematicians*
    - *National Fund for Scientific and Technological Development (FONDECYT, Chile)*
    - *American Society for Engineering Education*
13. Reviewer for
    - *Mathematical Reviews*
14. Book review for
    - *Mathematical Reviews*, Feynman-Kac Formulae: Genealogical and Interacting Particle Systems with Applications, Pierre del Moral. 2004.
    - *J. Amer. Stat. Assoc.*, **97**, no. 460: Stochastic Processes from Physics to Finance, W. Paul and J. Baschnagel. Springer V. 1999.
15. Conference and Seminar Organizer and co-organizer:
    - Information and Statistics in Nuclear Experiment and Theory (ISNET 8), Facility for Rare Isotope Beams, *Michigan State University*, Dec 13-16, 2021 (hybrid).
    - Information and Statistics in Nuclear Experiment and Theory (ISNET 7), Facility for Rare Isotope Beams, *Michigan State University*, Dec 14-17, 2020 (online).
    - Simon Conference for Young Researchers in Risk Management and Insurance: *Michigan State University*, Nov 22-23, 2019.
    - Michigan State Symposium on Mathematical Statistics and Applications: From Time Series and Stochastics, to Semi- and Non-Parametrics, and to High-Dimensional Models, *Michigan State University*, Sep 14-16, 2018.

- 8th International Workshop on High-Dimensional Data Analysis, Marrakech, Morocco, April 9-13, 2018
- 7th Conference on High Frequency Finance and Data Analytics: Nov 2-4, 2016, *Stevens Institute of Technology*, Hoboken NJ.
- Seminar on Stochastic Processes, March 16-19, 2016 *University of Maryland,* College Park, MD.
- Special session on Stochastic Processes and Stochastic PDEs, *American Mathematical Society Eastern Sectional Meeting*, Georgetown University, Washington, DC, March 7-8, 2016.
- 6th Conference on High Frequency Finance and Data Analytics: Oct 29-31, 2015, *Stevens Institute of Technology*, Hoboken NJ.
- *Seminar on Stochastic Processes*, Scientific Committee permanent member since 2013.
- 5th Conference on Modeling High-Frequency Data in Finance, *Stevens Institute of Technology*, Hoboken, NJ, October 2013.
- 4th Conference on Modeling High-Frequency Data in Finance, *Stevens Institute of Technology*, Hoboken, NJ, August 2012.
- 8th International Purdue Symposium on Statistics, "Diversity in the Statistical Sciences for the 21st Century", Scientific committee member and co-organizer, *Purdue University*, June 20 - 24, 2012.
- Premières Journées de Probabilités et Statistique, *Ecole Nationale des Sciences Appliquées,* Scientific committee member, Marrakech, Morocco, December 15-17, 2011.
- International conference on Malliavin calculus and stochastic analysis, *University of Kansas*, March 19-21, 2011.
- Second Conference on Modeling High-Frequency Data in Finance, *Stevens Institute of Technology*, Hoboken, NJ, June 24-26, 2010.
- Stochastic Analysis Workshop, *Purdue University*, Sep 29 - Oct 1, 2009.
- *Purdue Probability Seminar*, Fall 2009.
- *Purdue Computational Finance Seminar*, Spring 2009
- Workshop on Differential equations driven by fractional Brownian motion as random dynamical systems. *Banff International Research Station*, Banff, Canada, Sep 28 - Oct 5, 2008.
- Malliavin Calculus and Applications, *Kent State University*, August 7-12, 2008, Kent, OH.
- International conference on stochastic analysis: from mathematical physics to mathematical finance, *Princeton University*, June 13-15, 2008.
- *Purdue Probability Seminar*, Fall 2007.
- Special Session on Financial Mathematics, *Stochastic Processes and Applications conference, University of Illinois*, Aug 6-10, 2007.
- Kent-Purdue Minisymposium on Financial Mathematics, *Kent State University*, April 27-28, 2007, Kent, OH.
- Second Purdue Minisymposium on Financial Mathematics, *Purdue University*, April 15-16, 2005, West Lafayette, IN.
- Scientific program committee Chair, *26th Midwest Probability Colloquium*, Evantston, IL, Oct 15-17, 2004.
- *Purdue Probability Seminar*, Fall 2004 - Spring 2006.
- First Purdue Minisymposium on Financial Mathematics, *Purdue University*, April 3, 2003, West Lafayette, IN.
- Special session on Stochastic Analysis with Applications, *American Mathematical Society Sectional Meeting,* April 4-6, 2003, Bloomington, IN.
- *Purdue Computational Finance Seminar*, 2000-2003.
- Special session on Probability, *4th Joint Meeting of the American Mathematical Society and the Sociedad Matemática Mexicana*, May 19-24, 1999, Denton, TX.

## Postdoctoral mentees

| *Name* | *Subject, location* | *Dates* | *Mentor* | *Current Affiliation* |
|---|---|---|---|---|
| Ciprian Tudor | Probability, Purdue | Jan-May 2002 | Viens | U. Paris Sorbonne (Prof. w/ tenure) |
| Oana Mocioalca | Probability, Purdue | 2002-2004. | Viens | Kent St. U. (Assoc Prof. w/ tenure) |
| Léo Neufcourt | Statistics, Nuclear Phys, Family Medicine, MSU | Aug 2016 - Aug 2019 | Nazarewicz, Maiti, Viens | UC Santa Barbara (Asst. Prof.) |
| Dennis Ikpe | Prob., finance, MSU | May 2018 - pres. | Viens | MSU Statistics and Probability |
| Alireza Boloori | Statistics, Family Medicine, MSU | Aug 2019 - May 2021 | Arnetz,Arnetz Maiti, Viens | MSU Statistics and Probability MSU Family Medicine |
| Huanqun Jiang | Prob., Statistics, MSU | Nov 2019 - May 2020. | Viens | |
| Pablo Giuliani | Bayesian Statistics, Nuclear Physics, MSU | Jan 2021 - Dec 2023 | Nazarewicz, Maiti, Viens | MSU FRIB and Statistics Dept. |
| Ann Bybee-Finley | Bayesian Statistics, Agro-ecology, MSU | Jan 2021 - Dec 2023 | Snapp, Viens | MSU Statistics and Soil Sci. Depts. |

## Other visitors mentored

| *Name* | *Fellowship Program* | *Dates* | *Mentor* | *Home Affiliation* |
|---|---|---|---|---|
| Bo Yi, Ph.D. student | China Scholar. Council | 8/2012-12/2013 | Viens | Sun Yat-Sen U. Guangzhou, China |
| Jicheng Liu, Assoc Pr. | China Scholar. Council | 11/2012-8/2013 | Viens | Huazong UST, Wubei, China. |
| K. Essebaiy, Assoc Pr. | Fulbright Research Schol. | Jan-May, 2014 | Viens | University of Kuwait |
| Léo Neufcourt, MS st. | Stage Polytechnique | May-July 2013 | Viens | Columbia U. & E. Polytechnique, France |
| Xiaohui Wang, Ph.D. st. | China Scholar. Council | 10/2013-4/2015 | Viens | South China University of Technology |
| Héctor Araya, Ph.D. st. | Conicyt Graduate Fellow | 1/2015-3/2015 | Viens | Universidad de Valparaíso, Chile |
| Ashraf Noumir, Ph.D. st. | Joint Supervis. Schol. | 12/2014-12/2015 | Viens | American University in Cairo, Egypt |
| Ailing Gu, Assoc. Pr. | China Scholar. Council | 8/2015-2/2017 | Viens | University of Guangzhou, China |
| Olivier Coudray, MS st. | Stage Polytechnique | April-Aug 2018 | Viens | Ecole Polytechnique, France |
| Julien Chhor, MS st. | Stage Polytechnique | April-Aug 2018 | Viens | Ecole Polytechnique, France |
| Clément Mantoux, MS st. | Stage Polytechnique | April-Aug 2018 | Viens | Ecole Polytechnique, France |
| Ruihua Ruan, MS st. | Stage Polytechnique | April-Aug 2018 | Viens | Ecole Polytechnique, France |
| Luyi SHEN, MS st. | Stage Polytechnique | April-Aug 2018 | Viens | Ecole Polytechnique, France |
| Dennis Ikpe, Ph.D. | Teaching develop. grant | May-July 2018 | Viens | U. of South Africa, U. of Pretoria |
| Kamran Kalbasi, Ph.D. | Independent visit | May-July 2018 | Viens | Ecole Polytech. Fed. Lausanne, Switz. |
| Jonathan Hillman, REU | NSF REU | May-July 2019 | Viens | University of Virginia |
| Maggie Isaacson, REU | NSF REU | May-July 2019 | Viens | Northern Arizona University |
| Innocensia Festo John Massao, Ph.D. | African Futures | 11/2019-present | Snapp, Viens | Department of Economics U. Dar es Salaam, Tanzania |
| Youssef Hakiki | Independent visit | 06/2022-present | Viens | U. Cadi Ayyad, Marrakech, Morocco |
| Pierre-Antoine Cheminot | Stage ENSTA ParisTech | 05/2022-08/2022 | Viens | ENSTA ParisTech, France |

## MS Major Advisor

Viens graduated over 100 MS students in Computational Finance.at Purdue, from 2000 to 2015

## Ph.D. major advisor

| *Name* | *Subject* | *Ph.D. date* | *Advisor* | *Current Affiliation* |
|---|---|---|---|---|
| Ionut Florescu | Stat | Dec 2004 | Viens | Stevens Inst. of Tech. (research associate professor) |
| Yalcin Sarol | Math | Aug 2005 | Viens | U. Southern Indiana (associate professor, tenured) |
| Tao Zhang | Math | Dec 2006 | Viens | Bank of America, NYC (investment banker) |
| A. Vizcarra | Math | May 2008 | Viens | D5 Advisors, CT (hedge fund manager) |
| A. Chronopoulou | Stat | Dec 2009 | Viens | University of Illinois (assistant prof. tenure track) |
| Nikita Tuzov | Stat | May 2009 | Viens | AEGON Risk Group, Baltimore (financial engineer) |
| Ha-Young Kim | Math | May 2010 | Viens | Samsung Research and Development (mathematician) |
| Joseph Zadeh | Math | May 2012 | Viens | Greenplum Analytics (massive data scientist) |
| Richard Eden | Math | Aug 2012 | Viens | Ateneo de Manila University (tenure track) |
| Luis Barboza | Stat | Dec 2012 | Bo Li / Viens | Universidad de Costa Rica (tenure track) |
| Jishnu Jaganathan | Math | May 2014 | Viens | Unknown |
| Rolando Navarro | Stat | Dec 2015 | Viens | Options Clearing Corp., Chicago (quant researcher) |
| Yankeng Luo | Math | May 2015 | Figueroa / Viens | Virginia Commonwealth University (instructor) |
| Baron Law | Stat | May 2015 | Viens | Deloitte, NY (quantitative modeler) |
| Xin Zhang | Math | Aug 2016 | Viens | Unknown |
| Fatimah Alshahrani | Stat | Aug 2020 | Viens | Pr. Nora bint Abdulrahman Univ. Riyadh, Saudi Arabia (tenure track) |
| Han Wang | Stat | Aug 2020 | Viens | Wistar Institute, Philadelphia, PA (research statistician) |
| Vojtech Kejzlar | Stat | Aug 2020 | Maiti / Viens | Skidmore College, Saratoga Spr., NY (tenure track) |
| Soukaina Douissi | Math | Dec 2019 | Es-Sebaiy/Viens | Univ. Cadi Ayyad, Marrakech, Morocco (tenure track) |
| Sarah Manski | Stat | TBD | Viens | Michigan State University (Ph.D. student) |
| Gina Pizzo | Stat | TBD | Viens | Michigan State University (Ph.D. student) |

## Graduate committee member for local Ph.D. students

| *Name* | *Subject* | *Degree* | *Advisor* |
|---|---|---|---|
| Bryan Scott | Civil Engr | Ph.D. 2002 | R. Salgado |
| Adam Maung | AgEcon | Ph.D. 2001 | K. Foster |
| Xiaodong Sun | Math | Ph.D. 2001 | J. Ma |
| Jianfeng Zhang | Math | Ph.D. 2001 | J. Ma |
| Xiang Long | Math | Ph.D. 2001 | Ph. Protter |
| Kiseop Lee | Stat | Ph.D. 2002 | Ph. Protter |
| Olga Korosteleva | Stat | Ph.D. 2002 | T. Sellke |
| M, Niederhausen | Math | Ph.D. 2005 | J. Ma |
| Yuping Liu | Math | Ph.D. 2005 | J. Ma |
| F. Piera Ugarte | ECE | Ph.D. 2005 | R. Mazumdar |
| Yuhua Yu | Math | Ph.D. 2006 | J. Ma |
| Yujuan Jien | Math | Ph.D. 2008 | J. Ma |
| Xinyi Tu | Soil Sci. | Ph.D. 2021 | S. Snapp |
| Julián Venegas | Comp Math | Ph.D. TBD | Y. Xie |
| Jinguang (Tony) Li | Stat | Ph.D. 2008 | M. Levine |
| Song Yao | Math | Ph.D. 2008 | J. Ma |
| Yusun Wang | Math | Ph.D. 2009 | J. Ma |
| Jongyin Daye | Stat | Ph.D. 2009 | M. Zhu |
| Shan Yang | Math | Ph.D. 2009 | J. Ma |
| Juan Jose Viquez | Math | Ph.D. 2012 | F. Baudoin |
| Junha Woo | ECE | Ph.D. 2006 | I. Pollack |
| J. Chavez-Casillas | Math | Ph.D. 2014 | J.E. Figueroa |
| Shuai Chen | Stat | Ph.D. 2012 | M. Levine |
| Jeff Gaither | Math | Ph.D. 2014 | M. Ward |
| Jeff Nisen | Stat | Ph.D. 2013 | J.E. Figueroa |
| Sveinn Olafsson | Stat | Ph.D. 2014 | J.E. Figueroa |
| M. Gopaladesikan | Stat | Ph.D. 2014 | M. Ward |
| Jinwoo Hwang | Math | Ph.D. 2015 | F. Baudoin |
| Thien-Minh Le | Stat | Ph.D. 2020 | P. Zhong |

## Graduate committee member for Ph.D. students at other universities

| *Name* | *Subject* | *Degree* | *Advisor* | *University* |
|---|---|---|---|---|
| Solesne Bourgain | Mathematics | Ph.D. 2011 | C.A. Tudor | U. Paris Sorbonne, France |
| Peng Hu | Mathematics | Ph.D. 2012 | P. Del Moral | U. Toulouse, France |
| Jorge Clarke | Math. Engineering | Ph.D. 2013 | Torres, Tudor, Rodriguez | U. Valparaíso, Chile |
| Benjamin Arras | Math, Engineering | Ph.D. 2014 | Jacques Lévy-Véhel | INRIA / E. Centrale Paris, France |
| Ashraf Noumir | Agri. Economics | Ph.D. 2020 | Michael Langemeier | Purdue University |
| Salwa Bajja | Mathematics | Ph.D. 2018 | I. Ouassou | U. Cadi Ayyad, Marrakech, Morocco |
| Yassine Esmili | Mathematics | Ph.D. 2020 | Antoine Ayache | Université de Lille, France |
| Youssef Hakiki | Mathematics | Ph.D. TBA | Mohamed Ouahabbi | U. Cadi Ayyad, Marrakech, Morocco |

## External funding

| Sponsor | Title | Start and Duration | Amount | Role and Location |
|---|---|---|---|---|
| **Fundação de apoio à pesquisa do DF resch grant (Brazil)** | Rough Paths, Malliavin calculus, and related topics | Jan 2022 2 years | **BRL 150,000** | **Co-PI** (50%) MSU/Brasilia |
| **USDA / NIFA research grant** | Optimizing the use of High-Throughput Phenotyping in Genetic Evaluations Using Penalized Selection Indices | Jan 2021 3 years | **500,000** | **Co-PI** (17%) MSU |
| **NSF Research Grant, Cyberinfrastructure** | CSSI Frameworks: Bayesian Analysis of Nuclear Dynamics | July 2020 5 years | **3,424,000** | **Co-PI** (33%) Ohio Univ.; MSU |
| **NSF Research Grant, Statistics Program** | Exact & Asymptotic Distribution Thry for General Gaussian Processes | Aug 2018 3 years | **250,000** | **Co-PI** (50%) Rice Univ.; MSU |
| **USDA / NIFA research grant** | Synthesizing data from a network of long-term diversified cropping system experiments to reduce producer risk in an uncertain climate | Feb 2020 5 years | **500,000** | **Co-PI** (20%) MSU |
| **NSF conference grant** | MSU symposium on math statistics | May 2018 1 year | **25,000** | **PI** MSU |
| **ONR Research grant** | Statistical inference for stochastic processes with correlations | May 2018 3 years | **311,000** | **Co-PI** (33%) Rice Univ.; MSU |
| **NSF Research Grant, Probability Program** | Topics in stochastic analysis and Malliavin calculus | July 2014 5 years | **150,000** | **PI** Purdue; MSU |
| **NSF conference grant** | 5th Conference on Modeling High Frequency Data in Finance | Oct 24-6 2013 | **40,000** | **Co-PI** Stevens Inst. |
| **NSF conference grant** | 4th Conference on Modeling High Frequency Data in Finance | Aug 16-19 2012 | **44,410** | **Co-PI** Stevens Inst. |
| **Purdue U, Engagement Leave travel grant** | Franklin Fellow / Science Adviser U.S. Department of State | Sep 2010 9 months | **30,000** | **Fellow** U.S. Dept. State |
| **NSF conference grant** | Int'l conference on Stochastic Analysis and Malliavin Calculus | Mar 19-21 2011 | **27,260** | **PI** U Kansas |
| **NSF conference grant** | Second Conference on Modeling High-Frequency Data in Finance | June 24-26 2010 | **25,000** | **Co-PI** Stevens Inst. |
| **NSF Research Grant, Probability Program** | Density and tail estimates via Malliavin calculus and applications | July 2009 4 years | **232,000** | **PI** Purdue Univ. |
| **NSF Research Grant, Probability Program** | Stochastic analysis and random medium in continuous space and time | July 2006 4 years | **375,000** | **PI** Purdue Univ. |
| **NSF conference grant** | International conference on stochastic analysis | June 13-15 2008 | **14,000** | **PI** Princeton |
| **NSF conference grant** | Kent-Purdue Minisymposium on Financial Mathematics | Apr 27-28 2007 | **8,500** | **Co-PI** Kent State |
| **NSF conference grant** | 2nd Purdue Minisymposium on Financial Mathematics | Apr 15-16 2005 | **7,500** | **PI** Purdue Univ. |
| **NSF Stand Rsch Grant, Probability program** | Stochastic PDEs: interrelation of local and long-term behavior, and representation | Sep 2002 4 years | **122,000** | **PI** Purdue Univ. |
| **Fulbright U.S. Scholar Lecturing/Research** | Stochastic PDEs: interrelation of local and long-term behavior | Feb 2004 4 months | **≅ 12,000** | **PI** Univ. Paris 13 |
| **NSF-NATO Postdoc. Fellowship** | Lyapunov exponents for linear systems of stochastic PDEs | Jan 1998 12 months | **42,749** | **PI** Univ. Paris 6 |
| **NSF Int'l Opport. Postdoc. Fellow** | Behavior of systems of stochastic PDEs | Sep 1996 12 months | **44,500** | **PI** Univ. Barcelona |
| **Hon. Fellow, Internship Program in Probability** | | Jun 1996 2 months | **6,000** | **Fellow** Univ. Wisconsin |

## Internal funding

| Sponsor | Title | Period | Amount | Role and Location |
|---|---|---|---|---|
| **Year of Global Africa minigrant** | Data management, curation and repositories in Africa | 2019 | $\mathbf{5,000}$ | **Co-PI** Michigan State |
| **Purdue faculty fellowship for study in a second discipline** | climate change and uncertainty quantification in agricultural economics | 2014-2015 | $\mathbf{22,500}$ | **PI** Purdue Univ. |
| **Purdue internal grants for research and travel** | over 10 proposals funded since 2001 | 2001 to 2015 | $> \mathbf{80,000}$ | **PI** Purdue Univ. |
| **UNT Junior Faculty and Research Initiation grants** | 5 proposals funded in 3 years for summer salary | 1998-2000 10 months | $\mathbf{20,300}$ | **PI** Univ. N. Texas |