

**CURRICULUM VITAE AND LIST OF PUBLICATIONS**  
**LIST OF INVITED LECTURES**

**Pierre-A. VUILLERMOT, Ph. D.,**

Emeritus Professor of Mathematics

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**Personal Data:**

Place of birth: Couvet (NE), Switzerland

Citizenships: French and Swiss

**Spoken and Written Languages:**

English, French, German, Italian, Portuguese.

**Fields of Research:**

Stochastic Analysis, Stochastic Differential Equations, Mathematical Physics.

**Education:**

Undergraduate studies:

*October 1967-October 1971:* Swiss Institute of Technology (ETHZ), Zürich; degree in Physics received in October 1971.

Graduate studies:

*January 1972-November 1974:* University of Neuchâtel; Ph.D. in Mathematical Physics received in November 1974.

**Employment:**

*November 1974-October 1975:* Research Fellow, University of Neuchâtel.

*November 1975-August 1978:* Research Scientist, Princeton University; partially supported by a grant from the Swiss National Science Foundation for Scientific Research.

*September 1978-August 1980:* Instructor in Mathematics, Georgia Institute of Technology, Atlanta.

*September 1980-August 1983:* Assistant Professor of Mathematics, Emory University, Atlanta.

*September 1983-August 1985:* Assistant Professor of Mathematics, University of Texas, Arlington.

*September 1985-August 1989:* Associate Professor of Mathematics, University of Texas, Arlington.

*September 1989-August 1994:* Full Professor of Mathematics, University of Texas, Arlington.

*October 1992-August 1994:* Full Professor of Mathematics, University of Metz and University of Nancy 1, while on leave from the University of Texas at Arlington.

*September 1994-August 2014:* Full Professor of Mathematics, University Henri-Poincaré, Nancy, which became part of the newly created University of Lorraine as of January 2012.

*As of September 2014:* Emeritus Professor of Mathematics at the University of Lorraine.

*January 2017-December 2019:* Visiting Professor of Mathematics, University of Lisbon.

*January 2020-December 2023:* Integrated Member GFM, University of Lisbon.

*As of January 2024:* Integrated Member CMAFcIO, University of Lisbon.

**Short-Term Appointments:**

*Summer semester 1982:* Department of Mathematics and Department of Physics, University of São-Paulo.

*Summer semester 1985:* Mathematics Research Center, ETHZ, Zürich.

*Summer semester 1986:* Mathematics Research Center, ETHZ, Zürich; Department of Mathematics, University of Oulu.

*Summer semester 1987:* Department of Mathematics, University of Trento.

*Summer semester 1988:* Mathematics Research Center, ETHZ, Zürich.

*Winter semester 1988:* Department of Mathematics, University of Trento.

*Summer semester 1989:* Department of Mathematics, University of Trento; Department of Mathematics, University of Oulu.

*Academic years 1989-1991:* Max-Planck Institute, Bonn.

*Summer semester 1992:* Mathematics Research Center, ETHZ, Zürich.

*Summer semester 1994:* Department of Mathematics, University of Bayreuth.

*Summer semester 1995:* Institute for Mathematics and its Applications, University of Minnesota, Minneapolis.

*Summer semester 1996:* Department of Mathematics, University of California, Santa Cruz.  
*Winter semester 1996:* Mathematics Research Center, ETHZ, Zürich.  
*Winter semester 1997:* Mathematical Sciences Research Institute, MSRI, Berkeley.  
*Winter semester 1998:* Mathematics Research Center, ETHZ, Zürich.  
*Winter semester 1999:* Center for Dynamical Systems and Nonlinear Studies, Georgia Institute Of Technology, Atlanta; Department of Mathematics, ETHZ, Zürich.  
*Summer semester 2000:* Mathematics Research Center, ETHZ, Zürich.  
*Winter semester 2000-2001:* Mathematics Research Center, University of Barcelona.  
*Summer semester 2001:* Mathematics Research Center, ETHZ, Zürich.  
*Winter semester 2001-2002:* Mathematics Research Center, University of Barcelona.  
*Summer semester 2002:* Mathematics Research Center, ETHZ, Zürich.  
*Winter semester 2002-2003:* Mathematics Research Center, University of Barcelona.  
*Summer semester 2003:* Mathematics Research Center, ETHZ, Zürich.  
*Winter semester 2003-2004:* Mathematics Research Center, University of Barcelona.  
*Summer semester 2004:* Mathematics Research Center, ETHZ, Zürich.  
*Winter semester 2004-2005:* Mathematics Research Center, University of Barcelona.  
*Summer semester 2005:* Institute for Theoretical Physics and Mathematics Research Center, ETHZ, Zürich, and Department of Mathematical Physics, University of São Paulo.  
*Summer Semester 2006:* Institute for Theoretical Physics, ETHZ, Zürich, and Department of Mathematical Physics, University of São Paulo.  
*Winter semester 2006-2007:* Mathematics Research Center, University of Barcelona.  
*Summer Semester 2007:* Institute for Theoretical Physics, ETHZ, Zürich.  
*Winter Semester 2008:* Department of Mathematical Physics, University of São Paulo.  
*Summer Semester 2008:* Mathematics Research Center, ETHZ, Zürich.  
*Summer Semester 2009:* Institute for Theoretical Physics, ETHZ, Zürich, Institute for Interdisciplinary Research, University of Lisbon.  
*Summer Semester 2010:* Mathematics Research Center, ETHZ, Zürich, Institute for Interdisciplinary Research, University of Lisbon.  
*Summer Semester 2011:* Mathematics Research Center, ETHZ, Zürich, Institute for Interdisciplinary Research, University of Lisbon.  
*Summer Semester 2012:* Mathematics Research Center, ETHZ, Zürich, Institute for Interdisciplinary Research, University of Lisbon.  
*Summer Semester 2013:* Institute for Interdisciplinary Research, University of Lisbon.  
*Summer Semester 2014:* Institute for Interdisciplinary Research, University of Lisbon.  
*Winter Semester 2014:* Mathematics Research Center, ETHZ, Zürich.  
*Summer Semester 2015:* Institute for Interdisciplinary Research, University of Lisbon.  
*Winter Semester 2015:* Mathematics Research Center, ETHZ, Zurich.  
*Summer Semester 2016:* Mathematics Department, University of Lisbon.

### **Research Grants and Awards:**

*Academic years 1975-1978:*

- (1) Grant from the Ministry of Education of the Canton of Neuchâtel.
- (2) Grant from the Holderbank Foundation for Scientific Research.
- (3) Grant from the Swiss National Science Foundation.

*Academic years 1978-1980:* Grant from the von Humboldt Foundation (declined).

*Academic year 1980-1981:*

- (1) Grant from the Woodruff Foundation of Emory University.
- (2) Grant from the U.S. Department of Energy.

*Academic year 1982-1983:* Grant from the U.S. National Science Foundation.

*Academic year 1983-1984:* Summer grant from the University of Texas, Arlington.

*Academic year 1985-1986:* Grant from the Finnish Academy of Sciences.  
*Academic year 1986-1987:* Grant from the Italian Science Foundation (CNR).  
*Academic year 1987-1988:* Grant from the Italian Science Foundation (CNR).  
*Academic year 1988-1989:* Grants from the Italian Science Foundation (CNR) and from the Finnish Academy of Sciences.  
*Academic years 1989-1991:* Fellow of the Max Planck Society.  
*Academic year 1997-1998:* Research Professorship Award from the Mathematical Sciences Research Institute, MSRI, Berkeley.  
*Academic years 2000-2002:* Grant from the Spanish Ministry of Education.  
*Academic years 1994-2006:* Grant from the French Ministry of Education.

### **Editorial Activities:**

Editorial Board Member for Stochastic Analysis and Applications.

## **List of Publications**

### **I - Articles and Books:**

1. (With Romerio M. V.) *Exact Solution of the Maier-Saupe Model for a Nematic Liquid Crystal on a One-Dimensional Lattice*, Journal of Physics C. Solid State Physics 6 (1973): 2922-2930.
2. (With Romerio M. V.) *On Some Classical Vector Models in Statistical Mechanics*, Journal of Physics C. Solid State Physics 7 (1974): 1033-1045.
3. (With Romerio M. V.) *Absence of Long-Range Order for a Class of Two-Dimensional Systems*, Proceedings of the Third International Colloquium on Group Theoretical Methods in Physics, Publication CNRS, Marseille (1974): 153-159.
4. (With Romerio M. V.) *Absence of Ordering in a Class of Lattice Systems*, Communications in Mathematical Physics 41 (1975): 281-288.
5. (With Kunz H. and Pfister C. E.) *Correlation Inequalities for Some Classical Spin Systems*, Physics Letters 54A, 6 (1975): 428-430.
6. *Quelques Résultats Rigoureux en Mécanique Statistique, Applications au Problème des Changements de Phase* (1975), Lang Druck AG-Bern.
7. (With Kunz H. and Pfister C. E.) *Inequalities for Some Classical Spin Vector Models*, Journal of Physics A. Mathematical and General 9 (1976): 1673-1683.
8. *Absence of Ordering in a Class of Random Spin Systems, Including Simple Models for Spin Glasses and a New Inequality for Random Ferromagnets*, Physics Letters 61A (1977): 9-12.
9. *Thermodynamics of Quenched Random Spin Systems and Application to the Problem of Phase Transitions in Magnetic (Spin) Glasses*, Journal of Physics A. Mathematical and General 10 (1977): 1319-1333.

10. *Intertwining Relations Between the Dynamics of the Infinite Classical and Quantum Heisenberg Models: A New Application of Trotter Approximations and of the Coherent State Formalism*, Lettere Al Nuovo Cimento 24 (1979): 333-338.
11. (With Bountis T. C., Eminhizer C. R. and Helleman R. H. G.) *Variational Studies of the Beam-Beam Interactions*, Proceedings of the Symposium on the Physical and Mathematical Aspects of Beam-Beam Interactions, Brookhaven Report, BNL 25703, Brookhaven National Laboratory, Upton (1979): 35-59.
12. (With Sarbach S.) *Phase Transitions in Quantum X-Y and Heisenberg Models: Critique of N. Szabo's Discussion*, Helvetica Physica Acta 52 (1979): 230-237.
13. *Nonlinear Dynamics of the Infinite Classical Heisenberg Model and Classical Limit of the Corresponding Quantum Time Evolution*, Communications in Mathematical Physics 76 (1980): 1-26.
14. *Nonlinear Hill's Equations and the Beam-Beam Interaction*, Proceedings of the Seminar of the Beam-Beam Interaction, Stanford Linear Accelerator Center-Publication, Conference 8005102 (1980): 312-331.
15. *Solution of a Nonlinear Sturm-Liouville Eigenvalue Problem and the Question of Motion Stability in Intersecting Storage Rings*, Lettere al Nuovo Cimento 33 (6) (1982): 154-158.
16. *A Class of Orlicz-Sobolev Spaces with Applications to Variational Problems Involving Nonlinear Hill's Equations*, Journal of Mathematical Analysis and Applications 89 (1) (1982): 327-349.
17. *One-Parameter Families of Sturm-Liouville Eigenfunctions and of Periodic Solutions for a Class of Nonlinear Hill's Equations*, Journal of Mathematical Analysis and Applications 97 (1) (1983): 21-37.
18. *A Class of Sturm-Liouville Eigenvalue Problems with Polynomial and Exponential Nonlinearities*, Journal of Nonlinear Analysis: Theory, Methods, and Applications 8 (7) (1984): 775-796.
19. *A Class of Elliptic Partial Differential Equations with Exponential Nonlinearities*, Mathematische Annalen 268 (4) (1984): 497-518.
20. *A Class of Isoperimetric Variational Problems on Certain Orlicz-Sobolev Spaces*, Proceedings of the Second UAB International Conference on Differential Equations, I. Knowles and R. Lewis, editors, North-Holland Mathematics Studies 92 (1984): 553-559.
21. *Remarks on Some Strongly Nonlinear Degenerate Sturm-Liouville Eigenvalue Problems*, Proceedings of the 6th UTA International Conference on Trends in Theory and Practice of Nonlinear Analysis, V. Lakshmikantham, editor, North-Holland Mathematics Studies 110 (1985): 441-444.
22. *Non-Existence de Vibrations Libres Localisées pour Certaines Equations des Ondes Semilinéaires sur  $R^2$* , Comptes Rendus de l'Académie des Sciences de Paris 303, I (1986): 395-398.

23. *Existence and Regularity Theory for Isoperimetric Variational Problems on Orlicz-Sobolev Spaces : A Review*, Proceedings of the AMS-SIAM Summer Seminar on Nonlinear Systems of Partial Differential Equations in Applied Mathematics, B. Nicolaenko, D.D. Holm, J.M. Hyman, editors, AMS-Lectures in Applied Mathematics 23 (2) (1986): 109-122.
24. *On a Class of Strongly Nonlinear Dirichlet Boundary-Value Problems: Beyond Pohozaev's Results*, Nonlinear Functional Analysis and its Applications, F. Browder, editor, Proceedings of Symposia in Pure Mathematics 45 (2) (1986): 521-525.
25. *Hölder-Regularity for the Solutions of Strongly Nonlinear Eigenvalue Problems on Orlicz-Sobolev Spaces*, Houston Journal of Mathematics 13 (2) (1987): 281-287.
26. *Elliptic Regularization for a Class of Strongly Nonlinear Degenerate Eigenvalue Problems on Orlicz-Sobolev Spaces I: The ODE Case*, Houston Journal of Mathematics 13 (4) (1987): 573-597.
27. *Nonexistence of Spatially Localized Free Vibrations for a Class of Nonlinear Wave Equations*, Commentarii Mathematici Helvetici 62 (4) (1987): 573-586.
28. *Compact Embeddings for Weighted Orlicz-Sobolev Spaces on  $R^N$* , Mathematische Annalen 279 (2) (1987): 277-296.
29. *Spatially Localized Free Vibrations for Certain Semilinear Wave Equations on  $R^2$ : Recent Results and Open Problems*, Proceedings of the Third UAB International Conference on Differential Equations and Mathematical Physics, I. Knowles, Y. Saito, editors, Springer Verlag, Lecture Notes in Mathematics 1285 (1987): 493-499.
30. (With Scarpellini B.) *Variétés Stables et Instables pour Certaines Equations des Ondes Semilinéaires dans  $R^2$* , Comptes Rendus de l'Académie des Sciences de Paris 306, I (1988): 33-36.
31. *Variétés Lisses Associées à Certains Systèmes Dynamiques et Solitons Périodiques pour les Equations de Klein-Gordon Nonlinéaires sur  $R^2$* , Comptes Rendus de l'Académie des Sciences de Paris 307, I (1988): 639-642.
32. (With Scarpellini B.) *Smooth Manifolds for Semilinear Wave Equations on  $R^2$ : On the Existence of Almost-Periodic Breathers*, Journal of Differential Equations 77 (1) (1989): 123-166.
33. *Problèmes de Cauchy Multipériodiques et Solitons Quasipériodiques pour les Equations de Klein-Gordon Nonlinéaires sur  $R^2$* , Comptes Rendus de l'Académie des Sciences de Paris 308, I (1989): 215-218.
34. *Smooth Manifolds for Multiperiodic Cauchy Problems and Quasi-Periodic Solitons for Nonlinear Klein-Gordon Equations on  $R^2$* , Proceedings of the International Conference « Advanced Topics in the Theory of Dynamical Systems », G. Fusco, M. Iannelli, L. Salvadori, editors, Academic Press (1989): 247-251.
35. *Periodic Soliton Solutions to Nonlinear Klein-Gordon Equations on  $R^2$* , Differential and Integral Equations 3 (3) (1990): 541-570.

36. *Quasiperiodic Soliton Solutions to Nonlinear Klein-Gordon Equations on  $R^2$* , *Mathematische Zeitschrift* 203 (2) (1990): 235-253.
37. *Attracteurs Presque-Périodiques pour une Classe d'Equations Paraboliques Nonlinéaires du Type Réaction-Diffusion sur  $R^N$* , *Comptes Rendus de l'Académie des Sciences de Paris* 311, I (1990): 583-588.
38. *Almost-Periodic Attractors for a Class of Nonautonomous Reaction-Diffusion Equations on  $R^N$ , I. Global Stabilization Processes*, *Journal of Differential Equations* 94 (2) (1991): 228-253.
39. *A Geometric Theory for Semilinear Almost-Periodic Parabolic Partial Differential Equations on  $R^N$* , *Proceedings of the School on Qualitative Aspects and Applications of Nonlinear Evolution Equations*, P. de Mottoni, Li Ta-tsien, editors, World Scientific (1991): 185-201.
40. *Almost-Periodic Attractors for a Class of Nonautonomous Reaction-Diffusion Equations on  $R^N$ , II. Codimension-One Stable Manifolds*, *Differential and Integral Equations* 5 (3) (1992): 693-720.
41. *Small Divisors and the Construction of Stable Manifolds for Nonlinear Klein-Gordon Equations on  $R^+ \times R$* , *Proceedings of the International Workshop on Nonlinear Hyperbolic Equations*, M.K.V. Murthy, S. Spagnolo, editors, Pitman Research Notes in Mathematics (1992): 197-213.
42. *Global Exponential Attractors for a Class of Almost-Periodic Parabolic Equations on  $R^N$* , *Proceedings of the American Mathematical Society* 116 (3) (1992): 775-782.
43. *Variétés Inertielles et Stabilité de Liapounov pour une Classe d'Equations Paraboliques Semilinéaires Presque-Périodiques sur  $R^N$* , *Comptes Rendus de l'Académie des Sciences de Paris* 316, I (1993): 711-716.
44. *Almost-Periodic Attractors for a Class of Nonautonomous Reaction-Diffusion Equations on  $R^N$ , III. Center Curves and Liapounov Stability*, *Journal of Nonlinear Analysis: Theory, Methods and Applications* 22 (5) (1994): 533-559.
45. *Geometric Methods in Nonlinear Analysis: Two Examples from the Theory of Nonlinear Partial Differential Equations*, *Proceedings of the 3rd International Conference on Stochastic Processes, Physics and Geometry*, S. Albeverio, U. Cattaneo, D. Merlini, editors, World Scientific (1995): 697-710.
46. (With Bernfeld S. and Hu Y. Y.) *Homogénéisation Spatiale et Equivalence Asymptotique pour une Classe d'Equations Paraboliques Semilinéaires Non-Autonomes*, *Comptes Rendus de l'Académie des Sciences de Paris* 320, I (1995): 859-862.
47. (With Chueshov I. D.) *On the Large-Time Dynamics of a Class of Random Parabolic Equations*, *Comptes Rendus de l'Académie des Sciences de Paris* 322, I (1996): 1181-1186.
48. (With Chueshov I. D.) *On the Large-Time Dynamics of a Class of Parabolic Equations Subjected to Homogeneous White Noise: Stratonovitch's Case*, *Comptes Rendus de l'Académie des Sciences de Paris* 323, I (1996): 29-33.

49. (With Bernfeld S.) *Asymptotic Behavior of Solutions of Limiting Differential Equations*, in *Advances in Nonlinear Dynamics, Stability and Control Theory, Methods and Applications*, V. Lakshmikantham, A.A. Martynuk, S.S. Sivasundaram, editors, Gordon and Breach (1997): 23-32.
50. (With Chueshov I. D.) *Long-Time Behavior of Solutions to a Class of Quasilinear Parabolic Equations with Random Coefficients*, *Annales de l'Institut Henri-Poincaré, Analyse Nonlinéaire* 15 (2) (1998): 191-232.
51. (With Bernfeld S. and Hu Y. Y.) *Large-Time Asymptotic Equivalence for a Class of Non-Autonomous Semilinear Parabolic Equations*, *Bulletin des Sciences Mathématiques* 122 (5) (1998): 337-368.
52. (With Chueshov I. D.) *On the Large-Time Dynamics of a Class of Parabolic Equations Subjected to Homogeneous White Noise: Itô's Case*, *Comptes Rendus de l'Académie des Sciences de Paris* 326, I (1998): 1299-1304.
53. (With Chueshov I. D.) *Long-Time Behavior of Solutions to a Class of Stochastic Parabolic Equations with Homogeneous White Noise: Stratonovitch's Case*, *Probability Theory and Related Fields* 112 (2) (1998): 149-202.
54. (With Bergé B. and Chueshov I. D.) *Lyapunov Exponents and Stability for Nonlinear SPDE's Driven by Finite-Dimensional Wiener Processes*, *Comptes Rendus de l'Académie des Sciences de Paris* 329, I (1999): 215-220.
55. (With Chueshov I. D.) *Long-Time Behavior of Solutions to a Class of Stochastic Parabolic Equations with Homogeneous White Noise: Itô's Case*, *Stochastic Analysis and Applications* 18 (4) (2000): 581-615.
56. (With Bergé B. and Chueshov I. D.) *On the Behavior of Solutions to Certain Parabolic SPDE's Driven by Wiener Processes*, *Stochastic Processes and Their Applications* 92 (2) (2001): 237-263.
57. (With Sanz-Solé M.) *Hölder-Sobolev Regularity of Solutions to a Class of SPDE's driven by a Spatially Colored Noise*, *Comptes Rendus de l'Académie des Sciences de Paris* 334, I (2002): 869-874.
58. (With Sanz-Solé M.) *Equivalence and Hölder-Sobolev Regularity of Solutions for a Class of Non Autonomous Stochastic Partial Differential Equations*, *Annales de l'Institut Henri-Poincaré, Probabilités et Statistique* 39 (4) (2003): 703-742.
59. (With Chueshov I. D.) *Non-Random Invariant Sets for Some Systems of Parabolic Stochastic Partial Differential Equations*, *Stochastic Analysis and Applications* 22 (6) (2004): 1421-1486.
60. (With Nualart D.) *Variational Solutions for a Class of Fractional Stochastic Partial Differential Equations*, *Comptes Rendus de l'Académie des Sciences de Paris* 340, I (2005): 281-286.
61. (With Nualart D.) *A Stabilization Phenomenon for a Class of Stochastic Partial Differential Equations*, *Proceedings of the Seventh CIRM-International Conference on Stochastic Partial*



Differential Equations and Applications, Lecture Notes in Pure and Applied Mathematics Series, G. Da Prato, L Tubaro, editors, Chapman and Hall/CRC, 245 (2005): 215-227.

62. (With Nualart D.) *Variational Solutions for Partial Differential Equations Driven by a Fractional Noise*, Journal of Functional Analysis, 232 (2) (2006): 390-454.

63. (With Wreszinski W. F. and Zagrebnov V. A.) *A Trotter-Kato Product Formula for a Class of Non-Autonomous Evolution Equations*, Nonlinear Analysis: Theory, Methods and Applications, 69 (3) (2008): 1067-1072.

64. (With Sanz-Solé M.) *Mild Solutions for a Class of Fractional SPDEs and Their Sample Paths*, Journal of Evolution Equations, 9 (2) (2009): 235-265.

65. (With Wreszinski W. F. and Zagrebnov V. A.) *A General Trotter-Kato Formula for a Class of Evolution Operators*, Journal of Functional Analysis, 257 (7) (2009): 2246-2290.

66. *A Generalization of Chernoff's Product Formula for Time-Dependent Operators*, Journal of Functional Analysis, 259 (11) (2010): 2923-2938.

67. (With Wreszinski W. F.) *Product Approximations for Solutions to a Class of Evolution Equations in Hilbert Space*, Portugaliae Mathematica, 68 (3) (2011): 317-343.

68. (With Zambrini J. C.) *Bernstein Diffusions for a Class of Linear Parabolic Partial Differential Equations*, Journal of Theoretical Probability, DOI 10.1007/s10959-012-0426-3 (2012), and 27 (2) (2014): 449-492.

69. (With Petersen W. P.) *Product Approximations for a Class of Quantum Anharmonic Oscillators*, Zeitschrift für Angewandte Mathematik und Physik, DOI 10.1007/s00033-013-0346-9 (2013), and 65 (4) (2014): 613-643.

70. (With Cruzeiro A. B.) *Forward-Backward Stochastic Differential Equations generated by Bernstein Diffusions*, Stochastic Analysis and Applications, DOI 10.1080/07362994.2014.968669 (2014), and 33 (1) (2015): 91-109.

71. (With Zambrini J. C.) *On Some Gaussian Bernstein Processes in  $\mathbb{R}^N$  and the Periodic Ornstein-Uhlenbeck Process*, Stochastic Analysis and Applications, DOI 10.1080/07362994.2016.1156547 (2016), and 34 (4) (2016): 573-597.

72. *On the Time Evolution of Bernstein Processes associated with a Class of Parabolic Equations*, Discrete and Continuous Dynamical Systems Series B, DOI 10.3934/dcdsb.2018142 (2018) and 23 (3) (2018): 1073-1090.

73. (With Dozzi M. and Touibi R.) *Global Variational Solutions to a Class of Fractional SPDE's on Unbounded Domains*, Stochastic Analysis and Applications, DOI 10.1080/07362994.2018.1535320 (2018), and 37 (1) (2019): 57-73.

74. (With Zambrini J. C.) *On Bernstein Processes generated by Hierarchies of Linear Parabolic Systems in  $\mathbb{R}^D$* , Stochastic Processes and their Applications, DOI 10.1016/j.spa.2019.09.003 (2019), and 130 (5) (2020): 2974-3004.

75. *On Bernstein Processes of Maximal Entropy*, Stochastic Analysis and Applications, DOI 10.1080/07362994.2020.1733607 (2020), and 38 (5) (2020): 886-908.

76. (With Bögli S.) *A Spectral Theorem for the Semigroup generated by a Class of Infinitely Many Master Equations*, Acta Applicandae Mathematicae, DOI: 10.1007/s10440-022-00478-x (2022), and 178, 4 (2022).

77. (With Bögli S.) *On the Asymptotic Behavior of Solutions to a Class of Grand Canonical Master Equations*, Portugaliae Mathematica, DOI: 10.4171/PM/2102 (2023), and 80 (3/4) (2023): 269-289.

### **List of Invited Lectures:**

1. *Sur l'Existence de Transitions de Phase dans une Classe de Systèmes Réticulaires Bidimensionnels*, Mathematical Physics Seminar, Swiss Institute of Technology, Lausanne (1974).

2. *Correlation Inequalities for Classical Heisenberg Ferromagnets*, Yeshiva Meeting on Statistical Mechanics, New York (1975).

3. *Correlation Inequalities in Classical Statistical Mechanics with Applications to the Problem of Phase Transitions in Ferromagnets*, Mathematical Physics Seminar, Princeton University, Princeton (1976).

4. *Hamiltonian Dynamics of the Classical Heisenberg Ferromagnet*, Yeshiva Meeting on Statistical Mechanics, New York (1978).

5. *Ergodic Properties of Some Random Magnetic Systems*, Mathematical Physics and Probability Seminar, Cornell University, Ithaca (1978).

6. *Nonlinear Dynamics Generated by Some Hamiltonian Systems*, Regional Conference on Nonlinear Wave Theory, Clarkson College, Postdam (1979).

7. *Nonlinear Hill's Equations and the Beam-Beam Interaction*, Symposium on the Physical and Mathematical Aspects of Beam-Beam Interactions, Brookhaven National Laboratory, Brookhaven (1979).

8. *Nonlinear Dynamics and the Beam-Beam Interaction*, SLAC Symposium on the Beam-Beam Interactions, Palo Alto (1980).

9. *Nonlinear Hill's Equations: Some Recent Results*, Regional Conference on Differential Equations, VPI, Blacksburg (1981).

10. *Periodic Solutions to Nonlinear Hill's Equations*, Regional Conference on Differential Equations, NCSU, Raleigh (1982).

11. *Variational Problems on Nonreflexive Banach Spaces*, Colloquium at the IMPA, Rio de Janeiro (1982).

12. *Isoperimetric Variational Problems on Certain Orlicz-Sobolev Spaces*, Regional Conference on Differential Equations, UAB, Birmingham (1983).

13. *Sturm-Liouville Eigenvalue Problems with Polynomial and Exponential Nonlinearities*, Special Session on Differential Equations, AMS Annual Meeting, Denver (1983).
14. *A Class of Elliptic Partial Differential Equations with Exponential Nonlinearities*, AMS Summer School on Nonlinear Functional Analysis, UC Berkeley, Berkeley (1983).
15. *Variational Problems on Orlicz-Sobolev Spaces*, Texas Conference on Partial Differential Equations, San Marcos (1984).
16. *Sharp Regularity Results for Some Degenerate Sturm-Liouville Eigenvalue Problems*, Western States Mathematical Physics Conference, California Institute of Technology, Pasadena (1985).
17. *Sharp Regularity Results for Some Degenerate Sturm-Liouville Eigenvalue Problems*, Nonlinear Analysis Seminar, University of Basel, Basel (1985).
18. *Regularity Theory for Elliptic Systems on Orlicz-Sobolev Spaces*, Analysis Seminar, ETH Mathematics Research Center, Zürich (1985).
19. *Restored Compactness and Sharp Existence Results for Some Degenerate Elliptic Eigenvalue Problems*, Center for Nonlinear Studies (CNLS), Los Alamos (1985).
20. *Periodic Nonlinear Waves and Infinite-Dimensional Dynamical Systems*, Center for Nonlinear Studies (CNLS), Los Alamos (1985).
21. *New Nonexistence Results for Spatially Localized Free Vibrations of Some Nonlinear Wave Equations*, Session on the Calculus of Variations, Mathematical Institute, Oberwolfach (1986).
22. *Spatially Localized Free Vibrations of Certain Semilinear Wave Equations in  $R^2$ : Recent Results and Open Problems*, Nonlinear Analysis Seminar, University of Zürich, Zürich (1986).
23. *Solutions Périodiques Localisées pour Certaines Equations des Ondes sur  $R^2$  : Résultats Récents et Problèmes Ouverts*, Analysis Seminar, Swiss Institute of Technology, Lausanne (1986).
24. *Non-Existence of Soliton Bound States for Some Nonlinear Wave Equations*, BBC Research Center, Dättwil (1986).
25. *Some Recent Results on Nonlinear Elliptic and Hyperbolic Partial Differential Equations*, Colloquium at the University of Oulu, Oulu (1986).
26. *Sur l'Existence de Vibrations Libres Presque-Périodiques à Profils Exponentiellement Décroissants pour Certaines Equations des Ondes sur  $R^2$* , Mathematical Physics Seminar, University of Geneva, Geneva (1987).
27. *Compact Embeddings for Weighted Orlicz-Sobolev Spaces on  $R^N$* , Colloquium at the University of Basel, Basel (1987).
28. *Invariant Manifolds for Certain Semilinear Wave Equations: Existence of Almost-Periodic Breathers*, International Conference on Dynamical Systems, University of Trento, Trento (1987).

29. *Invariant Manifolds for Certain Semilinear Wave Equations on  $R^2$ : Some Recent Results*, Mathematical Physics Seminar, University of Trento, Trento (1987).
30. *Invariant Manifolds for Nonlinear Klein-Gordon Equations on  $R^2$ : Some Recent Results*, Analysis Seminar, University of Basel, Basel (1988).
31. *Invariant Manifolds for Nonlinear Klein-Gordon Equations on  $R^2$ : Some Recent Results*, Session on Hyperbolic Systems of Conservation Laws, Mathematical Institute, Oberwolfach (1988).
32. *Smooth Manifolds for Certain Dynamical Systems on Tori and a Semilinear Wave Equation*, Plenary Session of the Swiss Mathematical Society, Lausanne (1988).
33. *Nonlinear Klein-Gordon Equations and Infinite-Dimensional Dynamical Systems*, Colloquium at the University of Zürich, Zürich (1988).
34. *Nonlinear Klein-Gordon Equations on  $R^2$  and Infinite-Dimensional Dynamical Systems*, Session on the Functional Analytical Methods in the Theory of Nonlinear Evolution Equations, Mathematical Institute, Oberwolfach (1989).
35. *Almost-Periodic Attractors for a Class of Nonautonomous Parabolic Equations on  $R^N$* , Mathematical Physics Seminar, University of Trento, Trento (1989).
36. *Some Recent Results in the Theory of Infinite-Dimensional Dynamical Systems*, Analysis Seminar, University of Oulu, Oulu (1989).
37. *Smooth Manifolds for Nonlinear Klein-Gordon Equations in the Presence of Small Divisors*, Analysis Seminar, University of Bonn, Bonn (1990).
38. *Spatially Localized Time-Quasiperiodic Solutions to Nonlinear Klein-Gordon Equations on  $R^2$* , Seminar on the Geometric Methods in Mathematical Physics, Max-Planck Institute, Bonn (1990).
39. *Almost-Periodic Attractors for a Class of Nonautonomous Reaction-Diffusion Equations on  $R^N$* , Mathematical Physics Seminar, University of Bonn, Bonn (1990).
40. *Smooth Manifolds for Nonlinear Klein-Gordon Equations in the Presence of Small Divisors*, International Conference on Nonlinear Hyperbolic Equations, Varenna (1990).
41. *A Geometric Theory of Semilinear Almost-Periodic Parabolic Partial Differential Equations on  $R^N$* , Summer School Course on the Qualitative Aspects and Applications of Nonlinear Evolution Equations, International Center of Theoretical Physics, Trieste (1990).
42. *Equations de Klein-Gordon Nonlinéaires et Systèmes Dynamiques en Dimension Infinie*, Colloquium at the University of Strasbourg-I, Strasbourg (1990).
43. *Courbes Centrales et Stabilité de Liapounov : Application aux Equations du Type Réaction-Diffusion Presque-Périodiques*, Colloquium at the University of Nancy-I, Nancy (1991).

44. *Almost-Periodic Attractors for a Class of Reaction-Diffusion Equations on  $R^N$* , Session on Nonlinear Evolution Equations, Mathematical Institute, Oberwohlfach (1991).
45. *Equations de Klein-Gordon Nonlinéaires et Systèmes Dynamiques en Dimension Infinie*, Nonlinear Analysis Seminar, University of Besançon, Besançon (1991).
46. *Small Denominators, Infinite-Dimensional Dynamical Systems and Nonlinear Klein-Gordon Equations*, 3rd International Conference on Stochastic Processes, Physics and Geometry, Locarno (1991).
47. *Fast-Periodische Reaktion-Diffusionsgleichungen und Zentrumsmannigfaltigkeiten*, Colloquium at the University of Saarbrücken, Saarbrücken (1992).
48. *Almost-Periodic Attractors for a Class of Reaction-Diffusion Equations*, Nonlinear Analysis Seminar, University of Texas, Denton (1992).
49. *Fast-Periodische Reaktion-Diffusionsgleichungen und Zentrumsmannigfaltigkeiten*, Colloquium on Applied Mathematics, Swiss Institute of Technology, Zürich (1992).
50. *Fast-Periodische Reaktion-Diffusionsgleichungen und Zentrumsmannigfaltigkeiten*, Colloquium at the University of Clausthal, Clausthal-Zellerfeld (1992).
51. *Almost-Periodic Attractors for a Class of Reaction-Diffusion Equations*, International Conference on Differential Equations and Mathematical Physics, Atlanta (1992).
52. *Fast-Periodische Reaktion-Diffusionsgleichungen und Zentrumsmannigfaltigkeiten*, Colloquium at the Christian-Albrecht University, Kiel (1993).
53. *Fast-Periodische Reaktion-Diffusionsgleichungen und Zentrumsmannigfaltigkeiten*, Colloquium at the Philipps University, Marburg (1993).
54. *Equations de Klein-Gordon Nonlinéaires et Systèmes Dynamiques en Dimension Infinie*, Conference URA-CNRS, University Henri-Poincaré, Nancy-I, Nancy (1993).
55. *Inertial Manifolds for Almost-Periodic Parabolic Equations*, Session on the Functional Analytical Methods in the Theory of Nonlinear Partial Differential Equations, Mathematical Institute, Oberwohlfach (1993).
56. *Stabilization and Stability of Solutions for Nonautonomous Parabolic Equations on  $R^N$  : Some Recent Results*, International Colloquium on Nonlinear Analysis, University of Fes, Fes (1994).
57. *Invariant Manifolds and the Qualitative Analysis of Nonlinear Partial Differential Equations*, International Conference Henri-Poincaré, University of Nancy-II, Nancy (1994).
58. *Liapunov Stabilität bei Fast-Periodischen Parabolischen Partiellen Differentialgleichungen und Zentrumsmannigfaltigkeiten*, Colloquium at the University of Zürich, Zürich (1994).
59. *Geometric Methods for the Analysis of the Long-Time Behavior of Solutions to Nonautonomous Parabolic Equations: Some Recent Results*, International Conference on Stochastic Partial Differential Equations, University of Aix-Marseille, Luminy (1994).

60. *Large-Time Asymptotic Equivalence for a Class of Non-Autonomous Semilinear Parabolic Equations*, Workshop on Elliptic and Parabolic Problems, University of Basel, Basel (1995).
61. *Stabilization and Recurrence Phenomena for a Class of Semilinear Parabolic Stochastic Equations in Divergence Form*, International CIRM-Conference on Nonlinear Parabolic Problems, Levico Terme (1995).
62. *Long-Time Behavior of Random Fields that are Solutions to a Class of Stochastic Parabolic Equations*, Evolutionary Systems Seminar, University of Minnesota, Minneapolis (1995).
63. *Long-Time Behavior of Random Fields that are Solutions to a Class of Stochastic Parabolic Equations*, International Conference on Evolutionary Problems in Dynamical Systems, Levico Terme (1995).
64. *Stochastic Quasilinear Parabolic Partial Differential Equations*, Colloquium at the University of Delft, Delft (1996).
65. *Stabilization and Recurrence Phenomena for Quasilinear Parabolic Equations with Random Coefficients*, Colloquium at the University of California at Santa Cruz, Santa Cruz (1996).
66. *On the Long-Time Behavior of Solutions to a Class of Stochastic Parabolic Equations*, Partial Differential Equations Seminar, University of California at Berkeley, Berkeley (1996).
67. *On the Long-Time Behavior of Certain Random Fields*, Partial Differential Equations Seminar, Stanford University, Stanford (1996).
68. *Some Recent Results on the Long-Time Behavior of Certain Random Fields*, Colloquium at the University of Konstanz, Konstanz (1996).
69. *Sur le Comportement Asymptotique de Certains Champs Aléatoires*, Analysis Seminar, Swiss Institute of Technology, Lausanne (1996).
70. *Stabilization and Recurrence Phenomena for a Class of Semilinear Parabolic Stochastic Equations in Divergence Form*, International CIRM-Conference on Stochastic Partial Differential Equations and Applications, Levico Terme (1997).
71. *Lyapunov Exponents and Nonlinear Parabolic Problems of Itô Type*, Nonlinear Analysis Seminar, University of Basel, Basel (1997).
72. *Lyapunov Exponents and Nonlinear Stochastic Parabolic Problems*, Colloquium at the Mathematical Sciences Research Institute, MSRI, Berkeley (1997).
73. *The Global Attractor for a Class of Nonlinear Parabolic Itô Equations*, Stochastic Analysis Seminar, Mathematical Sciences Research Institute, MSRI, Berkeley (1997).
74. *Systèmes Dynamiques Aléatoires Monotones en Dimension Infinie : Résultats Récents et Perspectives*, Journées de Probabilités Evry - Nancy - Strasbourg, University Henri-Poincaré, Nancy - I, Nancy (1998).

75. *L'attracteur Global pour une Classe d'Equations Paraboliques Semilinéaires Stochastiques*, Séminaire Equations aux Dérivées Partielles, University Paul Sabatier, Toulouse - III, Toulouse (1998).
76. *Sur l'Attracteur Global associé à Certains Problèmes Paraboliques Nonlinéaires de Type Itô*, Journées de Probabilités, Centre International de Rencontres Mathématiques, Luminy (1998).
77. *On the Structure of the Global Attractor for a Class of Semilinear Parabolic Itô Equations*, Seminar on Stochastic Processes, Swiss Institute of Technology, Zürich (1998).
78. *Lyapunov Exponents and Stability for the Solutions to Nonlinear SPDE's Driven by Wiener Processes*, International Conference on Stochastic Evolution Equations, Lisbon (1999).
79. *Lyapunov Exponents and Stability for the Solutions to Nonlinear SPDE's Driven by Wiener Processes*, Mathematical Physics Seminar, University of Arizona, Tucson (1999).
80. *Lyapunov Exponents and Stability for a Class of Nonlinear Stochastic Parabolic Equations*, Center for Dynamical Systems and Nonlinear Studies Colloquium, Georgia Institute of Technology, Atlanta (1999).
81. *Remarks on the Long-Time Behavior of Certain Random Fields*, Center for Dynamical Systems and Nonlinear Studies Dynamics Seminar, Georgia Institute of Technology, Atlanta (1999).
82. *Some Recent Results Concerning Nonlinear Parabolic Itô Equations*, Analysis Seminar, Emory University, Atlanta (1999).
83. *Some Recent Results Concerning Nonlinear Parabolic Itô Equations*, International CIRM Conference on Stochastic Partial Differential Equations and Applications, Levico Terme (2000).
84. *Exposants de Lyapunov et Stabilité des Solutions d'une Classe d'EDPS Semilinéaires Dirigées par des Processus de Wiener*, Probability Seminar, Swiss Institute of Technology, Lausanne (2000).
85. *Long-Time Behavior of Solutions to a Class of Nonlinear SPDE's*, Probability Seminar, University of Barcelona, Barcelona (2000).
86. *Exchange of Stability Results for a Class of Nonlinear SPDE's Driven by Wiener Processes*, Centre de Recerca Matemàtica Probability Seminar, Barcelona (2000).
87. *Examples of Global Attractors for a Class of Stochastic Partial Differential Equations*, Colloquium at the University of Zürich, Zürich (2001).
88. *On the Hölder-Sobolev Regularity of Solutions to a Class of Parabolic Equations Driven by a Spatially Colored Noise*, International CIRM-Conference on Stochastic Partial Differential Equations and Applications, Levico Terme (2002).
89. *Quelques Résultats Récents Concernant la Régularité Hölder-Sobolev des Solutions d'Equations aux Dérivées Partielles Stochastiques Nonlinéaires*, Journées de Probabilités Evry-Nancy-Strasbourg, Université Louis-Pasteur, Strasbourg (2003).

90. *Some Recent Results for a Class of Fractional Partial Differential Equations*, International CIRM-Conference on Stochastic Partial Differential Equations and Applications, Levico Terme (2004).
91. *Equivalence of Various Notions of Solutions for a Class of Semilinear Stochastic Partial Differential Equations*, Colloquium on Fractal Geometry and Stochastics, University of Jena, Jena (2004).
92. *Lyapunov Exponents and Stability for the Solutions to a Class of Stochastic Partial Differential Equations*, Colloquium on Fractal Geometry and Stochastics, University of Jena, Jena, (2004).
93. *Some Recent Results on Fractional Partial Differential Equations*, International Conference on Stochastic Partial Differential Equations, Scuola Normale di Pisa, Pisa (2006).
94. *Variational Solutions to a Class of Parabolic Partial Differential Equations Driven by a Fractional Noise*, Probability Seminar, University of Barcelona, Barcelona (2007).
95. *Variational Solutions for a Class of Partial Differential Equations Driven by a Fractional Noise*, Partial Differential Equations Seminar, Northwestern University, Evanston, (2007).
96. *Hölder-Sobolev Regularity of Solutions for a Class of Stochastic Partial Differential Equations*, Analysis and Probability Seminar, Northwestern University, Evanston, (2007).
97. *New Developments in Stochastic Partial Differential Equations*, Second US-Chile Workshop on: New Developments in Partial Differential Equations, Santiago de Chile, (2008).
98. *Trotter-Kato Formulae for a Class of Non-Autonomous Evolution Equations*, Mathematical Physics Seminar, ETHZ, Zurich (2009).
99. *New Trotter-Kato Product Formulae for a Class of Time-Dependent Operators*, Mathematical Physics Seminar, University of Lisbon, Lisbon (2009).
100. *Product Approximations for Solutions to Time-Dependent Schrödinger Evolution Equations in Hilbert Space*, Mathematical Physics Seminar, University of Lisbon, Lisbon (2010).
101. *Bernstein Diffusions for a Class of Linear Parabolic Partial Differential Equations*, Mathematical Physics Seminar, University of Lisbon, Lisbon (2011).
102. *Inhomogeneous Bernstein Diffusions and Parabolic Equations: Some Recent Results*, Mini-Course, EPFL, Lausanne (2012).
103. *Parabolic Problems and Bernstein Diffusions: Some New Results*, Mathematical Physics Seminar, University of Lisbon, Lisbon (2012).
104. *Product Approximations for a Class of Quantum Anharmonic Oscillators: Analytical and Numerical Results*, Mathematical Physics Seminar, University of Lisbon, Lisbon (2013).
105. *Diffusions de Bernstein et Problèmes Paraboliques*, Colloquinte de Probabilités, Institut Élie Cartan, Université de Lorraine, Nancy (2014).



106. *Forward-Backward Stochastic Differential Equations generated by Bernstein Diffusions*, Mathematical Physics Seminar, University of Lisbon, Lisbon (2014).
107. *Parabolic Problems and Bernstein Processes: Some Recent Results*, Functional Analysis and Differential Equations Seminar, University of Lisbon, Lisbon (2015).
108. *On the Periodic Ornstein-Uhlenbeck Process*, IFIP TC7 Conference on System Modelling and Optimization, Essen (2018).
109. *Bernstein Processes, Parabolic Problems and Spectral Theory*, International Workshop on Stochastic Geometric Mechanics and Mass Transportation Problems, Lisbon (2018).
110. *Bernstein Processes, Parabolic Problems and Spectral Theory*, Analysis Seminar, University Nova of Lisbon, Lisbon (2018).
111. *Bernstein Processes of Maximal Entropy*, Second Conference of the European Physical Society Statistical and Nonlinear Physics Division, Stockholm (2019).
112. *On Entropy Functionals associated with Bernstein Stochastic Processes*, Analysis Seminar, University of Coimbra, Coimbra (2019).
113. *Some Aspects of Non-Equilibrium Statistical Mechanics*, Mathematics Department Colloquium, University of Lisbon (2023).

