

**CURRICULUM VITAE**  
**18 AUGUST 2021**

**PAUL LESCOT**

PAUL.LESCOT@UNIV-ROUEN.FR

## 1. STUDIES AND CAREER

1985-1989

Student at *Ecole Normale Supérieure* .

September 30, 1993

Successful defence of my PhD thesis (**Analyse sur l'espace de Wiener**;  
University Paris VI ; advisor : Professor Paul Malliavin).

1989-1996

Various teaching assistantships at University Paris VI.

1996-2008

*Maître de Conférences* ( $\equiv$  Assistant Professor) at *Université de Picardie* (Saint-  
Quentin, France).

July 2, 2002

Successful defence of my Habilitation Thesis (title: **Questions  
diverses d'Analyse en Dimension Infinie et Théorie des  
Groupes** ; presenter : Professeur Hélène Airault), at  
*Université de Picardie* (Saint-Quentin).

2004-2008

Holder of the *Prime d'Encadrement Doctoral et de Recherche* (research bonus).

2008-

*Professeur* ( $\equiv$  Full Professor) at the University of Rouen ; firs class as of  
September 01, 2017.

2011-2015

Holder of the *Prime d'Excellence Scientifique* (research bonus).

## 2. SOME OTHER ACTIVITIES

2001–

Reviewer for *Mathematical Reviews* / *MathSciNet* .

2006–2008

Associate Professor at ISMANS (engineering school in Le Mans).

2008–2009

Consultant at ISMANS.

2010–2013

Joint leader of the project *Probabilistic approach to finite and infinite dimensional dynamical systems* (Lisbon ; PTDC/MAT/104173/2008).

2010–2011 and 2013–

Associate Professor at *ENSTA ParisTech* (engineering school, Paris then Palaiseau).

2014

President of the organizing committee of the *Rencontre de Probabilités de Rouen* (8–9 September)

December 01 2015–March 03 2019

Joint chairman (with Professor Dalibor Volny) of the Mathematics Department (University of Rouen).

## 3. RESEARCH INVITATIONS

1988

Visit at University of Chicago (Chicago, Illinois, USA), upon an invitation from Professor George Glauber.

1993-1995

Various stays at *Institut für Angewandte Mathematik* (Bonn, Germany), upon an invitation from Professor Michael Röckner.

1998-2011

Regular guest of the *Stochastic Analysis Group (University of Bielefeld)* ; visits in 1998, 1999, 2000, 2001, 2004, 2005, 2006, 2007, 2008 and 2010.

1999-

Regular guest of the *Grupo de Física-Matemática* (Lisbon) : October 1999-January 2000, August-September 2000, July-August 2001, March-June 2005, July 2008, August 2009 and August-September 2010.

Invited Professor at *Institut des Hautes Études Scientifiques* (Bures-sur-Yvette) : October-November 2005, September-December 2006 and November 2010-March 2011.

May 20-26, 2013

Invited researcher at *Grupo de Física-Matemática* (Lisbon).

## 4. SUPERVISION OF STUDENTS (MASTERS AND PHD)

Master's thesis : Mathieu MAINNEMARRE.

Title : **Les Processus de Bessel comme exemples de solutions d'équations différentielles stochastiques singulières.**

Defence on 14 September 14th 2010.

Master's thesis : Hélène QUINTARD.

Titre : **Processus affines en finance et symétries d'équations aux dérivées partielles.**

Defence on May 30th 2011.

Ph D thesis : Mohamad HOUDA.

Title : **Calcul de prix d'options sur taux d'inérêt et processus de Bernstein.**

Defence on June 12, 2013.

Ph D thesis : Hélène QUINTARD

Title : **Symétries d'équations aux dérivées partielles, calcul stochastique, applications en physique mathématique et en finance.**

Defence on June 29, 2015.

Master's thesis : Roland Marcel MANDENG

Title : **Etude analytique et probabiliste du modèle de Heston.**

Defence on June 10, 2016.

Master's Thesis : Laurène VALADE.

Title : **Symétries de l'équation de Frey (une variante non linéaire de l'équation de Black-Scholes) et classification des sous-algèbres de Lie.**

Defence on May 12, 2017.

Master's Thesis : Anas OUKNINE.

Title : **Modèle de Longstaff.**

Defence on June 15, 2020.

PhD thesis : Laurène VALADE

Title : **Symétries des modèles stochastiques en mathématiques financières, en physique et en neurosciences ; begun September 1, 2017.**

PhD thesis : Anas OUKNINE

Title : **Modèles affines généralisés et symétries d'équations aux dérivées partielles; begun September 1, 2020.**

## 5. MEMBERSHIP OF PHD COMMITTEES

Belkacem BERDJANE (University of Rouen, November 27, 2012) : President.

Nadira BOUCHEMELLA (University of Rouen, December 11, 2012) : Examiner.

Zi HUI (ISMANS, April 8, 2013) : Referee.

Huu Thai NGUYEN (University of Rouen, October 06, 2014) : President.

Alexis VIGOT (University Paris VI, November 29, 2016) : Referee.

Aurélien SAGNIER (University Paris VII, July 11, 2017) : Referee

Sahar ALBOSAILY (University of Rouen, December 07, 2018) : President.

## 6. SEMINAR TALKS

Bielefeld, Bochum and Erlangen (January–February 1994).

*Séminaire de Probabilités* (Paris XIII, December 18th 2002).

*Séminaire de Probabilités* (Clermont–Ferrand II, December 19th 2002).

Seminar of the *Stochastic Analysis Group* (Bielefeld, July 22nd 2004).

*Mathematisches Kolloquium* Koblenz University, July 18th 2007.

Workgroup *Analyse sur l'espace de Wiener*  
(Institut Henri Poincaré, February 25th 2009).

*Séminaire de Sciences Actuarielles*, Université Libre de Bruxelles, February 18, 2010.

*Midlands Probability Seminar*, University of Warwick, May 26, 2010.

*Probabilits, Statistiques, Contrle*, ENSTA (Paris), November 10, 2010.

*Séminaire d'Informatique Théorique*, Rouen, September 22, 2016.

## 7. CONFERENCES (ATTENDED AS INVITED SPEAKER)

Annual Bielefeld Stochastic Analysis Conference :  
August 1998, August 2000 and August 2001.

*Stochastic Analysis and Mathematical Physics*  
(Lisbon, May 24–28 1999).

*Stochastic Analysis, Random Fields and Applications IV* (Ascona, Switzerland),  
May 18–24 2002.

*Journées de Probabilités* (La Rochelle), September 9–13 2002.

*Finite Groups 2003* (University of Florida , Gainesville, Florida, USA), on the  
occasion of Professor John G. Thompson's seventieth birthday ; March 6–13  
2003.

*German–Romanian Potential Theory Workshop* : Bielefeld, August 10 2004.

*Stochastic Analysis, Random Fields and Applications V* (Ascona, Switzerland),  
May 30–June 3 2005.

*Mathematical Analysis of Random Phenomena* ,  
Hammamet, Tunisia, 12–17 September 2005.

*Géométrie algébrique sur le corps à un élément*(IHES), March 26–28 2007.

32<sup>nd</sup> conference *Stochastic Processes and their Applications*  
(Urbana, Illinois, USA), August 6–10 2007.

*International Conference on Stochastic Analysis and Applications*  
(Hammamet, Tunisia), November 5–10 2007.

*Infinite Dimensional Analysis and Representation Theory*,  
(Bielefeld, Germany), December 10–14 2007.

*Stochastic Analysis, Random Fields and Applications V*  
(Ascona, Switzerland), May 18–23 2008.

*International Conference on Stochastic Analysis and Applications*  
(Hammamet, Tunisia), October 12–17 2009.

*Noncommutative Geometry and Applications to Number Theory*,  
The Ohio State University (Columbus, Ohio, USA) April 12–15 2010 .

*Noncommutative Geometry and Arithmetic*, Johns Hopkins University  
(Baltimore, Maryland, USA), March 22–25 2011.

*Stochastics and Real World Models*, Bielefeld, July 18–22 2011.

*Workshop Classic and Stochastic Geometric Mechanics*, Ecole Polytechnique  
Fédérale de Lausanne (Switzerland), June 08–11 2015.

*Workshop Stochastics and Symmetry*, Milan, October 5, 2015.



*32nd International Colloquium on Group Theoretical Methods in Physics (Group32)*,  
Czech Technical University, Prague, July 9–13 2018.

Workshop *Random Transformations and Invariance in Stochastic Dynamics*,  
Verona, March 25–28 2019.

## LIST OF PUBLICATIONS

- [1] *Sur certains groupes finis* Revue de Mathématiques Spéciales, Avril 1987, 276-277.
- [2] *Degré de commutativité et structure d'un groupe fini* Revue de Mathématiques Spéciales, Avril 1988, 276-279.
- [3] *Sur la factorisation de Thompson* Revue de Mathématiques Spéciales, Janvier 1989, 197-198.
- [4] *Degré de commutativité et structure d'un groupe fini(2)* Revue de Mathématiques Spéciales, Décembre 1989, 200-202.
- [5] *A note on CA-groups* Comm. Algebra 18 (1990), no. 3, 833-838.
- [6] *Un critère de régularité des lois pour certaines fonctionnelles de Wiener* C. R. Acad. Sci. Paris Sér. I Math. 316 (1993), no. 12, 1313-1318.
- [7] *Désintégration de la mesure de Wiener sous certaines fonctionnelles dégénérées* C. R. Acad. Sci. Paris Sér. I Math. 317 (1993), no. 1, 93-95.
- [8] *Un théorème de désintégration en analyse quasi-sûre* Séminaire de Probabilités XXVII, 256-275, Lecture Notes in Math., 1557, Springer, Berlin, 1993.
- [9] *Sard's theorem for hyper-Gevrey functionals on the Wiener space* J. Funct. Anal. 129(1995), no. 1, 191-220.
- [10] *Isoclinism classes and commutativity degrees of finite groups* J. Algebra 177 (1995), no. 3, 847-869.
- [11] (with P. Malliavin) *A pseudo-differential symbolic calculus for fractional derivatives on the Wiener space* C. R. Acad. Sci. Paris Sér. I Math. 322 (1996), no. 5, 475-479.
- [12] *A characterisation of prime numbers* The Mathematical Gazette Volume 80 : Number 488(July 1996), 400-401.
- [13] (with V. Bogachev and M. Röckner) *The martingale problem for pseudo-differential operators on infinite-dimensional spaces* Nagoya Math. J. 153 (1999), 101-118.
- [14] *Central extensions and commutativity degree* Comm. Algebra 29 (2001), no. 10, 4451-4460.
- [15] *Kernel systems on finite groups* Nagoya Math. J. 163 (2001), 71-85.
- [16] *Mehler-type semigroups on Hilbert spaces and their generators* Stochastic analysis and mathematical physics, 75-86, Progr. Probab., 50, Birkhäuser Boston, Boston, MA, 2001.
- [17] *Families of solvable Frobenius subgroups in finite groups* Nagoya Math. J. 165 (2002), 117-121.
- [18] (with M. Röckner) *Generators of Mehler-type semigroups as pseudo-differential operators* Infin. Dimens. Anal. Quantum Probab. Relat. Top. 5 (2002), no. 3, 297-315.
- [19] (with J.-C. Zambrini) *Isovecteurs pour l'équation de Hamilton-Jacobi-Bellman, différentielles stochastiques formelles et intégrales premières en mécanique quantique euclidienne* C. R. Math. Acad. Sci. Paris 335 (2002), no.3, 263-266.
- [20] (with H. Airault and V. Bogachev) *Finite-dimensional sections of functions in fractional Sobolev classes on infinite-dimensional spaces* Dokl. Akad. Nauk 391 (2003), no. 3, 320-323.
- [21] (with M. Röckner) *Perturbations of generalized Mehler semigroups and applications to stochastic heat equations with Levy noise and singular drift* Potential Anal. 20 (2004), no. 4, 317-344.
- [22] (with J.-C. Zambrini) *Isoectors for the Hamilton-Jacobi-Bellman equation, formal stochastic differentials and first integrals in Euclidean quantum mechanics* Seminar on Stochastic Analysis, Random Fields and Applications IV, 187-202, Progr. Probab., 58, Birkhäuser, Basel, 2004.
- [23] (with M. Gordina) *Riemannian Geometry of Diff(S1)/S1* J. Funct. Anal. 239 (2006), no. 2, 611-630.
- [24] *Unitarizing measures for a representation of the Virasoro algebra, according to Kirillov and Malliavin : state of the problem* Mathematical Analysis of Random Phenomena, 141-153, World Sci. Publ., Hackensack, NJ, 2007.
- [25] (with A. Erfanian and R. Rezaei) *On the relative commutativity degree of a subgroup of a finite group* Comm. Algebra 35 (2007), no.12, 4183-4197.
- [26] *On Frobenius systems* Osaka J. Math. 44(2007), no.4, 887-891.
- [27] (with J.-C. Zambrini) *Probabilistic deformation of contact geometry, diffusion processes and their quadratures* Seminar on Stochastic Analysis, Random Fields and applications V, 203-226, Progr. Probab., 59, Birkhäuser, Basel, 2008.
- [28] *Reduction theorems for characteristic functions on finite p-groups and applications to nilpotence criteria* Osaka J. Math. 45(2008), no. 4, 1043-1056.

- [29] *Algèbre absolue* Ann. Sci. Math. Québec 33 (2009), no 1, 63-82.
- [30] *Absolute Algebra II-Ideals and Spectra* Journal of Pure and Applied Algebra 215(2011), no. 7, pp.1782-1790.
- [31] (with W.J. Beyn, B. Gess and M. Röckner) *The global random attractor for a class of stochastic porous media equations* Communications in Partial Differential Equations 36(3), 2011, pp. 446-469.
- [32] *Absolute Algebra III-The saturated spectrum* Journal of Pure and Applied Algebra 216(2012), no. 7, pp. 1004-1015.
- [33] *Symmetries of the Black-Scholes equation* Methods and Applications of Analysis 19(2), June 2012, pp. 147-160.
- [34] (with Hung Ngoc Nguyen and Yong Yang) *On the commuting probability and supersolvability of finite groups* Monatshefte für Mathematik 174 (2014), no. 4, pp. 567-576.
- [35] (with H. Quintard) *Symmetries of the backward heat equation with potential and interest rate models*. C. R. Math. Acad. Sci. Paris 352 (2014), no. 6, pp. 525-528.
- [36] *Sur les automorphismes d'un groupe fini* RMS 125e année No 3 (Mai 2015), pp. 3-16.
- [37] *Prime and primary ideals in semirings* Osaka J. Math. 52(2015), pp. 721-736.
- [38] (with Mohamad Houda) *Some Bernstein processes similar to Cox-Ingersoll-Ross ones* Stoch. Dyn. 19 (2019), no. 6, 1950047, 9 pp.
- [39] (with Laurène Valade) *Symmetries of partial differential equations and stochastic processes in mathematical physics and in finance* J. Phys.: Conf. Ser.1194 012070, 2019.
- [40] *An arithmetical question related to perfect numbers* The Mathematical Gazette 104, Issue 559 (March 2020), pp. 20-26.
- [41] (with Mohamad Houda) *Two computations concerning the isovectors of the backward heat equation with quadratic potential* Methods Appl. Anal. 27 (2020), no. 1, pp. 57-64.