

CURRICULUM VITAE

Thierry Coulhon

NOVEMBER 2020

CAREER

Assistant at **University Paris VI** from 01/10/1984 to 30/09/1989.

Maître de Conférences at University Paris VI from 01/10/1989 to 30/09/1991.

Chargé de recherches, First Class at C.N.R.S. (on secondment) in the Equipe d'Analyse, University Paris VI, from 01/10/1991 to 30/09/1992.

Member of the Equipe d'Analyse (U.A. 754, Paris VI) from 01/01/1983 to 31/12/1992.

Professor at Cergy-Pontoise University since 01/10/1992.

Promoted to 1st class effective 01/09/1996, 1st ranking in the "classe exceptionnelle" effective 01/09/2006, 2nd ranking in the "classe exceptionnelle" effective 01/09/2008.

Member of the Group Analyse, Géométrie et Modélisation (U.M.R. 8088, Cergy-Pontoise) since 01/01/1993.

Director, Mathematical Sciences Institute, The Australian National University, Canberra, Australia, 15/08/2012-01/02/2015.

President, Paris Sciences et Lettres Research University, 02/02/2015-31/05/2017.

Advisor to Emmanuel Macron, President of the French Republic (education, higher education, research, innovation), 01/06/2017- 31/10/2020

President, High Council for Evaluation of Research and Higher Education (Hcéres), since 01/11/2020.

EDUCATION

Mathematics

1975: Baccalaureate C, mention very good, congratulations on behalf of jury.

1975-76: Math. Sup., Lycée Blaise Pascal, Clermont-Ferrand.

1976-77: Math.Spé. M', Lycée Blaise Pascal, Clermont-Ferrand.

1977-78: **Admission to the Ecole Polytechnique;** military service; resignation.

1978-79: Bachelor's degree in Pure Mathematics, University Clermont-Ferrand II.

1979-80: Masters degree in Pure Mathematics, University Clermont-Ferrand II.

1981: **Agrégation in mathematics,** prepared as auditeur libre at the E.N.S. Ulm.

1982: D.E.A. d'Analyse, University Paris VI.

1984: **Thèse de 3ème cycle,** University Paris VI, under the supervision of G. Pisier: "Semi-groupes d'opérateurs et suites de contractions sur les espaces L_∞ ou $C(K)$ ", awarded 15/06/1984; Jury: H. Brézis (Chair), G. Godefroy, G. Pisier, N. Varopoulos.

1991: **Habilitation à diriger des recherches,** University Paris VI, under the supervision of N. Varopoulos: "Méthodes de semi-groupes d'opérateurs pour l'analyse sur les groupes, les graphes, et les variétés", awarded 07/02/1991; Jury: M. Hervé (Chair), A. Ancona, P. Bougerol, N. Lohoué, G. Pisier, N. Varopoulos; examiners: A. Ancona, D. Bakry, P. Bougerol.

Philosophy

- 1978-79:** D.E.U.G., University Clermont-Ferrand II.
1979-80: Licence, University Clermont-Ferrand II.
1981-82: Maîtrise, University Paris I.
1982-83: Preparation for Agrégation as auditeur libre at the E.N.S. Sèvres.
1984-85: **D.E.A. History and Philosophy of Science**, University Paris I, 1984-85 (thesis supervised by S. Bachelard: “Mathématiques Cartésiennes et mathématiques Pascaliennes”).

PROFESSIONAL EXPERIENCE

Previous responsibilities

➤ **University Paris VI:**

Elected member of the UFR 920 Council at Paris VI from 1988-1990 and from 1986-1990, elected member of the Commission of Specialists 23-1,2,3 at Paris VI. Co-opted at CNU from 1990-1991. Longstanding Member of the Association Henri Poincaré for History and Philosophy of Mathematics and Modern Physics.

➤ **University of Cergy-Pontoise:**

- Deputy Director, Mathematics Department (1992-1994).
- Member, University Council (1992-1994).
- President, Commission of Specialists 25-26 (1993-1994).
- February 1995 - June 1996: Vice-President, University Scientific Committee (prefiguration of Scientific Council).
- 1997 - 1999: Vice-President, Library Council.
- June 1996 - June 2000: Elected member, University Scientific Council.
- Elected June 1996: **Vice-President, University of Cergy-Pontoise, in charge of Contracts**. My term ended in August 1999 with the one of President Bernard Raoult.
- Elected Board Member, University of Cergy-Pontoise, June 2000 - March 2004.
- Nominated Member, Strategic Advisory Board since September 2001.
- Chargé de mission, Culture, September 2000 - August 2004.
- Chargé de mission, Research, September 1999 - June 2002.
- **President, University of Cergy-Pontoise**, 1 September 2004 until appointment to Office of Minister of Higher Education and Research on 31 July 2008.

➤ **Mathematical community:**

- Appointed in 1991 to the group of experts “Mathématiques et applications”, DRED, 1994, 1995. Requested leave in 1996.
- 1991, external member of the hiring committee 25th section, Paris VII.
- 1994-1995, marker of Ulm-Cachan task at ENS concours.
- 1994-1997, external member of the hiring committee 25th section, Lyon I.
- 1994-2000, external member of the hiring committee 25th section, Clermont-Ferrand II.
- 1998-2001, external member of the hiring committee 25th section, Amiens.
- 1999-2001, member of the Policy Committee – Scientific, Informatics, Automatic, Electronic and Mathematics of the University of Picardie Jules Verne.
- 2000-2004, external interim member of the hiring committee 25th-26th section, Aix Marseille III.
- 2001-2003, external member of the hiring committee 25th section, Grenoble I.

- 2003, Member, Jury Panel, PEDR and expert for the DS1.
- 2003-2004, Member, Comité de pilotage de la cellule MathDoc.
- 2005-2006, Expert for the ANR.

➤ **Conférence des présidents d'Université (CPU):**

- Member of the commission permanente 21 September 2006 - 31 July 2008.
- Second Vice-President of the CPU, 14 December 2006 - 31 July 2008.
- **First Vice-President since CPU autonomy** following the LRU law.
- Appointed member of the board of the Centre Informatique National de l'Enseignement Supérieur, representing the CPU, 15 April 2006 - 31 July 2008.
- Appointed member of the board of Campus France, representing the CPU, 29 April 2007- 31 July 2008.
- Member of the board of the Conseil National des Oeuvres Universitaires, representing the CPU, 1 September 2007- 31 July 2008.
- President, representing the CPU, of the comité de pilotage of the ANR call for projects "Masse de Données et Connaissances Ambiantes" 1 October 2006 - 31 July 2008.

➤ **Office of Valérie Péresse, Minister for Higher Education and Research:**

- **Special Advisor to the Minister**, 1 August 2008 - 4 October 2009.
- **Deputy Chief of Staff**, 5 October 2009 - 4 April 2010.

➤ **Commissariat général à l'investissement:**

- **Director, Program "centres d'excellence"** at the CGI, seconded to Prime Minister, 5 April 2010 - 15 August 2012. **In charge of Initiatives d'excellence, Laboratoires d'excellence, Equipements d'excellence, Initiatives d'excellence en formations innovantes.**

➤ **Director, Mathematical Sciences Institute, Australian National University, 15/08/2012-1/02/2015.**

➤ Elected member Academic Board, Australian National University, 06/2015-01/2015.

➤ Elected external member of the scientific council, University of New Caledonia, 10/2013-01/2015.

➤ Member, Editorial Committee: *Nonlinear Analysis: theory, methods and applications (2015-2017)*.

Current responsibilities

➤ Referee for various research organisations and foreign universities (Australia, Chile, Germany, Italy, Netherlands, New Zealand, and United States).

➤ Evaluation of articles for *Acta Math., Adv. in Diff. Eq., Adv. in Math., Amer. J. Math., Ann. Fac. Sc. Toulouse, Ann. I.H.P. (proba-stat), Ann. Inst. Fourier, Annali S.N.S. Pisa, Annals of Proba., Arch. Rat. Mech., Arkiv för Matematik, Astérisque, Bull. S.M.F., Contemporary Math., Comm. in Anal. and Geom., Comm. Math. Phys., Comm. in Pure and Appl. Math., C.R.A.S. Paris, Discrete and Continuous Dynamical Systems-Series A, Dynamical systems and applications, Duke Math. J., Extracta Math., G.A.F.A., Houston J. Math., Illinois J. Math., Indiana Univ. Math. J., Inventiones Math., J. Amer. Math. Soc., J. d'Analyse Math., J. Diff. Geom., J. Math. Pures and Appl., J. für die reine u. angewandte Math., J. Funct. Anal., J. Geometric Anal., J. Australian Math. Soc., J. European Math. Soc., J. Evolution Equ., J. London Math. Soc., J. of Theoretical Probability, Manuscripta Math., Math. Scand., Math. Ann., Math. Nach., Math. Z., Memoirs*

A.M.S., Monatshefte für Math., Nonlinear Analysis, Osaka J. Math., Positivity, Potential Anal., Proc. Amer. Math. Soc., Proc. Roy. Soc. Edinburgh, Publicacions Matemàtiques, Rev. Mat. Complutense, Rev. Mat. Iberoamericana, Stoch. Proc. and Appl., Studia Math., Trans. Amer. Math. Soc..

- Regular editing of reviews for *Math. Reviews*.
- Evaluation of works for *Oxford University Press, Cours spécialisés de la S.M.F., London Math. Soc. Monographs, Springer Lecture Notes in Mathematics*.
- Member, Editorial Committee: *Annales Mathématiques Blaise Pascal*.

PUBLICATIONS

The publications below register 2575 citations by 1888 authors in the database MathSciNet. h-index=26.

1. “Suites d’opérateurs sur un espace $C(K)$ de Grothendieck”, *Comptes rendus Acad. sc. Paris*, t. 298, série I, 1, 1984, pp.13-15.
2. *Semi-groupes d’opérateurs et suites de contractions sur les espaces L_∞ ou $C(K)$* , thèse de 3ème cycle, University Paris VI, June 1984, p.60.
- 2bis. “Approximation forte et uniforme de l’identité sur les espaces $C(K)$ ”, *Séminaire d’Analyse Fonctionnelle 83/84*, Publications mathématiques de l’Université Paris VII, t.20, 1985, pp.117-121.
3. “Convergence vers l’identité de suites d’opérateurs définis sur $L(H)$ ”, with Yves Raynaud, *Comptes rendus Acad. sc. Paris*, t. 301, série I, 4, 1985, pp.111-113.
4. “Suites d’opérateurs à puissances bornées dans les espaces ayant la propriété de Dunford-Pettis”, communication au *Séminaire d’Analyse fonctionnelle 84/85*, Publications mathématiques de l’Université Paris VII, t.26, 1987, pp.141-153.
5. “Régularité L_p pour les équations d’évolution”, with Damien Lambertson, communication au *Séminaire d’Analyse fonctionnelle 84/85*, Publications mathématiques de l’Université Paris VII, t. 26, 1987, pp.155-165.
6. “Social choice theory in the case of Von Neumann-Morgenstern utilities”, with Philippe Mongin, *Social Choice and Welfare*, 6, 1989, pp.175-187.
7. “Semi-groupes d’opérateurs et espaces fonctionnels sur les groupes de Lie”, with Laurent Saloff-Coste, *Jour. Approximation Th.*, vol. 65, n° 2, 1991, pp.176-199.
- 7bis. “Théorèmes de Sobolev pour les semi-groupes d’opérateurs et application aux groupes de Lie unimodulaires”, with Laurent Saloff-Coste, *Comptes rendus Acad. sc. Paris*, t. 309, série I, 1989, pp.289-294.
- 7ter. “Théorie de Hardy-Littlewood-Sobolev pour les semi-groupes d’opérateurs et application aux groupes de Lie unimodulaires”, with Laurent Saloff-Coste, *Séminaire d’Analyse de l’Université Clermont-Ferrand II, 87/88*, exposé n° 21, 1989.
8. “Dimension à l’infini d’un semi-groupe analytique”, *Bull. Sc. Math.*, 114, 4, 1990, pp.485-500.
9. “Puissances d’un opérateur régularisant”, with Laurent Saloff-Coste, *Ann. Inst. Henri Poincaré, proba. stat.*, vol. 26, n° 3, 1990, pp.419-436.
10. “Dimensions of continuous and discrete semigroups on the L_p spaces”, in *Semigroup theory and evolution equations*, Clément, Mitidieri, De Pagter ed., Marcel Dekker L. N. in Pure and Appl. Math., vol. 135, 1991, pp.93-99.

11. "Itération de Moser et estimation gaussienne du noyau de la chaleur", *Jour. Operator Th.*, 29, 1993, pp.157-165.
12. "Marches aléatoires non symétriques sur les groupes unimodulaires", with Laurent Saloff-Coste, *Comptes rendus Acad. sc. Paris*, t. 310, série I, 1990, pp.627-630.
13. "Noyau de la chaleur et discrétisation d'une variété riemannienne", *Israël J. Math.*, 80, 1992, pp.289-300.
14. *Analysis and Geometry on Groups*, N. Varopoulos, L. Saloff-Coste, T. Coulhon, Cambridge Tracts in Mathematics, no 100, Cambridge University Press, 156 p., 1993.
15. "Quelques remarques sur la régularité L_p du semi-groupe de Stokes", with Damien Lambertson, *Comm. in Partial Diff. Equ.*, 17, 1& 2, 1992, pp.287-304.
16. "Inégalités de Gagliardo-Nirenberg pour les semi-groupes d'opérateurs et applications", *Potential Analysis*, 1, 1992, pp.343-353.
17. "Isopérimétrie pour les groupes et les variétés", with Laurent Saloff-Coste, *Rev. Mat. Iberoamericana*, 9, 2, 1993, pp.293-314.
18. "Minorations pour les chaînes de Markov unidimensionnelles", with Laurent Saloff-Coste, *Probability Th. Rel. F.*, 97, 1993, pp.423-431.
19. "Isopérimétrie, décroissance du noyau de la chaleur et transformations de Riesz: un contre-exemple", with Michel Ledoux, *Arkiv Mat.*, 32, 1994, pp.63-77.
- 19bis. "Sobolev inequalities on graphs and manifolds", in *Harmonic Analysis and Discrete Potential Theory*, Picardello ed., Plenum Press, 1992, pp.207-214.
20. "Variétés riemanniennes isométriques à l'infini", with Laurent Saloff-Coste, *Rev. Mat. Iberoamericana*, 11, 3, 1995, pp.687-726.
21. "Espaces de Lipschitz et inégalités de Poincaré", *J. Funct. Anal.*, 136, 1, 1996, pp.81-113.
22. "Sobolev inequalities in disguise", with Dominique Bakry, Michel Ledoux, and Laurent Saloff-Coste, *Indiana Univ. Math. J.*, 44, 4, 1995, pp.1033-1074.
23. "Dimensions at infinity for Riemannian manifolds", *Potential Analysis*, 4, 4, 1995, pp.335-344.
24. "About Riesz transforms on the Heisenberg groups", with Detlef Müller and Jacek Zienkiewicz, *Math. Annal.*, 305, 1996, pp.369-379.
25. "Ultracontractivity and Nash type inequalities", *J. Funct. Anal.*, 141, 2, 1996, pp.510-539.
26. "Von Neumann spectra near the spectral gap", with Alan Carey, Varghese Mathai and John Phillips, *Bull. Sc. Math.*, 122, 3, 1998, pp.203-242.
27. "Absence de principe du maximum pour certaines équations paraboliques complexes", with Pascal Auscher and Philippe Tchamitchian, *Colloq. Math.*, 71, 1, 1996, pp.87-95.
28. "On-diagonal lower bounds for heat kernels on non-compact Riemannian manifolds", with Alexander Grigor'yan, *Duke Math. J.*, 89, 1, 1997, pp.133-199.
- 28bis. "Heat kernels, volume growth and anti-isoperimetric inequalities", with Alexander Grigor'yan, *Comptes rendus Acad. sc. Paris*, t. 322, série I, 1996, pp.1027-1032.
- 28ter. "Heat kernels on non-compact Riemannian manifolds: a partial survey", *Séminaire de théorie spectrale and Geometry*, 15 (1996-1997), Institut Fourier, 1998, pp.167-187.
29. "Riesz transforms for $1 \leq p \leq 2$ ", with Xuan Thinh Duong, *Trans. Amer. Math. Soc.*, 351, 1999, pp.1151-1169.
30. "Random walks on graphs with regular volume growth", with Alexander Grigor'yan, *Geom. and Funct. Anal.*, 8, 1998, pp.656-701.

- 30bis. "Analysis on infinite graphs with regular volume growth", in *Random walks and discrete potential theory*, Picardello, Woess, ed., Symposia Math., XXXIX, Cambridge U.P., 1999, pp.165-187.
- 30ter. "Random walks and geometry on infinite graphs ", in *Lecture notes on analysis on metric spaces*, Luigi Ambrosio, Francesco Serra Cassano, ed., Scuola Normale Superiore di Pisa, 2000, pp.5-30.
31. "Maximal regularity and heat kernel bounds: observations on a theorem by Hieber and Prüss", with Xuan Thinh Duong, *Adv. in Diff. Equ.*, 5, 2000, pp.343-368.
32. "Gaussian lower bounds for random walks from elliptic regularity", with Pascal Auscher, *Ann. Inst. Henri Poincaré, proba. stat.*, 35, 5, 1999, pp.605-630.
33. "Manifolds and graphs with slow heat kernel decay", with Martin Barlow and Alexander Grigor'yan, *Inventiones Math.*, 144, 3, 2001, pp.609-649.
- 33bis. "Large time behaviour of heat kernels on Riemannian manifolds: fast and slow decays", *Journées équations aux dérivées partielles, St-Jean-de-Monts 1998*, II, pp.1-12.
- 33ter. "Estimates for kernels of Markov semigroups and geometry", *Publications Mathématiques de Besançon*, 16, 1999, pp.31-40.
34. "Sobolev algebras on Lie groups and Riemannian manifolds", with Emmanuel Russ and Valérie Tardivel-Nachef, *Amer. J. of Math.*, 123, 2001, pp.283-342.
35. "Gaussian estimates and L_p -boundedness of Riesz means", with Gilles Carron and El-Maati Ouhabaz, *J. of Evolution Equ.*, 2, 2002, pp.299-317.
36. "Harnack inequality and hyperbolicity for subelliptic p -Laplacians with applications to Picard type theorems", with Ilkka Holopainen and Laurent Saloff-Coste, *Geom. and Funct. Anal.*, 11, 6, 2001, pp.1139-1191.
37. "A geometric approach to on-diagonal heat kernel lower bounds on groups", with Alexander Grigor'yan and Christophe Pittet, *Ann. Inst. Fourier*, 51, 6, 2001, pp.1763-1827.
- 37bis. "Pointwise estimates for transition probabilities of random walks on infinite graphs", with Alexander Grigor'yan, in *Fractals in Graz 2001, Analysis-Dynamics-Geometry-Stochastics*, Grabner, Woess, ed., Birkhäuser, 2003, pp.119-134.
38. "Subexponential ultracontractivity and L_p - L_q functional calculus", with Stefano Meda, *Math. Zeitschrift*, 244, 2003, pp.291-308.
39. "Riesz transform and related inequalities on non-compact Riemannian manifolds", with Xuan Thinh Duong, *Comm. in Pure and Appl. Math.*, 56, 12, 2003, pp. 1728-1751.
- 39bis. "Riesz transforms for $p > 2$ ", with Xuan Thinh Duong, *Comptes rendus Acad. sc. Paris*, t.332, 11, série I, 2001, pp.975-980.
40. "Littlewood-Paley-Stein functions on complete Riemannian manifolds for $1 \leq p \leq 2$ ", with Xuan Thinh Duong and Xiang-Dong Li, *Studia Math.*, 154, 1, 2003, pp.37-57.
41. "On isoperimetric profiles of product spaces", with Alexander Grigor'yan and Daniel Levin, *Comm. in Anal. and Geom.*, 11, 1, 2003, pp.85-120.
- 41bis. "Heat kernel and isoperimetry on non-compact Riemannian manifolds", in *Heat kernels and analysis on manifolds, graphs and metric spaces*, P. Auscher, T. Coulhon, A. Grigor'yan ed., Contemporary Mathematics 338, A.M.S., 2004, pp.65-99.
42. "Off-diagonal heat kernel lower bounds without Poincaré", *J. London Math. Soc.*, 68, 3, 2003, pp.795-816.
43. "Riesz transform on manifolds and heat kernel regularity", with Pascal Auscher, Xuan Thinh Duong, Steve Hofmann, *Ann. Sc. E.N.S.*, 37, 2004, pp.911-957.

44. “Estimations inférieures du noyau de la chaleur sur les variétés coniques et transformée de Riesz”, with Hong-Quan Li, *Archiv der Mathematik*, 83, 2004, pp.229-242.
45. “The discrete integral maximum principle and its applications”, with Alexander Grigor’yan and Fabio Zucca, *Tohoku Math. J.*, 57, 4, 2005, pp.559-587.
46. “Geometric interpretations of L_p -Poincaré inequalities on graphs with polynomial growth”, with Pekka Koskela, *Milan J. Math.*, 72, 2004, pp.209-248.
47. “Characterization of sub-Gaussian heat kernel estimates on strongly recurrent graphs”, with Martin Barlow and Takashi Kumagai, *Comm. in Pure and Appl. Math.*, 58, 12, 2005, pp.1642-1677.
48. “Riesz transform and L_p cohomology for manifolds with Euclidean ends”, with Gilles Carron and Andrew Hassell, *Duke Math. J.*, 133, 1, 2006, pp.59-93.
49. “Riesz transform on manifolds and Poincaré inequalities”, with Pascal Auscher, *Ann. Sc. Norm. Sup. Pisa*, (5), IV, 3, 2005, pp.531-555.
50. “Large time behavior of heat kernels on forms”, with Qi Zhang, *J. Diff. Geom.*, 77, 2007, pp.353-384.
51. “Ultracontractivity and embedding into L_∞ ”, with Alexander Bendikov and Laurent Saloff-Coste, *Math. Annal.*, 337, 2007, pp.817-853.
52. “Gaussian heat kernel bounds via Phragmén-Lindelöf theorem”, with Adam Sikora, *Proc. London Math. Soc.*, 3, 96, 2008, pp.507-544.
53. “Riesz transform and perturbation”, with Nicholas Dungey, *J. Geometric Anal.*, 17, 2, 2007, pp.213-226.
54. “Riesz meets Sobolev”, with Adam Sikora, *Colloq. Math.*, 118, 2010, pp.685-704.
- 54bis. “Heat kernel estimates, Sobolev-type inequalities and Riesz transform on non-compact Riemannian manifolds”, in *Analysis and Geometry of Metric Measure Spaces: Lecture Notes of the 50th Séminaire de Mathématiques Supérieures (SMS), Montréal, 2011*, Galia Dafni, Robert John McCann and Alina Stancu ed., CRM Proceedings and Lecture Notes, vol. 56, 2013.
55. “Heat kernel generated frames in the framework of Dirichlet spaces”, with G. Kerkycharian and P. Petrushev, *J. Fourier Anal. Appl.*, 18, 5, 2012, pp.995-1066.
56. “A new approach to heat kernel pointwise upper bounds on doubling metric measure spaces”, with Salahaddine Boutayeb and Adam Sikora, *Adv. in Math.*, 270, 2015, pp.302-374.
57. “Gaussian heat kernel bounds through elliptic Moser iteration”, with Frédéric Bernicot and Dorothee Frey, *J. Math. Pures et Appl.*, 9, 106, 6, 2016, pp.995-1037.
58. “Sobolev algebras through heat kernel estimates”, with Frédéric Bernicot and Dorothee Frey, *J. Ec. Polytech. Math.*, 3, 2016, pp.99-161.
59. “Riesz transform for $1 \leq p \leq 2$ without Gaussian heat kernel bound”, with Chen Li, Joseph Feneuil, and Emmanuel Russ, *J. Geometric Anal.*, 27, 2, 2017, pp.1489-1514.
60. “Sobolev algebra counterexamples”, with Luke Rogers, *J. Fractal Geom.*, 5, 2, 2018, pp.143-164.
61. “Gaussian heat kernel estimates: from functions to forms”, with Baptiste Devyver and Adam Sikora, *J. Reine Angew. Math.*, 761, 2020, pp.25-79.
62. “Gradient estimates for heat kernels and harmonic functions”, with Renjin Jiang, Pekka Koskela, and Adam Sikora, *J. Funct. Anal.*, 278, 8, 2020, 68 pp, 108398.

63. "Riesz transforms for bounded Laplacians on graphs", with Chen Li and Hua Bobo, *Math. Z.*, 294, 1-2, 2020, pp.397-417.
64. "Regularity of non-linear semigroups, theory and applications", with Daniel Hauer, <https://arxiv.org/abs/1604.08737>, in revision.

RESEARCH FUNDING

- Holder of a Contrat d'encadrement doctoral et de recherche since 01/10/1993, renewed on 01/10/1997, again on 01/10/2001, suspended in 2004 due to incompatibility with functions as university president, renewed on 01/10/2006 until appointment to the office of Valérie Péresse.
- **1998-2006:** Member, "key scientific staff", of European networks TMR "Harmonic Analysis" 1998-2001 and IHP "Harmonic Analysis and Related Problems" 2002-2006.
- **2004:** In charge of Analyse sur les variétés, Analyse spectrale in the GDR 2753, Analyse fonctionnelle et harmonique et applications (director El-Maati Ouhabaz).
- First chief investigator with Adam Sikora, Macquarie University, Sydney, chief investigator, of a **Discovery Project** by the Australian Research Council (ARC) titled "Heat kernel and Riesz transform on non-compact metric measure spaces" and received **\$330 000 AUD** funding (approximately 230 000 Euros) during 2013-2015.

INVITATIONS: SEMINARS, CONFERENCES, VISITING PROFESSORSHIPS

Seminars

About 100 seminars between 1983 and 2014: 40 in the Paris region (external to Cergy-Pontoise), 22 in regional France, 12 in Australia since August 2012, 24 overseas.

Paris Region (external to Cergy-Pontoise):

- Séminaire Maurey-Pisier.
- Séminaire Choquet (numerous exposés 1983-1988).
- Séminaire Malliavin.
- Séminaire d'Analyse Paris VI-Orsay (numerous exposés 1986 -1991).
- Séminaire de Probabilités (1990) de Paris VI.
- Séminaire de Géométrie Riemannienne (1992, 1993, 1995, 1996), Paris VI.
- Séminaire de Théorie du Potentiel, Paris VI (1992, 1998, 2001).
- Groupe de travail Analyse et Probabilités d'Evry (1993).
- Séminaire EDP et applications of ENS Cachan (1994).
- Séminaire d'Analysis Harmonique, Orsay (1994, May and October 2001, 2003).
- Groupe de travail Géométrie non-holonome ENS Ulm (1995).
- Groupe de travail cohomologie bornée and Séminaire A.L. Besse, Ecole Polytechnique

(1995).

- Séminaire d'Analyse, Marne-la-Vallée (1995).
- Séminaire de Probabilités, Versailles-St Quentin (1996).
- Séminaire d'Analyse Fonctionnelle, Paris VI (1999, 2000, 2003).
- Séminaire Algorithmes, INRIA (1999).
- Meeting LAGA (Paris 13)/AGM (Cergy-Pontoise), 2007.

Regional France:

- Clermont-Ferrand (1984, 1986 and 1988).
- Lyon (1984 and 1994).
- Strasbourg (1988, 1992 and 1994).
- Besançon (1988).
- Marseille (1992, 2000 and 2008).
- Toulouse (1992, 1994 and 1999).
- Amiens (1996).
- ENS Lyon (1997).
- Vannes (1998).
- Grenoble (2001).
- Bordeaux (2002).
- Nantes (2003).
- Nancy (2004).

Australia since August 2012:

- Numerous exposés at the Australian National University (ANU).
- Conference exposé at the University of South Australia (2013).
- Conference exposé at the University of Queensland (2013).
- Conference exposé at the University of Sydney (2014).
- Conference exposé at the University of Melbourne (2014).
- Keynote speaker at the joint seminar Macquarie-Sydney-Wollongong (2014).
- Conference exposé at the UNSW (2014).
- Conference exposé at Macquarie University (2014).

Overseas (external to below):

- University of Neuchâtel (1992 and 2004).
- Politecnico di Torino (1992 and 1996).
- University of Adelaide (1994).
- University of New South Wales (1994).
- Macquarie University, Sydney (1994).
- Imperial College, London (1995 and 2001).
- Ecole Normale, Beijing (1997).
- King's College, London (1997 and 2003).
- University of Helsinki, conference invitation from the Finland Mathematical Society (1998).
- University of Milan-La Bicocca (2000).
- Institut für angewandte Mathematik, Bonn (2000).
- ANU, Canberra (2000, 2002, 2004).
- ETH, Zürich (2001).
- Seminario Matematico e Fisico di Milano (2004).
- University of Florence (2004).
- University of Bielefeld (2006).
- University of Thessalonika (2006).
- University Sun-Yat-Sen, Canton (2012).

Conference participation

Attended 17 conferences between 1984 and 2004 in the Czech Republic, Germany, Israel, England, Greece, France and Scotland.

- **1984:** Winter School, Abstract Analysis, Prague.
- **1985:** Winter School, Abstract Analysis, Prague; Operator ideals and Banach spaces, Jena; Positivity in functional analysis, Tübingen; PDE and Banach spaces, Jerusalem; Classical analysis and Banach spaces, Kent, Ohio.
- **1987:** Analysis and Probability, Delphi.
- **1988:** Operator semigroups, Oberwolfach; Probability Summer School, Saint-Flour.
- **1989:** Semigroups and evolution equations, Delft.
- **1990:** Probability and Potential Theory, Edinburgh.
- **1991:** Théorie spectrale et Géométrie, Aussois.
- **1992:** Espaces de Banach, Mons.
- **1996:** Probability Summer School, Saint-Flour.
- **1998:** Instructional Conference on spectral theory and geometry, Edinburgh.
- **1999:** Inégalités isopérimétriques et transport de mesures, CIRM, Luminy.
- **2004:** GDR Meeting - Analysis fonctionnelle et harmonique et applications, Bordeaux.

Guest and Plenary Lectures

A total of 55 guest and plenary lectures between 1990 -2013 in France, Italy, Poland, Germany, Canada, Australia, England, Israel, Finland, Sweden, Scotland, Greece, United States and China.

- **1990:** Journées de Probabilités, CIRM, Luminy.
- **1991:** Problèmes de Diffusion, Orsay; Harmonic Analysis and Discrete Potential Theory, Frascati (Italy); Harmonic Analysis, Karpacz (Poland).
- **1992:** Journées d'Analyse fonctionnelle Paris VI-Besançon, Besançon.
- **1993:** Evolution equations and control theory, CIRM, Luminy; Théorie des opérateurs et calcul H^∞ , Lyon; Harmonic Analysis, Tuczno (Poland); Partial differential equations, Potsdam.
- **1994:** Potential theory and PDO's in non-negative characteristic form, Parme; Non-compact manifolds and asymptotic invariants, Montreal; Journées d'Analyse, Lyon; Lie groups, Sydney University.
- **1995:** Harmonic Analysis, Tuczno (Poland); Differential geometry and stochastic analysis, Warwick; Harmonic Analysis and PDE, Macquarie University, Sydney.
- **1997:** Random walks and discrete potential theory, Cortona; Geometric methods in Analysis, Haifa.
- **1998:** Dirichlet forms, Oberwolfach; Maximal regularity, Halle (RFA); Equations aux dérivées partielles, St-Jean-de-Monts; Lie groups, Canberra; Harmonic Analysis and related topics, Macquarie University, Sydney.

- **1999:** Colloque Sophus Lie, Metz.
- **2000:** Geometric stochastic analysis, Oberwolfach; XVIII Rolf Nevanlinna Colloquium, Helsinki; Conférence en l'honneur de Jaak Peetre, Lund; Evolution equations, Levico Terme (Italy).
- **2001:** Harmonic Analysis, Zakopane (Poland); Fractals, Graz; Harmonic Analysis and PDE, Göteborg; Progress in PDE (Landis session), Edinburgh; Probability and Geometry, Dijon.
- **2002:** Reelle Analysis, Oberwolfach; Analysis stochastique et théorie du potentiel, St-Priest-le-Gimel; Géométrie et analyse sur les variétés non-compactes, Montpellier.
- **2003:** Journées d'Analyse fonctionnelle-géométrie-équations d'évolution, Bordeaux; Inégalités géométriques: approches stochastiques et géométriques (GDR S.D.MAT), Clermont-Ferrand; Second order subelliptic equations and applications, Cortona.
- **2004:** Analytic and geometric aspects of stochastic processes, Banff; Heat equation and curvature flows, Rome.
- **2005:** Semi-groupes d'opérateurs, équations d'évolution et théorie spectrale en physique mathématique, CIRM, Luminy.
- **2006:** Harmonic Analysis, Zakopane (Poland); Géométrie conforme et opérateurs géométriques, Etats de la recherche, Cergy-Pontoise; Subelliptic PDE's and applications to geometry and finance, Cortona; Marches aléatoires sur les graphes et les groupes, Tours; Evolution equations, en l'honneur de Günter Lumer, Mons-Valenciennes; Mini-symposium Probability and Geometry, Jahrestagung der Deutschen Mathematiker-Vereinigung, Bonn ; Heat kernels in Mathematics and Physics, Blaubeuren.
- **2009:** Harmonic Analysis, Samos; Concentration, functional inequalities and isoperimetry, Boca Raton (USA).
- **2011:** Harmonic analysis and applications, Sydney.
- **2012:** Trilateral meeting on nonlinear partial differential equations and related topics, Wollongong; Advances on fractals and related topics, Hong-Kong.
- **2013:** Heat kernels, stochastic processes and functional inequalities, Oberwolfach; Recent developments of nonlinear PDEs, ANU; Geometric analysis session, Australian Mathematical Society conference.
- **2014:** Probability and analysis symposium, ANU.
- **2015:** Analysis and geometry in metric spaces, ICMAT, Madrid.

Conferences, mini-courses, summer schools

A total of 23 conferences, mini-courses and summer schools between 1990 and 2014 in France, Poland, Switzerland, Scotland, Italy, Japan, Cyprus, Germany, Iran, Austria, Czech Republic, Mexico, Canada and Australia.

- **1990:** Mini-course, Nancy.
- **1991:** Mini-cours, Rennes.
- **1993:** Cours Tempus, Wroclaw.
- **1994:** 2 conferences (Isopérimétrie et croissance du volume dans les groupes, Champoussin), Switzerland; 2 conferences at the North British Functional Analysis Seminar, Edinburgh; Summer School in Poland, Analysis and Geometry, Tuczno.
- **1997:** 2 conferences at the Mathematical days of the Academy of Sciences of Bologna; 2 conferences at the CNRS-NSF workshop in Spectral Geometry (Grenoble); 3 conferences

at Osaka City University.

- **1998:** Summer School on operator semigroups, Besançon.
- **1999:** Summer School CIRM (Italy) on analysis of metric spaces, Trento.
- **2001:** Cours de DEA resident au CIRM, Luminy.
- **2002:** Discrete Geometric Analysis, first symposium of the JAMS, Tohoku.
- **2004:** Series of conferences at the University of Cyprus; Course at the 4th European-Maghreb Workshop on Evolution Equations, Freudenstadt.
- **2005:** Mini-course at the GDR Analysis fonctionnelle et harmonique et applications meeting, Grenoble.
- **2006:** Course in a CIMPA-UNESCO-IPM School, Progrès récents en Analysis géométrique, Tehran; mini-course at the Institut Wolfgang Pauli, Vienna.
- **2007:** Minicorsi di Analisi Matematica, University of Padoue.
- **2009:** Spring school of analysis, Function spaces, inequalities and interpolation, Paseky, Czech Republic; Escuela de Verano en Análisis y Física Matemática, Cuernavaca, Mexico.
- **2011:** Seminar de mathématiques supérieures, University of Montreal.
- **2014:** Workshop on geometric analysis, Wollongong.

Overseas invitations

A total of 45 invitations between 1988 and 2014 to the United States, Scotland, Italy, Poland, Australia, Sweden, Finland, Japan, England, Austria, China, Cyprus, Greece, Spain and Germany.

- **1988:** 1 week, U.C.L.A.
- **1991:** 10 days, Edinburgh.
- **1992:** 2 weeks, Trento.
- **1993:** 1 week, Milan; 2 weeks, Wroclaw.
- **1994:** 3 months, Australian National University.
- **1995:** 1 month, Macquarie University, Sydney; 1 week, University of Adelaide.
- **1996:** 2 weeks, Institut Mittag-Leffler (special year in Analysis on Lie groups); 1 week, Jyväskylä (Finland) 2 weeks, Politecnico di Milano.
- **1997:** 1 week in Bologna; 1 week in Osaka; five times 2 weeks at Imperial College during 1997-1999.
- **1998:** 1 week in Helsinki; 2 months at Macquarie University, Sydney.
- **2000:** 6 weeks at Macquarie University, Sydney; 1 week at Cornell University (USA).
- **2001:** 1 week at Imperial College; 2 weeks at the Erwin Schrödinger Institute (Semester, Random Walks and Geometry), Vienna.
- **2002:** 6 weeks at Macquarie University, Sydney; 1 week at the Chinese University of Hong-Kong.
- **2004:** 3 weeks at Macquarie University, Sydney; 1 week at University of Milan-La Bicocca; 2 weeks at Centre Ennio de Giorgi, Pisa, Trimester, Harmonic Analysis; 1 week at Rutgers University, USA .

- **2005:** 2 weeks at the University of Cyprus.
- **2006:** 2 weeks at the Isaac Newton Institute, Cambridge (Spectral theory and partial differential equations program).
- **2007:** 1 week at Tsukuba University (Japan); 1 week at the University of Crete, Heraklion.
- **2008:** 1 week at the University of Kyoto.
- **2013:** 3 weeks at Fudan University, Shanghai; 2 weeks at ICMAT, Madrid, Trimester Real harmonic analysis and applications to PDE.
- **2014:** 1 week at University of Milan-La Bicocca and 1 week at the University of Bielefeld.

RESEARCH SUPERVISION

16 supervisions in total: 1 HDR, 8 doctoral theses, 4 post-doctoral fellowships, 2 ENS internships and 1 DEA thesis.

Habilitation à diriger des recherches

- Sönke Blunck, “Semigroupes discrets et continus, et extension à L_p de propriétés L_2 d’opérateurs elliptiques sans noyaux de la chaleur”, awarded 17/11/03. Blunck worked at Cergy-Pontoise under my supervision as a post-doctoral researcher 1998 -2005: 1998 - 2000, as a German government scholarship holder, 2000 -2002, ATER, 2003 - 2005, as holder of research scholarship DFG. Blunck returned to Germany in 2005 to take up a high-level position in banking.

Doctoral theses

- Thierry Delmotte, “Versions discrètes de l’inégalité de Harnack”, awarded 26/11/97. After working as an assistant at ETH Zürich (chaired by A.-S. Sznitman), Delmotte was recruited as a lecturer at Toulouse III.
- Emmanuel Russ, “Espaces de Hardy et transformées de Riesz sur les graphes et les variétés”, awarded 26/10/98. After an ATER position at Paris XIII, Russ was recruited as a lecturer at Aix-Marseille III then as a professor at Grenoble.
- David Mascré, “Inégalités de Hardy-Littlewood-Sobolev et inégalités à poids sur les espaces homogènes”, awarded 14/02/05. Mascré is now a civil servant at the Ministry of Foreign Affairs.
- Romain Tessera, “Questions d’analyse et de géométrie sur les espaces métriques et sur les groupes”, (moniteur normalien), under co-supervision with Alain Valette, awarded 28/06/06. After a postdoctoral fellowship at Vanderbilt University (USA), Tessera was recruited in 2008 as a Chargé de recherches at the CNRS; he is now Directeur de recherches.
- Davide Barbieri, “Approximation des normes de Sobolev dans les groupes de Carnot”, in co-tutelle with Bruno Franchi (Bologna), awarded 9/06/08. Barbieri is now Assistant Professor in Madrid.
- Salahaddine Boutayeb, “Sur les estimations du noyau de la chaleur dans les espaces

métriques doublants”, awarded 28/10/10. Boutayeb is a lecturer in Morocco.

- Chen Li, “Quasi transformées de Riesz, espaces de Hardy et estimations sous-gaussiennes du noyau de la chaleur”, in co-tutelle with Pascal Auscher, awarded 24/04/14. Chen is a postdoctoral fellow at U. Conn..
- David Tewodrose, “Some functional inequalities and spectral properties of metric measure spaces with curvature bounded below”, in co-tutelle with Luigi Ambrosio (Pisa), 27/08/18.

Postdoctoral Researchers

- Daniel Levin (Israel), 2000-2001, Chateaubriand scholarship holder, 2001-2002, TMR network “Analysis Harmonique” scholarship holder.
- Fabio Zucca (Italy), 2001-2002, scholarship holder C.N.R.
- Satoshi Ishiwata (Japan), 2004-2005, Japanese Government scholarship holder.
- Zihua Guo (China), 2014.
- Huaiqian Li (China), 2014.

Interns, ENS Lyon

- Benoît Fanchon, François Chevallier, 1998.

Thesis, DEA

- Romain Tessera, ENS Ulm, 2003.

PARTICIPATION ON THESIS JURY PANELS

35 jury participations in total: 28 PhD (5 as chair, 18 as referee) and 7 HDR (1 as chair, 2 as referee).

- El-Maati Ouhabaz, PhD, “Propriétés d’ordre et de contractivité des semi-groupes avec applications aux opérateurs elliptiques”, Besançon, 26/06/92 (referee).
- Azzedine Saouli, PhD, “Puissances imaginaires d’opérateurs de type positif”, Lyon I, 29/09/92 (chair).
- Abdellatif Bentaleb, PhD, “Analyse des semi-groupes ultrasphériques”, Toulouse III, 16/12/93 (referee).
- Gilles Carron, PhD, “Inégalités isopérimétriques sur les variétés riemanniennes”, Grenoble I, 27/09/94 (referee).
- Frédéric Mathéus, PhD, “Empilements de cercles: rigidité, discrétisation d’applications conformes”, Grenoble I, 22/12/94 (referee).
- Sophie Bismut, PhD, “Courbure scalaire prescrite”, Paris VI, 20/06/96 (referee).
- Andrzej Zuk, PhD, “Sur certaines propriétés spectrales du laplacien sur les graphes”, Toulouse III, 18/12/96 (referee).
- Zindine Djadli, PhD, “Equations de Yamabe perturbées”, Cergy-Pontoise, 05/11/98.
- Li Hong-Quan, PhD, “Estimations L_p des opérateurs de Schrödinger sur les groupes nilpotents et transformation de Riesz sur les variétés coniques”, Paris XI, 04/12/98 (referee).

- Mahmoud Qafsaoui, PhD, “Opérateurs elliptiques d’ordre supérieur sous forme divergence à coefficients peu réguliers, estimations gaussiennes de leurs noyaux de la chaleur et applications”, Amiens, 18/01/99 (chair).
- El-Maati Ouhabaz, habilitation à diriger des recherches, “Théorie L_p des diffusions à coefficients réels ou complexes: propriétés de contractivité et théorie spectrale”, Marnela-Vallée, 28/01/99 (referee).
- Arnaud Simard, PhD, “Calcul fonctionnel analytique pour des opérateurs sectoriels”, Besançon, 13/09/99 (referee).
- Gilles Carron, habilitation à diriger des recherches, “Formes harmoniques L_2 sur les variétés non compactes”, Lyon I, 13/09/99.
- Elide Terraneo, PhD, “Application de certains espaces fonctionnels de l’analyse harmonique réelle aux équations de Navier-Stokes et de la chaleur non-linéaire”, Evry, 15/12/99 (referee).
- Yves Rakotondratsimba, habilitation à diriger des recherches, “Weighted inequalities for classical operators”, Cergy-Pontoise, 25/01/00.
- Nicholas Dungey, PhD, “Heat kernels on Lie groups of polynomial growth”, ANU (Canberra), 17/04/00 (referee).
- Monher Damak, PhD, “ C^* -algèbres et problèmes à N corps”, Cergy-Pontoise, 17/05/00.
- Khaled Gafaiti, PhD, “Algèbres de Royden et homéomorphismes à p -dilatation bornée entre espaces métriques mesurés”, Lausanne, 19/06/01 (referee).
- Hervé Pajot, habilitation à diriger des recherches, “Rectifiabilité, analyse dans les espaces singuliers et géométrie hyperbolique à la Gromov”, Cergy-Pontoise, 08/11/02.
- Patrick Ostellari, PhD, “Estimations globales du noyau de la chaleur”, Nancy I, 13/06/03 (referee).
- Zidine Djadli, habilitation à diriger des recherches, “Métriques privilégiées en géométrie conforme”, Cergy-Pontoise, 10/12/03.
- Vincent Bayle, PhD, “Propriétés de concavité du profil isopérimétrique et applications”, Grenoble I, 18/12/03 (chair).
- Pierre Portal, PhD, “Harmonic analysis of Banach space valued functions in the study of parabolic evolution equations”, Besançon, 11/06/04 (referee).
- Thomas Rey, PhD, “Estimations de De Giorgi-Nash et approximations”, AixMarseille III, 17/09/04 (referee).
- Li Hong-Quan, habilitation à diriger des recherches, “Sur quelques problèmes d’Analysis sur les variétés”, Paris XI, 15/12/04 (referee).
- César Poupaud, PhD, “Régularité maximale L_p du problème de Cauchy non-autonome et théorie spectrale des opérateurs de Schrödinger sur les variétés riemanniennes”, Bordeaux I, 14/12/05 (referee).
- Alexandre Engoulatov, PhD, “La géométrie et la théorie quantique des champs”, Paris XI, 11/12/06 (referee).
- Vincent Minerbe, PhD, “Sur l’effondrement à l’infini des variétés asymptotiquement plates”, Nantes, 07/12/07.
- Li Xiang-Dong, habilitation à diriger des recherches, “Transformées de Riesz, théorie de Hodge L_p et estimations L_p de ∂ ”, Toulouse III, 12/12/07 (chair).
- Nadine Badr, PhD, “Interpolation réelle des espaces de Sobolev sur les espaces métriques

mesurés et applications aux inégalités fonctionnelles”, Paris XI, 17/12/07 (referee).

- Besma Ben Ali, PhD, “Inégalités maximales et estimations L_p des transformées de Riesz des opérateurs de Schrödinger”, Paris XI, 14/04/08.
- Michel Bonnefont, PhD, “Functional inequalities for subelliptic heat kernels”, Toulouse III, 27/11/09 (referee).
- Mohamad-Maammoun Turkawi, PhD, “Espaces de Sobolev et de Hardy-Sobolev et opérateur divergence sur les graphes”, Aix-Marseille, 06/07/12, (chair).
- Meriem Imechrane, PhD, “Applications harmoniques, singularités apparentes, lemme de Schwarz-Yau et grand théorème de Picard”, Corte, 12/07/12.
- Joseph Feneuil, PhD, “Analyse harmonique sur les graphes et les groupes de Lie : fonctionnelles quadratiques, transformées de Riesz et espaces de Besov”, Grenoble, 10/07/15 (chair).
- Jocelyn Magniez, PhD, “Etude de la bornitude des transformées de Riesz sur L_p via le Laplacien de Hodge-De Rham”, Bordeaux, 06/11/15 (referee).
- Laurent Kayser, PhD, “Estimations gaussiennes des noyaux de la chaleur”, Metz, 11/12/2015 (chair).

SEMINARS AND CONFERENCES

- **1992-2008:** Chaired a workshop at Cergy-Pontoise. In 1996, this workshop became weekly and was organised together with Hervé Pajot and Vladimir Georgescu, under the title “Analysis sur les graphes et les variétés”. In 2003, it became a “Séminaire d’Analyse”, organised with François Germinet and Zindine Djadli, then, from 2006 to 2008, with François Germinet and Armen Shirikyan.
- **1994:** Participated in the organisation of the Journées Mathématiques at Cergy-Pontoise.
- **1996:** Organisation at Cergy-Pontoise, with L. Saloff-Coste, of the international conference on “Inégalités de Sobolev et Géométrie”.
- **1997-2002:** Chaired a bi-monthly seminar titled “Analysis and Geometry” with V. Georgescu and E. Hebey.
- **1999:** Co-organisation at Cortona with B. Franchi and N. Sbordone, with support from INDAM and University of Cergy-Pontoise, of a conference on “Integral inequalities and applications”.
- **2000:** Organisation at Cergy-Pontoise with E. Hebey, of a conference on “Functional inequalities and geometry”.
- **2002:** Organisation, with P. Auscher, G. Besson, and A. Grigor’yan, of a trimester at the Institut Henri Poincaré titled “Noyaux de la chaleur, marches aléatoires et Analysis sur les graphes et les variétés”; during this trimester, co-organisation of three conferences: “Harmonic Analysis and PDE”, with P. Auscher and A. Bonami, “Heat kernels and analysis on manifolds”, with P. Auscher, G. Besson, and A. Grigor’yan, “Analysis on graphs and on metric spaces”, with A. Grigor’yan. A 420 page volume of this trimestre appeared in the collection *Contemporary Mathematics* of the A.M.S. under the title “Heat kernels and analysis on manifolds, graphs and metric spaces”.
- **2005:** Organisation, with B. Franchi, T. Kumagai and K.-T. Sturm, of a week-long conference at Oberwolfach titled “Heat kernels, stochastic processes and functional

inequalities”.

- **2008:** Organisation, with A. Ancona, J.-P. Anker, G. David and J. Peyrière, of a conference “Analysis harmonique à Orsay”, in honour of Noël Lohoué.
- **2014:** Organisation, with A. Pulemotov, G. Wheeler, V.-M. Wheeler and H. Nguyen, of a week-long conference in Brisbane on “Ricci flow and stochastic methods in geometric analysis”.

TEACHING

Paris VI

- From 1984-1985 to 1988-1989, I taught for one semester in second year as well as taking the tutorials for the differential calculus lectures of G. Pisier for 4 years. For 5 consecutive years, in the evening hours, I taught the lectures and tutorials of mathematics in undergraduate physics (integration, distributions, operators), for salaried students.
- For several years I coordinated the undergraduate degree by correspondence and, in 1988-1989, the training of high school teachers . I assisted N. Varopoulos in 1988-1989 and 1989-1990 in a masters course of Real Analysis.
- In 1989-1990, I was seconded to the CNRS and, in 1990-1991, I was on sabbatical leave for one semester. In 1990-1991, I taught the tutorials of the complex analysis course of P. Dolbeault.
In 1991-1992, I was seconded to the CNRS.

Cergy-Pontoise

- I taught first year maths courses from 1992-1993 to 1997-1998 .
- In 1992-1993, and 1993-1994 I taught some undergraduate courses.
- In 1994-1995, I implemented a CAPES preparation program and taught a masters course.
- In 1995-1996, I taught mostly in the graduate program.
- In 1996-1997, I also taught in preparation for the agrégation and in the graduate program. From 1997-1998 to 2003-2004, I taught several third and fourth year courses (topology, complex analysis, real analysis, differential calculus) as well as the preparation for the agrégation and/or CAPES, and in the graduate program.

I gave up teaching upon accepting my role as University President in September 2004.

Australian National University

- My position as School Director did not include a compulsory teaching load. I did however teach a specialised Honours course in harmonic analysis in 2013.