

CURRICULUM VITAE

Sylvie PAYCHA

Last name: PAYCHA **First name:** SYLVIE

Born on the 27th of March 1960 in Neuilly/s/Seine (France)

Home address: Flotowstr. 6, 10555 Berlin, Germany

Present position (since Oct. 2011): Full professor at the Mathematics Department at the university of Potsdam (on leave from the Unievrstity Clermont-Auvergne Pascal in Clermont-Ferrand, France)

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Spoken languages: French, English (British mother), German and Spanish (all fluent), some knowledge of Chinese and Russian

EDUCATION

- 1984: **Agrégation de Mathématique**
- 1985: **D.E.A de Mathématique** at the University Paris VII in Paris on spectral theory
- 1988: **Ph.D thesis (Doktor Titel der Ruhr Universität Bochum)** at the Ruhr University in Bochum, Germany, *Probability measures on infinite dimensional manifolds and Polyakov strings*
- 1990: **Ph.D thesis (Doctorat d'université français)** at the University Paris VI in Paris, France, *A mathematical interpretation of the Polyakov string model in non critical dimension* The contents of these two Phd theses differ by an extra chapter in the French one.
- 1994: **Habilitation thesis** (Habilitation à diriger des recherches) at the University Louis Pasteur in Strasbourg, France, *Towards an interpretation of path integrals: the Polyakov model and the critical Ising model*

HONOURS

- 1999/2000: von Humboldt fellowship¹.
- 2003: One month Emmy Noether Professorship² at the University of Göttingen, Germany.
- 2003: One month Silla Sanford Professorship, University of Los Andes, Bogotá, Colombia
- Since 2013: (Honorific Position) Associate Honorary Professor/ Profesora adjunta of the University of los Andes, Bogotá, Colombia
- April 2014: Promoted "Chevalier de la Légion d'Honneur" in France
- 2019-2020: **Simons Emmy Noether Fellowship** at the Perimeter Institute, with four 3 weeks stays at the Perimeter Institute planned over two years

¹A Humboldt Research Fellowship for postdoctoral researchers allows you to carry out a long-term research project (6-24 months) you have selected yourself in cooperation with an academic host you have selected yourself at a research institution in Germany.

²Once a year the faculty of mathematics of the university of Göttingen awards the Emmy Noether professorship to an outstanding female mathematician for 3 to 4 weeks stay to present a current field of research in talks and seminars.

PROFESSIONAL EXPERIENCE

- 1984-1985: High school teacher (for A Levels pupils in Sciences) in Argenteuil (France)
- 1985-1989: **Assistant** at the Ruhr University in Bochum (Germany) (Wiss. Hilfskraft/Wiss. Mitarbeiterin)
- 1989-1995: **Assistant professor** Maître de conférence at the University Louis Pasteur in Strasbourg
- since 1995: **Full professor** at the University Blaise Pascal in Clermont-Ferrand
- 1998-1999: On leave from the University Blaise Pascal (Sabbatical year)
- March-Sept. 1999: *Von Humboldt Stiftung Fellow*, University of Bonn (invited by S. Albeverio)
- April-Sept. 2000: *Von Humboldt Stiftung Fellow*, University of Bonn (invited by S. Albeverio)
- 2003-2004: On leave for 6 months (Sept 2003-February 2004) from the University Blaise Pascal to the C.N.R.S. (French National Research Center) (Délégation C.N.R.S)
- 2006-2007: On leave for one year (Sept 2006- August 2007) from the University Blaise Pascal to the C.N.R.S. (French National Research Center) (Délégation C.N.R.S)
- Oct 2008-2012: Member of the *Graduiertes Kolleg, Analysis, Geometry and String Theory* of the University of Hannover, Germany
- Sept. 2011-August 2016: On leave from the University Blaise Pascal
- As from Oct. 2011: **Full professor** (W3) at the University of Potsdam, Germany
- Sept. 2016-August 2021: On leave from the University Clermont-Auvergne

ADMINISTRATIVE RESPONSABILITIES

- **On a international level**

- 98-08: In charge of an international scientific project based in Colombia (Ecos-Nord, Prefalc) which involved France (with the universities of Metz and Clermont-Ferrand), Colombia as well as Venezuela and Mexico
- Sept. 95-Dec. 97: **Convenor** of the European organisation *European Women in Mathematics (E.W.M.)*
- Jan. 2006- Dec. 2009 : **Chair** of the *EMS committee Women and Mathematics*
- Jan. 2010- Dec. 2013: Vice-chair for *EMS committee Women and Mathematics*
- Jan. 2011–Dec. 2013: Member of the *EMS committee for meetings*, see <http://www.euro-math-soc.eu/comm-meetings.html>
- Since 2013: Member of the standing committee of *European Women in Mathematics (EWM)*, see <http://www.europeanwomeninmaths.org/about-us/organization>

- **On a national level in France**

- Jan. 94-June 95: Member of the **National University Hiring Committee** in France (C.N.U)
- Oct. 92-June 95: **Chairwoman** of the French organisation for women mathematicians *Femmes et Mathématiques*
- Sept. 2005- June 2011: Member of the standing committee of the *French Mathematical Society (SMF)*
- Jan. 2010- Aug. 2011: **Coordinator (and initiator)** of a CNRS National Research Network (<http://renorm.math.cnrs.fr/>) (<http://www.renorm.math.cnrs.fr/>) on “Renormalization” which encompasses some 40 members. (I resigned due to my moving from Clermont-Ferrand to Potsdam)
- Since Oct. 2015-: Member of the **National University Hiring Committee** in France (C.N.U)

- **At the University Blaise Pascal in Clermont-Ferrand (1995-2011)**

- **On the mathematics department level**
 - * **Oct. 95 - June 98:** Coordinator and initiator of an interdisciplinary work-group *Géométrie de l'espace des lacets/ The geometry of loop groups*

- * **Oct. 96 - June 07:** Coordinator and initiator of a seminar *Analyse fonctionnelle, géométrie et topologie/ Functional analysis, geometry and topology* since then renamed *Géométrie, Algèbres et algèbres d'opérateurs (G.A.A.O)/ Geometry, Algebra and Operator Algebras* (see <http://math.univ-bpclermont.fr/seminaires/gt-gao.htm>)
- * **Sept. 96-Sept. 98, and Sept. 99- June 01:** In charge of the library of the mathematics department of the university Blaise Pascal
- * **Jan. 95- Sept. 98:** Member of the standing committee of the applied mathematics department of the university Blaise Pascal
- **On the Faculty of Science and University level**
 - * 99-01: Elected member of the Scientific Committee for the Faculty of Science of the University Blaise Pascal in Clermont-Ferrand
 - * 02-06: Elected member of the Scientific Committee of the University Blaise Pascal in Clermont-Ferrand
 - * Jan. 06-Dec. 07: Elected member of the Administrative Committee of the University Blaise Pascal in Clermont-Ferrand
 - * Jan. 08- Aug.11: Elected member of the Scientific Committee of the University Blaise Pascal in Clermont-Ferrand
 - * Oct. 08 -Aug.11: Chair of a committee for the “Hennequin Grant”, corresponding to some 5000 Euros per year given out to women mathematics/physics/chemistry students at the Universty Blaise Pascal

- **At the University of Potsdam (Since October 2011)**

- Since 2012: **On the mathematics department level:**
Main organizer (assisted by post-docs) of the monthly **Colloquium of the Mathematics Department** of the University of Potsdam (monthly sessions) see <http://www.math.uni-potsdam.de/qkolloquien/Institutskolloquium>
I thereby reinitiated a tradition of colloquia in Potsdam, which had been abandoned in the past decades. This transversal monthly scientific meeting, which has become a central event in the life of the maths department, is organised around two talks on a common topic.
- **On the faculty of Science level:**
 - * Since 2012: Member of the Committee for Equal Opportunities and Support for Women (Kommission fr Gleichstellung und Frauenförderung), see <http://www.uni-potsdam.de/mnfakul/dekanat/gfk.html>
 - * 2018-2019: Member of the **interdisciplinary hiring committee** for an “Open topic position” at the Universty of Potsdam (out of 420 candidates)

in all natural sciences disciplines and mathematics, a female mathematician was offered the position)

- * since Oct. 2018: Member of the Committee for the **Equal Opportunities Programme** of the Faculty of Science of the University of Potsdam (Komision Gleichstellungsplan)
- * since Oct. 2018: Member of the committee for the elaboration of a new **interdisciplinary undergraduate programme Mathematics-Physics** at the Faculty of Science of the University of Potsdam.

RECENT OUTREACH ACTIVITIES

- **Curator of a touring exhibition:**

Women of mathematics throughout Europe. A gallery of portraits:
<http://womeninmath.net>

which was opened on July 20th 2016 at the 7th European Congress in Berlin, supported (among other institutions) by the Alexander von Humboldt Stiftung (Humboldt Alumni Award 2015 for innovative networking initiatives) and has since then been shown in more than 110 locations (<http://womeninmath.net/all-locations/>) in Europe and beyond, Australia, South America, Africa...

The exhibition offers a glimpse into the world of mathematics through **photographs** by Noel Tovia Matoff (also curator of the exhibition) and excerpts of **interviews** (thirteen by Sylvie Paycha with the assistance of Sara Azzali and one by Cordian Riener) of fourteen women mathematicians throughout Europe, who share their experiences as mathematicians, thus serving as role models. The complete interviews are available in the **catalogue** of the exhibition (<http://womeninmath.net/resources/>). The exhibition has undergone several extensions, amongst which one with ten portraits of female mathematicians in South America interviewed by Mariel Saenz (<http://womeninmath.net/venue/santiago-chile/>), and is in the process of being extended with 16 portraits of female mathematicians in Australia, 6 of female mathematicians working in countries on the mediterranean shores, and one at an initial stage with women physicists or mathematical physicists affiliated with the Perimeter Institute in Waterloo, Canada.

<http://womeninmath.net/resources/>

- **Initiator of the laying of "Stolpersteine" for Alexandre Grothendieck:**

<http://www.grothendieckcircle.org/>

Three Stolpersteine were placed in honor of Grothendieck's family, on March 22, 2017 in front of the home in Berlin where Alexandre Grothendieck resided with his parents and sister from 1928 to 1933 at the address 165 Brunnenstraße, Berlin. I initiated this project by applying for the three stones (<http://www.stolpersteine.eu/de/>), and organised a "**mathematical café**" on the day they were placed by the artist Gunter Demnig. This event brought together a group of some 20 pupils of a high school in Berlin (<https://www.hhgym.de/?q=node/441>), non mathematical friends and professional mathematicians including Peter Scholze who had delivered a mathematical talk at the school that morning around Grothendieck's work.

- **Interviews of witnesses of the German reunification at the Mathematics Institute of the University of Potsdam:**

<https://www.math.uni-potsdam.de/institut/vortraege-und-videos/zeitzeugen-der-wende/>

In 2018, I interviewed nine colleagues presently or formerly working at the Mathematics Institute, who witnessed **German reunification** or who were appointed shortly after that,

asking them to tell us about their experience and the changes that they observed. The videos with subtitles are available on the afore mentioned website. Further five interviews with colleagues from the natural sciences were carried out in 2019 by Elke Rosenberger at the Mathematics Institute in Potsdam.

TEACHING

Undergraduate teaching in France (1989-2011)

University Louis Pasteur, Strasbourg and University Blaise Pascal, Clermont-Ferrand

- **95-11** First two years analysis and algebra courses.
 - Algebra: Vector spaces, Matrices, Linear maps, Determinants, Diagonalisation,
 - Analysis: Continuity, Mean value theorem, Differentiability, Taylor expansions (+ Integration theory up to 2009)
 - Some arithmetics: Divisibility in the integers and the polynomials, factorisation into primes or irreducibles.
- **92-95** First two years analysis and algebra exercise sessions as well as preparation courses for entrance exams for future high school teachers (CAPES) at the university Louis Pasteur in Strasbourg

Undergraduate teaching in Germany (as from Oct.2011)

University of Potsdam

- **Oct.2011-July 2012:** Analysis I and II.
- **Oct.2012-July 2013:** Analysis I and II.
- **Oct. 2013-July 2014:** Mathematics for Physicists I and II.
- **Oct. 2014-July 2015:** Mathematics for Physicists III and IV.
- **Oct. 2015-July 2016:** Mathematics for Physicists I and II.
- **Oct. 2016-July 2017:** Mathematics for Physicists III and IV.
- **Oct. 2017-July 2018:** Analysis I and II.
- **Oct. 2018-July 2019:** Mathematics for Physicists I and II.
- **Oct. 2019-July 2020:** Mathematics for Physicists III and II.

Advanced courses in France

(from 15 to 30 hours each)

- **90-91:** *Ising Model* with D. Bennequin, Louis Pasteur University, Strasbourg
- **91-92:** *Methods for path integral quantisation* Louis Pasteur University, Strasbourg
- **95-96:** *Determinant bundles*, Blaise Pascal University, Clermont-Ferrand
- **97-98:** *Group actions and determinant bundles*, Blaise Pascal University, Clermont-Ferrand
- **99-00:** *Geometry of a class of infinite dimensional manifolds*, Blaise Pascal University, Clermont-Ferrand
- **01-02:** *Group actions in infinite dimensions*, Blaise Pascal University, Clermont-Ferrand
- **04-05:** *Two index theorems on forms*, Blaise Pascal University, Clermont-Ferrand
- **06-07:** *Regularisation and renormalisation methods in physics and geometry*, Blaise Pascal University, Clermont-Ferrand

Postgraduate course in Germany (as from March 2011)

University of Potsdam

- **Apr.-July 2011:** *Regularised integrals, sums and traces from an analytic point of view (26 hrs)*
- **Oct. 2012- Feb. 2013:** *Regularisation methods in mathematics and physics (26 hrs)*
- **Apr.- July 2013:** *Prolegomenon to renormalisation methods (26 hrs)*
- **Apr.- July 2014:** *Regularised determinants and related anomalies (12 hrs)*
- **Apr.- July 2015:** *Pseudodifferential operators on groups (13 hrs)*
- **Apr.- July 2015:** *(Ringvorlesung) Can the Wodzicki residue detect the shape of a drum? 12 hrs)*
- **Apr.- July 2016:** *(Ringvorlesung) Surfaces as paths in string theory (13 hrs)*
- **Apr.- July 2017:** *Regularised determinants and related anomalies (26 hrs)*

- **Apr.- July 2018:** *Locality and singularities (26 hrs)*
- **Apr.- July 2019:** *Group actions in geometry and quantum field theory (26 hrs)*
- planned for **Apr.- July 2020:** *Heat kernel expansion in physics and geometry (26 hrs)*

Invited lecturer at other universities (a selection)

(lectures held in French, English, German or Spanish according to the audience)

- *Emmy Noether Professorship*, Mini course *Regularisation techniques in geometry and physics* (10 hrs), University of Göttingen, Germany (April-May 2003)
- Invited Professor *Silla Stanford*, Mathematics Department of the *University Los Andes*, Bogota, Colombia, Mini course (20hrs) *Regularisation techniques in geometry and physics*, (July-August 2003)
- Mini course (6 hrs) *Rencontres mathématiques de Glanon*, Glanon, July 5-9 2004
- Mini course (8 hrs) *Analytic aspects of renormalisation*, Johns Hopkins University, Baltimore (5.- 12. Nov. 2008)
- Mini course (15 hrs) *Renormalisation*, Lebanese University, Beyrouth (21. - 30. Jan. 2009)
- Mini course (6 hrs) *Prolegomenon to renormalisation*, Erwin Schrödinger Institute in Vienna, (March / April 2009) during the *Number Theory and Physics* program
- Mini course (8 hrs) *Analytic aspects of renormalisation*, Leibniz University in Hannover, Germany (4.- 8. May 2009)
- Mini course (10 hrs) *Regularisierungsmethoden*, University of Regensburg, Germany (July 2010)
- Advanced course (48 hrs *Regularised integrals, sums and traces* (4hrs/week during 12 weeks), University of Potsdam (April-July 2011)
- Advanced lectures (20 hrs) *Global analysis and index theory*, University of Los Andes, Bogota, Colombia (August 2011)
- Advanced lectures (24 hrs) *An introduction to index theory*, Lebanese University, Beyrouth, Lebanon (February 2012)
- Mini course (16 hrs) *A Mathematical Approach to Some Issues in Quantum Field Theory: A Prolegomenon to Renormalisation Methods* held in two parts, with 8 hrs at the Summer School, Geometric, Algebraic and Topological Methods for Quantum Field Theory, Villa de Leyva (July 2013) and another 8 hrs at the University of Los Andes, Bogota, Colombia (August 2013)

- Mini course (4 hrs) *A Prolegomenon to renormalisation; from path integrals to discrete sums on cones* (Aug. 13- Aug. 30 2013), during the "Mathematical Methods from Physics" program (July 22. -Sept. 5. 2013) at the Academy of Sciences in Beijing, China
- Intensive Master course (24 hrs + examination) *Zeta determinants and spectral invariants*, (March 27th- April 7th 2017), Universidad Nacional de Bogotá, Colombia
- Mini course (4hrs) Pseudodifferential operators in geometry and quantum field theory, Summer School on Global Differential Geometry (14 - 18 May 2018) at the AIMS Center M'bour (Sénégal)

SCIENTIFIC SUPERVISION

- **Master theses**

1. Catherine Ducourtioux *Determinant bundles* (Feb. -June 96),
2. Olivier Bonnemoy *Geometry on Wiener space* (Feb. - June 96)
3. Jean Pierre Magnot *Ricci curvature on loop groups* (Feb.-June 98)
4. (codirected by Jaime Lesmes, Bogota, Colombia) Carolina Neira (Universidad de Los Andes, Bogota) *A mathematical interpretation of point splitting procedures in quantum field theory*
5. Ihsane Malass (Lebanese University, Beyrouth) *Chern-Gauss-Bonnet index Theorem* (April-June 09)

- **Ph.D theses**

1. Catherine Ducourtioux: *Regularized traces and associated determinants on pseud-differential operators* (thesis defended in June 2001). Catherine Ducourtioux is now assistant professor (maître de conférence) at the university of Corte in Corsica
2. Jean-Pierre Magnot: *The geometry of loop spaces* (thesis defended in September 2002) Jean-Pierre Magnot is presently teaching at high school in Clermont-Ferrand
3. A. Cardona: *Geometry of elliptic complexes, Duality and Anomalies*, (thesis defended in June 2002) Alexander Cardona is now assistant professor at the University of Los Andes, Bogotá, Colombia
4. Marie-Françoise Ouedraogo: *Extension of the canonical trace and associated determinants*, (thesis defended in October 2009) M.-F. Ouedraogo has a permanent assistant professorship at the university of Ouagadougou
5. Carolina Neira (supervised together with Matthias Lesch): *Cohomology of classes of symbols and classification of traces on corresponding classes of operators with non positive order*. Carolina Neira is presently Assistant Professor at the Universidad Nacional, Bogota, Colombia.
6. Cesar del Corral (coadviser with Alexander Cardona, Universidad de Los Andes) *Characterisation of traces on manifolds with boundary*, (cosupervision 90/100) Universidad Los Andes, Bogotá, 2016, Bogotá
7. (currently) as from Sept. 2017 (cosupervision 90/100) Diego Lopez, Universidad Nacional, Manizales, Colombia
8. (currently) as from March 2018 (cosupervision 50/100) Ihsane Malass, Université Libanaise, Lebanon

• **Postdocs**

1. Cyril Lévy, Potsdam, Oct. 2011- Sept. 2013, now Assistant professor (Maître de Conférences), Université d'Albi, France
2. Sara Azzali, Potsdam, April 2014-Sept. 2019 (since October 2017 DFG project SPP 2026 "Geometry at infinity")
3. Pierre Clavier, Potsdam, October 2015-September 2019 (2015-2017 DFG project PA 1686/6-1 "The Euler-Maclaurin formula and Birkhoff-Hopf factorisation", 2017-Postdoc in the Analysis group)
4. Youness Boutaib, Potsdam, October 2016-July 2019 (DFG project FOR 2402 "Rough Paths, Stochastic Partial Differential Equations and Related Topics"), presently Postdoc at the University of Aachen
5. Alfonso Garmendia, since October 2019

EVALUATION AND REFEREEING

- **Thesis and Habilitation juries (a selection)**

- PhD Thesis, Pierre Gosselin (examiner), Strasbourg, 1998
- Habilitation Thesis, Moulay Benameur (examiner), Lyon, 2002
- Habilitation Thesis, Paul Lescot (examiner), Amiens, 2002
- PhD Thesis, Clara Aldana (referee and examiner), Bonn, 2009
- PhD Thesis, Cyril Lévy (referee and examiner), *Global pseudodifferential calculus and spectral action in noncommutative geometry*, Luminy, 2009
- PhD Thesis, Arnaud Lathuille (referee and examiner), *Sur l'intégrabilité des distributions en dimension infinie*, Chambéry, 2009
- PhD Thesis, Alexandre Rey Alcantara (referee and examiner), *Théorème de l'indice et géométrie basique d'un feuilletage riemannien*, Metz, 2011
- PhD Thesis, Henri Lipponen (single examiner), *On noncommutative BRST complex and superconnection character form*, Helsinki, 2013
- PhD Thesis, Kevin Falk (referee and examiner), *Berezin-Töplitz quantization and noncommutative geometry*, Marseille, 2015
- PhD Thesis, Elisabeth Grieger (referee and examiner), *On heat-kernel methods and curvature asymptotics for certain cohomogeneity one Riemannian manifolds*, London, 2015
- PhD Thesis, Ngo Quoc Hoan (referee and examiner), *An interface between physics and number theory*, Paris XIII, 2016
- PhD Thesis, Franck Gautier-Bauduit (examiner), *Étude du prolongement méromorphe de fonctions zeta spectrales grâce à la géométrie non commutative*, Université Clermont-Auvergne, 2017
- PhD Thesis, Nadir Bizi (examiner), *Semi-Riemannian noncommutative geometry, gauge theory, and the standard model of particle physics*, University Paris VI, 2018
- Habilitation Thesis, Shantanu Dave (referee), Vienna, 2019

- Oct. 2015–Dec. 2016 **Member of the editorial board** of *Demonstratio Mathematica* (in 2017 the journal was taken over by De Gruyter)

- **Referee for various scientific journals**

I am regularly asked (several times a year) to write reports for various scientific journals, amongst which:

Acta Mathematica, Annals of Mathematics, Com. Math. Phys., Comptes Rendus de l'Académie des Sciences, International Mathematical Research Notices, Journal d'Analyse Mathématique, Journal of Differential Geometry, Journal of Geometry and Physics, Journal of Mathematical Physics, Int. Math. Research Notices, Proceedings of the American Mathematical Society.

- **Book reviews**

- *Global Analysis in Mathematical Physics*, Y. Gliklikh, Applied Math. Sciences 122, Springer Verlag 1997
- *Singular Traces Theory and Applications*, S. Lord, F. Sukochev, D. Zanin, Studies in Mathematics 46, De Gruyter 2012

- **Hiring committees:** I am regularly asked to join hiring committees at the universities of Strasbourg, Clermont-Ferrand, Potsdam (all three on many occasions), Stokholm (2014), Marburg (2014), Metz (2013, 2014), Montpellier (2015), Paris VII (2018, 2019).
- **Evaluation for grant attributions:** I am regularly asked to evaluate applications for grants and/or fellowships by various organisms such as ECOS Sud (France), the Austrian Science Fund, the Technical University (Technische Universität) in Berlin, the German Research Foundation (Deutsche Forschungsgemeinschaft).

ORGANISATION OF SCIENTIFIC MEETINGS

International conferences (since 1994)

1. (with R. Léandre and T. Wurzbacher) "Journées mathématiques" on *Loop spaces*, Strasbourg, 3.-4. June 1994
2. (with T. Wurzbacher) *Determinant bundles*, R.I.P. meeeting, Oberwolfach June 1998
3. (with F. Dumas and J.-Y. Le Dimet) *New invariants in geometry and topology* French Mathematical Society (SMF) Session "État de la Recherche" at the University Blaise Pascal in Clermont-Ferrand, Sept. 15 -18 1999
4. (with T. Wurzbacher) *The geometry of operator families* Conference, C.I.R.M., Marseille, June 12.-16. 2000
5. (with M. Lesch) *Geometry of operators* R.I.P. meeting, Oberwolfach, June 2002
6. (with M. Arnaudon and L.-M. Wu) *Geometric inequalities; geometric and stochastic points of view*, Conference, Clermont-Ferrand March 13-15 2003
7. (with S. Rosenberg and T. Wurzbacher) *The geometry of index theory and quantum field theory*, Conference, C.I.R.M., May 31 - June 5. 2004
8. (with S. Albeverio and M. Marcolli) *Traces in geometry, number theory and quantum field theory*, Conference, Max Planck Institute, Bonn, Oct. 24-28 2005
9. (with A. Frabetti and S. Parmentier) *Polylogarithms*, Two day meeeting, University of Lyon I, Sept. 29-30 2005
10. (with D. Manchon) *Twisted K-theory and gerbes*, Two day meeting, Université Blaise Pascal, Clermont-Ferrand March 24. and 25. 2006
11. (with S. Rosenberg and S. Scott) *Zeta functions, index and twisted K-theory; interactions with physics*, R.I.P. meeeting, Oberwolfach May 1.-5. 2006
12. (with A. Carey and S. Rosenberg) *Motives, Quantum Field Theory and Pseudodifferential Operators*, Conference, June 4-14 2008 (Boston University)
13. (with A. Carey and H. Grosse) *Number Theory and Physics* Research programme March. 1- April 11. 2009, Erwin Schrödinger Institute in Vienna
14. (with V. Mathai and S. Rosenberg) *Geometry and Quantum Field Theory*, Conference, Max Planck Institute, Bonn, June 20.-26. 2010

15. (with J. Mickelsson) *Analysis, Geometry and Quantum Field Theory*, Conference, University of Potsdam, Sept. 26-30. 2011, see <http://math.univ-bpclermont.fr/conferences/agqft/index.html>
16. (with Ch. Brouder and F. Hélein) *Géométrie sans frontière au contact de plusieurs disciplines*, Conference, Paris VII, March 12.-16. 2012, see <http://www.iscpif.fr/tiki-index.php?page=Bennequin2012orga>
17. (with Ch. Brouder and F. Hélein) *Renormalisation at the confluence of analysis, geometry and algebra*, Conference, CIRM, Luminy, Sept. 17.-21. 2012
18. (with A. Carey, R. Nest and S. Rosenberg) *Masterclass on Quantum theory's influences on topology, analysis and geometry*, The University of Copenhagen May 20. - June 1. 2013
19. (with M. Högele and D. Manchon) *Renormalisation from Quantum Field Theory to Random and Dynamical Systems*, Conference, University of Potsdam, Nov. 7. - 9. 2013, <http://analysis.math.uni-potsdam.de/isw/InternationalScientificWorkshop.html>
20. (with P. Friz and D. Manchon) *Paths in, from and to renormalisation. At the confluence of rough paths, analysis, algebra and geometry.*, University of Potsdam, Feb. 8-12 2016
21. (with I. Chalendar and R. Rodriguez) *Mathematics and Physics meet in La Habana*, Feb. 28- March 3rd. 2017, Havana, Cuba
22. (with G. Honecker, K. Reijzner and K. Wendland) *Women at the intersection of mathematics and high energy physics*, Mainz, 6-10 March 2017 <https://indico.mitp.uni-mainz.de/event/68/program>
23. (with Elli Pomoni and Jörg Teschner) *Women at the intersection of mathematics and high energy physics* Desy, Hamburg 8-13 April 2018 <https://indico.desy.de/indico/event/19286/>
24. (with Georges Habib) *At the confluence of analysis, geometry and modern mathematical physics*, Université Libanaise, Beirut 15-17 February 2018
25. (with Lorenz Schwachhöfer) *Differentialgeometrie und Globale Analysis Session*, DMV Tagung, Paderborn 5-9 February 2018
26. (with Xenia de la Ossa, Kasia Rejzner, Anne Taormina (intern'l orgs.) Anton Alekseev and Susanne Reffert (local orgs.)) *Women at the Intersection of Mathematics and High Energy Physics*, Univ. Geneva 18-20 February 2019 <http://nccr-swissmap.ch/events/women-intersection-mathematics-and-high-energy-physics>

Research schools

I have coorganized 10 summer schools in Colombia, which have taken place every other year for the past 14 years (since 1999), see: <http://villadeleyvaschool.uniandes.edu.co/> I search for international sources of funding (CIMPA, Ecos-Nord, Prefalc, ICTP....) and suggest and invite lecturers for the school. I have also coorganised schools in Burkina Faso the first one of which took place in 2010 and was funded by the French organisation CIMPA, the second one in 2015, which was founded by the Volkswagen Foundation in Germany.

1. (with S. Adarve and H. Ocampo) Summer school on *Geometric methods around Quantum Field Theory*, Villa de Leyva, Colombia, July 12.-30. 1999
<http://matematicas.uniandes.edu.co/summer1999/>
2. (with S. Adarve and H. Ocampo) Summer school on *Geometry, Topology, and Quantum Field Theory*, Pereira, Colombia Sept. 15.-22. 2000
3. (with S. Adarve and H. Ocampo) Summer school on *Geometry, Topology, and Quantum Field Theory*, Villa de Leyva, Colombia, July 9.-27. 2001
<http://matematicas.uniandes.edu.co/summer2001/>
4. (with S. Adarve and H. Ocampo) Summer school on *Geometry, Topology, and Quantum Field Theory*, Villa de Leyva, Colombia, July 9-27. 2003
<http://matematicas.uniandes.edu.co/summer2003/>
5. (with S. Adarve and H. Ocampo) Summer school on *Geometry, Topology, and Quantum Field Theory*, Villa de Leyva, Colombia, July 11-29 2005
<http://matematicas.uniandes.edu.co/summer2005/>
6. (with S. Adarve, A. Cardona, H. Ocampo, B.Uribe) Summer school on *Geometry, Topology, and Quantum Field Theory*, Villa de Leyva, Colombia, July 2-20. 2007
7. (with A. Cardona, A. Reyes, H. Ocampo) Summer school on *Geometry, Topology, and Quantum Field Theory*, Villa de Leyva, Colombia, July 6-23. 2009
<http://matematicas.uniandes.edu.co/summer2009/>
8. (with Marie-Françoise Ouedraogo) “Summer school” on “Index theory and interactions with physics” in Ouagadougou, May 21-29. 2009 (Research school organised and co-funded by the CIMPA and the University of Ouagadougou with the help of external funding)
9. (with A. Cardona, A. Reyes, H. Ocampo) Summer school (cosubsidised by the CIMPA) on *Geometry, Topology, and Quantum Field Theory*, Villa de Leyva, Colombia, July 4.-22. 2011 <http://matematicas.uniandes.edu.co/summer2011/>

10. (with A. Carey, S. Rosenberg and R. Nest) *Quantum theory's influences on topology, analysis and geometry* "Spring school/Master Class", University of Copenhagen, May 20. - June 1. 2013, <http://www.math.ku.dk/english/research/conferences/2013quantumtheory/>
11. (with A. Cardona, A. Reyes, H. Ocampo) Summer school on *Geometry, Topology, and Quantum Field Theory*, Villa de Leyva, Colombia, July 15.-27. 2013
<http://villadeleyvaschool.uniandes.edu.co/>
12. (with Alexander Cardona and Andres Reyes) Summer school on *Geometry, Topology, and Quantum Field Theory*, Villa de Leyva, Colombia, July 13-31 2015
13. (with Cyril Lévy and Marie-Françoise Ouedraogo) Summer school (funded by the Volkswagen Stiftung) on *Fourier integral operators and their applications* in Ouagadougou, Sept. 14-25 2015
14. (with Alexander Cardona and Andres Reyes) Summer school on *Geometry, Topology, and Quantum Field Theory*, Villa de Leyva, Colombia, July 24.- Aug 4. 2017
<https://villadeleyvaschool.wordpress.com/>

Women in mathematics meetings

I coorganise scientific meetings for women in mathematics (to which men are also welcome) which aim at encouraging women to do research in mathematics and to increase their visibility.

1. Franco-Russian meeting (under the auspices of *Femmes et Mathématiques*), Marseille, December 2.-6. 1996
2. X th Anniversary celebration of *Femmes et Mathématiques*, Paris, February 1. 1997
3. (with Ina Kersten) *Symmetries*, Interdisciplinary session at the VIII th EWM (European Women in Mathematics) General Meeting, Trieste, Dec . 14. -16. 1997
4. (with S. T. Tsou et X. de la Ossa) *Geometry and duality in string theory* Meeting of women mathematicians and physicists, Oberwolfach, May 16.-22. 2004
5. (with A. Frabetti) *Women in Physics and Mathematics meeting*, IHES, November 4 2006
6. (with Colette Guillopé and Frances Kirwan) Scientific meeting under the auspices of the EMS (European Mathematical Society) and EWM (European Women in Mathematics) at the University of Amsterdam on July 13th 2008, on the eve of the Vth European Congress of Mathematics (July 14.- 18.) in Amsterdam

7. (with M.-F. Roy as main organiser) XVIth EWM (European Women in Mathematics) General Meeting, Sept. 2.-6. 2013, Hausdorff Center for Mathematics, Bonn
8. (with G. Honecker, K. Reijzner and K. Wendland) *Women at the intersection of mathematics and high energy physics*, Mainz, 6–10 March 2017 (<https://indico.mitp.uni-mainz.de/event/68/program>)
9. (with Elli Pomoni and Jörg Techner) *Women at the intersection of mathematics and quantum field theory /high energy physics* Desy, Hamburg 8-13 April 2018 (<https://indico.desy.de/indico/event/19286/>)
10. (with Anton Alekseev, Kasia Rejzner, Susanne Reffert and Ana Taormina) *Women at the Intersection of Mathematics and High Energy Physics*, Swissmap, Geneva, 18-20 Feb. 2019 (<http://nccr-swissmap.ch/events/women-intersection-mathematics-and-high-energy-physics>)

EDITORIAL ACTIVITIES

Conference proceedings

1. *L'espace des lacets/Loop spaces*, I.R.M.A. Preprint (University Louis Pasteur, Strasbourg), (Ed. R. Léandre, S. Paycha, T. Wurzbacher) 1994 Proceedings of a meeting held in Strasbourg, June 3-4 1994
2. *Stochastic processes, physics and geometry: new interplays. I, II*" (Ed. F. Gesztesy, H. Holden, J. Jost, S. Paycha, S. Scarlatti, M. Röckner) Can. Math. Soc. vol. **28 and 29**, 2000, Proceedings of the conference "Infinite dimensional (stochastic) analysis and Quantum field theory", held in Leipzig, 1999
3. *Nouveaux invariants en géométrie et en topologie*, (Ed. F. Dumas, J.-Y. Le Dimet, S. Paycha) in "Panoramas et synthèses" N.11 (2001), Proceedings of a meeting held at the Université Blaise Pascal in Clermont-Ferrand 1999, Editors
4. *Traces in geometry, number theory and quantum field theory* (Ed. S. Albeverio, M. Marcolli, S. Paycha and J. Plazas) Aspects of Mathematics E38, Vieweg (2008), Proceedings of a conference held at the Max Planck Institute in Bonn in 2005
5. *Motives, Quantum Field Theory and Pseudodifferential Operators* (Ed. A. Carey, D. Ellwood, S. Paycha and S. Rosenberg) AMS/ Clay Mathematics Proceedings, Vol. **12** (2010), Proceedings of a conference held in Boston June 2-13 2008
6. *Geometry and Quantum Field Theory*, (Ed. V. Mathai, S. Paycha and S. Rosenberg) Journal of the Australian Mathematical Society Vol. **90**, Issues 01 and 02 (2011), Proceedings of a conference held at the Max Planck Institut in Bonn, June 20-26 2010

Summer school proceedings

I have coedited (very actively) the proceedings of the past Villa de Leyva Summer schools (apart for the 2009 edition to which I contributed) that were published by various publishers.

1. *Geometric methods for quantum field theory* (Ed. H. Ocampo, S. Paycha, A. Reyes) World Scientific (2001), proceedings of a summer school held in Villa de Leyva, Colombia 1999
2. *Geometric and topological methods in quantum field theory* (Ed. A. Cardona, H. Ocampo and S. Paycha) World Scientific (2003), Proceedings of a summer school held in Villa de Leyva, Colombia, 2001,

3. *Geometric and topological methods in quantum field theory* (Ed. H. Ocampo, A. Vargas and S. Paycha) Lecture Notes in Physics, Springer Verlag (2005), Proceedings of a summer school held in Villa de Leyva, Colombia, 2003
4. *Geometric and topological methods in quantum field theory* (Ed. S. Paycha, S. Rosenberg), *Annales Mathématiques Blaise Pascal*, n.11 (2004), 6 short communications delivered in the summer school held in Villa de Leyva, Colombia, 2003
5. *Geometric and topological methods in quantum field theory* (Ed. S. Paycha and B. Uribe) AMS Cont. Math. 434 (2007), Proceedings of a summer school held in July 2005 in Villa de Leyva, Colombia
6. *Geometric and topological methods in quantum field theory* (Ed. E. Pariguan, S. Paycha and H. Ocampo) Cambridge University Press (2010), Proceedings of a summer school held in Villa de Leyva, Colombia, in July 2007
7. *Geometric, algebraic and topological methods in quantum field theory* (Ed. A. Cardona, H. Ocampo, C. Neira-Jimenez, S. Paycha and A. Reyes) World Scientific (2013), Proceedings of a Summer School held in Villa De Leyva, Colombia, in July 2011

Women in mathematics proceedings

1. *Renormalization in Physics and Mathematics* (Ed. S. Paycha), Proceedings of a Workshop held in Paris, June 1996 (under the auspices of E.W.M. and *Femmes et Mathématiques*)
2. *Moduli spaces* (Ed. F. Kirwan, S. Paycha and S.T. Tsou) Hindawi Publishing Corporation (1998), Proceedings of a Workshop organised by “European Women in mathematics” held in Oxford, July 1998
3. *Xth General Meeting of European Women in Mathematics* (Ed. E. Mezzetti, S. Paycha) World Scientific (2003), Proceedings of the the EWM meeting held in Malta in August 2001,
4. *Journée “Physique et Mathématique”* (Ed. A. Frabetti, S. Paycha) Letters in Mathematical Physics (special issue) Vol. **78** n. 3 (2006), Proceedings of the meeting , held at the I.H.E.S on Nov. 4. 2005
5. *XIII th General Meeting of European Women in Mathematics*, (Ed. C. Hobbs, S. Paycha) World Scientific (2010), Proceedings of the meeting held in Cambridge in September 2007

SCIENTIFIC INVITATIONS
Invited addresses (a selection since 1994)

- *Advanced topics in applied mathematics*, CIRM, Marseille, 13-17 June 1994 (Title of talk: “Factorization of stochastic processes and applications to gauge field theories”)
- *Symposium on Differential Geometry and Mathematical Physics*, 15. -23. May 1995, Warsaw, Poland (Title of talk: “Minimal orbits for group actions in infinite dimensions”)
- *European/Gregynog Stochastic Analysis Symposium*, Gregynog, Wales, 9.-16. July 1995
- Colloque en l’honneur d’Albert Badrikian: *Analyse stochastique en dimension infinie*, Clermont-Ferrand, 12.-15. Sept. 1995 (Title of talk: “Projections via the action of a Hilbert Lie group of a class of semi-martingales defined on Hilbert manifolds”)
- *Infinite dimensional Kähler manifolds*, Oberwolfach, 19.- 25. Nov. 1995
- *Stochastic Differential Geometry and Infinite Dimensional Analysis*, Zhejiang University, Han Zhou, China, April 8.-12. 1996 (Title of talk: “From gauge fields to group actions and determinant bundles”)
- *Stochastic and global analysis*, Voronezh, Russia, Jan. 13-19 1997 (Title of talk: “Harmonic functions on a class of Hilbert manifolds”)
- *Analyse sur les groupes et algèbres de Lie en dimension infinie*, Marseille, Sept. 15.-19. 1997 (Title of talk: “On the action of some infinite dimensional Lie groups on path spaces”)
- *Infinite dimensional stochastic analysis*, M.S.R.I, Berkeley, Nov. 2.-8. 1997
- *Infinite dimensional (stochastic) analysis and Quantum field theory* (main speaker), Leipzig, Jan. 18.-24. 1999
- *Geometry and Analysis on loop spaces* (organizers: M. Röckner, S. Stolz), M.F.O., Oberwolfach, 25.04-01.05 1999 (Title of talk: “A Bochner-Weitzenböck formula on loop groups”)
- *Geometry and Probability*, Nancy, Sept. 1999 (Title of talk: “Remarks concerning regularised trace forms on PDOs”)
- Special A.M.S. session on the *Feynman integral* (invited speaker: “Traces: a useful tool on path spaces”), Washington, 18-23 Jan. 2000

- *Quantum Field Theory, Noncommutative geometry and Quantum probability*, Trieste, March 26-29 2001
- *Stochastic Analysis and Related topics*, Russia, Saint Petersburg, June 4.-10. 2001 (Title of the talk: “Analysis on pseudodifferential operators and applications to geometry and quantum field theory”)
- *Quantum Field Theory, Noncommutative geometry and Quantum probability*, Trieste, March 26.-29. 2001 (Title of the talk: “On the noncommutative residue of pseudodifferential operators”)
- *International Conference on Stochastic Analysis and Applications*, Hammamet, Tunisia, Oct. 22.-27. 2001 (Title of the talk: “Pseudodifferential operators in infinite dimensional structures”)
- *Geometrical aspects of field equations (in honour of Prof. J. Eichhorn)*, Greifswald, Allemagne, July 28.-30. 2002 (title of the talk : “From tracial anomalies to anomalies in quantum field theory”)
- *Infinite dimensional geometry and applications to quantum field theory*, Luminy, Nov. 25.-29. 2002 (Title of the talk: “A propos de classes caractéristiques en dimension infinie”)
- *Infinite dimensional analysis and path integrals*, Luminy 29 Nov. 29. - Dec. 3. 2004 (Title of the talk: “Weighted trace cochains; a geometric setup for anomalies”)
- *Geometric, Spectral and Stochastic Analysis*, UK-Japan Winter School, Evesham Jan. 9.-12. 2005 (Title of the talk: “Conformal invariants built from regularized traces and Wodzicki residues”)
- *Krzysztof Wojciechowski 50 years-Analysis and Geometry of Boundary Value Problems*, Roskilde, Danemark, May 20.-22. 2005 (Title of the talk: “Ad-invariant functionals on pseudodifferential operators and applications”)
- RIP Worskhop *Dirac Operators in Differential and Noncommutative Geometry*, M.F.O. Oberwolfach, Nov. 26. - Dec. 2. 2006
- Mini-workshop *Renormalisation*, MPI, Bonn, Dec. 15. and 16. 2006 (Title of the talk: “Iterated sums and integrals with constraints”)
- *Infinite dimensional Lie theory*, Oberwolfach, 10.-16. Dec 2006
- *Combinatorics and Physics*, MPI, Bonn March 19-23, 2007 (Title of the talk: “Quantised functional calculus and tracial anomalies”)

- *Geometric analysis in Nice*, Nice May 29. - June 2. 2007 (Title of talk: “Conformal anomalies via canonical traces”)
- *XVII Coloquio latinoamericano de algebra*, Medellin, Colombia, July 23.-27. 2007
- *Analysis and geometric singularities*, Oberwolfach Aug. 19. -25. 2007
- *Workshop on analysis and geometry*, E. Schrohe, J. Seiler, K. Smoczyk, Hannover, Sept. 24-Sept. 28. 2007 (title of the talk: “Integrals, sums and traces of holomorphic families of symbols and operators”)
- *The manifold Geometries of Quantum Field Theory*, S. Albeverio, H. Gottschalk, M. Marcolli, Max Planck Institute, Bonn June 30. -July 4., 2008
- *Conference on Noncommutative Geometry*, A. Connes, A. Carey; M. Marcolli, M. Lesch, Hausdorff Institute for Mathematics, Bonn July 24. -Aug. 1., 2008 (Title of the talk: “ Weighted infinite dimensional spaces and renormalised Feynman integrals”)
- *International Conference on Differential Algebra and Related Topics (DART-III)*, Rutgers University at Newark, November 13-16 2008 (Title of talk: “Locality as a driving principle for renormalization”)
- *Zeta functions II*, Laboratoire Poncelet, Université Indépendante de Moscou, Dec.1-Dec 6, 2008 (Title of talk: “Multiple zeta functions revisited using pseudodifferential calculus”)
- *Global analysis and quantisation day*, Warwick, 7. Jan. 2009, Conference in honour of Yoshi Maeda,
- *Une journée en dimension infinie*, Sept. 21. 2010, Université de Lille 1
- *Regularisation and renormalisation schemes*, March 24.-25. 2011, Université de Nice
- *Periods and Motives, A Modern Perspective on Renormalization*, July 2-6 2012, IC-MAT, Madrid
- *Mathematical aspects of QFT and QSM* , July 30.- Aug. 1., 2012, Hamburg. Satellite meeting of the ICMP12 in Aalborg (Denmark)
- *Multiple zeta values, Rota-Baxter algebras and related topics*, Aug. 2.-4. 2012, Lanzhou, China
- *Geometric perspectives in mathematical quantum field theory*, 8.- 12. April 2013, American Institute of Mathematics, Palo Alto

- *New approaches to Multizeta values* (Title of the talk: "A geometric approach to multizeta values: conical zeta values"), Euro. Sc. Found. Exploratory Workshop, Sept 30. - Oct. 2. 2013 ICMAT, Madrid
- *Workshop Belgian Bracket and Quantization* (Title of the talk: Quantisation of toroidal symbols and associated traces in the noncommutative setup), April 1.-3. 2014
- *Journées de Géométrie*, (Title of the talk: Toroidal pseudodifferential operators on the non-commutative torus and associated traces) May 8.-10. 2014, Université Libanaise (Fanar), Beyrouth, Lebanon
- *XXXIII Workshop on Geometric Methods in Physics*, Bialowieza, Poland (Title of the talk: "Traces on the noncommutative torus") 25 June- 5 July 2014
- *Operator and geometric analysis on quantum theory*, Levico Terme (Trento), Italy 15-19 September 2014
- *HIM Workshop: Quantum physics and non-commutative geometry*, Hausdorff Center, Bonn September 22-26, 2014
- *Géométrie spinorielle et analyse sur les variétés*, CIRM, Marseille, France October 6-10 2014
- *Algèbre, déformations et groupes quantiques*, CIRM, Marseille, France December 1-5 2014
- *International Conference on Differential Algebra and Related Topics (DART-VI)*, ICIAM, Beijing Aug. 10- Aug. 14. 2015 (Title of talk: "A renormalisation operator on multivariate meromorphic functions")
- Meeting Group 31 , Rio de Janeiro, June 20.- 24 2016
- *Index theory and singular structures*, Toulouse, May 29 - June 2 2017 (Title of talk: "Local linear forms on pseudodifferential operators and index theory")
- *Fourth International Workshop on Zeta Functions in Algebra and Geometry*, Bielefeld May 29 - June 2 2017 (Title of talk: Branched zeta functions and their renormalised values at poles)
- XXI Congreso Colombiano de Matemáticas, Universidad Nacional, Bogotá, June 5- June 9 2017 <http://www.scm.org.co/eventos/ccm2017/> (Title of talk: "Localidad y renormalización: el caso de las funciones multizetas cónicas y arboríferas")

- CARMA (Algebraic Combinatorics, Resurgence, Moulds and Applications) CIRM, Marseille, June 26 - 30 2017
- XXII Coloquio latino americano de álgebra, Quito Aug.7 -Aug. 11 2017
<http://www.puce.edu.ec/claquito2017/>
- *Quantum Field Theory, Geometry and Analysis*, Cargèse, Corsica, Nov. 21-24, 2017
- AIMS School and Workshop *Global Differential Geometry*, Dakar, Senegal, May 14 -25, 2018
- 42nd LQP Workshop *Foundations and Constructive Aspects of QFT* Bergische Universität Wuppertal, June 22-23, 2018
- *Non-commutative Geometry, Index Theory and Mathematical Physics*, Mathematisches Forschungsinstitut Oberwolfach (Title of talk: An algebraic approach to locality for geometric and renormalisation purposes) July 8-14, 2018 (<https://www.mpim-bonn.mpg.de/HAMP>)
- *Higher algebra and mathematical physics*, Max Planck Institute, Bonn August 13 - 17, 2018
- *Quantum Spacetime '19*, Bratislava, February 11-15 2019 (<http://qspace19.fmph.uniba.sk/>)
- *Deformation quantization and index theory*, Workshop (organised by Anton Alekseev and Michèle Vergne) Swissmap, Geneva, March 18-22 2019
- *Quantum and Gravity*, OIST, Okinawa, Japan, International meeting (organised by Reiko Toriumi), July 23-27 2019 (Title of talk: Are locality and renormalisation reconcilable?)
- *Noncommutative manifolds and their symmetries*, Scalea, Italy (in honour of Gianni Landi's 60th birthday) Sept. 16-20 2019 (Title of talk: Meromorphic germs with linear poles and the geometry of cones)
- *Singular SPDEs and Related Topics*, HIM, Bonn, Oct. 20-25 2019 (Title of talk: Re-expansion maps as direct connections)
- *Emmy Noether Workshop: The Structure of Quantum Space Time*, Perimeter Institute, Waterloo, Canada (organised by Kasia Rejzner, Sumati Surya, Reiko Toriumi) November 18-22 2019 (Title of talk: Can complements cure divergences?)
- *20th anniversary of the Center for Advanced Mathematical Sciences (CAMS) of the American University of Beirut*, Beirut, Lebanon November 28-29 2019

Invitations for short term research stays (a selection)

- Academia Sinica in Beijing (1991, 1993, 1996, 2013)
- Physics Institute, *Wroclaw University*, Poland (1991, 1996) invited by Z. Jaskolski,
- *University of Warwick*, England (as research fellow) invited by D. Elworthy (1994-1995 during the Symposium on Stochastic Analysis)
- *Boston University* invited by S. Rosenberg (May 97)
- *Max Planck Institute* in Leipzig (3 months, 1998) invited by J. Jost
- *University of Bonn* 1999 (6 months), 2000 (6 months), 2002 (1 month) invited by S. Albeverio
- Ten days stay at the *Erwin Schrödinger Institute in Vienna*, “Non commutative geometry and quantum field theory, Feynman diagrams in physics” (2002)
- Three weeks stay at the University of Göttingen, *Emmy Noether Professorship* (April-May 2003)
- Two weeks stay at Keio University, invited by Y. Maeda (Dec. 2003)
- Three months’ stay at the University of Los Andes, *Silla Stanford*, Bogotá, Colombia (June-Sept 2003)
- Ten days stay at Boston University, invited by S. Rosenberg (Jan. 2004)
- Several stays at the *Max Planck institute* in Bonn (July-August 2004, August 2005, July-August 2006, August 2007) invited by M. Marcolli
- Ten days stay at the MIT and Northeastern University in Boston, April 2007 (title of the talk given at MIT on April 4th: “Quantised functional calculus and tracial anomalies”)
- Ten days stay at the *Erwin Schrödinger Institute*, Vienna, Research program *Gerbes, Groupoids and Quantum Field Theory* (May 2006)
- One month’s stay at the Max Planck Institute, Bonn (July 2008), one month at the Hausdorff Center, Bonn (August 2008) during the *Geometry and Physics* program.
- Ten days stay at the Johns Hopkins University, JAMI program *Noncommutative Geometry, Arithmetic and Related Topics* Nov. 2008
- Three weeks stay at the Erwin Schrödinger Institute, Vienna, March-April 2009, research program *Number Theory and Physics*
- A ten days stay at the Leibniz Universität in the Graduiertenkolleg “Analysis, Geometrie und Stringtheorie” (May 2009)

- A three weeks stay at the University in Regensburg (July 2010)
- One month stay at the Max Planck Institut in Bonn (August 2010)
- Guest Professorship, University of Potsdam (April– Sept. 2011)
- One month stay (Aug. 2012) in China, with invitations from the Universities of Lanzhou and Capital Normal in Beijing
- Three weeks stay (13-30 Aug. 2013) at the Academy of Sciences in Beijing, China during the "Mathematical Methods from Physics" program.
- One month stay (21.July -16. Aug. 2014) at the Universities of Sichuan (Chengdu), Lanzhou and Capital Normal (Beijing).
- Ten days stay at the *Erwin Schrödinger Institute*, Vienna, Research program *Interrelations between mathematical physics, number theory and non-commutative geometry*, March 2-13 2015
- 2 weeks stay at the *Universidad de Los Andes*, Bogotá, Feb. 6-Feb. 21 2015 (supervision of a PhD student Cesar del Corral and mini-course)
- 2 weeks stay at the *University of Sechuan*, Cheng Du, China (Aug. 15- Aug. 28 2015)
- 1 month stay at the *University of Sechuan*, Cheng Du, China (July 26- Aug. 22 2016)
- 2 weeks stay at the *Universidad Nacional*, Bogotá (March 25.- April 7. 2017) (mini-course "Regularised determinants in geometry and quantum field theory" 30 hrs)
- 2 weeks stay at the *University of Sechuan*, Cheng Du, China (Aug. 12.- Aug. 27 2017)
- 3 weeks stay at the *University of Sechuan*, Cheng Du, China (July. 22 - Aug. 15 2018)
- 3 weeks stay at the *Perimeter Institute*, Waterloo, Canada (June 5- June 24 2019)
- 3 weeks stay at the *University of Sechuan*, Cheng Du, China (July. 30 - Aug. 22 2019)
- 1 week stay at the *University of Sydney* (Aug. 23-28 2019)
- 15 days stay at the *Perimeter Institute*, Waterloo, Canada (November 12- November 26 2019)

Berlin, November 2019