

## Liste de Publications de V. Rivasseau

### 1) Revues à comité de lecture

1. The Borel transform in Euclidean  $\phi_4^4$ , Local existence for  $Re \nu < 4$ , with E. Speer, Commun. Math. Phys. **72**, 293 (1980).
2. Lieb's correlation inequality for plane rotors, Commun. Math. Phys. **77**, 145 (1980).
3. Renormalization in the complete Mellin representation of Feynman amplitudes, with C. de Calan and F. David, Commun. Math. Phys. **78**, 4 (1981).
4. Local existence of the Borel transform in Euclidean  $\phi_4^4$ , with C. de Calan, Commun. Math. Phys. **82**, 69 (1981).
5. The perturbation series for  $\phi_3^4$  field theory is divergent, with C. de Calan, Commun. Math. Phys. **83**, 77 (1982).
6. Borel summability of the  $1/N$  expansion for the N-vector ( $O(N)$  non linear  $\sigma$ ) models, with J. Fröhlich and A. Mardin, Commun. Math. Phys. **86**, 87 (1982).
7. A comment on the local existence of the Borel transform in Euclidean  $\phi_4^4$ , with C. de Calan, Commun. Math. Phys. **91**, 265 (1983).
8. A comment on  $\phi_4^4$  Euclidean field theory, with G. Gallavotti, Phys. Lett. B **122**, 268 (1983).
9.  $\Phi^4$  field theory in dimension 4; a modern introduction to its unsolved problems, with G. Gallavotti, Ann. Inst. H. Poincaré **40**, 185 (1984).
10. Rigorous construction and Borel summability for a planar 4 dimensional Euclidean field theory, Phys. Lett. B **137**, 98 (1984).
11. Construction and Borel summability of planar 4 dimensional Euclidean field theory, Commun. Math. Phys. **95**, 445-486 (1984).
12. Bounds on completely convergent Euclidean Feynman Graphs, with J. Feldman, J. Magnen and R. Sénéor, Commun. Math. Phys. **98**, 273 (1985).
13. Bounds on renormalized Feynman graphs, with J. Feldman, J. Magnen and R. Sénéor, Commun. Math. Phys. **100**, 23 (1985).

14. Massive Gross-Neveu model: a rigorous perturbative construction, with J. Feldman, J. Magnen and R. Sénéor, *Phys. Rev. Lett.* **54**, 1479 (1985).
15. Local existence of the Borel transform in Euclidean massless  $\phi_4^4$ , with C. de Calan and D. Petritis, *Commun. Math. Phys.* **101**, 559 (1985).
16. The Lipatov argument for  $\phi_3^4$  perturbation theory, with J. Magnen, *Commun. Math. Phys.* **102**, 59 (1985).
17. A renormalizable field theory: the massive Gross-Neveu model in two dimensions, with J. Feldman, J. Magnen and R. Sénéor, *Commun. Math. Phys.* **103**, 67 (1986).
18. A Lipatov bound for convergent graphs of  $\phi_4^4$ , with J. Magnen, F. Nicolò and R. Sénéor, *Commun. Math. Phys.* **108**, 257 (1987).
19. Construction of infrared  $\phi_4^4$  by a phase space expansion, with J. Feldman, J. Magnen and R. Sénéor, *Commun. Math. Phys.* **109**, 437 (1987).
20. Existence of an instanton singularity in  $\phi_3^4$  Euclidean field theory, with J. Feldman, *Ann. Inst. H. Poincaré* **44**, 427 (1986).
21. Espace de phase et grands ordres de perturbations, *Helv. Phys. Acta* **59**, 1223 (1986).
22. On the Witten vertex, with D. Arnaudon, O. Bernier, N. Castel and D. Duhamel, *Phys. Lett. B* **180**, 41 (1986).
23. On the vanishing of the cosmological constant in superstring theories, with D. Arnaudon, C. Bachas and P. Végreville, *Phys. Lett. B* **95**, 1167 (1987).
24. On the large order behavior of  $\phi_4^4$ , with F. David and J. Feldman, *Commun. Math. Phys.* **116**, 215 (1988).
25. The Young relation for one dimensional general droplet models, with J. de Coninck and F. Dunlop, *Commun. Math. Phys.* **121**, 401 (1989).
26. On multi-loop four dimensional superstring amplitudes, *Phys. Lett. B* **246**, 405 (1990).
27. Isosystolic inequalities and the topological expansion for random surface and matrix models, *Commun. Math. Phys.* **139**, 183 (1991).
28. Pinning of an interface by a weak potential, with F. Dunlop, J. Magnen and P. Roche, *Journ. Stat. Phys.* **66**, 71 (1992).

29. An Infinite Volume Expansion for Many Fermion Green's functions, with J. Feldman, J. Magnen and E. Trubowitz, *Helv. Phys. Acta*, **65**, 679 (1992).
30. Construction of  $YM_4$  with an infrared cutoff, with J. Magnen and R. Sénéor, *Commun. Math. Phys.* **155**, 325 (1993).
31. Rigorous results on the ultraviolet limit of non-Abelian gauge theories, with J. Magnen and R. Sénéor, *Phys. Lett. B* **283**, 90 (1992).
32. Mass generation for an interface in the mean field regime, with F. Dunlop and J. Magnen, *Ann. Inst. Henri Poincaré*, **57**, 333 (1992).
33. Ward Identities and a Perturbative Analysis of a U(1) Goldstone Boson in a Many Fermion System, with J. Feldman, J. Magnen and E. Trubowitz, *Helv. Phys. Acta* **66**, 498 (1993).
34. An Intrinsic  $1/N$  Expansion for Many Fermion System, with J. Feldman, J. Magnen and E. Trubowitz, *Europhys. Letters* **24**, 437 (1993).
35. Two dimensional Many Fermion Systems as Vector Models, with J. Feldman, J. Magnen and E. Trubowitz, *Europhys. Letters* **24**, 521 (1993).
36. Mass Generation in the Large N Gross-Neveu Model, with C. Kopper and J. Magnen, *Commun. Math. Phys.* **169**, 121 (1995)
37. A single scale Infinite Volume Expansion for Three-Dimensional Many Fermion Green's Functions, with J. Magnen, *Mathematical Physics Electronic Journal* **1**, n3 (1995).
38. An Explicit Large Versus Small Field Multiscale Cluster Expansion, with A. Abdesselam, *Rev. Math. Phys.* **9**, 123 (1997).
39. Explicit Fermionic Tree Expansion, with A. Abdesselam, *Letters in Math. Phys.* **44**, 77 (1998)
40. Ward type Identities for the 2d Anderson Model at weak Disorder, with J. Magnen and G. Poirot, *Journ. Stat. Phys.* **93**, 331 (1998)
41. Continuous Constructive Fermionic Renormalization, with M. Disertori, *Annales Henri Poincaré* **1**, 1 (2000)
42. Interacting Fermi liquid in two dimensions at finite temperature, Part I: Convergent Attributions, with M. Disertori, *Commun. Math. Phys.* **215**, (2000) 251

43. Interacting Fermi liquid in two dimensions at finite temperature, Part II: Renormalization, with M. Disertori, *Commun. Math. Phys.* **215**, (2000) 291
44. Constructive Field Theory and Applications: Perspectives and Open Problems, *Journ. Math. Phys.* **41**, 3764 (2000)
45. A Rigorous Proof of Fermi Liquid Behavior for Jellium Two-Dimensional Interacting Fermions, with M. Disertori, *Phys. Rev. Lett.* **85**, 361 (2000)
46. Bosonic Monocluster Expansion, with A. Abdesselam and J. Magnen, *Commun. Math. Phys.* **229**, 183 (2002).
47. Interacting Fermi liquid in three dimensions at finite temperature: Part I: Convergent Contributions, with M. Disertori and J. Magnen, *Annales Henri Poincaré* **2** 733-806 (2001)
48. The two dimensional Hubbard Model at half-filling: I. Convergent Contributions, *Journ. Stat. Phys.* **106**, 693-722; (2002)
49. Supersymmetric Analysis of a Simplified Two Dimensional Anderson Model at Small Disorder, with J. Bellissard and J. Magnen, *Markov Processes and Related Fields*, **9**, 1-30 (2003).
50. Random Matrices and the Anderson Model, with M. Disertori, *arXiv:math-ph/0310021*, *Panorama et Syntheses* **25** (2008), 1-53.
51. Renormalization of the 2-point function of the Hubbard Model at half-filling, with S. Afchain and J. Magnen, *Ann. Henri Poincaré* **6**, 399, (2005)
52. The Hubbard Model at half-filling, part III: the lower bound on the self-energy, with S. Afchain and J. Magnen, *Ann. Henri Poincaré* **6**, 449 (2005)
53. Renormalization of non-commutative  $\phi^4$ -theory by multi-scale analysis, with F. Vignes-Tourneret and R. Wulkenhaar, *Commun. Math. Phys.* **262** 565, (2006).
54. Propagators for Noncommutative Field Theories, with R. Gurau and F. Vignes-Tourneret, *Ann. Henri Poincaré* **7**, 1601, 2006
55. Renormalization of Non-Commutative  $\Phi_4^4$  Field Theory in  $x$  Space, with R. Gurau, J. Magnen and F. Vignes-Tourneret, *Commun. Math. Phys.* **267**, 515 (2006)
56. Parametric Representation of Noncommutative Field Theory, with R. Gurau, *math-ph/0606030*, *Commun. Math. Phys.* **272**, 811-835 (2007)

57. Two and three loops Beta function of Non commutative  $\Phi^4$  Theory with M. Disertori, arXiv:hep-th/0610224, Eur. Phys. Journ. C **50** (2007), 661
58. Vanishing of Beta function of Non commutative  $\Phi^4$  Theory to all orders with M. Disertori, R. Gurau and J. Magnen, arXiv:hep-th/0612251, Physics Letters B, **649**, 95-102 (2007).
59. Parametric representation of Critical noncommutative QFT models, with A. Tanasa, arXiv:math-ph/0701034, Commun. Math. Phys. **279**, 355-379 (2008)
60. Non-Commutative Complete Mellin Representation for Feynman Amplitudes, with R. Gurau, A.P.C. Malbouisson and A. Tanasă, arXiv:math-ph/0705.3437, Letters Math. Phys. **81**, 161-175 (2007)
61. Constructive Matrix Theory, arXiv:hep-ph/0706.1224, JHEP **09** (2007) 008.
62. Constructive field theory without tears, with J. Magnen, math/ph/0706.2457, Ann. Henri Poincaré **9** 403-424 (2008).
63. A translation-invariant renormalizable non-commutative scalar model, with R. Gurau, J. Magnen and A. Tanasa, arXiv:0802.0791, Commun. Math. Phys. **287**, 275-290 (2009).
64. Color Grosse-Wulkenhaar models: One-loop  $\beta$ -functions, arXiv:0805.2538 with J. Ben Geloun, The European Physical Journal C **58**, 115 (2008).
65. Vanishing  $\beta$ -function for Grosse-Wulkenhaar model in a magnetic field, with J. Ben Geloun and R. Gurau, arXiv:0805.4362, Phys.Lett. **B671**:284-290 (2009)
66. Noncommutative Field Theory on Rank One Symmetric Spaces, with P. Bieliavsky and R. Gurau, arXiv:0806.4255, Journ. Noncommut. Geometry **3**, 99 (2009)
67. Commutative limit of a renormalizable noncommutative model, with J. Magnen and A. Tanasa, arXiv:0807.4093, Euro. Phys. Letters, **86** 11001 (2009).
68. Tree Quantum Field Theory, with R. Gurau and J. Magnen, arXiv:0807.4122, Annales Henri Poincaré, **10** no 5, (2009).
69. Topological Graph Polynomials and Quantum Field Theory, Part I: Heat Kernel Theories, with T Krajewski, A. Tanasa and Zhituo Wang, arXiv:0811.0186, Journ. Noncommut. Geometry **4**, (2010) 29-82
70. Constructive Field Theory in Zero Dimension, arXiv:0906.3524, Advances in Mathematical Physics, **2009**, (2009), Article ID 180159

71. Scaling in 3D Group Field Theory, with J. Magnen, K. Noui and M. Smerlak, arXiv:0906.5477, Classical and Quantum Gravity **26**, 185012, 2009
72. Bosonic Colored Group Field Theory, with J. Ben Geloun and J. Magnen, arXiv:0911.1719, Eur. Phys. Journ. **C70**, (2010), 1119-1130.
73. Topological graph polynomials and quantum field theory, Part II: Mehler kernel theories, with T. Krajewski and F. Vignes-Tourneret, arXiv:0912.5438, Ann. Henri Poincaré **12**, 483-545, 2011.
74. Linearized Group Field Theory and Power Counting Theorems, with J. Ben Geloun, T. Krajewski and J. Magnen, arXiv:1002.3592, Classical Quantum Gravity **27**, 155012 (2010).
75. Loop Vertex Expansion for  $\phi^{2k}$  Theory in Zero Dimension, with ZhiTuo Wang, arXiv:1003.1037, J. Math. Phys. **51**, 092304 (2010).
76. Quantum Corrections in the Group Field Theory Formulation of the EPRL/FK Models, with T. Krajewski, J. Magnen, A. Tanasa and P. Vitale, arXiv:1007.3150, Physical Review D, **82**, **12**, 124069 (2010).
77. EPRL/FK Group Field Theory, with J. Ben Geloun and R. Gurau, arXiv:1008.0354, Europhysics Lett. **92**, 60008 (2010).
78. The  $1/N$  expansion of colored tensor models in arbitrary dimension, with R. Gurau, arXiv:1101.4182, Europhysics. Lett. **95** 50004 (2011).
79. Constructive Renormalization for  $\Phi_2^4$  Theory with Loop Vertex Expansion, with ZhiTuo Wang, arXiv:1104.3443, J. Math. Phys. **53**, 042302 (2012).
80. Critical behavior of colored tensor models in the large N limit, with V. Bonzom, R. Gurau and A. Riello, arXiv:1105.3122, (2011), Nucl. Phys. **B853** (2011) 174-195.
81. Parametric Cutoffs for Interacting Fermi Liquids, with M. Disertori and J. Magnen, arXiv:1105.4138, (2011), Ann. Henri Poincaré **14** 925-945 (2013).
82. The Ising Model on Random Lattices in Arbitrary Dimensions, with V. Bonzom and R. Gurau, arXiv:1108.6269, Physics Letters **B711**, **1**, 8896 (2012).
83. A Renormalizable 4-Dimensional Tensor Field Theory, with J. Ben Geloun, arXiv:1111.4997, (2011), Comm. Math. Phys. **318**, 69109 (2013).
84. Random tensor models in the large N limit: Uncoloring the colored tensor models, with V. Bonzom and R. Gurau, arXiv:1202.3637, Phys. Rev. **D 85**, 084037 (2012)

85. Renormalization of Tensorial Group Field Theories: Abelian  $U(1)$  Models in Four Dimensions, with S. Carrozza and D. Oriti, arXiv:1207.6734, *Comm. Math. Phys.* **327**, pp 603-641 (2014).
86. Addendum to "A Renormalizable 4-Dimensional Tensor Field Theory" with J. Ben Geloun, arXiv:1209.4606, *Comm. Math. Phys.* **322**, 957-965 (2013).
87. Combinatorial Hopf algebraic description of the multiscale renormalization in quantum field theory, with T. Krajewski and A. Tanasa, arXiv:1211.4429, *Séminaire Lotharingien de Combinatoire*, **B70**, c 23 pp, (2014).
88. The  $1/N$  expansion of multi-orientable random tensor models, with S. Dartois and A. Tanasa, arXiv:1301.1535, *Ann. Henri Poincaré* **15**, 965-984 (2014).
89. Renormalization of an  $SU(2)$  Tensorial Group Field Theory in Three Dimensions, with S. Carrozza and D. Oriti, arXiv:1303.6772, *Comm. Math. Phys.* **330**, pp 581-637 (2014).
90. Spheres are rare, arXiv:1303.7371, *Europhys. Letters* **102**, 61001 (2013).
91. How to Resum Feynman Graphs, with ZhiTuo Wang, arXiv:1304.5913, replaces arXiv:1006.4617; *Ann. Henri Poincaré*, **15**, 2069-2083, (2014).
92. Double Scaling in Tensor Models with a Quartic Interaction, with Stéphane Dartois and Razvan Gurau, arXiv:1307.5281, *JHEP* **1309** (2013) 088.
93. Generalized constructive tree weights, with A. Tanasa, arXiv:1310.2424, *Journ. Math. Phys.* **55**, 043509 (2014).
94. The Tensor Track III, arXiv:1311.1461, *Fortschr. Phys.* **62**, No. 1, 1-27 (2013).
95. The Multiscale Loop Vertex Expansion, with R. Gurau, arXiv:1312.7226, *Ann. Henri Poincaré*, Online First October 2014.
96. Borel summability and the non perturbative  $1/N$  expansion of arbitrary quartic tensor models, with R. Gurau and T. Delepouve, arXiv:1403.0170 (2014), accepted in *AIHP-B, Probabilities and Statistics*.
97. Corrected Loop Vertex Expansion for  $\Phi^4$  Theory, with Zhituo Wang, arXiv:1406.7428, *J. Math. Phys.* **56**, 062301 (2015).
98. Constructive Tensor Field Theory: The  $T_3^4$  Model, with T. Delepouve, arXiv:1412.5091, submitted to *Comm. Math. Phys.*
99. Renormalization of an Abelian Tensor Group Field Theory: Solution at Leading Order, with V. Laroche and D. Oriti, arXiv:1501.02086, *JHEP* **1504** 095 (2015).

100. Enhancing non-melonic triangulations: A tensor model mixing melonic and planar maps, arXiv:1502.01365, with V. Bonzom and T. Delepuve, submitted to Ann. Henri Poincaré.

## 2) Revues, conférences invitées, congrès, séminaires, workshops

1. Non perturbative dimensional interpolation, with A. Wightman, Publications de l'IRMA, RCP 25, Vol. 28, Strasbourg 1980.
2. Méthodes pour la théorie constructive des champs renormalisables asymptotiquement libres, with J. Feldman, J. Magnen and R. Sénéor, Publications de l'IRMA, RCP 25, Strasbourg (1984).
3. Infrared  $\phi_4^4$ , with J. Feldman, J. Magnen and R. Sénéor, Comptes rendus de l'Ecole d'été des Houches 1984, North Holland.
4. Bounds on Feynman graphs, with J. Feldman, J. Magnen and R. Sénéor, Comptes rendus de l'Ecole d'été des Houches 1984, North Holland.
5. Constructive Renormalization, in VIIIth International Congress on Mathematical Physics, Juillet 1986, World Scientific Publishing Co, Singapore.
6. Groupe de Renormalisation autour d'une sphère, with J. Magnen, Séminaire Equations aux Dérivées Partielles de l'Ecole Polytechnique (1991).
7. Résultats rigoureux sur la limite ultraviolette des théories de jauge non-Abéliennes, Prépublications de la RCP 25, Strasbourg, Vol. 42. (1992).
8. Constructive solid state physics: renormalization around a Fermi sphere, Conférence donnée au Workshop on Mathematical Physics of disordered systems, CIRM, Marseille, Juillet 1992.
9. Constructive Many Body Theory, with J. Feldman, J. Magnen and E. Trubowitz, "The State of Matter", Proceedings of the 1992 Copenhagen Conference in honor of Elliott Lieb, Eds M. Aizenman and H. Araki, Advanced Series in Mathematical Physics Vol. 20, World Scientific (1994).
10. Cluster expansions with small/large field conditions, Cours à l'Ecole d'été de Vancouver, (1993).
11. Fermionic Many-Body Models, with J. Feldman, J. Magnen and E. Trubowitz, Cours à l'Ecole d'été de Vancouver, (1993).



12. Un développement  $1/N$  intrinsèque en physique des solides, with J. Feldman, J. Magnen and E. Trubowitz, Prépublications de l'IRMA, RCP 25, Strasbourg Vol. 45 (1993).
13. Le programme constructif en physique du solide, with J. Feldman, J. Magnen and E. Trubowitz, preprint Ecole Polytechnique, Prépublications de la RCP 25, Vol. 46, Strasbourg 93
14. On the continuum limit of pure  $SU(2)$  Yang-Mills theory, Proceedings of ICMP, Paris, 1994, ed by D. Iagolnitzer, Diderot and IP
15. Trees, forests and jungles: a botanical garden for cluster expansions, with A. Abdesselam, in Constructive Physics, Lecture Notes in Physics 446, Springer Verlag, 1995
16. A Rigorous Analysis of the Superconducting Phase of an Electron-Phonon System, with J. Feldman, J. Magnen and E. Trubowitz, Proceedings de l'Ecole des Houches 1994 (F. David, P. Ginsparg eds)
17. The Anderson Model as a Matrix Model, with J. Magnen and G. Poirot, Nucl. Phys. B (Proc. Suppl.) **58**, 149 (1997)
18. Renormalization Group Methods and Applications: First Results for the Weakly Coupled Anderson Model, with J. Magnen and G. Poirot, Physica **A 263**, 131 (1999).
19. Continuous Constructive Fermionic Renormalization, with M. Disertori, in "Mathematical Results in Statistical Mechanics", World Scientific, 1999.
20. Constructive Renormalization Theory, Proceedings of the André Swieca Summer School, Brasil, 1999. math-ph/9902023.
21. An Introduction to Renormalization, in Progress in Mathematical Physics **30**, Birkhäuser, 2002.
22. Non-Commutative Renormalization, with F. Vignes-Tourneret, hep-th/0409312, dans Rigorous Quantum Field Theory, a Festschrift for Jacques Bros, Birkhauser Progress in Mathematics **251**, 2007.
23. Interacting Fermions in 2 Dimensions, Mathematical Physics of Quantum Mechanics, ed J. Asch and A. Joye, Lecture Notes in Physics 690, Springer Verlag 2006.
24. Renormalization of Noncommutative Field Theories, with F. Vignes-Tourneret, IRMA Lectures in Mathematics and Theoretical Physics, edited by A. Connes, F. Fauvet and JP Ramis, **15** 40-80.

25. Noncommutative Renormalization, Séminaire Poincaré 28 Avril 2007, in "Quantum Spaces", Progress in Mathematical Physics **53**, Birkhäuser, 2007, arXiv:0705.0705,
26. Why Renormalizable Noncommutative Quantum Field Theories? Applications of RG Methods in Mathematical Sciences, RIMS Kyoto Seminar, 2007, arXiv:0711.1748.
27. Noncommutative Quantum Field Theory, article in MemPhys Project, Springer Verlag.
28. Introduction to the Renormalization Group with Applications to Non-Relativistic Quantum Electron Gases, CIME Cetraro Lectures, Sept. 2010, arXiv:1102.5117; published in Quantum Many Body Systems, Lecture Notes in Mathematics, 2012, Volume 2051/2012, 1-54, .
29. Towards Renormalizing Group Field Theory, Proceedings 2010 Corfu Workshop on Noncommutative Field Theory and Gravity, PoS CNCFG2010:004,2010, arXiv:1103.1900.
30. Quantum Gravity and Renormalization: The Tensor Track, arXiv:1112.5104 VIIIth International Conference on Progress in Theoretical Physics (ICPTP 2011), Constantine, Algeria, Dec. 2011, AIP Conf. Proc. 1444, pp. 18-29
31. The Tensor Track: an Update, arXiv:1209.5284, Symmetries and Groups in Contemporary Physics, 63-74, World Scientific 2013.
32. Renormalization: an advanced overview, with R. Gurau and A. Sfondrini, arXiv:1401.5003, submitted to Rev. Mod. Physics (2014).
33. The Tensor Theory Space, arXiv:1407.0284, Proceedings 2014 Corfu Workshop on Noncommutative Field Theory and Gravity,

### 3) Livres et ouvrages divers

1. Sommatation et estimations d'amplitudes de Feynman, thèse de troisième cycle, Université de Paris VI, juin 1979.
2. Développements asymptotiques et méthodes graphiques en physique mathématique, thèse d'état, Université de Paris VI, juin 1982.
3. From perturbative to constructive renormalization, Princeton University Press (1991).

4. Géométrie et Physique, Cours de DEA de physique théorique, Publications ENS (1993).
5. Mathématiques pour Physiciens, Cours du MIP, Polycopié ENS (2001-).

#### 4) Ouvrages édités

1. Constructive Physics, Proceedings of the International Workshop at Ecole Polytechnique, Palaiseau, July 1994, ed by V. Rivasseau, Lecture Notes in Physics **446**, Springer Verlag (1995).
2. Poincaré Seminar 2002, Vacuum Energy, Renormalization, with B. Duplantier, **PMP30** Birkhäuser (2003).
3. International Conference on Theoretical Physics TH2002, with D. Iagolnitzer and J. Zinn-Justin, Birkhäuser (2003).
4. Poincaré Seminar 2003, Bose-Einstein Condensation, Entropy with B. Duplantier and J. Dalibard, **PMP38** Birkhäuser PMP38 (2004).
5. Poincaré Seminar 2004, The Quantum Hall Effect with B. Duplantier and V. Pasquier, **PMP45** Birkhäuser (2004).
6. Poincaré Seminar 2005, Einstein 1905-2005 with T. Damour, O. Darrigol and B. Duplantier, **PMP47** Birkhäuser (2006).
7. Poincaré Seminar 2005, Quantum Decoherence, with B. Duplantier and J.M. Raimond, **PMP48** Birkhäuser (2006).
8. La Science et la guerre, la responsabilité des scientifiques, with D. Iagolnitzer and L. Koch-Miramond L'Harmattan, 2006.
9. Justice Internationale et Impunité, le cas des Etats Unis, with D. Iagolnitzer and Nils Andersson, L'Harmattan, mars 2007.
10. Poincaré Seminar 2006, General Relativity and Experiments, with B. Duplantier and T. Damour, **PMP52** Birkhäuser (2007).
11. Poincaré Seminar 2007, Quantum Spaces, with B. Duplantier, **PMP53** Birkhäuser (2007).
12. Poincaré Seminar 2008, The Spin, with B. Duplantier and J.M. Raimond, **PMP55** Birkhäuser (2009).

13. Poincaré Seminar 2009, Biological Physics, with B. Duplantier, **PMP60** Birkhäuser (2011).
14. Poincaré Seminar 2009, Glasses and Grains, with B. Duplantier and T. Halsey, **PMP61** Birkhäuser (2011).
15. Poincaré Seminar 2010, Time, with B. Duplantier, **PMP63** Birkhäuser (2013).
16. Poincaré Seminar 2010, Chaos, with B. Duplantier, **PMP66** Birkhäuser (2013).
17. Afrique, le choix de la science, l'exemple de l'initiative AIMS, Editions IRD (2012).
18. Poincaré Seminar, Poincaré 1912-2012, with B. Duplantier, to appear.
19. Poincaré Seminar, Bohr 1913-2013, with B. Duplantier, to appear.
20. Poincaré Seminar 2014, Dirac Matter(s), with B. Duplantier, to appear.
21. Poincaré Seminar 2014, The H-Boson, with B. Duplantier, to appear.

#### **Invitations conférences internationales (Extrait, 2009-2014)**

1. Algebraic and Combinatorial Structures in Quantum Field Theory Cargèse, March 2009
2. Un Einstein africain, rêve ou réalité, Dakar, April 2009
3. Renormalization Group, UBC Conference, Vancouver, July 2009
4. Quantum Field Theory Summer School, USTC-SIAS, Shanghai, July 2009
5. Loops 09, Beijing August 2009
6. Workshop Noncommutative Geometry, Oberwolfach, September 2009
7. Quantum Gravity and Quantum Geometry, Corfu, September 2009
8. Interactions of Mathematics and Physics, Schrödinger Institute, October 2009
9. Asymptotic Safety 30 years later, Perimeter Institute, November 2009
10. Spacetime as a statistical system: from quantum discreteness to macroscopic continuum, Gln, Germany, July 2010 July 2010

11. Many Fermions, CIME School, Cetraro, Sept. 2010
12. Noncommutative Field Theory and Gravity, Corfu, Sept. 2010
13. The Renormalization Group, Oberwolfach, Germany, March 2011
14. VIIIth International Conference on Progress in Theoretical Physics, Constantine, Algeria, October 2011
15. Simons Workshop "Mathematical Approaches to Quantum Field Theory, Stony Brook, USA, January 2012
16. Exploring Quantum Space-Time, Bad Honnef Germany, March 2012
17. Mechanics: classical, statistical and quantum, A conference in honor of the 70th birthday of Giovanni Gallavotti, Roma, July 2012
18. XIX International Colloquium on Group-Theoretical Methods in Physics, Tian Jin, China, August 2012
19. Colloquium, Perimeter Institute, February 2013, Canada
20. Quantum Gravity and Fundamental Cosmology, AEI, Gölm, Germany, March 2013
21. Loops 2013, Perimeter Institute, July 2013, Canada
22. Geoquant, ESI Vienna, August 2013
23. Quantum Gravity and Quantum Geometry, Corfu, September 2013, Greece
24. Global Fields, Moscow, September 2013, Russia
25. Regards sur la Gravité Quantique, Clermont-Ferrand, Janvier 2014
26. Renormalization Group Approaches to Quantum Gravity, Perimeter Institute, April 2014
27. Workshop on Random Tensors, Combinatorics, Geometry and Physics, Vienna, July 2014
28. Fourth International Conference on Mathematical Physics and Its Applications, Samara, August 2014
29. Random Geometry and Physics, Moscow, September 2014

30. Rencontres de Physique des Particules, Paris, January 2015