CURRICULUM VITAE

Name: BRICMONT Jean

Date and place of birth: April 12, 1952, Uccle, Belgium

Family: Married, two children

Degrees: 1973 MS Université catholique de Louvain (Belgium)

        1976 Ph D Université catholique de Louvain (Belgium)

Academic positions:

- 1978-1979: Research Associate, Mathematics Department, Rutgers University

- 1979-1981: Assistant Professor, Mathematics Department, Princeton University

- From 1981 on: Assistant, Assistant Professor (from 1989 on) and Ordinary (full) Professor (from 1999 on) in Theoretical Physics, Université Catholique de Louvain

- 1981-1984: Part-time Professor, Université Libre de Bruxelles

- Spring 1985 and academic year 1986-1987, Visiting Professor, Mathematics Department, Rutgers University

- Fall 1987: Lecturer, Physics Department, Princeton University

- 2004: Member of the Belgian Academy of Sciences

- 2007-2008: Visiting Professor (European Chair) Universit Paris-Dauphine.

Selected invited talks:

1) 87th General Meeting of the American Mathematical Society San Fransisco 7-10 january 1981. "Perturbation around a massless Gaussian lattice field."

2) 6th International Symposium on Information Theory, Tashkent (Ouzbekistan, URSS), 18-22 sept. 1984. "The Pirogov-Sinai theory of phase transitions for continuous fluids."

3) International Conference on the Mathematical aspects of statistical mechanics and field theory, Groningen 1985. "First order phase transitions and perturbation theory."

4) 8th International Conference on Mathematical Physics - Marseille, 16-25 juillet 1986. Co-organizer (with Yu. Suhov) of the session "Equilibrium Statistical Mechanics".

5) 10th International Conference on Mathematical Physics. Swansea (G.B.) 17-27 july 1988. Plenary talk on "Phase transitions in disordered systems."

6) 17th IUPAP Conference on Thermodynamics and statistical Mechanics (STATPHYS). Rio de Janeiro. 31/7-4/8 1989. Invited lecture. "Rigorous renormalization group and disordered systems."

7) Meeting on Geometric, Analytic and Computational Aspects of Mechanics, Oberwolfach Zentrum (Germany.), 1993. "Renormalization group and front propagation."

8) Meeting of the German Physical Society on Theoretical and Mathematical Foundations of Physics. Berlin, March 1994. "Recent results for extended dynamical systems."

9) International Workshop on Lattice Dynamics, Paris 6, 1995. "Infinite dimensional SRB Measures."

10) Second European Congress of Mathematics, Budapest, july 21-27, 1996. "The renormalization group: from statistical mechanics to partial differential equations."

11) International Congress of Mathematicians, Beijing August 2002, "Ergodicity and mixing for stochastic differential equations".

Selected seminars and visits:

IHES (Bures sur Yvette, France), ETH (Zurich, Suisse), Institute for Theoretical Physics (Santa Barbara, USA), Harvard, M.I.T., Mittag-Leffler Institute, Cornell, Courant Institute (NYU), Caltech, IAS (Princeton), Rome University, Moscow University.

Scientific prizes: A. Wetrems (1991) and J. Deruyts (1996) of the Belgian Academy of Sciences. Prix quinquennal of the FNRS-2005.

Other duties: Member of the Editorial board of the Journal of Statistical Physics, 1985-1987 and 1991-1993.

STATPHYS 20. Paris, July 1998. Member of the International Advisory Committee. .

STATPHYS 23. Genova, July 2007. Member of the International Advisory Committee.

EC Grants : SC1-CT91-0695 (1991-1993) et CHRX-CT93 (1994-1996) on "Stochastic Modelling of Large Disordered Systems."

Belgian Grant : Five year grant (2007-2012) from the Belgian Internuniversity Attraction Poles Program P6/02.

LIST OF SCIENTIFIC PUBLICATIONS

1. BRICMONT J., Correlation inequalities for two component fields.
   Annales Soc.Sc. de Bruxelles **90**, 245-252 (1976).

2. BRICMONT J., Inequalities between different classical spin models.
   Phys. Lett. **57A**, 411-413 (1976).

3. BRICMONT J., DEBACKER-MATHOT F., The Wegner approximation of the plane rotator
   model as a massless, free, lattice, Euclidean field.
   Jour. Math. Phys. **18**, 37-40 (1977).

4. BRICMONT J., FONTAINE J-R., LANDAU L.J., On the uniqueness of the equilibrium
   state for plane rotators.
   Commun. Math. Phys. **56**, 281-296 (1977).

5. BRICMONT J., FONTAINE J-R., LANDAU L.J., On the uniqueness of the equilibrium
   state for plane rotators. In Proc. of the International Conference on Math. Problems in
   Theoretical Physics, Rome, 1977.
   Lecture Notes in Phys. **80**, 415-416, Springer Verlag, Berlin, Heidelberg, New York 1978.

6. BRICMONT J., The Gaussian inequality for multicomponent rotators.
   J. Stat. Phys. **17**, 289-300 (1978).

7. BRICMONT J., On the transport of equilibrium states.
   Ann. Inst. Henri Poincaré, **28**, 423-429 (1978).

8. BRICMONT J., FONTAINE J-R., LANDAU L.J., Absence of symmetry breakdown and
   uniquenes of the vacuum for multicomponent field theories.
   Comm. Math. Phys. **64**, 49-72 (1978).

9. BRICMONT J., LEBOWITZ J.L., PFISTER C.E., OLIVIERI E., Non-translation invariant
   Gibbs states with coexisting phases : I. Existence of sharp interface for Widom-Rowlinson
   type lattice models in three dimensions.
   Comm. Math. Phys. **66**, 1-20 (1979).

10. BRICMONT J., LEBOWITZ J.L., PFISTER C.E., Non-translation invariant Gibbs states with coexisting phases : II. Cluster properties and surface tension.
Comm. Math. Phys. **66**, 21-36 (1979).

11. BRICMONT J., LEBOWITZ J.L., PFISTER C.E., Non-translation invariant Gibbs states with coexisting phases : III. Analyticity properties.
Comm. Math. Phys. **69**, 267-291 (1979).

12. BRICMONT J., LEBOWITZ J.L., PFISTER C.E., On the equivalence of boundary conditions.
J. Stat. Phys. **21**, 573-582 (1979).

13. BRICMONT J., LEBOWITZ J.L., PFISTER C.E., On the surface tension of lattice systems.
Proc. of the third International Conference on Collective Phenomena, Moscow, Dec. 1978.
In Annals of the New York Academy of Sciences, **337**, 214-223 (1980).

14. BRICMONT J., LEBOWITZ J.L., PFISTER C.E., Some remarks on the surface tension. in : Mathematical Problems in Theoretical Physics, Proc. of the International Conference on Math. Physics, Lausanne, 1979.
Lecture Notes in Physics **116**, 164-165, Springer-Verlag, Berlin, Heidelberg, New-York, 1980.

15. BRICMONT J., Correlation inequalities and classical spin systems.
In Proc. of the International School "Recent Advances in Statistical Mechanics", Brasov, Romania, 1979, 205-221. Ed. A. Corciovei. Central Inst. of Physics, Bucharest, Romania, 1980.

16. BRICMONT J., LEBOWITZ J.L., PFISTER C.E., Low temperature expansion for continuous spin Ising models.
Commun. Math. Phys. **78**, 117-135 (1980).

17. BRICMONT J., FONTAINE J-R., LEBOWITZ J.L., SPENCER T., Lattice systems with a continuous symmetry : I Perturbation theory for unbounded spins.
Comun. Math. Phys. **78**, 281-302 (1980).

18. BRICMONT J., LEBOWITZ J.L., PFISTER C.E., Periodic Gibbs states of ferromagnetic spin systems.
J. Stat. Phys. **24**, 276-279 (1981).

19. BRICMONT J., FONTAINE J-R., LEBOWITZ J.L., SPENCER T., Lattice systems with a continuous symmetry : II Decay of correlation.
Commun. Math. Phys. **78**, 363-372 (1981).

20. BRICMONT J., FONTAINE J-R., LEBOWITZ J.L., LIEB E.H., SPENCER T., Lattice systems with a continuous symmetry : III. Low temperature asymptotic expansion for the plane rotator model.
Commun. Math. Phys. **78**, 545-566 (1981).

21. BRICMONT J., LEBOWITZ J.L., PFISTER C.E., On the local structure of the phase separation line in the two-dimensional Ising system.
J. Stat. Phys. **26**, 313-332 (1981).

22. BRICMONT J., FONTAINE J-R., Correlation inequalities and contour estimates.
J. Stat. Phys. **26**, 745-753 (1981).

23. BRICMONT J., FONTAINE J-R., LEBOWITZ J.L., Some inequalities related to roughening.
In : Mathematical Problems in Theoretical Physics. Proc. of the International Conference on Math. Physics. Berlin 1981. Lectures Notes in Physics **153**, 29-32 Springer-Verlag Berlin, Heidelberg, New York 1982.

24. BRICMONT J., FONTAINE J-R., Perturbation about the mean field critical point.
Commun. Math. Phys. **86**, 337-362 (1982).

25. BRICMONT J., FONTAINE J-R., LEBOWITZ J.L., Surface tension, percolation and roughening.
J. Stat. Phys. **29**, 193-203 (1982).

26. BRICMONT J., FONTAINE J-R., Infrared bounds and the Peierls argument in two dimensions.
Commun. Math. Phys. **87**, 417-427 (1982).

27. BRICMONT J., FROHLICH J., An order parameter distinguishing between different phases of lattice gauge theories with matter fields.
Phys. Lett. **122B**, 73-77 (1983).

28. BRICMONT J., LEBOWITZ J.L., MESSAGER A., First order phase transitions in Potts and Ising systems.

    Phys. Lett. **95A**, 169-172 (1983).

29. BRICMONT J., KURODA K., LEBOWITZ J.L., Surface tension and phase coexistence for general lattice systems.

    J. Stat. Phys. **33**, 59-75 (1983).

30. BRICMONT J., FROHLICH J., Defect free energies in lattice gauge theories with matter fields.

    Nucl. Phys. **B230** (FS10) 407-434 (1984).

31. BRICMONT J., KURODA K., LEBOWITZ J.L., The structure of Gibbs states and phase coexistence for non-symmetric continuum Widom-Rowlinson models.

    Z. für Wahrscheinlchkeitstheorie **67**, 121-138 (1984).

32. BRICMONT J., LEBOWITZ J.L. : Book reviews : Two from Sinai.

    J. Stat. Phys. **34**, 651-656 (1984).

33. BRICMONT J., FROHLICH J., Statistical mechanical methods in particle structure analysis of lattice field theories. Part I : General results.

    Nucl. Phys. **B251** (FS13), 517-552 (1985).

34. BRICMONT J., FROHLICH J., Statistical mechanical methods in particle structure analysis of lattice field theories. Part II : Scalar and surface models.

    Commun. Math. Phys. **98**, 553-578 (1985).

35. BRICMONT J., KURODA K., LEBOWITZ J.L., First order phase transitions in lattice and continuous systems : extension of Pirogov-Sinai theory.

    Commun. Math. Phys. **101**, 501-538 (1985).

36. BRICMONT J., LEBOWITZ J.L., PFISTER C.E. : Some inequalities for anisotropic rotators.

    In : The Wonderful world of Stochastics - A tribute to Elliott Montroll. p.205-213, M.F. Shlesinger and G.H. Weiss eds. - North-Holland, Amsterdam 1985.

37. BRICMONT J., SLAWNY J., First order phase transitions and perturbation theory in: Statistical Mechanics and Field Theory : Mathematical aspects. Proceedings Groningen

1985. T.C. Dorlas, N.M. Hugenholtz, M. Winnink eds.

Lecture notes in Physics **257**, p.10-51, Springer Verlag.

38. BRICMONT J., LEBOWITZ J.L., On the continuity of magnetization and energy in Ising ferromagnets.

    J. Stat. Phys. **42**, 861-869 (1986).

39. BRICMONT J., EL MELLOUKI A., FROHLICH J., Random surfaces in Statistical Mechanics. Roughening, Rounding, Wetting

    J. Stat. Phys. **42**, 743-798 (1986).

40. BRICMONT J., FROHLICH J., Statistical mechanical methods in particle structure analysis of lattice field theories. III Confinement and bound states in gauge theories.

    Nucl. Phys. **B280** (FS18), 385 (1987).

41. BRICMONT J., LEBOWITZ J.L., Wetting in Blume-Capel and Potts models.

    J.Stat.Phys. **46**, 1015-1029 (1987).

42. BRICMONT J., LEBOWITZ J.L., MAES C., Percolation in strongly correlated systems : The massless Gaussian field.

    J.Stat.Phys. **48**, 1249-1268 (1987).

43. AIZENMAN M., BRICMONT. J., LEBOWITZ J.L., Percolation of the minority spins in high dimensional Ising models.

    J. Stat. Phys. **49**, 859-865 (1987).

44. BRICMONT J., KUPIAINEN A., Lower critical dimension for the random field Ising model.

    Phys. Rev. Lett. **59**, 1829-1832 (1987).

45. BRICMONT J., KUPIAINEN A., Phase transition in the 3d random field Ising model.

    Commun. Math.Phys. **116**, 539-572 (1988).

46. BRICMONT J., KUPIAINEN A., The renormalisation group and the random field Ising model.

    In: "Mathematical Quantum Field Theory and Related Topics" (Proc. Montréal 1987) J.S. Feldman, L.M. Rosen (eds) Canadian Math. Soc. Conf. Proc. **9** (1988) pp.15-27.

47. BRICMONT J., KUPIAINEN A., The hierarchical random field Ising model.
    J. Stat. Phys. **51** (1988) 1021-1032.

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    J.Stat.Phys. **54**, 89-161 (1989).

49. BRICMONT J., KESTEN H., LEBOWITZ J.L., SCHONMANN R.H., A note on the Ising model in high dimensions.
    Commun.Math.Phys. **122**, 597-607 (1989).

50. BRICMONT J., KUPIAINEN A., Phase transitions in disordered systems, in Proceedings of the 9th International Conference on Mathematical Physics.
    Eds B. Simon, A. Truman, I. Davies. A. Hilger; p. 164-169.

51. BRICMONT J., The random field Ising model, in "Mathematical Methods in Statistical Mechanics".
    Eds. M. Fannes, A. Verbeure, Leuven University Press, p.1-14 (1989).

52. BRICMONT J., Random surfaces in statistical mechanics. Wetting Phenomena (Proc.Mons 1988).
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53. BRICMONT J., KUPIAINEN A., Rigorous renormalisation group and disordered systems. (Proc. STATPHYS 17, Rio de Janeiro 1989).
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54. BRICMONT J., KUPIAINEN A., Renormalisation group for diffusion in a random medium.
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55. BRICMONT J., KUPIAINEN A., Randoms walks in asymmetric random environments.
    Commun. Math. Phys. **142**, 345-420 (1991).

56. BRICMONT J., KUPIAINEN A., Renormalization Group and Nonlinear PDE's
    H. Araki et al. (eds.), Quantum and Non-Commutative Analysis, p. 113-118 Kluwer, Netherlands (1993).

57. BRICMONT J., KUPIAINEN A., LIN G., Renormalization group and asymptotics of solutions of nonlinear parabolic equations.

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58. BRICMONT J., KUPIAINEN A., Renormalization group and the Ginzburg-Landau equation.

Commun. Math. Phys. **150**, 193-208 (1992).

59. BRICMONT J., KUPIAINEN A., Stability of moving fronts in the Ginzburg-Landau equation.

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60. BRICMONT J., KUPIAINEN A., Universality in blow-up for nonlinear heat equations.

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61. BRICMONT J., KUPIAINEN A., Stable Non-Gaussian diffusive profiles.

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62. BRICMONT J., KUPIAINEN A., Coupled analytic maps.

Nonlinearity, **8**, 379-396 (1995).

63. BRICMONT J., KUPIAINEN A., Renormalizing partial differential equations.

In: Constructive Physics, p. 83-115, V. Rivasseau (ed), Proceedings, Palaiseau, France, 1994, Lecture Notes in Physics, Springer-Verlag, Berlin 1995 .

64. BRICMONT J., KUPIAINEN A., XIN J., Global large time self-similarity of a thermal-diffusive combustion system with critical nonlinearity.

J. Diff. Eqs. **130**, 9-35 (1996).

65. BRICMONT J., KUPIAINEN A., High-temperature expansions and dynamical systems.

Commun. Math. Phys. **178**, 703-732 (1996).

66. BRICMONT J., KUPIAINEN A., Infinite dimensional SRB measures.

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67. BRICMONT J., KUPIAINEN A., Renormalization group for fronts and patterns.

In: European Congress of Mathematics, Volume 1, p. 121-130, A. Balog, G. O. H. Katona, A. Recski, D. Sza'sz (eds), Proceedings, Budapest, July 22-26, 1996, Birchäuser, Basel 1998.

68. BRICMONT J., KUPIAINEN A., LEFEVERE R., Renormalization group pathologies and the definition of Gibbs states.
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69. BRICMONT J., KUPIAINEN A., TASKINEN, J., Stability of Cahn-Hillard fronts.
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70. BRICMONT J., GAWEDZKI K., KUPIAINEN A., KAM Theorem and quantum field theory.
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71. BRICMONT J., KUPIAINEN A., LEFEVERE R., Renormalizing the renormalization Group pathologies.
Physics Reports, **348** 5-31 (2001).

72. BRICMONT J., KUPIAINEN A., LEFEVERE R., Probabilistic estimates for the two dimensional stochastic Navier-Stokes equations.
J. Stat. Phys. **100**, 743-756 (2000).

73. BRICMONT J., KUPIAINEN A., SCHENKEL A., Renormalization Group and the Melnikov Problem for PDE's.
Commun. Math. Phys. **221**, 101-140 (2001).

74. BRICMONT J., KUPIAINEN A., LEFEVERE R., Ergodicity of the 2D Navier-Stokes equations with random forcing.
Commun. Math. Phys. **224**, 65-81 (2001).

75. BRICMONT J., KUPIAINEN A., LEFEVERE R., Exponential mixing of the 2D Navier-Stokes dynamics.
Commun.Math.Phys. **230**, 87-132 (2002).

76. BRICMONT J. Ergodicity and mixing for stochastic differential equations. *Proceedings of the International Congress of Mathematicians*, (Beijing, August 2002), Vol. 1, 567-585, Higher Education Press, Beijing, 2002.

77. BRICMONT J., KUPIAINEN A., Towards a derivation of Fourier's law for coupled anharmonic oscillators; Commun.Math.Phys., **274**, 555-626 (2007).

78. BRICMONT J., KUPIAINEN A., Fourier's law from closure equations; Phys. Rev. Lett., **98**, 21, 214301 (2007)

79. BRICMONT J., KUPIAINEN A., Approach to equilibrium for the phonon Boltzmann equation; Commun.Math.Phys., **281**, 179-202 (2008).

80. BRICMONT J., KUPIAINEN A., Random walks in space time mixing environments, J.Stat.Phys. **134**, 979-1004 (2009).

81. BRICMONT J., KUPIAINEN A., Diffusion in Coupled Map Lattices, Preprint.