Liste des Publications de Bernard L. JULIA
Décembre 2005

Notes:
Les étoiles sont une mesure subjective d'importance...
5 références renvoient à des sites de la toile et contiennent des résultats non publiés sous forme papier.

1**. On birefringence phenomena associated with total reflection (avec A. Neveu), Journ. de Physique 5-6 (1973) 335. A semi-classical derivation of polarization by multiple reflections at the separation between two homogeneous media.

2. Unitarity bound on the decay rate of $K^+ --> \pi^+ + e^+ + e^-$ Lettere al Nuovo Cimento 11 (1974) 309.

3. Thèse de 3ème cycle, 1974 : "Phénomènes de biréfringence associés à la réflexion totale et limite d'unitarité pour

$$K^+ --> \pi^+ + e^+ + e^-"$$

4**. Poles with both electric charge and magnetic charge in non-Abelian gauge theory (avec A. Zee), Phys. Rev. D11 (1975) 2227.

Reprinted in C. Rebbi and G. Soliani: Solitons and Particles, World Scientific 1984.

5**. Supergravity theory in 11 dimensions (avec E. Cremmer et J. Scherk), Phys. Lett. 76B (1978) 409.

Reprinted in A. Salam and E. Sezgin: Supergravities in diverse dimensions, vol. 1 North Holland and World Scientific, 1989.

Reprinted in M. Duff: The world in 11 dimensions: Supergravity, supermembranes and M-theory, IOP Publishing, 1999.

Nombre de citations Juillet 2005: 880.

6. Super-Higgs effect in supergravity with general scalar interactions (avec E. Cremmer, J. Scherk, P. Van Nieuwenhuizen, S. Ferrara, L. Girardello), Phys. Lett. 79B (1978) 231.

Nombre de citations: 260

7*. Spontaneous symmetry breaking and Higgs effect in supergravity without cosmological constant (avec E. Cremmer, J. Scherk, S. Ferrara, L. Girardello, P. van Nieuwenhuizen), Nucl. Phys. B147 (1979) 105.

Nombre de citations: 548

Reprinted in S. Ferrara: Supersymmetry, volume 2, North Holland and World Scientific, 1987.

8. The N=8 supergravity theory 1 : the Lagrangian (avec E. Cremmer), Phys. Lett. 80B (1978) 48.

Reprinted in A. Salam and E. Sezgin: Supergravities in various dimensions, vol. 1, North Holland and World Scientific, 1989.

Reprinted in A. Zee: Unity of forces in the Universe, vol II, World Scientific.

9. Thèse d'Etat, 1978 : "Physique Théorique des particules élémentaires : Etude théorique des champs de jauge".

10** The SO(8) supergravity (avec E. Cremmer), Nucl. Phys. B159 (1979) 141.

Reprinted in C. Froggatt and H. B. Nielsen: Origin of Symmetries, World Scientific.

La réf. 10 étant fréquemment citée d'après le Science Citation Index, l'Institute for Scientific Information nous a demandé de rédiger un commentaire pour "Citation Classics" de Current Contents (Mai 1988). Nombre de citations en juillet 2005 = 860 (source HEP-SPIRES).

11. The many-defect problem: Gauge-like variables for ordered media containing defects, (avec G. Toulouse), Journal de Physique (Lettres) 16 (1979) L375.

12**. Extra-dimensions : Recent progress using old ideas, Proc. Second M. Grossmann Meeting, p.79, Trieste 1979, Ruffini ed., North-Holland 1982. (First argument for 2-branes=membranes in 11D supergravity).

13. Technological applications of N=8 supergravity, Proc. EPS Intern. Conf. on High Energy Physics, Genève 1979, CERN 1980, Vol. II, p.958.

14*. Symmetries of supergravity models, Proc. Conf. on Mathematical Problems in Theoretical Physics, Lausanne 1979, K. Osterwalder ed., Lecture Notes in Physics 116, Springer-Verlag 1980, p.368.

15. Non-linear realizations of compact and non-compact gauge groups (avec J.F. Luciani), Phys. Lett. 90B (1980) 270.

16**. Effective gauge fields and generalized Noether theorem, Proc. 4th Johns Hopkins Workshop on Current Problems in High Energy Particle Theory, Bad Honnef (RFA) 1980, Johns Hopkins Univ., Baltimore 1980, p.295. (First description of (p-1)-brane charges associated to higher p-gauge invariances: p=0 for instantons, p=1 for usual point charges, p=2 for strings...)

17*. Group disintegrations, in "Superspace and Supergravity", Proc. Nuffield Gravity Workshop, Cambridge 1980, eds. S.W. Hawking and M. Roček, Cambridge University Press 1981, p.331.

18** Infinite Lie algebras in Physics, in Proc. 5th Johns Hopkins Workshop on Current Problems in Particle Theory, Unified Field Theories and Beyond, Baltimore 1981, Johns Hopkins Univ., Baltimore 1982, p.23. (First arguments for affine symmetries in (super)gravities.)

19. Dualities and fermions, in Proc. Trieste Meeting 1981, in "Monopoles in Quantum Field Theory", eds. N.S. Craigie, P. Goddard & W. Nahm, World Scientific, Singapore 1982, p.229.

20*. Système linéaire associé aux équations d'Einstein, Les Comptes-Rendus de l'Académie des Sciences 295 (1982) 113. (Argument for some integrability of full Einstein's equations)

21. Application of supergravity to gravitation theory, Proc. Intern. School of Cosmology and Gravitation, Erice 1982, in "Unified Field Theories of More than 4 Dimensions Including Exact Solutions", eds. V. De Sabbata & E. Schmutzer, World Scientific, Singapore (1983), p.215-235.

22**. Kac-Moody symmetry of gravitation and supergravity theories, Proc. AMS-SIAM Summer Seminar on Applications of Group Theory in Physics and Mathematical

Physics, Chicago 1982, LPTENS preprint 82/22 eds. M. Flato, P. Sally & G. Zuckerman, Lectures in Applied Mathematics, Vol. 21 (1985) p.355.

23. Gravity, supergravities and integrable systems, Proc. Istanbul 1982, "Group Theoretical Methods in Physics", eds. M. Serdaroglu and E. Inonu, Lecture Notes in Physics vol. 180, Springer-Verlag 1983, p.214

24. Infinite dimensional groups acting on (super)gravity phase spaces, Proc. Intern. Seminar on Group Theoretical Methods in Physics, Zvenigorod 1982, eds. M.A. Markov, Man'ko & Shabad, Harwood 1986, p.564.

25. (Super)gravity and integrable systems, Proc. Rencontre d'Annecy 1983, in "Supersymmetry and Supergravity", LAPP-TH-73, 1983.

26. Three lectures on Kac-Moody algebras and supergravities, in Proceedings 1983 Dubrovnik Conf., in "Frontiers in Particle Physics 1983", eds. D. Sijacki et al., World Scientific Singapore 1984, p.132.

27. Supergeometry and Kac-Moody algebras, Proc. 1983 Berkeley Conf., in "Vertex operators in Mathematics and Physics", eds. J. Lepowsky, S. Mandelstam & I.M. Singer, Springer New York 1985, p.393.

28*. On infinite dimensional symmetry groups in physics, Proc. Niels Bohr Workshop, Copenhagen 1985, in "Recent Developments in Quantum Field Theory", eds. J. Ambjorn, B.J. Durhuus & J.L. Petersen, North Holland 1985, p.215. (Noether method as instance of deformation theory)

29. Induced representations and supersymmetric covariant derivatives, Proc. 1986 Annecy Meeting on "Higher Dimensional Theories and Expected Physics", eds. P. Sorba & R. Stora, LAPP-TH-158.

30. Cohomologies and deformations of "gauge" symmetries, Proc. Espoo (Finland) 1986 Symposium, in "Topological and Geometrical Methods in Field Theory", eds. J. Hietarinta & J. Westerholm, World Scientific, Singapore 1986, p.325.

31*. A relation between gauge groups and diffeomorphism groups, Proc. Bonn (RFA) 1986, in "Infinite Lie Algebras and Conformal Invariance in Condensed Matter and Particle Physics", eds. K. Dietz & V. Rittenberg, World scientific, Singapore 1987, p.175.

32. Déformations de symétries de "jauge" en Relativité Générale, Proc. Journées Relativistes de Chambéry 1987, p.69.

33*. "Phosphorus: from supernovae to life". Version parue dans les Comptes-Rendus de la Conférence SFP de Strasbourg de 1987 (avec referee): Annales de Physique 14 (1989) p101-120 : "From Supernovae to Phosphorites". (Suggestions of future observations on Mars in particular. Carbonates seem to be a first objective though and goethite (FeOOH) was just discovered in 2004 as a signature of past liquid water)

34. On the "statistics" of primes, Journal de Physique (Fr) 50 (1989) 1371

35**. Statistical theory of numbers, Springer Proceedings in Physics 47 p. 276 ed. J.-M. Luck, P. Moussa et M. Waldschmidt (1990). (prompted some activity in pure Mathematics)

36. Actes du colloque "Objectifs de la Formation Scientifique" (1991) 382 p. Palaiseau éd. B. Julia. 500 participants.

37*. Thermodynamic limit in number theory: Riemann-Beurling gases Physica A203 (1994) 425.

38. Théories statistique et thermodynamique des nombres: Exposés à la RCP-25 de Strasbourg Nov. 1989 et Mai 1992 . Texte rédigé et publié dans les Actes de la RCP 25 vol. 44 (Déc. 1993).

39. Actes de l'Ecole des Houches de Juillet 1992: "Gravitation and Quantizations" ed. B. Julia et J. Zinn-Justin, Elsevier (1995) 900p.

40*. Null-Killing vector dimensional reduction and Galilean Geometrodynamics (avec H. Nicolai), Nuclear Physics B439 (1995) 291-323. hep-th/9412002.

41*. Conformal internal symmetries of 2d sigma models coupled to gravity and a dilaton (avec H. Nicolai), Nuclear Physics B482 (1996) 431-465. hep-th/9608082.

42*. Dualisation of Dualities. I (avec E. Cremmer, H. Lu, C. N. Pope) Nucl. Phys. B523 (1998) 73-144, hep-th/9710119.

43**. Dualisation of Dualities, II: Twisted self-duality of doubled fields and superdualities (avec E. Cremmer, H. Lu, C. N. Pope) Nucl. Phys. B535 (1998) 242-292, hep-th/9806106. (New superalgebras of *-forms)

44. Shorter version appeared as Conference Proceedings in AMS/IP SIAM **13** (1999) 145.

45. Twisted Self-Duality of Dimensionally Reduced Gravity and Vertex Operators (avec D. Bernard), Nucl. Phys. B547 (1999) 427-470, hep-th/9712254.

46. Duality and Moduli Spaces for Timelike Reductions (avec C. Hull), Nucl. Phys. B534 (1998) 250-260, hep-th/9803239.

47**. Currents and Superpotentials in classical gauge invariant theories I: Local results with applications to Perfect Fluids and General Relativity. (avec S. Silva) Class. Quant. Grav. 15 (1998) 2173-2215, gr-qc/9804029. (Hidden there are a general method to excite Noether charges and a strict (Emmy) Noetherian explanation for helicity and enstrophies in hydrodynamics).

48**. " Dualities in the classical supergravity limits". Exposés de Cargèse, Neuchâtel et Trieste. Comptes-rendus de l'Ecole de Cargèse de Mai 1997, " Strings, Branes and Dualities " Kluwer (1999) ASI C520, hep-th/9805083. (Contains striking arguments for fusion of U-dualities and diffeomorphisms in a larger E11 or bigger symmetry group, it triggered some activity in Physics)

49. Noether superpotentials in supergravities (avec M. Henneaux et S. Silva) hep-th/9904003, Nuclear Physics B563 (1999) 448.

50*. Higher dimensional origin of D=3 coset symmetries (avec E. Cremmer, H. Lu and C. Pope) hep-th/9909099 to be submitted to Com. Math. Phys. (Contains a fully symmetric Magic triangle of split dualities)

51*. Counterterms in type I Supergravities (avec D.C. Dunbar, D. Seminara and M. Trigiante) LPTENS preprint 99/42, hep-th/9911158, JHEP 0001:046, 2000.

52. First order formulations of Supergravities (avec S. Silva), LPTENS preprint 99/43, hep-th/9911035, JHEP 0001:026, 2000.

53. Noetherian origin of fluid invariants and their selective excitations (avec S. Silva) article en préparation demandé par les C.R.Acad.Sc. Fr. (should publicize hidden results of [47])

54. Théorie des nombres et Physique, exposés à l'Institut Schroedinger de Vienne 1998 et à Paris 1999, en préparation (slides).

55*. Superdualities: below and beyond U-duality, exposés à Utrecht, Bures (IHES) et Dubna July 1999. Proceedings of the International Seminar "Supersymmetries and Quantum Symmetries" JINR-Press p. 68-78 Dubna 2000, LPTENS-00/02, hep-th/0002035.

e-56. M-theory from below, talk at Tel-Aviv 1/2000 (Renewed proposal for hyperbolic Kac-Moody algebras BE10 and "CE10" see[22] and:
http://minerva.tau.ac.il/physics/strings/workshop00/lectures/julia/

57. Nonassociative geometry and Exceptional supergravities, exposé à la réunion tmr de Septembre 1999: Quantum aspects of gauge theories, supersymmetry and unification. En préparation pour les e-Proceedings. (Real 4x4 magic square of exceptional geometries relevant to some supergravity models with matter)

58*. Currents and Superpotentials in classical gauge invariant theories II: Global aspects and the example of affine gravity (avec S. Silva), Class. Quant. Grav. 17 (2000) 4733-4744, gr-qc/0005127.

59. Supergravity in 11 dimensions, demandé par Living Reviews in General Relativity et Classical and Quantum Gravity en 2001, en préparation.

60**. Measurements of Planck's constant and classical limits, en préparation.

e-61. Proceedings of the tmr Workshop: Nonperturbative Quantum Effects Paris (September) 2000. Chief Editor of the electronic Proceedings see PrHEP volume:
http://pos.sissa.it/cgi-bin/reader/frame_ start.cgi?role=readeraction=list.cgi?confid=6

62. hep-th/0012230: "Counterterms in Supergravity" Authors: Z. Bern, D. Dunbar, L. Dixon, B. Julia, M. Perelstein, J. Rozowsky, D. Seminara, M. Trigiante hep-th/0012230 in [61].

63. Invited talks at the Montréal Conference on Strings, Duality and Geometry: "Beyond U-duality" ed. E. D'Hoker, D. Phong and S. T. Yau and at the Second Gursey memorial Conference on M-theory and dualities, June 19-23, 2000 Istanbul: "Beyond U-dualities" not in Proceedings.

65. Invited Talk at the London International Congress on Mathematical Physics July 17-22, 2000: " Supergravities from fields to branes" LPT-ENS/01-33, hep-th/0107009 in Proceedings edited by A. Grigoryan et al. International Press 2001.

66. Invited talk at the D.V. Volkov Memorial conference, Kharkov 2000: "Holography of charges in gauge theories": LPT-ENS preprint 01-21. hep-th/0104231, in the Proceedings, ed. D. Sorokin et al. Nucl.Phys.Proc.Suppl. 102 (2001) 156.

67*. Talk at the Berlin RTN Workshop (The quantum structure of spacetime and the geometric nature of fundamental interactions) October 4-10, 2000: "Magics of M-gravity". LPTENS preprint 01/03, hep-th/0105031 Fortschritte der Physik ed. D. Luest et al 49 (2001) 551.

e-68. Invited talks at the Minneapolis SUSY-30 meeting, October 2000 and at the Stony Brook Conference "Supergravity at 25" December 2001: "Magical M-Gravity" and "Inventing symmetries" see:
http://insti.physics.sunysb.edu/itp/sg25/talks/julia/

69**. Hyperbolic Kac-Moody algebras and Chaos in Kaluza-Klein models (avec T. Damour, M. Henneaux and H. Nicolai) hep-th/0103094, LPTENS/01-14, Physics Letters B509 (2001) 323. (Confirms my conjecture of [22] on the occurence of hyperbolic Kac-Moody algebras in pure gravity theory).

70. On covariant phase space methods (avec S. Silva) preprint LPT-ENS 01/28, hep-th/0205072 .

71. Gravitational couplings of orientifold planes (avec P. Henry). LPT-ENS 01/38, hep-th/0112065, JHEP 0201:033,2002.

72. Orientifolds, string compactifications and non simply laced scalar manifolds (avec A. Hanany and A. Keurentjes) in preparation. (Model realizing BE10).

73*. Borcherds symmetries in M theory (avec P. Henry-Labordère et L. Paulot) hep-th/0203070 JHEP 0204:049,2002 (recognition of the geometrical origin of the generalized U-dualities of [43])

74. U Opportunities: why is 10 equal to 10?, hep-th/0209170, appeared in Les Houches Proceedings 2001, Gravity gauge theory and strings ed. C. Bachas et al.

75. Real Borcherds superalgebras and M theory (avec P. Henry-Labordère et L. Paulot), hep-th/0212346, JHEP 0304:060,2003

76. Superfield T duality rules (avec Igor Bandos) hep-th/0303075, JHEP 0308:032, 2003

77. Hyperbolic billiards of pure D=4 supergravities (avec Marc Henneaux) hep-th/0304233, JHEP 0305:047,2003 (Explains the role of the real rank of U-dualities as the dimension of the appropriate classical billiard and makes specific proposal for the origin of CE10. This is crucial to allow 26 dimensions and full rank larger than 10 and yet preserve hyperbolic character)

78. Symmetries in M theory: Monsters, INC. (avec P. Henry-Labordère et L. Paulot) hep-th/0303178, Appeared in Cargèse Proceedings 2002, Progress in string, field and particle theory.

79. Superfield T duality rules in ten dimensions with one isometry, (avec Igor Bandos) hep-th/0312299, appeared in Proceedings of SQS 03 Dubna.

80. Cosmological billiards and oxidation (avec Sophie de Buyl, Marc Henneaux et Louis Paulot) hep-th/0312251 appeared in Proceedings of Goeteborg 2003, Ahrenshoop 2003 et Fortschritte der Physik 52:548-554,2004

e-81. Non-abelian p-forms, algebraic surfaces and M-theory symmetries, talk at Goeteborg 2002 and talk at Swansea for David Olive's fest, see:
http://pyweb.swan.ac.uk/diofest/program.htm

82. From equivariant gerbes to non abelian *-gerbes, from FT-model to M-theory (avec L. Breen et J. Kalkinnen) en préparation.

83. Superalgebras of oxidation chains (avec Yacine Dolivet, Pierre Henry-Labordère et Louis Paulot)

84. Gravitational dualities near de Sitter space (avec Jérôme Levie et Sébastien Ray) LPT/ENS preprint 05/23 and hep-th/0507262. JHEP 0511 (2005) 025.

85. Editeur et coauteur d'un manuel de seconde générale de Physique Chimie pour la classe de seconde (éditions Magnard 2004, 340p.)
Idem pour le livre du professeur correspondant (190p.).
Coauteur du CD-ROM didactique associé.

86. Dualisation of gravity with dark energy (avec Malcolm Perry et Igor Dolgachev) referred to in my talks in Moscow, Potsdam and Rome spring 2005 in progress.

87. Frontiers in Number theory, Physics and Geometry (coordinateur scientifique et coéditeur des Actes avec P. Cartier, P. Moussa et P. Vanhove). Les deux volumes de la conférence des Houches de Mars 2003 sont à paraître chez Springer en 2005-6 (630p. resp. 600p. environ).

(e)-88. The power of dualities. Talk at the Ferrara fest: the legacy of Supergravity, Roma June 2005 slides see TALKS at:
http://people.roma2.infn.it/ stringhe/

89. Electric/Magnetic duality beyond 4 dimensions and in general Relativity theory. Talk at the Nankai Institute Tianjin August 2005. hep-th/0512320 to appear in the Proceedings. World Scientific 2006.

90. New dualities in supergravity theories. Talk at Strasbourg 77ème RCP: Géométrie pseudo-Riemannienne et supersymétrie, September 2005 (en préparation).

(e)-91. Dualizing gravity. Talk at Loops 05 Potsdam October 2005
http://loops05.aei.mpg.de/index$_{f}iles/PDF_{F}iles/julia.pdf$