

Publications de Michel Dubois-Violette

1. M. Dubois–Violette, “Theory of formal series with applications to quantum field theory”, *J. Math. Phys.* **11** (1970), 2539–2546 .
2. M. Dubois–Violette, “ [Méthode formelle de solutions d’équations non-linéaires](#)”, *Int. J. Non-Linear Mechanics* **5** (1970), 311–323.
3. M. Dubois–Violette, Thèse de 3ème Cycle, Orsay 1968. “Sur le formalisme fonctionnel en théorie quantique des champs”. [Jury : F. Lurçat (Président), K. Chadan, A. Visconti].
4. M. Dubois–Violette, “On the functional formalism in quantum field theory”, *Nuovo Cimento* **62B** (1969), 235–246.
5. M. Dubois–Violette, “[On some topological tensor algebras](#)”, LPTHE–ORSAY 75/26.
6. M. Dubois–Violette, Thèse d’Etat, Orsay 1975. “Sur les algèbres involutives et la théorie quantique des champs”. [Jury : R. Omnès (Président), H. Epstein (Directeur de Thèse), H.J. Borchers, D. Kastler, L. Schwartz].
7. M. Dubois–Violette, “[A generalization of the classical moment problem on \$\ast\$ -algebras with applications to relativistic quantum theory, I](#)”, *Commun. Math. Phys.* **43** (1975), 225–254.
8. M. Dubois–Violette, “[A generalization of the classical moment problem on \$\ast\$ -algebras with applications to relativistic quantum theory, II](#)”, *Comm. Math. Phys.* **54** (1977), 151–172.

9. M. Dubois–Violette, “[Topics on a non–commutative moment problem](#)” dans les comptes-rendus de la Conférence Internationale de Leipzig, 1977 ; Teubner Texte Zur Mathematik Leipzig, 1978.
10. M. Dubois–Violette, “[A theory of regularity for linear forms on \$C^*\$ –algebras](#)”.
LPTHE–ORSAY 75/17.
11. M. Dubois–Violette, “ [Some aspects of classical gauge theory](#)” dans “Regards sur la physique contemporaine”, Colloque en l’honneur d’Antoine Visconti, Marseille 1979, Editions du CNRS, Paris 1980.
12. M. Dubois–Violette, “Connexions universelles et formulations des théories de jauge en termes d’applications classifiante”, *R.C.P.* 25, Strasbourg, Novembre 1980.
13. M. Dubois–Violette et Y. Georgelin, “[Gauge theory in terms of projector valued fields](#)”, *Phys. Lett.* **82B** (1979), 251–254 .
14. M. Dubois–Violette, “ [Equations de Yang et Mills, modèles \$\sigma\$ à deux dimensions et généralisations](#)” dans “Mathématique et Physique”, Séminaire de l’Ecole Normale Supérieure, p.43–64, L. Boutet de Monvel, A. Douady & J.L. Verdier, eds., Progress in Mathematics **37**, Birkhäuser (Boston, Basel, Stuttgart) 1983.
15. M. Dubois–Violette, “ [Structures complexes au–dessus des variétés, applications](#)”, dans “Mathématique et Physique”, Séminaire de l’E.N.S., p.1–42, L. Boutet de Monvel, A. Douady & J.L. Verdier eds, Progress in Mathematics, Birkhäuser (Boston, Basel, Stuttgart) 1983.
16. M. Dubois–Violette, “Structures complexes et quaternioniques en théorie de jauge”, (Cours). Université Catholique de Louvain, Institut de

Physique Théorique.

Phys 3140 : Physique mathématique avancée II : théorie des champs et mécanique statistique 1981–1982.

17. M. Dubois–Violette, “ [Einstein equations, Yang-Mills equations and classical field theory as compatibility conditions of linear partial differential operators](#)” *Phys. Lett.* **119B** (1982), 157–161.
18. M. Dubois–Violette, “ [Remarks on the local structure of Yang-Mills and Einstein equations](#)”, *Phys. Lett.* **131B** (1983), 323–326.
19. M. Dubois–Violette, “ [The theory of linear over–determined systems and its applications to non–linear field equations](#)”. Exposés à l’Institut Banach, Varsovie, Octobre 1983. *J. Geom. Phys.* **1** (1984), 139–172.
20. M. Dubois–Violette, M. Talon, C-M. Viallet, “Results on B.R.S. cohomology in gauge theory”, *Phys. Lett.* **158B** (1985), 231–233.
21. M. Dubois–Violette, M. Talon, C-M. Viallet, “ [B.R.S. algebras. Analysis of consistency equations in gauge theory](#)”, *Commun. Math. Phys.* **102** (1985), 105 –122.
22. M. Dubois–Violette, M. Talon, C-M. Viallet, “Anomalous terms in gauge theory: relevance of the structure group”, *Ann. Inst. Henri Poincaré* **44** (1986), 103–114.
23. M. Dubois–Violette, “[Structure algébrique des anomalies et cohomologies de B.R.S.](#)”. Journées relativistes, Juillet 1985, Y. Choquet–Bruhat, B. Coll, R. Kerner, A. Lichnerowicz eds. *Travaux en cours* **21**, Hermann, Paris 1987.

24. M. Dubois–Violette, dans *R.C.P.* 25 vol. 36. Publication de l’I.R.M.A. Strasbourg 1986.
25. M. Dubois–Violette, “[Graded differential algebras, B.R.S. algebras and the computation of anomalous terms in gauge theory](#)”, dans “Fields and Geometry 1986”, A. Jadczyk ed. World Scientific, Singapore 1986.
26. M. Dubois–Violette, “[The Weil–B.R.S. algebra of a Lie algebra and the anomalous terms in gauge theory](#)”, *J. Geom. Phys.* **3** (1986), 525–565.
27. M. Dubois–Violette, J. Madore, “[Conservation laws and integrability conditions for gravitational and Yang–Mills field equations](#)”, *Commun. Math. Phys.* **108** (1987), 213–223.
28. M. Dubois–Violette, “[Systèmes dynamiques contraints : L’approche homologique](#)”, *Ann. Inst. Fourier Grenoble* **37** (1987), 45–57. Colloque International en l’honneur de J.L. Koszul.
29. M. Dubois–Violette, A. Rouet, “A mathematical classification of the one–dimensional deterministic cellular automata”, *Commun. Math. Phys.* **112** (1987), 627–631.
Addendum, *Commun. Math. Phys.* **118** (1988), 529.
30. M. Dubois–Violette, “[Dérivations et calcul différentiel non–commutatif](#)”, *C.R. Acad. Sci. Paris* **307**, I (1988), 403–408.
31. M. Dubois–Violette, R. Kerner, J. Madore, “[Non–commutative differential geometry of matrix algebras](#)” **SLAC-PPF 88-45** , *J. Math. Phys.* **31** (1990), 316–322.
32. M. Dubois–Violette, R. Kerner, J. Madore, “[Non–commutative differential geometry and new models of gauge theory](#)” **SLAC-PPF 88-49**,

- J. Math. Phys.* **31** (1990), 323–329.
33. M. Dubois–Violette, R. Kerner, J. Madore, “Gauge bosons in a non-commutative geometry”, *Phys. Lett.* **217** (1989), 485–488.
 34. M. Dubois–Violette, R. Kerner, J. Madore, “[Classical bosons in a non-commutative geometry](#)” (1988), *Class. Quantum Grav.* **6** (1989), 1709–1724.
 35. M. Dubois–Violette, “[On the theory of quantum groups](#)”, *Lett. Math. Phys.* **19** (1990), 121–126.
 36. M. Dubois–Violette, R. Kerner, J. Madore, “Modèles des théories de jauge basés sur la géométrie non-commutative”, *Annales de Physique, Colloque n°1, supplément au n°6*, Vol. 14 (1989).
 37. M. Dubois–Violette, R. Kerner, J. Madore, “[Super Matrix Geometry](#)”, *Class. Quantum Grav.* **8** (1991), 1077–1089.
 38. M. Dubois–Violette, “[Non-commutative differential geometry, quantum mechanics and gauge theory](#)” in *Differential Geometric Methods in Theoretical Physics*, C. Bartocci et al (eds), 1991 Springer Verlag.
 39. M. Dubois–Violette, G. Launer, “[The quantum group of a non-degenerated bilinear form](#)”, *Phys. Letters* **245B** (1990), 175–177.
 40. M. Dubois–Violette. Conférences sur les algèbres et la géométrie non-commutative à l’Institut Henri Poincaré (1990–1991). A paraître.
 41. M. Dubois–Violette, “Calcul différentiel non-commutatif, mécanique quantique et théorie des champs”. 50ème *R.C.P.* 25, Strasbourg 1990.

42. M. Dubois–Violette, M. Henneaux, M. Talon, C.M. Viallet, “ [Some results on local cohomologies in field theory](#)”, *Phys. Lett.* **B267** (1991), 81–87.
43. M. Dubois–Violette, “Equations d’Einstein et de Yang–Mills comme lois de conservation”, 53ème R.C.P. 25, Strasbourg 1991.
44. M. Dubois–Violette, M. Henneaux, M. Talon, C.M. Viallet, “[General solution of the consistency equation](#)”, *Phys. Lett.* **B289** (1992), 361–367.
45. M. Dubois–Violette, “[Complex structures and the Elie Cartan approach to the theory of spinors](#)”, in *Spinors, Twistors, Clifford Algebras and Quantum Deformations*, 17-23, Z. Oziewicz et al. (eds), 1993 Kluwer Academic Publishers.
46. M. Dubois–Violette, P.W. Michor, “[A common generalization of the Fröhlicher-Nijenhuis bracket and the Schouten bracket for symmetric multivector fields](#)”, *Indag. Mathem., N.S.*, **6** (1995), 51-66.
47. M. Dubois–Violette, “[A bigraded version of the Weil algebra and of the Weil homomorphism for Donaldson invariants](#)”, *J. Geom. Phys.* **19** (1996), 18-30.
48. M. Dubois–Violette, T. Masson, “[Basic cohomology of associative algebras](#)”, *Journal of Pure and Applied Algebra* **114** (1996), 39–50.
49. M. Dubois–Violette, P.W. Michor, “[More on the Fröhlicher-Nijenhuis bracket in non commutative differential geometry](#)”, *Journal of Pure and Applied Algebra* **121** (1997), 107-135.

50. M. Dubois–Violette, P.W. Michor, “[Dérivations et calcul différentiel non commutatif, II](#)”, *C.R. Acad. Sci. Paris* **319**, I (1994), 927–931.
51. M. Dubois–Violette, J. Madore, T. Masson, J. Mourad, “[Linear connections on the quantum plane](#)”, *Lett. Math. Phys.* **35** (1995), 351-358.
52. M. Dubois–Violette, P.W. Michor, “[Connections on central bimodules in noncommutative differential geometry](#)”, *J. Geom. Phys.* **20** (1996), 218-232.
53. M. Dubois–Violette, T. Masson, “[On the first-order operators in bimodules](#)”, *Lett. Math. Phys.* **37** (1996), 467-474.
54. M. Dubois–Violette, J. Madore, T. Masson, J. Mourad, “[On Riemann curvature in noncommutative geometry](#)”, *J. Math. Phys.* **37** (1996), 4089-4102.
55. M. Dubois–Violette, “[Some aspects of noncommutative differential geometry](#)”, Proceedings of the conference “New Trends in Geometrical and Topological Methods”, Funchal (Madeira), Portugal, July 30–August 5, 1995 *Geometry and Nature, Contemporary Mathematics* **203**, American Mathematical Society 1997, H. Nencka and J.P. Bourguignon, Eds., p. 145-157.
56. M. Dubois–Violette, R. Kerner, J. Madore. “[Shadow of noncommutativity](#)”, *J. Math. Phys.* **39** (1998), 730-738.
57. M. Dubois–Violette, R. Kerner. “[Universal \$q\$ -differential calculus and \$q\$ -analog of homological algebra](#)”, *Acta Math. Univ. Comenianae* **Vol. LXV, 2** (1996), 175-188.

58. M. Dubois–Violette, R. Kerner. “Universal \mathbf{Z}_N -graded differential calculus”, *J. Geom. Phys.* **23** (1997), 235-246.
59. M. Dubois–Violette. “Generalized differential spaces with $d^N = 0$ and the q -differential calculus”, *Czech. J. Phys.* **46** (1996), 1227-1233.
60. M. Dubois–Violette, J. Madore, T. Masson, J. Mourad. “Linear connections in noncommutative geometry”. *Proceedings of the 2nd Bulgarian Workshop “New trends in quantum field theory”*, August 1995, Razlog, Bulgaria, ed. A. Ganchev, R. Kerner, I.T. Todorov, Heron Press, Sofia 1996, pp. 206-217.
61. M. Dubois–Violette, T. Masson. “ $SU(n)$ -gauge theories in noncommutative differential geometry”, *J. Geom. Phys.* **25** (1998), 104-118.
62. M. Dubois–Violette, I.T. Todorov. “Generalized cohomologies and the physical subspace of the $SU(2)$ WZNW model”, *Lett. Math. Phys.* **42** (1997), 183-192.
63. M. Dubois–Violette. “ $d^N = 0$: Generalized homology”, *K-theory* **14** (1998), 371-404.
64. M. Dubois–Violette. “Generalized homologies for $d^N = 0$ and graded q -differential algebras”, *Contemporary Mathematics* **219**, American Mathematical Society 1998, M. Henneaux, J. Krasil’shchik, A. Vinogradov, Eds., p. 69-79.
65. M. Dubois–Violette, I.T. Todorov. “Generalized homologies for the zero modes of the $SU(2)$ WZNW model”, *Lett. Math. Phys.* **48** (1999), 323-338.

66. M. Dubois–Violette, M. Henneaux. “Generalized cohomology for irreducible tensor fields of mixed Young symmetry type”, *Lett. Math. Phys.* **49** (1999), 245-252.
67. M. Dubois–Violette, P. Furlan, L.K. Hadjiivanov, A.P. Isaev, P.N. Pyatov, I.T. Todorov. “A finite dimensional gauge problem in the WZNW model”, LPT-ORSAY 99/73.
68. M. Dubois–Violette. “Lectures on graded differential algebras and noncommutative geometry”, in *Noncommutative Differential Geometry and Its Applications to Physics*, Proceedings of the Workshop at Shonan, Japan, June 1999, Y. Maeda, H. Moriyoshi et al (eds), Kluwer Academic Publishers 2001, pp. 245-306 .
69. M. Dubois–Violette. “Lectures on differentials, generalized differentials and on some examples related to theoretical physics”. *Contemporary Mathematics* **294**, American Mathematical Society 2002, R. Coquereaux, A. Garcia, R. Trinchero Eds, p. 59-94.
70. A. Connes, M. Dubois–Violette. “Noncommutative finite-dimensional manifolds. I. Spherical manifolds and related examples”. *Commun. Math. Phys.* **230** (2002) 539-579.
71. M. Dubois-Violette, M. Henneaux. “Tensor fields of mixed Young symmetry type and N-complexes”, *Commun. Math. Phys.* **226** (2002) 393-418.
72. M. Dubois-Violette, A. Kriegl, Y. Maeda, P.W. Michor, “Smooth $*$ -algebras”, *Progress of Theoretical Physics Supplement* **144** (2001) 54-78.

73. R. Berger, M. Dubois-Violette, M. Wambst. “[Homogeneous Algebras](#)”. *J. Algebra* **261** (2003) 172-185.
74. A. Connes, M. Dubois-Violette. “[Yang-Mills algebra](#)”. *Lett. Math. Phys.* **61** (2002) 149-158.
75. M. Dubois-Violette, T. Popov. “[Homogeneous algebras, statistics and combinatorics](#)”. *Lett. Math. Phys.* **61** (2002) 159-170.
76. A. Connes, M. Dubois-Violette. “[Moduli space and structure of non-commutative 3-spheres](#)”. *Lett. Math. Phys.* **66** (2003) 91-121.
77. M. Dubois-Violette, O. Ferrandiz Bofill. “[Yang-Mills and \$N\$ -homogeneous algebras](#)”. Proceedings of First Solvay Workshop on Higher-Spin Gauge Theories (May 12-14, 2004, Brussels), Editors G. Bonelli, R. Argurio, G. Barnich and M. Grigoriev, Université Libre de Bruxelles, International Solvay Institutes for Physics and Chemistry, 2004, 21-34.
78. A. Connes, M. Dubois-Violette. “[Yang-Mills and some related algebras](#)”, math-ph/0411062 in *Rigorous Quantum Field Theory*, Colloque en l’honneur de J. Bros. Progress in Mathematics **251** (2007) 65-78.
79. A. Connes, M. Dubois-Violette. “[Noncommutative finite dimensional manifolds. II. Moduli space and structure of noncommutative 3-spheres](#)”. math.QA/0511337. *Commun. Math. Phys.* **281** (2008) 23-127.
80. M. Dubois-Violette. “[Graded algebras and multilinear forms](#)”. math.QA/0604279. *C.R. Acad. Sci. Paris, Ser. I* **341** (2005) 719-724.
Corrigendum : “[Graded algebras and multilinear forms](#)”
81. R. Berger, M. Dubois-Violette. “[Inhomogeneous Yang-Mills algebras](#)”. math.QA/0511521. *Letters in Mathematical Physics* **76** (2006) 65-75.

82. M. Dubois-Violette. “[Multilinear forms and graded algebras](#)”. *Journal of Algebra* **317** (2007) 198-225.
Corrigendum : “[Multilinear forms and graded algebras](#)”
83. M. Dubois-Violette. “[Noncommutative coordinate algebras](#)”, dédié à *Alain Connes* in “Quanta of Maths”, E. Blanchard et al. eds, Clay Mathematics Proceedings 14, Clay Mathematics Institute 2010, p. 171-199.
84. M. Dubois-Violette, M. Lagraa “[Abundance of local actions for the vacuum Einstein equations](#)”. *Letters in Mathematical Physics* **91** (2010) 83-91.
85. M. Dubois-Violette “[Tensor product of N-complexes and generalization of graded differential algebras](#)”. *Bulg. J. Phys.* **36** (2009) 227-236.
86. M. Dubois-Violette “[Notes sur les variétés différentiables, structures complexes et quaternioniques et applications](#)” in “Gravitation, Théorie et Expérience”, A. Bounames et A. Makhoulf eds, Hermann 2013, p. 335-416.
87. M. Dubois-Violette, G. Landi “[Lie prealgebras](#)” in “Noncommutative Geometry and Global Analysis”, Connes et al. eds, *Contemporary Mathematics* **546**, AMS (2011), 115-135.
88. M. Dubois-Violette “[From Koszul duality to Poincaré duality](#)”.
Dédié à Raymond Stora. *Pramana Journal of Physics* **78** (2012) 947-961.
89. M. Dubois-Violette, G. Landi “[The Weil algebra of a Hopf algebra - I - A noncommutative framework](#)”. *Commun. Math. Phys.* **326** (2014) 851-874.

90. M. Dubois-Violette, T. Popov “[Young tableaux and homotopy commutative algebras](#)”. V. Dobrev (ed.), Lie Theory and its applications in Physics : IX International Workshop, Springer Proceedings in Mathematics and Statistics **36**, 2013.
91. M. Dubois-Violette, T. Popov “[Homotopy transfer and self-dual Schur modules](#)”. *Physics of Particles and Nuclei* **43** (2012) 708-710.
92. J. Bichon, M. Dubois-Violette “[Half-commutative orthogonal Hopf algebras](#)”. *Pacific J. Math.* **263** (2013) 13-28.
93. M. Dubois-Violette “[Poincaré duality for Koszul algebras](#)” in “Algebra, Geometry and Mathematical Physics”, A. Makhlouf et al. eds, Springer Verlag 2014, 3-26.
94. M. Dubois-Violette, T. Popov “[Homotopy commutative algebra and two-nilpotent Lie algebra](#)” in “Algebra, Geometry and Mathematical Physics”, A. Makhlouf et al. eds, Springer Verlag 2014, 71-81.
95. J. Bichon, M. Dubois-Violette “[The quantum group of a preregular multilinear form](#)”. *Lett. Math. Phys.* **103** (2013) 455-468.
96. M. Dubois-Violette, T. Popov “ [\$C_\infty\$ -structure on the cohomology of the free 2-nilpotent Lie algebra](#)”. *Publications de l'Institut Mathématique (Beograd) (N.S.)* **94** (108) (2013), 99-109.
97. M. Dubois-Violette “[Lectures on the classical moment problem and its noncommutative generalization](#)”, *Contemporary Mathematics* **676** (2016) 135-145.
98. M. Dubois-Violette “[Exceptional quantum geometry and particle physics](#)”. *Nuclear Physics* **B912** (2016) 426-449.

99. M. Dubois-Violette, I. Todorov “[Deducing the symmetry of the Standard Model from the automorphism and structure groups of the exceptional Jordan algebra](#)”. *Int. J. Mod. Phys.* **A33** (2018) 1850118.
 100. M. Dubois-Violette, G. Landi “[Noncommutative products of Euclidean spaces](#)”. *Lett. Math. Phys.* **108** (2018) 2491-2513.
 101. M. Dubois-Violette, G. Landi “[Noncommutative Euclidean spaces](#)”. *J. Geom. Phys.* **130** (2018) 315-330.
 102. A. Carotenuto, L. Dabrowski , M. Dubois-Violette, “[Differential calculus on Jordan algebras and Jordan modules](#)”. *Lett. Math. Phys.* **109** (2019) 113-133.
 103. M. Dubois-Violette, X. Han, G. Landi “[Principal fibrations over non-commutative spheres](#)”. *Rev. Math. Phys.* **30** (2018) 1850020.
 104. M. Dubois-Violette, I. Todorov “[Exceptional quantum geometry and particle physics II](#)”. *Nuclear Physics* **B938** (2019) 751-761.
 105. M. Dubois-Violette, G. Landi “[Quadratic differential algebras generated by Euclidean spaces](#)”.
 106. M. Dubois-Violette, I. Todorov “[Superconnection in the spin factor approach to particle physics](#)”. *Nucl. Phys.* **B957** (2020) 115065.
 107. M. Dubois-Violette, B. Torrecillas “[Quadratic algebras associated with exterior 3-forms- I. Generalities and algebras generated in low dimensions \$n \leq 7\$](#) ”. ArXiv: 2010.10091.
-

Bk “Infinite Dimensional Geometry, Non Commutative Geometry, Operator Algebras, Fundamental Interactions”, Proceedings of the First Caribbean Spring School of Mathematics and Theoretical Physics, Saint-François, Guadeloupe, May 30-June 13, 1993, R. Coquereaux, M. Dubois-Violette, P. Flad (eds), World Scientific 1995.