

PUBLICATIONS

1. *Compact four-dimensional Einstein manifolds*, J.Differential Geometry **9** (1974), 435-441.
2. *Harmonic spinors*, Advances in Mathematics **14** (1974), 1-55.
3. *On the curvature of rational surfaces*, Proc. Sympos. Pure Math. XXVII, pp 65-80, Amer. Math. Soc. Providence RI (1975)
4. (with M F Atiyah, I M Singer) *Deformations of instantons*, Proc. Nat. Acad. Sci. USA (1977) **7**, 2662-2663.
5. (with M F Atiyah, I M Singer) *Self-duality in four-dimensional Riemannian geometry*, Proc. Roy. Soc. London Ser A **362** (1978), 425-461.
6. *Polygons and gravitons*, Math. Proc. Camb. Phil. Soc. **85** (1979), 465-476.
7. (with M F Atiyah, V G Drinfeld, Yu I Manin) *Construction of instantons*, Phys. Lett. A **65** (1978), 185-187.
8. *Linear field equations on self-dual spaces*, Proc. Roy. Soc. London Ser. A **370** (1980), 173-191.
9. *Kählerian twistor spaces*, Proc. London Math. Soc. **43** (1981), 133-150.
10. *Complex manifolds and Einstein's equations*, in “Twistor geometry and nonlinear systems”, H.Doebner et al (Eds), Lecture Notes in Mathematics **970**, 73-99, Springer, Berlin (1982).
11. *Monopoles and geodesics*, Commun. Math. Phys. **83** (1982) 579-602.
12. *On the construction of monopoles*, Commun. Math. Phys. **89** (1983) 145-190.
13. *The Yang-Mills equations and the topology of 4-manifolds (after Simon Donaldson)*, Bourbaki seminar vol 1982/83, 167-178, Astérisque **105-106**, Soc. Math. France, Paris (1983).
14. “Global Riemannian geometry”. Proceedings of the symposium held at the University of Durham, Durham, July 1983. Edited by T. J. Willmore and N. J. Hitchin. Ellis Horwood Series: Mathematics and its Applications. Ellis Horwood Ltd., Chichester; Halsted Press [John Wiley & Sons, Inc.], New York, 1984.
15. *Twistor construction of Einstein metrics*, in “Global Riemannian geometry” (Durham, 1983), 115–125, Ellis Horwood Ser.: Math. Appl., Horwood, Chichester, 1984.
16. *The geometry of monopoles*, in Proceedings of the International Congress of Mathematicians, Vol. 1, 2 (Warsaw, 1983), 541–547, PWN, Warsaw, 1984.

17. (with M F Atiyah) *Low energy scattering of nonabelian monopoles*, Phys. Lett. A **107** (1985), 21–25.
18. (with M F Atiyah) *Low-energy scattering of nonabelian magnetic monopoles*, in “New developments in the theory and application of solitons. With discussion.” Philos. Trans. Roy. Soc. London Ser. A **315** (1985), no. 1533, 459–469.
19. *Metrics on moduli spaces*, in “The Lefschetz centennial conference, Part I (Mexico City, 1984)”, 157–178, Contemp. Math., **58**, Amer. Math. Soc., Providence, R.I., 1986.
20. (with A. Karlhede, U. Lindström, M. Roček) *Hyperkähler metrics and supersymmetry*, Comm. Math. Phys. **108** (1987), 535–589.
21. *Monopole and vortex scattering*, in “Field theory, quantum gravity and strings, II (Meudon/Paris, 1985/1986)”, 117–124, Lecture Notes in Phys., **280**, Springer, Berlin-New York, (1987).
22. *Stable bundles and integrable systems*, Duke Math. J. **54** (1987), 91–114.
23. *The self-duality equations on a Riemann surface*, Proc. London Math. Soc. (3) **55** (1987), 59–126.
24. (with M K Murray) *Spectral curves and the ADHM method*, Comm. Math. Phys. **114** (1988), 463–474.
25. “Monopoles, minimal surfaces and algebraic curves.” Séminaire de Mathématiques Supérieures, **105**. Presses de l’Université de Montréal, Montreal, PQ, 1987. 94 pp. ISBN: 2-7606-0801-8
26. (with M F Atiyah) “The geometry and dynamics of magnetic monopoles.” M. B. Porter Lectures. Princeton University Press, Princeton, NJ, 1988. viii+134 pp. ISBN: 0-691-08480-7
27. *Harmonic maps from T^2 to S^3* , in “Harmonic mappings, twistors, and σ -models (Luminy, 1986)”, 103–112, Adv. Ser. Math. Phys., **4**, World Sci. Publishing, Singapore, 1988.
28. *Gauge theory on Riemann surfaces*, in “Lectures on Riemann surfaces (Trieste, 1987)”, 99–118, World Sci. Publishing, Teaneck, NJ, 1989.
29. *Harmonic maps from a 2-torus to the 3-sphere*, J. Differential Geom. **31** (1990), 627–710.
30. *Flat connections and geometric quantization*, Comm. Math. Phys. **131** (1990), 347–380.

31. *The geometry and topology of moduli spaces*, in “Global geometry and mathematical physics (Montecatini Terme, 1988)”, Lecture Notes in Math., **1451**, Springer, Berlin, (1990), 1–48.
32. *Hypersymplectic quotients*, Atti della Accademia delle Scienze di Torino, Classe di Scienze Fisiche, Matematiche e Naturali, **124** Supp. (1990), 169 – 180.
33. *Geometric quantization of spaces of connections*, in “Geometry of low-dimensional manifolds, 2 (Durham, 1989)”, London Math. Soc. Lecture Note Ser., **151**, Cambridge Univ. Press, Cambridge, (1990) 97 – 100.
34. *Vector fields on the circle*, in “Mechanics, analysis and geometry: 200 years after Lagrange”, North-Holland Delta Ser., North-Holland, Amsterdam, (1991), 359 – 378.
35. (with M F Atiyah) “ Geometriya i dinamika magnitnykh monopolei”. (Russian) [The geometry and dynamics of magnetic monopoles] Translated from the English and with a preface by O. V. Ogievetskiĭ. “Mir”, Moscow, (1991).
36. *The symplectic geometry of moduli spaces of connections and geometric quantization*, in “Common trends in mathematics and quantum field theories (Kyoto, 1990).” Progr. Theoret. Phys. Suppl. No. **102**, (1991), 159 – 174.
37. *Lie groups and Teichmüller space*, Topology **31** (1992), 449 – 473.
38. *Hyperkähler manifolds*, Séminaire Bourbaki, Vol. 1991/92. Astérisque No. **206** (1992), Exp. No. 748, 3, 137–166.
39. “Vector bundles in algebraic geometry.” Proceedings of the symposium held in Durham, 1993. Edited by N. J. Hitchin, P. E. Newstead and W. M. Oxbury. London Mathematical Society Lecture Note Series, **208**. Cambridge University Press, Cambridge, 1995. +345 pp. ISBN: 0-521-49878-3
40. *Twistor spaces, Einstein metrics and isomonodromic deformations*, J. Differential Geom. **42** (1995), 30 – 112.
41. (with N S Manton and M K Murray) *Symmetric monopoles*, Nonlinearity **8** (1995), 661 – 692.
42. *Poncelet polygons and the Painlevé equations*, in “Geometry and analysis (Bombay, 1992)”, 151 – 85, Oxford University Press, Bombay, 1996.
43. *A new family of Einstein metrics*, in “ Manifolds and geometry (Pisa, 1993)”, 190 – 222, Sympos. Math., XXXVI, Cambridge Univ. Press, Cambridge, 1996.
44. *Magnetic monopoles with Platonic symmetry*, in “Moduli of vector bundles (Sanda, 1994; Kyoto, 1994)”, 55 – 63, Lecture Notes in Pure and Appl. Math., **179**, Dekker, New York, 1996.

45. *Einstein metrics and the eta-invariant*, Bollettino UMI (7) **11-B** Suppl. fasc. 2 (1997), 95 – 105.
46. *Lectures on Frobenius manifolds*, in “Gauge Theory and Symplectic Geometry”, J.Hurtubise & F.Lalonde (eds), NATO ASI Series C **488**, Kluwer, Dordrecht (1997).
47. *Geometrical aspects of Schlesinger’s equation*, Journal of Geometry and Physics **27** (1997), 287–300.
48. *The moduli space of special Lagrangian submanifolds*, Ann. Scuola Norm. Sup. Pisa Cl. Sci. **25** (1997), no. 3 – 4, 503 – 515
49. *Hypercomplex manifolds and the space of framings*, in “The Geometric Universe: Science, Geometry and the work of Roger Penrose”, S.A.Huggett et al (eds.), Oxford University Press, Oxford, (1998), 9 – 30.
50. *Integrable systems in Riemannian geometry*, in “Surveys in Differential Geometry Vol. 4”, C.-L. Terng and K. Uhlenbeck, (eds.), International Press, Cambridge, Mass. (1999), 21 – 80.
51. *The moduli space of complex Lagrangian submanifolds*, Asian Journal of Mathematics, **3** (1999) 77 – 92.
52. (with G.B.Segal and R.S.Ward) “Integrable systems: Twistor, loop groups and Riemann surfaces”, Oxford Graduate Texts in Mathematics, Oxford University Press , Oxford (1999).
53. *The Dirac operator*, in “Invitations to Geometry and Topology”, M.Bridson and S.Salamon (eds.), Oxford Graduate Texts in Mathematics, Oxford University Press, Oxford (2002), 208 – 232.
54. *Lectures on special Lagrangian submanifolds*, in “Winter School on Mirror Symmetry, Vector Bundles and Lagrangian Submanifolds”, Cumrun Vafa & S-T Yau (eds.), Studies in Advanced Mathematics **23**, AMS/International Press, Providence (2001), 151 – 182.
55. (with Justin Sawon) *Curvature and characteristic numbers of hyperkähler manifolds*, Duke Mathematical Journal **106** (2001), 599 – 615.
56. *L^2 -cohomology of hyperkähler quotients*. Commun. Math. Phys. **211** (2000), 153 – 165.
57. *Sir Michael Atiyah: a brief biography* in “The Founders of Index Theory”, S-T Yau (ed.), International Press, Boston (2004).
58. *Global Differential Geometry*, in “Mathematics Unlimited – 2001 and Beyond”, (B.Enquist and W.Schmid (Eds)), Springer Verlag, Heidelberg (2000) 577 – 591.

59. *The Wess-Zumino term for a harmonic map*, Journal für die reine und angewandte Mathematik **543** (2002) 83 –101.
60. *The geometry of three-forms in six dimensions*, J. Differential Geometry **55** (2000), 547 – 576.
61. *Stable forms and special metrics*, in “Global Differential Geometry: The Mathematical Legacy of Alfred Gray”, M. Fernández and J. A. Wolf (eds.), Contemporary Mathematics **288**, American Mathematical Society, Providence (2001).
62. *What is a gerbe?*, Notices of the AMS, **50** No 2 (2003), 218 – 219.
63. *A lecture on the octahedron*, Bulletin of the London Math Soc, **35** (2003) 577–600.
64. *Generalized Calabi-Yau manifolds*, Quart. J. Math. Oxford, **54** (2003) 281–308.
65. *Special holonomy and beyond*, in “Strings and Geometry”, M. Douglas, J. Gauntlett & M. Gross (eds.), Clay Mathematics Proceedings Vol 3, American Mathematical Society, Providence (2005)
66. (with S. Cherkis), *Gravitational instantons of type D_k* , Commun. Math. Phys. **260** (2005) 299 – 317.
67. *Instantons, Poisson structures and generalized Kähler geometry*, Commun. Math. Phys. **265** (2006), 131–164.
68. *Shiing-Shen Chern 1911–2004*, Bull. London Math. Soc. **38** (2006), 507–519.
69. *Arthur Geoffrey Walker: 1909–2001* Biographical Memoirs of the Royal Society, **52** (2006) 413–421.
70. *La Geometria a Oxford 1960–1990*, in “La Matematica” Vol. 1 I luoghi e i tempi, Giulio Einaudi editore, Torino (2007) 711– 734.
71. *Brackets, forms and invariant functionals*, Asian J. Math **10** (2006) 541–560.
72. *Low-dimensional geometry – a variational approach*, in “Perspectives in Riemannian geometry”, CRM Proc. Lecture Notes **40** 183–207, Amer. Math. Soc., Providence, RI, (2006).
73. *Generalized Geometry – an introduction*, in “Handbook of pseudo-Riemannian Geometry and Supersymmetry”, V Cortes (ed.) IRMA Lectures in Mathematics and Theoretical Physics **16** 185–208, European Mathematical Society (2010).
74. *Bihermitian metrics on Del Pezzo surfaces*, Journal of Symplectic Geometry **5** (2007) 1–7.
75. *Langlands duality and G_2 spectral curves*, Quart. J. Math. Oxford. **58** (2007) 319–344.

76. *Interaction between mathematics and physics*, ARBOR Ciencia, Pensamiento y Cultura, CLXXXIII **725** (2007).
77. *Higgs bundles in the vector representation*, in “Moduli spaces and vector bundles”, S.Bradlow, L. Brambila-Paz, O.Garcia-Prada and S.Ramanan (eds.), London Mathematical Society Lecture Notes **359** 473–483, Cambridge University Press, Cambridge (2009).
78. *Quaternionic Kähler moduli spaces*, in “Riemannian Topology and Geometric Structures on Manifolds”, K. Galicki and S.R. Simanca (eds.), Progress in Mathematics **271** 49–61, Birkhäuser (2008).
79. *Spherical harmonics and the icosahedron*, in “Groups and symmetries”, 215–231, CRM Proc. Lecture Notes **47** Amer. Math. Soc., Providence, RI, (2009).
80. *Einstein metrics and magnetic monopoles*, in “Géométrie différentielle, physique mathématique, mathématiques et société (I)”, (O. Hijazi, ed.) Astérisque **321** 5–29 Société Mathématiques de France (2008).
81. *The Atiyah-Singer index theorem* in “The Abel Prize 2003-2007: The first five years” (H. Holden and R. Piene eds.), 105–133 Springer Verlag, Heidelberg (2009).
82. *Vector bundles and the icosahedron*, in “Vector bundles and complex geometry” O.Garcia-Prada et al (eds.) Contemporary Mathematics **522** 71–88, American Mathematical Society, Providence RI, (2010).
83. *Poisson modules and generalized geometry*, in “Geometry and Analysis Vol 1” Lizhen Ji (ed.), 403–406, Advanced Lectures in Mathematics **17**, Higher Education Press Beijing (2010).
84. *Stable bundles and polyvector fields*, in “Complex and Differential Geometry”, W. Ebeling et al (eds.) Springer Proceedings in Mathematics **8**, 135–156, Springer Verlag, Heidelberg (2011).
85. (with M F Atiyah and R Dijkgraaf) *Geometry and Physics*, Philos. Trans. R. Soc. Lond. Ser. A Math. Phys. Eng. Sci. **368** (2010) 913–926.
86. *Lectures on generalized geometry*, in “Surveys in Differential Geometry Vol. 16”, N.-C. Leung and S.-T. Yau, (eds.), International Press, Cambridge, Mass. (2011), 79 – 124.
87. *Generalized holomorphic bundles and the B-field action*, Journal of Geometry and Physics **61** (2011), 352–362.
88. *Deformations of holomorphic Poisson manifolds*, Moscow Mathematical Journal **12** (2012), 567–591.

89. *On the hyperkähler/quaternion Kähler correspondence*, Communications in Mathematical Physics **324** (2013), No. 1, 77–106.