

University of Groningen

Symmetries in string theory

Boonstra, Harm Jan Hugo

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version

Publisher's PDF, also known as Version of record

Publication date:

1996

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Boonstra, H. J. H. (1996). *Symmetries in string theory*. s.n.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

References

1. E. Abdalla, M.C.B. Abdalla, D. Dalmazi and A. Zadra, *2D-Gravity in Non-Critical Strings*, Lecture Notes in Physics m20, Springer (1994)
2. L. Álvarez-Gaumé, *Helv. Phys. Acta* 64 (1991) 359
3. E. Álvarez, L. Álvarez-Gaumé and Y. Lozano, *Phys. Lett.* B336 (1994) 183
4. E. Álvarez, L. Álvarez-Gaumé and Y. Lozano, CERN-TH-7486/94, FTUAM-94/26, hep-th/9410237
5. L. Álvarez-Gaumé and M.A. Vázquez-Mozo, *Topics in String Theory and Quantum Gravity*, Les Houches 1992 lecture notes, hep-th/9212006
6. U. Amaldi, W. de Boer and H. Fürstenau, *Phys. Lett.* B260 (1991) 447
7. A. Astashkevich and A. Belopolsky, *String center of mass operator and its effect on BRST cohomology*, MIT-CTP-2471, hep-th/9511111; A. Belopolsky and B. Zwiebach, *Who changes the string coupling?*, MIT-CTP-2450, hep-th/9511077
8. J. Avan and A. Jevicki, *Phys. Lett.* B266 (1991) 35, B272 (1991) 17
9. F.A. Bais, P. Bouwknegt, M. Surridge and K. Schoutens, *Nucl. Phys.* B304 (1988) 348, 371
10. F.A. Bais, T. Tjin and P. van Driel, *Nucl. Phys.* B357 (1991) 632
11. I. Bakas, *Phys. Lett.* B228 (1989) 57; A. Bilal, *Phys. Lett.* B227 (1989) 406
12. I. Bakas and E. Kiritsis, *Int. J. Mod. Phys.* 7 Suppl. 1A (1992) 55
13. F. Bastianelli and N. Ohta, *Phys. Lett.* B348 (1995) 411
14. F. Bastianelli, N. Ohta and J.L. Petersen, *Phys. Rev. Lett.* 73 (1994) 1199
15. C. Becchi, A. Rouet and R. Stora, *Phys. Lett.* B52 (1974) 344; I.V. Tyutin, Lebedev preprint FIAN No. 39 (1975), unpublished
16. A.A. Belavin, A.M. Polyakov and A.B. Zamolodchikov, *Nucl. Phys.* B241 (1984) 333
17. S. Bellucci, S.O. Krivonos and A.S. Sorin, *Phys. Lett.* B366 (1996) 104
18. E.A. Bergshoeff, J. de Boer, M. de Roo and T. Tjin, *Nucl. Phys.* B420 (1994) 379
19. E.A. Bergshoeff, H.J. Boonstra and T. Ortín, *S duality and dyonic p-brane solutions in type II string theory*, UG-7/95, QMW-PH-95-23, hep-th/9508091, to appear in *Phys. Rev. D*
20. E.A. Bergshoeff, H.J. Boonstra, S. Panda and M. de Roo, *Nucl. Phys.* B411 (1994) 717
21. E.A. Bergshoeff, H.J. Boonstra, S. Panda, M. de Roo and A. Sevrin, *Phys. Lett.* B308 (1993) 34
22. E.A. Bergshoeff, H.J. Boonstra and M. de Roo, *Phys. Lett.* B292 (1992) 307
23. E.A. Bergshoeff, H.J. Boonstra and M. de Roo, *Phys. Lett.* B346 (1995) 269
24. E.A. Bergshoeff, C.M. Hull and T. Ortín, *Nucl. Phys.* B451 (1995) 547
25. E.A. Bergshoeff, M. de Roo, B. de Wit and P. van Nieuwenhuizen, *Nucl. Phys.* B195 (1982) 97
26. E.A. Bergshoeff, A. Sevrin and X. Shen, *Phys. Lett.* B296 (1992) 95
27. N. Berkovits, M. Freeman and P. West, *Phys. Lett.* B325 (1994) 63
28. N. Berkovits and N. Ohta, *Phys. Lett.* B334 (1994) 72
29. N. Berkovits and C. Vafa, *Mod. Phys. Lett.* A9 (1994) 653
30. M. Bershadsky, W. Lerche, D. Nemeschansky and N.P. Warner, *Phys. Lett.* B292 (1992) 35

31. M. Bershadsky, W. Lerche, D. Nemeschansky and N.P. Warner, Nucl. Phys. B401 (1993) 304
32. A. Bilal, *Introduction to W-algebras*, in *String theory and quantum gravity '91*, proceedings of the 1991 Trieste Spring School
33. A. Bilal and J.-L. Gervais, Nucl. Phys. B326 (1989) 222
34. P. Binétruy, Phys. Lett. B315 (1993) 80
35. R. Blumenhagen, M. Flohr, A. Kliem, W. Nahm, A. Recknagel and R. Varnhagen, Nucl. Phys. B361 (1991) 255
36. J. de Boer, PhD thesis, Rijksuniversiteit Utrecht (1993)
37. J. de Boer and J. Goeree, Nucl. Phys. B405 (1993) 669; A. Deckmyn, R. Siebelink, W. Troost and A. Sevrin, Phys. Rev. D51 (1995) 6970
38. J. de Boer and T. Tjin, Comm. Math. Phys. 160 (1994) 317
39. H.J. Boonstra, *BRST analysis of W-symmetries*, in the proceedings of the 1993 Trieste Summer School in High Energy Physics and Cosmology
40. H.J. Boonstra, Class. Quantum Grav. 11 (1994) 1941
41. H.J. Boonstra, *Strong/weak coupling duality and dyonic solutions in string theory*, in the proceedings of the workshop on 'Gauge theories, applied supersymmetry and quantum gravity', Leuven 1995, eds. B. de Wit et al., Leuven University Press (1996)
42. H.J. Boonstra and M. de Roo, Phys. Lett. B353 (1995) 57
43. P. Bouwknegt, A. Ceresole, P. van Nieuwenhuizen and J. McCarthy, Phys. Rev. D40 (1989) 415
44. P. Bouwknegt, J. McCarthy and K. Pilch, *Some aspects of free field resolutions in 2D CFT with application to the quantum Drinfel'd-Sokolov reduction*, in the proceedings of 'Strings and Symmetries 1991', eds. N. Berkovits et al., World Scientific (1991), hep-th/9110007
45. P. Bouwknegt, J. McCarthy and K. Pilch, J. Geom. Phys. 11 (1993) 225
46. P. Bouwknegt, J. McCarthy and K. Pilch, Lett. Math. Phys. 29 (1993) 193; *On the \mathcal{W} -gravity spectrum and its G -structure*, in the proceedings of the workshop 'Quantum Field Theory and String Theory', Cargèse 1993, eds. L. Baulieu et al.
47. P. Bouwknegt, J. McCarthy and K. Pilch, *The \mathcal{W}_3 algebra: modules, semi-infinite cohomology and BV-algebras*, USC-95/18, ADP-95-46/M38, hep-th/9509119
48. P. Bouwknegt, J. McCarthy and K. Pilch, *BV-structure of the cohomology of nilpotent subalgebras and the geometry of (\mathcal{W} -) strings*, USC-95/32, ADP-95-59/M41, hep-th/9512032
49. P. Bouwknegt and K. Schoutens, Phys. Rep. 223 (1993) 183
50. P. Bouwknegt and K. Schoutens (eds.), *\mathcal{W} -symmetry*, Adv. Series in Math. Phys. 22 (1995), World Scientific
51. L. Brink, P. Di Vecchia and P. Howe, Phys. Lett. B65 (1976) 471
52. R.C. Brower, Phys. Rev. D6 (1972) 1655
53. T.H. Buscher, Phys. Lett. B194 (1987) 51, Phys. Lett. B201 (1988) 466
54. C.G. Callan, D. Friedan, E.J. Martinec and M.J. Perry, Nucl. Phys. B262 (1985) 593
55. C.G. Callan, J.A. Harvey and A. Strominger, Nucl. Phys. B359 (1991) 611
56. P. Candelas, G.T. Horowitz, A. Strominger and E. Witten, Nucl. Phys. B258 (1985) 46

57. J.L. Cardy, in *Fields, Strings and Critical Phenomena*, Les Houches 1988 proceedings, eds. E. Brézin and J. Zinn-Justin
58. A.H. Chamseddine, Nucl. Phys. B185 (1981) 403
59. A.H. Chamseddine, Phys. Rev. D24 (1981) 3065
60. G.F. Chapline and N.S. Manton, Phys. Lett. B120 (1983) 105
61. P. Christe and M. Henkel, *Introduction to Conformal Invariance and Its Applications to Critical Phenomena*, Lecture Notes in Physics m16, Springer (1993)
62. E. Cremmer in *Supergravity '81*, Cambridge University Press (1982)
63. A. Dabholkar, Phys. Lett. B357 (1995) 307; C.M. Hull, Phys. Lett. B357 (1995) 545; P. Hořava and E. Witten, *Heterotic and type I string dynamics from eleven dimensions*, IASSNS-HEP-95-86, PUP-T-1571, hep-th/9510209
64. A. Dabholkar, G.W. Gibbons, J.A. Harvey and F. Ruiz Ruiz, Nucl. Phys. B340 (1990) 33
65. S. Das, A. Dhar and S.K. Rama, Int. J. Mod. Phys. A7 (1992) 2295
66. F. David, Mod. Phys. Lett. A3 (1988) 1651; J. Distler and H. Kawai, Nucl. Phys. B321 (1989) 509
67. F. De Jonghe, J. Paris and W. Troost, *The BPHZ renormalised BV master equation and two-loop anomalies in chiral gravities*, KUL-TF-96/4, NIKHEF-96-009, hep-th/9603012
68. E. Del Giudice, P. Di Vecchia and S. Fubini, Ann. Phys. 70 (1972) 378
69. E. D'Hoker and D.H. Phong, Rev. Mod. Phys. 60 (1988) 917
70. R. Dijkgraaf, E. Verlinde and H. Verlinde, Nucl. Phys. B348 (1991) 435; M. Fukuma, H. Kawai and R. Nakayama, Int. J. Mod. Phys. A6 (1991) 1385; J. Goeree, Nucl. Phys. B358 (1991) 737
71. M. Dine, P. Huet and N. Seiberg, Nucl. Phys. B322 (1989) 301
72. M.J. Duff, Nucl. Phys. B442 (1995) 47
73. M.J. Duff and J.X. Lu, Phys. Rev. Lett. 66 (1991) 1402
74. M.J. Duff and J.X. Lu, Nucl. Phys. B354 (1991) 129,141
75. M.J. Duff and J.X. Lu, Class. Quant. Grav. 9 (1992) 1; J.A. Dixon, M.J. Duff and J.C. Plefka, Phys. Rev. Lett. 69 (1992) 3009
76. M.J. Duff, R.R. Khuri and J.X. Lu, Phys. Rep. 259 (1995) 213
77. J. Ellis, *Supersymmetry and grand unification*, CERN-TH/95-316, hep-ph/9512335
78. V.A. Fateev and S.L. Lukyanov, Sov. Phys. JETP 67 (1988) 447, Int. J. Mod. Phys. A3 (1988) 507
79. V.A. Fateev and A.B. Zamolodchikov, Nucl. Phys. B280 [FS18] (1987) 644
80. B.L. Feigin and D.B. Fuks, Funct. Anal. Appl. 16 (1982) 114
81. J.M. Figueroa-O'Farrill, Phys. Lett. B321 (1994) 344
82. J.M. Figueroa-O'Farrill, Phys. Lett. 326B (1994) 40
83. J.M. Figueroa-O'Farrill, C.M. Hull, L. Palacios and E. Ramos, Mod. Phys. Lett. A10 (1995) 515
84. E.S. Fradkin and A.A. Tseytlin, Phys. Lett. B158 (1985) 316, Nucl. Phys. B261 (1985) 1
85. M. Freeman and D.I. Olive, Phys. Lett. 175B (1986) 151
86. M. Freeman and P. West, Int. J. Mod. Phys. A8 (1993) 4261
87. M. Freeman and P. West, Phys. Lett. B324 (1994) 322; P. West, Phys. Lett. B329 (1994) 199

88. I.B. Frenkel, H. Garland and G.J. Zuckerman, Proc. Natl. Acad. Sci. USA 83 (1986) 8442
89. E. Frenkel, V.G. Kac and M. Wakimoto, Comm. Math. Phys. 147 (1992) 295
90. D. Friedan, E.J. Martinec and S. Shenker, Nucl. Phys. B271 (1986) 93
91. D. Friedan, Z. Qiu and S. Shenker, Phys. Rev. Lett. 52 (1984) 1575
92. K. Fujikawa, Phys. Rev. D25 (1982) 2584
93. M.K. Gaillard and B. Zumino, Nucl. Phys. B193 (1981) 221
94. G.I. Ghandour, Phys. Rev. D35 (1987) 1289
95. M. Evans and I. Giannakis, *T-duality in arbitrary string backgrounds*, RU95-04, CTP-TAMU-28/95, hep-th/9511061
96. P. Ginsparg, in *Fields, Strings and Critical Phenomena*, Les Houches 1988 proceedings, eds. E. Brézin and J. Zinn-Justin
97. P. Ginsparg and G. Moore, *Lectures on 2D Gravity and 2D String Theory*, lectures given at the 1992 TASI summer school, YCTP-P23-92, LA-UR-92-3479, hep-th/9304011
98. A. Giveon, M. Porrati and E. Rabinovici, Phys. Rep. 244 (1994) 77
99. A. Giveon, E. Rabinovici and G. Veneziano, Nucl. Phys. B322 (1989) 167
100. P. Goddard, J. Goldstone, C. Rebbi and C.B. Thorn, Nucl. Phys. B56 (1973) 109
101. P. Goddard, J. Nuyts and D. Olive, Nucl. Phys. B125 (1977) 1
102. P. Goddard and C.B. Thorn, Phys. Lett. 40B (1972) 235
103. M.B. Green and J.H. Schwarz, Phys. Lett. B149 (1984) 17
104. M.B. Green, J.H. Schwarz and E. Witten, *Superstring theory*, two volumes, Cambridge University Press (1987)
105. D. Gross and V. Periwal, Phys. Rev. Lett. 60 (1988) 2105
106. M. Günaydin, G. Sierra and P.K. Townsend, Nucl. Phys. B242 (1984) 244
107. J.A. Harvey and A. Strominger, Nucl. Phys. B449 (1995) 535, Nucl. Phys. B458 (1996) 456
108. B. Hatfield, *Quantum Field Theory of Point Particles and Strings*, Addison-Wesley (1992)
109. M. Henneaux, Phys. Lett. 177B (1986) 35
110. M. Henneaux, Phys. Rep. 129 (1985) 1
111. M. Henneaux and C. Teitelboim, *Quantization of gauge systems*, Princeton University Press (1992)
112. K. Hornfeck, Nucl. Phys. B407 (1993) 237
113. K. Hornfeck, Phys. Lett. 315B (1993) 287
114. C.M. Hull, Phys. Lett. 240B (1990) 110, Phys. Lett. 259B (1991) 68
115. C.M. Hull, *Classical and quantum \mathcal{W} -gravity*, in *Strings and symmetries 1991*, eds. N. Berkovits et al., World Scientific (1992), *Lectures on \mathcal{W} -gravity, \mathcal{W} -geometry and \mathcal{W} -strings*, in the proceedings of the 1992 Trieste Summer School in High Energy Physics and Cosmology
116. C.M. Hull, Nucl. Phys. B413 (1994) 413
117. C.M. Hull and L. Palacios, Mod. Phys. Lett. A7 (1992) 2619
118. C.M. Hull and P.K. Townsend, Nucl. Phys. B438 (1995) 109
119. S. Hwang, Phys. Rev. D28 (1983) 2614
120. C.J. Isham, *Structural issues in quantum gravity*, IMPERIAL/TP/95-96/07, gr-qc/9510063

121. H. Ishikawa and M. Kato, *Mod. Phys. Lett.* A9 (1994) 725
122. J.M. Izquierdo, N.D. Lambert, G. Papadopoulos and P.K. Townsend, *Nucl. Phys.* B460 (1996) 560
123. V.G. Kac, in *Lecture Notes in Physics Vol. 94*, Springer (1979)
124. V.S. Kaplunovsky, *Phys. Rev. Lett.* 55 (1985) 1036
125. M. Kato, *Physical spectra in string theories*, UT-Komaba/95-12, hep-th/9512201
126. M. Kato and K. Ogawa, *Nucl. Phys.* B212 (1983) 443
127. H.G. Kausch and G.M.T. Watts, *Nucl. Phys.* B354 (1991) 740
128. I.R. Klebanov and A.M. Polyakov, *Mod. Phys. Lett.* A6 (1991) 3273
129. V.G. Knizhnik, A.M. Polyakov and A.B. Zamolodchikov, *Mod. Phys. Lett.* A3 (1988) 819
130. S.O. Krivonos and A.S. Sorin, *Phys. Lett.* B335 (1994) 45, *More on the linearization of W-algebras*, JINR E2-95-151, hep-th/9503118, *Conformal linearization versus nonlinearity of W-algebras*, JINR E2-95-427 hep-th/9510072
131. H. Kunitomo, *Phys. Lett.* B343 (1995) 144
132. H. Kunitomo, M. Sakaguchi and A. Tokura, *Int. J. Mod. Phys.* A10 (1995) 827, *Prog. Theor. Phys.* 92 (1994) 1019
133. B.H. Lian and G.J. Zuckerman, *Phys. Lett.* B254 (1991) 417, *Comm. Math. Phys.* 145 (1992) 561
134. B.H. Lian and G.J. Zuckerman, *Phys. Lett.* B266 (1991) 21
135. H. Lu, C.N. Pope, S. Schrans and X.J. Wang, *Nucl. Phys.* B408 (1993) 3
136. H. Lu, C.N. Pope, S. Schrans and K.W. Xu, *Nucl. Phys.* B385 (1992) 99
137. H. Lu, C.N. Pope, K.S. Stelle and K.W. Xu, *Phys. Lett.* B351 (1995) 179
138. H. Lu, C.N. Pope, K. Thielemans and X.J. Wang, *Class. Quantum Grav.* 11 (1994) 119
139. H. Lu, C.N. Pope, X.J. Wang, *Int. J. Mod. Phys.* A9 (1994) 1527
140. H. Lu, C.N. Pope, X.J. Wang and K.W. Xu, *Class. Quantum Grav.* 11 (1994) 967
141. H. Lu, C.N. Pope, X.J. Wang and S.C. Zhao, *Class. Quantum Grav.* 11 (1994) 939
142. H. Lu, C.N. Pope, X.J. Wang and S.C. Zhao, *Phys. Lett.* B327 (1994) 241
143. H. Lu, C.N. Pope and K.W. Xu, *Mod. Phys. Lett.* A10 (1995) 1857
144. S.L. Lukyanov, *Funct. Anal. Appl.* 22 (1988) 1
145. D. Lüüst and S. Theisen, *Lectures on String Theory*, *Lecture Notes in Physics* 346, Springer (1989)
146. I.N. McArthur, *Phys. Lett.* B342 (1995) 94, *Nucl. Phys.* B452 (1995) 456
147. J. Maharana and J.H. Schwarz, *Nucl. Phys.* B390 (1993) 3
148. R. Mohayaee, C.N. Pope, K.S. Stelle and K.-W. Xu, *Nucl. Phys.* B433 (1995) 712; R. Mohayaee and L. Wenham, *Higher-loop anomalies in chiral gravities*, Imperial/TP/94-95/33, hep-th/9505099, to appear in *Nucl. Phys.* B
149. N. Mohammadi, *Mod. Phys. Lett.* A32 (1991) 2977
150. C. Montonen and D. Olive, *Phys. Lett.* B72 (1977) 117
151. K.S. Narain, *Phys. Lett.* B169 (1986) 41; K.S. Narain, H. Sarmadi and E. Witten, *Nucl. Phys.* B279 (1987) 369
152. R.I. Nepomechie, *Phys. Rev.* D31 (1985) 1921; C. Teitelboim, *Phys. Lett.* B167 (1986) 63,69
153. L. Palacios, *Phys. Lett.* B350 (1995) 33

154. P. Pasti, D. Sorokin and M. Tonin, Phys. Lett. B352 (1995) 59, *Duality symmetric actions with manifest space-time symmetries*, DFPD 95/TH/37, hep-th/9506109, *Space-time symmetries in duality symmetric models*, hep-th/9509052
155. J. Polchinski, *What is string theory?*, Les Houches 1994 lecture notes, hep-th/9411028
156. J. Polchinski, *Dirichlet-branes and Ramond-Ramond charges*, NSF-ITP-95-122, hep-th/9510017
157. J. Polchinski, *Recent results in string duality*, NSF-ITP-95-157, hep-th/9511157
158. J. Polchinski, S. Chaudhuri and C.V. Johnson, *Notes on D-branes*, NSF-ITP-96-003, hep-th/9602052
159. A.M. Polyakov, Phys. Lett. 103B (1981) 207,211
160. C.N. Pope, *Lectures on W algebras and W gravity*, in the proceedings of the 1991 Trieste Summer School in High-Energy Physics, World Scientific (1992)
161. C.N. Pope, *A review of W strings*, in the proceedings of the International Symposium on blackholes, wormholes, membranes and superstrings, HARC, The Woodlands, Texas (1992), *W-strings 93*, CTP TAMU-55/93, hep-th/9309125
162. C.N. Pope, L.J. Romans, E. Sezgin and K.S. Stelle, Phys. Lett. B274 (1992) 298
163. C.N. Pope, L.J. Romans and X. Shen, Phys. Lett. 236B (1990) 173, Nucl. Phys. B339 (1990) 191
164. C.N. Pope, L.J. Romans and K.S. Stelle, Phys. Lett. 268B (1991) 167, Phys. Lett 269B (1991) 287
165. C.N. Pope, E. Sezgin, K.S. Stelle and X.J. Wang, Phys. Lett. B299 (1993) 247
166. S.K. Rama, Mod. Phys. Lett. A6 (1991) 3531
167. P. Ramond, *Field Theory*, Addison-Wesley (1990)
168. L.J. Romans, Nucl. Phys. B352 (1991) 829
169. N. Sakai, Y. Saitoh and N. Yugami, Progr. Theor. Phys. 83 (1990) 621
170. J. Scherk and J.H. Schwarz, Nucl. Phys. B81 (1974) 118
171. J. Scherk and J.H. Schwarz, Nucl. Phys. B153 (1979) 61
172. K. Schoutens, A. Sevrin and P. van Nieuwenhuizen, Comm. Math. Phys. 124 (1989) 87
173. K. Schoutens, A. Sevrin and P. van Nieuwenhuizen, Phys. Lett. 243B (1990) 245, Nucl. Phys. B349 (1991) 791, Int. J. Mod. Phys. A6 (1991) 2891
174. J.H. Schwarz, Int. J. Mod. Phys. A4 (1989) 2653
175. J.H. Schwarz, Phys. Lett. B360 (1995) 13, (E) B364 (1995) 252
176. J.H. Schwarz and A. Sen, Nucl. Phys. B411 (1994) 35
177. N. Seiberg, Nucl. Phys. B435 (1995) 129
178. N. Seiberg and E. Witten, Nucl. Phys. B426 (1994) 19, Nucl. Phys. B431 (1994) 484
179. A. Sen, Phys. Lett. B271 (1991) 295, Phys. Lett. B274 (1992) 34
180. A. Sen, Int. J. Mod. Phys A9 (1994) 3707
181. A. Sen, Nucl. Phys. B450 (1995) 103
182. A. Strominger, Nucl. Phys. B343 (1990) 167
183. H. Suelmann, PhD thesis, Rijksuniversiteit Groningen (1994)
184. Y. Tani, Phys. Lett. 145B (1984) 197
185. K. Thielemans, Int. J. Mod. Phys. C2 (1991) 787
186. K. Thielemans, PhD thesis, Katholieke Universiteit Leuven (1994)

187. J. Thierry-Mieg, Phys. Lett. 197B (1987) 368
188. C.B. Thorn, Nucl. Phys. B248 (1984) 551
189. P.K. Townsend, *P-brane democracy*, hep-th/9507048
190. S. Vandoren and A. Van Proeyen, Nucl. Phys. B411 (1994) 257
191. P. West, Int. J. Mod. Phys. A8 (1993) 2875
192. P. West, *A review of W strings*, Göteborg-ITP-93-40, hep-th/9309095
193. K.G. Wilson, Phys. Rev. 179 (1969) 1499
194. E. Witten, Nucl. Phys. B373 (1992) 187; E. Witten and B. Zwiebach, Nucl. Phys. B377 (1992) 55
195. E. Witten, Nucl. Phys. B443 (1995) 85
196. S. Wolfram, *Mathematica* (2nd ed.), Addison-Wesley (1991)
197. T. Yoneya, Nuovo Cim. Lett. 8 (1973) 951
198. A.B. Zamolodchikov, Theor. Math. Phys. 65 (1985) 1205
199. C.-J. Zhu, Phys. Lett. B316 (1993) 264
200. C.-J. Zhu, Nucl. Phys. B418 (1994) 379