

J. D. GIBBON: PUBLICATION LIST (April 2026)

1 Papers

141. *John Trevor Stuart*, 2026 Biogr. Mems Fell. R. Soc. 20250022 (with D. Crowdy, D. Papegeorgiou & X. Wu), <https://doi.org/10.1098/rsbm.2025.0022>
140. *Is it true that no mathematical relation exists between the Navier-Stokes equations and the multifractal model?* (with Dario Vincenzi), J. Fluid Mech. (2026), **1034**, A2, doi:10.1017/jfm.2026.11445.
139. *The global attractor of the Toner-Tu-Swift-Hohenberg equations of active turbulence and its properties* (with Daniel Boutros, K. V. Kiran & Rahul Pandit), in submission to Pure & Applied Functional Analysis, arXiv:2601.18233v1 [physics.flu-dyn] (Jan 26th 2026).
138. *Estimates for the 2D Navier–Stokes equations: the effects of forcing* (with Ritwik Mukherjee & Dario Vincenzi), arXiv:7087976 [physics.flu-dyn] 17 Dec 2025.
137. On the removal of the barotropic condition in helicity studies of the compressible Euler and ideal compressible magnetohydrodynamic equation (with Daniel Boutros), J. Fluid Mech., **1008**, R3, 2025. doi:10.1017/jfm.2025.161
136. Dynamics of vorticity moments in shell models of turbulence: a comparison with the Navier–Stokes equations (with Dario Vincenzi), Proc. R. Soc. A **481** 20240622, 2025. <https://doi.org/10.1098/rspa.2024.0622>
135. Phase transitions in the three-dimensional fractional Navier-Stokes equations (with Daniel Boutros), Nonlinearity, **37** 045010, 2024.
134. Identifying the multifractal set on which energy dissipates in a turbulent Navier-Stokes fluid, Physica D, **445** 133654, 2023.
133. An analytical and computational study of the incompressible Toner-Tu Equations (with Kolluru Venkata Kiran, Nadia Bihari Padhan & Rahul Pandit), Physica D, **444**, 133594, 2023.
132. How to extract a spectrum from hydrodynamic equations (with Dario Vincenzi), J. Nonlin. Sci. **32**:87, 2022. <https://doi.org/10.1007/s00332-022-09830-9>
131. A correspondence between the multifractal model of turbulence and the Navier-Stokes equations (with Berengere Dubrulle), Phil. Trans. R. Soc. A **380** 20210092, 2022. doi.org/10.1098/rsta.2021.0092
130. How close are shell models to the 3D Navier-Stokes equations? (with Dario Vincenzi), Nonlinearity **34** 5821–5843, 2021. doi.org/10.1088/1361-6544/abe096
129. Variable density model for the Rayleigh–Taylor instability and its transformation to the diffusive, inhomogeneous, incompressible Navier–Stokes equations, Phys. Rev. Fluids, **6** L082601, 2021.
128. Intermittency, cascades and thin sets in three-dimensional Navier-Stokes turbulence, EPL, **131**, 64001, 2020. (doi.org/10.1209/0295-5075/131/64001)
127. Weak & strong solutions of the 3D Navier-Stokes equations & their relation to a chessboard of convergent inverse length scales, J. Nonlin. Sci., **29**(1), 215–228, 2019. <https://doi.org/10.1007/s00332-018-9484-8>

126. Regularity diagnostics applied to a turbulent boundary layer, December 2018, H. Jane Bae. Jane Bae, John D. Gibbon, R M Kerr and Adrian Lozano-Duran; Stanford CTR Summer Program 2018.
125. The Pharmacopoeia Mathematica, *The Mathematical Intelligencer*, **40**(4), 62–64, 2018. Published on-line 21st August 2018, <https://doi.org/10.1007/s00283-018-9806-6>
124. The role of BKM-type theorems in Euler, Navier-Stokes and Cahn-Hilliard-Navier-Stokes analysis (with Anupam Guptab, Nairita Pal and Rahul Pandit) *Physica D* 376–377, 60–68, 2018.
123. Martin David Kruskal – a memoir, *Biographical Memoirs of Fellows of the Royal Society*, **64**, 2018. Published on-line 30 August 2017. DOI: 10.1098/rsbm.2017.0022
122. Integrability of the hyperbolic reduced Maxwell-Bloch equations for strongly correlated Bose-Einstein condensates (with Alexis Arnaudon); *Phys. Rev. A* **36**, 013610, (2017).
121. Lyapunov dimension of elastic turbulence (with E. L. C. Vi. M. Plan, A. Gupta & D. Vincenzi), *JFM Rapids*, **822**, R4, doi:10.1017/jfm.2017.267 (2017). arXiv: 1701.02366v1 [physics.flu-dyn] 6 Jan 2017.
120. Bounds on solutions of the rotating, stratified, incompressible, non-hydrostatic, three-dimensional Boussinesq equations (with D. D. Holm); *Nonlinearity* **30**, R1–R24, (2017). arXiv:1611.01976v1 [nlin.CD] (7th Nov 2016)
119. Regularity criterion for solutions of the three-dimensional Cahn-Hilliard-Navier-Stokes equations and associated computations (with Nairita Pal, Anupam Gupta and Rahul Pandit); *Phys. Rev. E* **94**, 063103 (2016).
118. Depletion of Nonlinearity in Magnetohydrodynamic Turbulence: Insights from Analysis and Simulations. (with A. Gupta, G. Krstulovic, R. Pandit, H. Politano, Y. Ponty, A. Pouquet, G. Sahoo, and J. Stawarz), *Phys. Rev. E*, **93**, 043104 (2016).
117. Nonlinear effects in buoyancy-driven variable density turbulence (with P. Rao and C. P. Caulfield); *J. Fluid Mech.* **810**, 362–377, 2017.
116. High-low frequency slaving and regularity issues in the 3D Navier-Stokes equations, *IMA J. Appl. Math.* **81**(2), 308–320 (2016).
115. Modal dependency and nonlinear depletion in the 3D Navier-Stokes equations; *Recent Progress in the Theory of the Euler and Navier-Stokes equations*, (eds. James C. Robinson, José L. Rodrigo, Witold Sadowski and Alejandro Vidal-López), London Mathematical Society Lecture Note Series, **430**, 57–76, Cambridge University Press, 2016.
114. Regimes of nonlinear depletion and regularity in the 3D Navier-Stokes equations, (with D. Donzis, R. M. Kerr, A. Gupta, R. Pandit & D. Vincenzi), *Nonlinearity*, **27**, 1-19, 2014, (ArXiv:1402.1080v3).
113. Vorticity moments in four numerical simulations of the 3D Navier-Stokes equations (with D. Donzis, R. M. Kerr, A. Gupta, R. Pandit & D. Vincenzi) 2013: *J. Fluid Mech.*, **732**, pp. 316–331, (2013).
112. The three-dimensional Euler equations with a passive scalar: a road to blow-up (with E. S. Titi): *J. Non. Sci.*, **23** (issue 6), 993–1000, (2013).
111. Enstrophy bounds and the range of space-time scales in the hydrostatic primitive equations (with D. D. Holm), *Phys. Rev. E* **87**, 031001(R) (2013).

110. Stretching and folding processes in the 3D Navier-Stokes and Euler equations (with D. Holm): *Procedia IUTAM*, **9**, 25–31, (2013). (Proceedings of IUTAM Symposium on the understanding of common aspects of extreme events in fluids, Dublin, 2012).
109. Dynamics of scaled vorticity norms for the three-dimensional Navier-Stokes and Euler equations, *Procedia IUTAM*, **7**, 39–48, (2013). Proceedings of IUTAM Symposium Topological Fluid Dynamics II, Cambridge (2012).
108. Quasi-conservation laws for compressible 3D Navier-Stokes flow (with D. D. Holm); *Phys. Rev. E* **86**, 047301 (2012).
107. Conditional regularity of solutions of the three dimensional Navier-Stokes equations & implications for intermittency: *J. Math. Phys.*, **53**, 115608, (2012).
106. Sharp constants in the Sobolev embedding theorem & a derivation of the Brezis-Gallouet interpolation inequality (M. V. Bartuccelli & J. D. Gibbon): *J. Math. Phys.*, **52**, 093706 (2011).
105. A hierarchy of length scales for solutions of the three-dimensional Navier-Stokes equations; *Comm Math. Sci.*, **10**, No. 1, pp. 131–136, 2011.
104. Stretching & folding diagnostics in solutions of the three-dimensional Euler & Navier-Stokes equations, (with D. D. Holm): *Mathematical Aspects of Fluid Mechanics*, pgs 201–220, edited by J. C. Robinson, J. L. Rodrigo & W. Sadowski, Cambridge University Press 2012.
103. The gradient of potential vorticity, quaternions and an orthonormal frame for fluid particles (with D. D. Holm), *Geophysical and Astrophysical Fluid Dynamics*; ISSN 0309-1929 print/ISSN 1029-0419 online, 2010 Taylor & Francis.
102. The dynamics of the gradient of potential vorticity (with D. D. Holm), *J. Phys. A: Math. Theor.* **43** (2010) 172001.
101. Extreme events in solutions of hydrostatic and non-hydrostatic climate models, (with D. D. Holm): *Phil. Trans. R. Soc. A* 28 March 2011, **369**, no. 1939, 1156-1179 (arXiv:0902.0066v3 [nlin.CD])
100. Regularity and singularity in solutions of the three-dimensional Navier-Stokes equations, *Proc. Royal Soc A*, **466**, 2587-2604, 2010. published online 17 March 2010, doi: 10.1098/rspa.2009.0642 (arXiv:0905.0344v3 [nlin.CD])
99. Kähler geometry and Burgers vortices (with I. Roulstone, B. Banos & V. N. Roubtsov), *Proc. Ukrainian Natl. Acad. Math.* **16**, no. 2, (2009) 303–321.
98. A geometric interpretation of coherent structures in Navier-Stokes flows (with I. Roulstone, B. Banos & V. N. Roubtsov): *Proc. R. Soc. A*, **465**, (2009) 2015-2021.
97. Estimating intermittency in three-dimensional Navier-Stokes turbulence; *Journal of Fluid Mechanics*, **625** (2009), 125-133.
96. The three-dimensional Euler equations: singular or non-singular? (with M. Bustamante and R. M. Kerr), A contribution to *Nonlinearity's* 'Open Problems' series; *Nonlinearity* **21**, (2008) T123–T129.
95. Estimates for the LANS- α , Leray- α & Bardina models in terms of a Navier-Stokes Reynolds number (with D. D. Holm); *Indiana University Math. Journal*, **57**, No. 6 (2008), 2761–2773.

94. Quaternions and ideal flows (with H. Eshraghi), *J. Phys. A: Math. Theor.* **41**, (2008) 344004.
93. The three-dimensional Euler equations: Where do we stand? Survey Lecture at the meeting *Euler equations 250 years on*, – Proceedings of an international conference Aussois, France, 18-23 June 2007 : edited by Gregory Eyink, Uriel Frisch, René Moreau and Andre Sobolevski, *Physica D* **237**, (2008) 1894–1904.
92. Ortho-normal quaternion frames, Lagrangian evolution equations and the three-dimensional Euler equations, *Russian Math. Surveys* **62:3** 1–26, (*Uspekhi Mat. Nauk* **62:3** 47–72, 2007. DOI 10.1070/RM2007v062n03ABEH004411
91. Lagrangian analysis of alignment dynamics for isentropic compressible magnetohydrodynamics (with D. D. Holm), *New Journal of Physics* **9**, 292–306, (2007).
90. Lagrangian particle paths & ortho-normal quaternion frames (with D. D. Holm), *Nonlinearity* **20**, 1745-1759, 2007.
89. Estimates for the two-dimensional Navier-Stokes equations in terms of the Reynolds number (with G. A. Pavliotis) *J. Math. Phys.* **48**, 065202, 2007.
88. Length-scale estimates for the LANS- α equations in terms of the Reynolds number, (with D. D. Holm), *Physica D*, **220**, 69–78, 2006; doi:10.1016/j.physd.2006.06.012
87. Quaternions and particle dynamics in the Euler fluid equations, J. D. Gibbon, D. D. Holm, R. M. Kerr and I. Roulstone, *Nonlinearity* **19**, 1969-1983, 2006.
86. Exponentially growing solutions in homogeneous Rayleigh-Bénard convection, (with E. Calzavarini, C. R. Doering, D. Lohse, A. Tanabe, and F. Toschi), *Phys. Rev. E* **73**, 035301, 2006.
85. Cluster formation in complex multi-scale systems (with E. Titi); *Proc Royal Soc.*, **461**, 3089–3097, 2005. DOI ref: dx.doi.org/10.1098/rspa.2005.1548
84. Intermittency & regularity issues in three-dimensional Navier-Stokes turbulence (with C. R. Doering). *Arch. Rat. Mech. Anal.*, **177**, 115–150, 2005.
83. A Bound on Mixing Efficiency for the Advection–Diffusion Equation (with J-L. Thiffeault & C. R. Doering); *Journal of Fluid Mechanics*, **521**, 105-114, 2004.
82. Exact, infinite energy, blow-up solutions of the three-dimensional Euler equations (with D. R. Moore & J. T. Stuart), *Nonlinearity*, **16**, 1823-1831, 2003.
81. Intermittency is solutions of the three-dimensional Navier-Stokes equations (with C. R. Doering), *J. Fluid Mech.*, **478**, 227-235, 2003.
80. A quaternionic structure in the three-dimensional Euler and ideal MHD equations, *Physica D*, **166**, 17-28, 2002.
79. Bounds on moments of the energy spectrum for weak solutions of the 3D Navier-Stokes equations (with C. R. Doering), *Physica D*, **165**, 163-175, 2002.
78. Singularity formation in a class of stretched solutions of the equations for ideal MHD (with K. Ohkitani), *Nonlinearity*, **14**, 1239-1264, 2001.
77. Numerical study of singularity formation in a class of Euler and Navier-Stokes flows (with K. Ohkitani), *Physics of Fluids*, **12**, 3181-3194, 2000.

76. Scale separation and regularity of the Navier-Stokes equations (with C. R. Doering) in *Intermittency in Turbulent Flows and other Dynamical Systems* ed. J. C. Vassilicos, Cambridge University Press, Isaac Newton Institute Series, 2000.
75. "Stretching & compression of vorticity in the 3D Euler equations" (with B. Galanti & R. Kerr), in *Turbulence structure and vortex dynamics*, pp 23-34, eds J. C. R. Hunt and J. C. Vassilicos, Cambridge University Press 2000.
74. Vorticity alignment results for the 3D Euler and Navier-Stokes equations, *Trends in Mathematics*, (Birkhauser) pp 25-32, 1999.
73. Dynamically stretched vortices as solutions of the 3D Navier-Stokes equations (with A. S. Fokas and C. R. Doering), *Physica D*, **132**, 497-510, 1999.
72. Extending Lundgren's transformation to construct stretched vortex solutions of the 3D Navier-Stokes and Euler equations, Proceedings of the NCAR June 16th-19th 1998 conference, published in *Developments in Geophysical Turbulence*, Kluwer.
71. A logarithmic 3d Euler inequality (with M. Heritage & J. Gibbons); *Phys. Fluids*, **9**(2), 471-472, 1997.
70. Angular dependence and growth of vorticity in the 3D Euler equations (with M. Heritage), *Phys. Fluids, A*, **9**, 901-909, 1997.
69. Vorticity alignment results for the 3D Euler and Navier-Stokes equations (with B. Galanti and M. Heritage), *Nonlinearity*, **10**, 1675-1695, 1997.
68. Attractor dimension and small length scale estimates for the 3d Navier-Stokes equations (with E. S. Titi); *Nonlinearity*, **10**, 109-119, 1997.
67. Dimensions of attractors and small length scales in solutions of the two- and three-dimensional Navier-Stokes equations, in *Advances in Fluid Mechanics "Nonlinear Instability Analysis"* pgs 1-42, Computational Mechanics Publications, (ed. L. Debnath & S. R. Choudhury 1997).
66. Length scales in solutions of the complex Ginzburg Landau equation (with M. V. Bartuccelli and M. Oliver); *Physica* **89D**, 267-286, 1996.
65. A voyage around the Navier-Stokes equations: *Physica* **92D**, 133-139, 1996
64. "Analysis of the 2d and 3d Navier-Stokes equations": in *Nonlinear Mathematics and its applications* edited by P. J. Aston, Cambridge University Press, pp. 121-146, 1996 (Lectures given at the EPSRC Nonlinear Mathematics Spring School, Surrey, 1995).
63. A conjecture regarding local behaviour of vorticity in the 3d incompressible Navier-Stokes equations: *Physics Letters* **A203**, 181-188, 1995.
62. Estimates of the the shape and dimension of the Lorenz attractor: *Dynamics and Stability of Systems*, **10**, 255-268, 1995, (with C. R. Doering).
61. Length scales and ladder theorems for 2d and 3d convection: *Nonlinearity*, **8**, 81-92, 1995.
60. Weak and strong solutions of the CGL equation: *Physica* **71D**, 285-318, 1994 (with C. D. Levermore and C. R. Doering).
59. Derivation of 3d Navier-Stokes length scales from a result of Foias, Guillope and Temam; *Nonlinearity* **7**, 245-252, 1994.

58. Length scales in solutions of the Navier-Stokes equations: *Nonlinearity* **6**, 549-568, 1993 (with M. Bartuccelli, C. R. Doering and S. J. Malham).
57. Lattice methods and the pressure field for solutions of the $3d$ Navier-Stokes equations: *Nonlinearity*, **6**, 79-91, 1993 (with S. J. A. Malham and M. V. Bartuccelli).
56. Ladder theorems for the $2d$ and $3d$ Navier-Stokes equations on a finite periodic domain (with M. Bartuccelli and C. R. Doering), *Nonlinearity* **4**, 531-542, 1991.
55. Note on the Constantin-Foias-Temam attractor dimension estimate for two-dimensional turbulence. *Physica* **48D**, 471-480, 1991 (with C. R. Doering)
54. Coupled NLS equations for counter-propagating waves for systems with reflection symmetry (with E. Knobloch); *Phys. Lett.* **154**(7-8), 1991.
53. On the possibility of soft and hard turbulence in the complex Ginzburg Landau equation: *Physica* **44D**, 421-444, 1990 (with P. Constantin, C. R. Doering, M. Gisselalt and M. Bartuccelli).
52. Finite dimensionality in the complex Ginzburg Landau equation, (with C. R. Doering and D. D. Holm) in *Nonlinear evolution equations: integrability and spectral methods*, edited by A. Degasperis, A. P. Fordy and M. Lakshmanan, Manchester University Press, 1990 pp. 462-476.
51. "Why the NLS equation is simultaneously a success, a failure and a mediocrity in the theory of nonlinear waves": in *Nonlinear evolution equations: integrability and spectral methods*, edited by A. Degasperis, A. P. Fordy and M. Lakshmanan, Manchester University Press, 1990.
50. Finite dimensional attractor in the laser equations (with P. Constantin and C. Foias); *Nonlinearity* **2**, 241-269, 1989.
49. Low dimensional behaviour in the CGL equation: (with C. R. Doering, D. D. Holm and B. Nicolaenko), *Contemporary Mathematics* **99**, 117-141, 1989.
48. Hard turbulence in a finite dimensional dynamical system (with M. Bartuccelli, P. Constantin, C. R. Doering and M. Gisselalt), *Physics Letts* **142A**, 349-356, 1989.
47. Lax pairs, Bäcklund transformations & special solutions for ordinary differential equations (with A. C. Newell, M. Tabor & Y. B. Zheng), *Nonlinearity*, **1**, 481-490, 1988.
46. Finite dimensionality in the complex Ginzburg Landau equation, (with C. R. Doering, D. D. Holm and B. Nicolaenko), *Contemporary Mathematics*, AMS, Providence, Rhode Island **99**, 117-142, 1989 (edited by B. Nicolaenko).
45. Finite dimensionality in the laser equations in the good cavity limit (with J. N. Elgin, C. R. Doering and D.D. Holm), *Physics Letts*, **129A**, 310-5, 1988.
44. Low dimensional behaviour in the CGL equation: *Nonlinearity* **1**, 279-309, 1988 (with C.R. Doering, D. D. Holm and B. Nicolaenko).
43. Finite upper bound on the Lyapunov dimension in the CGL equation, (with C. Doering, D.D. Holm and B. Nicolaenko), *Phys. Rev. Lett.*, **59**, 2911-4, 1987.
42. Aspects of the Painlevé property for partial differential equations (with M. Tabor: *Physica D*, **18**, 180-9, 1986.
41. Theoretical and computational study of the soliton laser (with J.N. Elgin, F. If, P. Christiansen & O. Skovgaard), *Optics Comm.*, **57**, 350, 1986.

40. A numerical model of the soliton laser (with J.N. Elgin, F. If, P. Christiansen & O. Skovgaard), *Physica D*, **23**, 362, 1986.
39. "Modulational Instabilities in homogeneously broadened lasers", (with J. N. Elgin, J. Molina-Garza and D. Wood) pp.246 in *Nonlinear phenomena and chaos* (ed. S. Sarkar) Adam Hilger, 1986.
38. Spatial effects & the Eckhaus instability in the laser & Lorenz equations (with J. N. Elgin, C. Holmes, J. Molina-Garza & N. Readwin, *Physica D*, **23**, 19-26, 1986.
37. On the one- and two-dimensional Toda lattices & the Painlevé property (with M. Tabor), *J. Math Phys.*, **26**, 1956-60, 1985.
36. The Painlevé property & Hirota's method (with P. Radmore, D. Wood and M. Tabor), *Stud. Appl. Math.*, **72**, 39-63, 1985.
35. Hirota's method and the Painleve property: (with M. Tabor) page 55 "Dynamical Problems in Soliton systems" (ed. S. Takeno) Springer 1985.
34. A survey of the origins and physical importance of soliton equations; *Phil Trans Royal Soc Lond.*, 315A, 335-65, 1985. (Also published by the Royal Society as a book 1985 *New developments in the theory and applications of solitons*, edited by J. D. Gibbon, G. Wilson and Sir Michael Atiyah FRS).
33. The real and complex Lorenz equations and their relevance to physical systems, *Physica D*, **7**, 135-150, 1983 (Special issue, *Order in Chaos*).
32. Collapse in the n-dimensional NLS equation - a parallel with Sundman's theorems in the N-body problem (with F.H. Berkshire): *Studies in Appl. Math.*, **69**, 229-62, 1983.
31. Dispersive instabilities in nonlinear systems: The real and complex Lorenz equations; Article in "Chaos and Order in Nature", pages 92-101, Springer Series in Synergetics, editor H. Haken, 1982.
30. Amplitude equations at the critical points of unstable dispersive physical systems (with M.J. McGuinness); *Proc. Roy. Soc. London*, 1981, **A377**, 185-219.
29. A study of the effect of mode truncation on an exact periodic solution of an infinite set of Lorenz equations (with M. Booty and A. C. Fowler); *Phys. Letts.*, **87A**, 261-5, 1982.
28. The complex Lorenz equations (with A.C. Fowler and M.J. McGuinness); *Physica D*, (Nonlinear Phenomena), **4D**, 139, 1982.
27. The real and complex Lorenz equations in rotating fluids and lasers (with M.J. McGuinness); *Physica D*, (Nonlinear Phenomena), **5D**, 108-22, 1982.
26. The real and complex Lorenz equations; *Proceedings of the Royal Irish Academy* **83A**, 17-22, 1983 - *Proc. of the Nonlinear Wave conference held in Trinity College Dublin, May 1980.*
25. A general derivation of the Lorenz equations for some unstable dispersive physical systems (with M. J. McGuinness); *Phys. Letts.*, **77A**, 259-63, 1980.
24. Nonlinear focussing and the Kelvin Helmholtz instability (with M. J. McGuinness); *Physics Letts.*, **77A**, 118-21, 1980.
23. An example of soliton behaviour in a rotating baroclinic fluid (with I. N. James and I.M. Moroz); *Proc. Roy. Soc. London*, **A367**, 219-37, 1979.

22. The sine-Gordon equation as a model for a rapidly rotating baroclinic fluid (with I.N. James and I.M. Moroz); Physics Scripta special issue on solitons and their applications to science and technology; **20**, 402-408, 1979.
21. The prolongation structure of a class of nonlinear evolution equations (with R.K. Dodd); Proc. Roy. Soc. London, **A359**, 411-33, 1978.
20. Correspondence between classical $\lambda\phi^4$, double and single sine-Gordon equations for 3-dimensional solitons (with N.C. Freeman and R.S. Johnson); Phys. Letts., **65A**, 380-2, 1978.
19. Multiple soliton-like solutions of nonlinear Klein-Gordon equations in three dimensions (with N.C. Freeman and A. Davey); J. Phys. A, **11**, L93-96, 1978.
18. The prolongation structure of a higher order KdV equation (with R. K. Dodd); Proc. Roy. Soc. London, **A358**, 287-96, 1977.
17. Wobbling & leapfrogging in SIT (with R. K. Bullough, S. Duckworth, P. J. Caudrey, H. M. Gibbs, B. Bölger & L. Baede); Optics Comm., **18**, 200, 1976.
16. A modified regularized long-wave equation with an exact two-soliton solution (with R. K. Dodd & J. C. Eilbeck), J. Phys. A: Math. Gen. **9**, L127, 1976.
15. Unusual behaviour in the SIT of $Q(2)$ vibration-rotation transitions (with S. Duckworth, R.K. Bullough and P.J. Caudrey); Phys. Letts., **57A**, 19-22, 1976.
14. A new hierarchy of Korteweg-de Vries equations (with R.K. Dodd and P.J. Caudrey); Proc. Roy. Soc. London **A351**, 407-22, 1976.
13. A modified long wave equation with an exact 2-soliton solution (with R.K. Dodd and J.C. Eilbeck); J. Phys. A, **9**, 1976.
12. The interaction of n -dimensional soliton wavefronts (with G. Zambotti); Il Nuovo Cimento, **288**, 1-17, 1975.
11. The sine-Gordon equation as a model classical field theory (with J.C. Eilbeck and P.J. Caudrey); Il Nuovo Cimento, **258**, 497-512, 1975.
10. A general theory of Self-Induced Transparency (review paper) (with R.K. Bullough, P.J. Caudrey and J.C. Eilbeck); J. Opto-electronics, **6**, 121-140, 1974.
9. N-Soliton solutions of some non-linear dispersive wave equations of physical significance, J. D. Gibbon, P. J. Caudrey, R. K. Bullough and J C Eilbeck, Lecture Notes in Mathematics, **415**, 1974, Ordinary and Partial Differential Equations Proceedings of the Conference held at Dundee, Scotland, 26th-29th March, 1974. Editors: B. D. Sleeman & I. M. Michael, ISBN : 978-3-540-06959-1 (Print) 978-3-540-37264-6 (Online).
8. Exact multisoliton solution of the Reduced Maxwell-Bloch equations of nonlinear optics (with J. C. Eilbeck and P. J. Caudrey); J.I.M.A., **14**, 375-86, 1974.
7. An N-soliton solution of a nonlinear optics equation derived by an inverse method (with J.C. Eilbeck and P.J. Caudrey); Lett. Nuovo Cimento, **8**, 773-9, 1973.
6. Multiple soliton and bisoliton bound state solutions of the sine-Gordon equation and related equations in nonlinear optics (with P.J. Caudrey, J.C. Eilbeck and R.K. Bullough); J. Phys. A, **6**, L122, 1973.

5. Exact multi-soliton solutions of the SIT and sine-Gordon equations (with J.C. Eilbeck, P.J. Caudrey and R.K. Bullough); Phys. Rev. Letts., **30**, 237-8, 1973.
4. Exact multisoliton solutions of the inhomogeneously broadened SIT equations (with P.J. Caudrey, J.C. Eilbeck and R.K. Bullough); J. Phys. A, **6**, L53, 1973.
3. Solitons in nonlinear optics: A more accurate description of the 2π pulse in SIT (with J.C. Eilbeck, R.K. Bullough and P.J. Caudrey); J. Phys. A, **6**, 1337-47, 1973.
2. The asymptotic form of the N-soliton solution of the Korteweg-de Vries equation (with J.C. Eilbeck); J. Phys. A, **5**, L132, 1972.
1. A proposed N-soliton solution of a nonlinear optics equation (with J.C. Eilbeck); J. Phys. A., **5**, L122, 1972.

2 Books

1. *Solitons and Nonlinear Wave Equations* (with J.C. Eilbeck, R.K. Dodd and H.C. Morris), Academic Press, 1982.
1986/7 Russian Translation by Mir Publishing House of the above book.
2. *New developments in the theory and application of Solitons*, (eds Sir Michael Atiyah, J. D. Gibbon & and Dr G. Wilson), The Royal Society, 1985.
3. *Applied Analysis of the Navier-Stokes equations* Cambridge University Press 1995 in their series Cambridge Texts in Applied Mathematics.
4. *Science and the Knowledge of God*, Lampion Press, 2015. ISBN: 978-1-942614-06-7
5. *Baruch's Tale*, Stone Tower Press, Providence RI, 2020.