

Publications.

Thermodynamics/Statistical Thermodynamics.

1. "Statistical thermodynamics of the ideal relativistic quantum gas"
in Statistical Mechanics of Equilibrium and Non-equilibrium,
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(With P.T.Landsberg)
2. "Ideal relativistic Bose condensation"
Phys. Rev. **138** (1965) A1049
(with P.T.Landsberg)
3. "Carathéodory's principle and the Kelvin statement of the second law"
Nature **208** (1968) 576
4. "A consequence of the Gibbs-Duhem relation"
Il Nuovo Cimento **53B** (1968) 180
5. "Particle-number fluctuations"
Il Nuovo Cimento **57B** (1968) 315
6. "Connections between the various forms of the second law of thermodynamics"
Il Nuovo Cimento **64B** (1969) 82
7. "The second law and adiabatic unattainability"
Il Nuovo Cimento **10B** (1972) 407
8. "Pressure shifts of high-series spectral lines and cross sections for scattering of very slow electrons from rare-gas atoms"
Phys. Rev. **7A** (1973) 1549
(with M.H.Choudhury)
9. "Negative absolute temperatures and Carnot cycles"
J.Phys.A **9** (1976) 605
10. "Remarks on negative absolute temperatures and Carnot cycles"
Am. J. Phys. **46** (1978) 583
11. "A comment on the ideal relativistic Bose gas"
J. Phys. A **14** (1981) 3013
12. "The d-dimensional Landsberg gas"
J. Phys. A **14** (1981) 3005
13. "On the meaning of extensivity"
Phys. Lett. **94A** (1983) 346
14. "On the derivation of $d'Q = TdS$ "
J. Phys. A **16** (1983) 3377
15. "Extensivity and the Gibbs-Duhem equation"
Phys. Lett. **97A** (1983) 327
16. "A note on the laws of thermodynamics"
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17. "Logical relations among different definitions of extensivity"
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(with P.T.Landsberg)
18. "A note on the gamma function for the unwary"
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19. "Problems of non-extensivity in hadron thermodynamics"
J. Stat. Phys. **46** (1987) 87
(with P.T.Landsberg)
20. "Thermodynamics of non-extensive systems"
J. Phys. Chem. Solids **49** (1988) 705
21. "On the law of error for mass fluctuations in black holes"
Classical & Quantum Gravity **5** (1988) L149
(with B.H.Lavenda)
22. "The case against intermediate statistics"
J. Math. Phys. **30** (1989) 1117
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23. "On the analogy between first-order phase transitions and black body radiation"
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(with B.H.Lavenda)
24. "Classical particles and order statistics"
Phys. Lett. **140A** (1989) 90
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25. "Stefan-Boltzmann law for black bodies and black holes"
Int. J. Theor. Phys. **29** (1990) 501
(with B.H.Lavenda)
26. "Underlying probability distributions of the canonical ensemble"
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27. "Kinetic derivation of Gauss' law and its thermodynamic significance"
Z. Fur Naturforschung **45a** (1990) 873
(with B.H.Lavenda)
28. "The essence of the second law is concavity"
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31. "Concavity, superadditivity and the second law"
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32. "Comment on 'The Hawking Phenomenon'"
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33. "Comment on 'Implications of the entropy maximum principle'"
Am. J. Phys. **61** (1993) 88
34. "Bosons and fermions in two dimensions"
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35. "Geothermal energy"
Phys. Ed. **28** (1993) 343
36. "The second law, concavity and negative heat capacities"
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37. "Elementary errors about entropy"
Nature **368** (1994) 284
38. "The entropy of a column of gas under gravity"
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39. "A new thermodynamics for self-gravitating systems"
Review Bulletin Calcutta Math. Soc. **2** (1994) 1
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40. "The essence of the third law; the deliniation of two forms of thermodynamics"
Il Nuovo Cimento **110B** (1995) 265
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41. "What is entropy?"
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(with B.H.Lavenda and M.Compiani)
42. "A consideration of the possibility of negative mass"
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43. "Questions concerning relativity theory and some of its applications"
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(with G.H.A.Cole)
44. "Time travel; fact or fiction?"
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(with G.H.A.Cole)
45. "The prospects for time travel"
The Observatory, June 1997.
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46. "Undergraduate thermodynamics and black holes"
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49. "Problems with the entropy concept in modern applications of thermodynamics"
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52. "Describing states of super-dense matter"
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53. "Strings and Inflation in Modern Cosmology"
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54. "Intermediate Statistics?"
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55. "Past and present states of super-dense matter"
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(b) , in English.
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56. "Thermodynamics of antimatter via Santilli's isodualities"
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59. "Entropy, Thermodynamics and Biology"
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60. "Thermodynamics:The Second Law Revisited"
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61. "Qualms Concerning Relativity Theory"
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63. "Maxwell's electromagnetic equations revisited"
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64. Book review of "Foundations of Hadronic Chemistry with Applications to
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65. "Concavity and the Second Law of Thermodynamics"
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66. "Nuclear Power and the World's Energy Requirements"
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<http://uk.arXiv.org> physics/0406046
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67. "Universal Constants and Black Holes"
Focus on Astrophysics Research , (ed. Louis V. Ross), 2003, pp.73-83,
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68. "X-ray vision"
Letter to National Geographic, April 2003.
69. "The possible variation of the universal constant of gravitation with time"
Hadronic Journal **27** (2004) 165 - 176
(with D. Elrick)
70. "Additive entropies of degree-q and the Tsallis entropy"
<http://uk.arXiv.org> physics/0310117
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71. "Qualms regarding "Non-extensive Hamilton systems follow Boltzmann's principle not Tsallis
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<http://uk.arXiv.org> cond-mat/0311271
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73. "Qualms concerning Tsallis's condition of Pseudo-Additivity as a Definition of Non-Extensivity"
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74. "Qualms concerning Tsallis's use of the maximum entropy formalism"
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75. "Qualms regarding "Dynamical Foundations of Nonextensive Statistical Mechanics" by C. Beck
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(with B.H.Lavenda)
76. "Results concerning the centre of our galaxy"
<http://uk.arXiv.org> astro-ph/0402290

77. "E. A. Milne and the Universes of Newton and Relativistic Cosmology"
Galilean Electrodynamics **17**, special issue 3, (2006), 57
<http://uk.arXiv.org> astro-ph/0402554
78. "The Gravitational Red-Shift"
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<http://uk.arXiv.org> gr-qc/0403082;
(with R.F.Evans)
79. "Some comments on the Theory of Bose Condensation, with particular reference to the Interiors of Stars"
<http://uk.arXiv.org> physics/0405139
80. "Hadron thermodynamics, concavity and negative heat capacities"
<http://uk.arXiv.org> physics/0406041
81. "A re-examination of Maxwell's electromagnetic equations"
Progress in Physics **3** (2005) 48-50
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82. "The constancy, or otherwise, of the speed of light"
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83. "On the existence of statistics intermediate between those of Fermi-Dirac and Bose-Einstein"
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84. "Some Comments on the Universal Constants"
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Journal of Applied Sciences **5** (5), (2005) 928-937
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89. "Astronomy Education"
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90. "Is 'superstatistics' really 'super'?"
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91. "Questions Concerning Schwarzschild's Solution of Einstein's Equations"
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92. "Some comments on extreme value statistics"
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93. "Twentieth century physics; promised much, delivered...?"
in 'Proceedings of the XVIII Workshop on Hadronic Mechanics'
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94. "Black holes, other exotic stars and conventional wisdom"
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95. "Schwarzschild's Solution, Black Holes and the Universal Constants"
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96. "Planck particles and quantum gravity"
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97. "The thermodynamics associated with Santilli's hadronic mechanics"
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98. "The Canonical Ensemble and the Central Limit Theorem"
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100. "Reflections and Thoughts on Tired Light"
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101. "Comments on Possible Variation of the Universal Constants"
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(with Adam Law)
102. "Mathematics as the language of physics"
<http://arXiv.org> physics 0801.2881
103. "The overrated 'masters' of the universe"
<http://www.thunderbolts.info/thunderblogs/archives/guests08/guestarchive.htm>
104. "Some thoughts on the fluid equation of cosmology"
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105. "The Big Bang, Dark Matter and 'Conventional Wisdom'"
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(to be published by Nova Publishers, 2008)
106. "Some Comments on the Tests of General Relativity"
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(with M. Anyon)

107. “A fresh look at some comments surrounding black holes”
<http://arXiv.org> physics 0806.1176
(with M. Anyon)
108. “The world’s energy problems and the safe disposal of nuclear waste”
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109. “Some comments on the possible causes of climate change”
<http://arXiv.org> physics 0806.3418
(with L. Padgett)
110. “A review of redshift and its interpretation in cosmology and astrophysics”
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(with R. Gray)
111. “Thornhill, de Broglie and the kinetic theory of electromagnetic radiation”
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112. Review of *Gravitational Collapse and Spacetime Structure* by P. S. Joshi
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113. “Criticisms of Black Hole Theory”, www.aias.us; www.atomicprecision.com and
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1. "Analytical realisation of evc-arc networks"
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4. "The equivalence of third-order low-pass structures"
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5. "The application of capacitance minimisation to low-pass active RC structures"
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6. "Recursive formulae for the analysis of double-ladder single amplifier feedback systems"
Int. J. Electronics **39** (1975) 625
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7. "Canonically-extended evc-arc networks and their associated recursive formulae"
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8. "Notes on the solution of evc-arc network equations"
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10. "Comment on: Active realisation of a third-order bandpass Butterworth characteristic using equal-valued passive elements"
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13. "Analytical optimisation of equal-value-capacitor active RC networks"
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General.

1. 'Tonga' – prize winning essay for Royal Empire Society, United Empire, November-December, 1955, p218 & 234.
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1. "On the entropy of black holes"
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2. "On the theory of second order phase transitions"
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3. "The case against negative heat capacities"
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4. "Bose-Einstein condensation: a two phase equilibrium at different pressures"
(with B.H.Lavenda)
5. "Entropy paradoxes"
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6. "Probabilistic basis of thermodynamics"
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7. "Statistical thermodynamics without ensemble theory"
(with B.H.Lavenda)
8. "Negative temperatures revisited"
9. "Are negative heat capacities allowable?"
10. "Space, Time and All That"

Books.

1. "Mathematical methods for mathematicians, physical scientists and engineers"
(Ellis Horwood, Chichester, 1982)
2. "Concise Thermodynamics: Principles and Applications in Physical Science and Engineering"
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3. "Mathematical methods for mathematicians, physical scientists and engineers"
2nd edition, (Horwood Publishing, Chichester, 2003)
4. "Exploding a Myth"
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