



CURRICULUM VITAE OF PETER ROWLANDS

Name: Peter Rowlands
Place and Date of Birth: Warrington, UK, 30 April 1949
Nationality: UK

Education
 elementary 1954-1960
 De La Salle College, Salford 1960-1963
 Upholland College 1963-1966
 De La Salle College, Salford 1966-1967
 University of Manchester 1967-1975

Qualifications:
 BSc (HONS) in Physics: University of Manchester; 1970
 PhD (Physics); University of Manchester; 1975
 MInstP 1986
 CPhys 1986
 MBCS 2004

Present Appointment:

Research Fellow, Department of Physics, University of Liverpool (1987 to date, began lecturing 1990, ceased active teaching 2016)
 Governor / Honorary Governor, Manchester College, Oxford (1993-1994 / 1994 to date)

Previous Appointments:

Project Leader, ICI Mond Division, 1976-77
 MD, NVA Ltd, 1977-81
 Lecturer in Physics, and other positions up to HoD, De La Salle College, Manchester, 1981-97
 Lecturer in Physics, Pendleton College, Manchester 1997-99

Major lines of research:

Fundamental symmetries foundational to physics, in particular a group structure relating the fundamental parameters space, time, mass and charge.

A universal rewrite system derived from the concept zero, in collaboration with computer scientist Bernard Diaz.

A nilpotent version of relativistic quantum mechanics, with significant applications in particle physics and cosmology.

Fundamental mathematical structures relating to physics and biology, in collaboration with biologist Vanessa Hill (Royal Holloway College, University of London).

Application of rewrite concept to analysis of large-scale systems in physics, biology, theoretical computing, etc., in collaboration with Peter Marcer.

Computational realization of the universal rewrite system, with Sydney Rowlands.

Also work on history of science, including books and articles on Newton, Oliver Lodge, Fröhlich, Rotblat, etc., and work on the epistemology of science (Why does physics work?).

Books

Oliver Lodge and the Liverpool Physical Society, Liverpool University Press, 1990.

Newton and the Concept of Mass-Energy, Liverpool University Press, 1990.

The Fundamental Parameters of Physics: An Approach towards a Unified Theory, PD Publications, Liverpool, 1991.

Waves Versus Corpuscles: The Revolution That Never Was, PD Publications, Liverpool, 1992.

A Revolution Too Far: The Establishment of General Relativity, PD Publications, Liverpool, 1994.

Oliver Lodge and the Invention of Radio, PD Publications, Liverpool, 1994, editor with J.

Patrick Wilson, and author of: 'Preface' (with JPW), 'Radiowaves', 39-66, 'Radio begins in 1894', 75-114, 'Waves from the Sun', 125-136, 'The Significance of the aether', 137-144.

120 Years of Excellence, The Physics Department at The University of Liverpool 1881-2001, U-P L Communications, Liverpool, 2001.

Herbert Fröhlich: A Physicist Ahead of His Time, editor, with G. J. Hyland, University of Liverpool, 2006, second edition, 2008.

War and Peace: The Life and Work of Sir Joseph Rotblat, editor, with T. V. Attwood, and author of 'Introduction', pp 5-20 (with TVA), and 'Sir Joseph Rotblat as Teacher and Research Director', pp 75-86, University of Liverpool, 2006.

125 Years of Excellence, The Physics Department at The University of Liverpool 1881-2006, PD Publications, Liverpool, 2006.

Zero to Infinity: The Foundations of Physics, World Scientific, Singapore, 2007.

The Foundations of Physical Law, World Scientific, Singapore, 2014.

How Schrödinger's Cat Escaped the Box, World Scientific, Singapore, 2015.

Newton and Modern Physics, World Scientific, Singapore, 2017.

Newton and the Great World System, World Scientific, Singapore, 2017.

Newton – Innovation and Controversy, World Scientific, Singapore, 2017.

Proceedings

Physical Interpretations of Relativity Theory, Proceedings of International Scientific Meeting, Moscow 2005, editor, with M. C. Duffy, V. O. Gladyshev and A. N. Morozov.

Proceedings of the XVIII Workshop on Hadronic Mechanics, Karlstad, Sweden, 2005, editor, with Valeri Dvoeglazov, Tepper L. Gill, Erik Trelle, and Horst E. Wilhelm, International Academic Publishers, December 2006.

Physical Interpretations of Relativity Theory, Proceedings of XV International Scientific Meeting PIRT, Moscow, July 2009, editor, with M. C. Duffy, V. O. Gladyshev and A. N. Morozov

Search for Fundamental Theory, The VIIth International Symposium Honoring French Mathematical Physicist Jean-Pierre Vigié, AIP Conference Proceedings, 1316, 2010, editor, with R. L. Amoroso and S. Jeffers

Approximately 200 research papers since 1983

16 books, including:

Awards:

Best paper for Symposium on The Fundamental Semantic Foundations of the Sciences: Computational Rewrite Systems at VII CASYS Conference, Liège, 2005.

Best paper for Symposium on Rewrite Science – the Universal Semantic Calculus and Grammatical Cosmos at VIII CASYS Conference, Liège, 2007, with Vanessa Hill.

Best paper for Symposium on Rewrite Science – at IX CASYS Conference, Liège, 2009, with Peter Marcer.

Scientific Award of the R. M. Santilli Foundation 2018 for Unprecedented Axiomatic Advances on Dirac's Equation

Also guest or invited speaker on a number of occasions, including the opening of the Institute for Hypercomplexity, at Fryazino, near Moscow, 2009 and (with Anton Zeilinger) at the twentieth anniversary of the Helsinki Natural Philosophy Association in 2008.

website under construction at nilpotentquantummechanics.co.uk