

Name

Professor Paul Callaghan

Born

Wanganui , 1947

Nationality

New Zealander

Current Employment

- 🏠 Nuclear Physicist
- 🏠 Director MacDiarmid Institute for Advanced Materials and Nanotechnology
- 🏠 The Alan MacDiarmid Professor of Physical Sciences at Victoria University
- 🏠 Sir Neil Waters Distinguished Professor at Massey University
- 🏠 Co-founder and Board director of magritek Ltd

Education

- 🏠 BSc(Hons)(Wellington)
- 🏠 DPhil DSc(Oxford)
- 🏠 PCNZM, FRS, FRSNZ, FInstP, FNZIP

Work History

- 🏠 Teacher at Wanganui Boys College 1970
- 🏠 Appointed to Massey University as a lecturer in physics in 1974
- 🏠 Appointed Professor of Physics at Massey in 1984.
- 🏠 Appointed Alan MacDiarmid Professor of Physical Sciences at Victoria University of Wellington 2001

Key Career Highlights

- 🏠 Distinguished by his development of new Nuclear Magnetic Resonance (NMR) measurements
- 🏠 He has made numerous ingenious extensions to the Pulsed Gradient Spin Echo (PGSE) method, including
 - Dynamic NMR Microscopy and its use in plant physiology and fluid rheology
 - The scattering formalism for PGSE NMR and the discovery and application of diffraction effects arising from restricted diffusion in colloidal and porous systems,
 - Measurements of internal polymer dynamics, velocity exchange spectroscopy, PGSE ESR in a quasi-one dimensional conductor, and Earth's field Spin Echo NMR.
- 🏠 Responsible for developing Modulated Adiabatic Passage of Oriented Nuclei
- 🏠 He has published around 220 articles in scientific journals as well as a book on magnetic resonance
- 🏠 Principal Companion of the New Zealand Order of Merit (PCNZM) – 2006
- 🏠 Rutherford Medal – 2005
- 🏠 No 39 in the Listener's top 50 - 2005
- 🏠 European Union Ampere Prize – 2004
- 🏠 Wellingtonian of the Year (Science and Technology) - 2004
- 🏠 Fellow of the Royal Society of London - 2001
- 🏠 Michaelis Medal and Prize by Otago University 1994
- 🏠 Cooper Medal 1991
- 🏠 Hector Medal - 1998
- 🏠 DSc by Oxford University in 1995
- 🏠 Fellow of the Royal Society of New Zealand – 1991

Awards



People say

- “Paul's reputation as a great speaker and motivator is equal to his reputation as a scientist. His contribution has been extraordinary” – Steve Thompson
- “Paul Callaghan is an exemplar of scientific excellence - insightful and approachable, brimming with ideas, and with the nous to manage large research grants and acquire patents.” – David Bibby
- He is a superstar of magnetic resonance - Julie Middleton
- A genius worth listening to - Jo Randerson
- Paul Callaghan has a way of making even the most mundane things sound fascinating and the most complex seem obvious - Veronika Meduna
- “He is a champion of science in New Zealand and is a renowned communicator who has the uncanny ability to take complex scientific concepts and distil them into a form that can be easily understood.” - Pat Walsh

Family

Raised in Wanganui, Callaghan was the third of four children of parents who shared one year of secondary education between them. “My father was a draper,” he says. “He was very interested in the world around him, but he only had primary school education, so there was certainly no science in the family.”

Quirky facts

- Helped Fonterra develop the best mozzarella cheese for pizzas
- Spent his childhood just roaming free after school just doing stuff, mischievous stuff - making crystal sets, building boats, making explosives.