The New Zealand Association of Scientists Awards for 2015

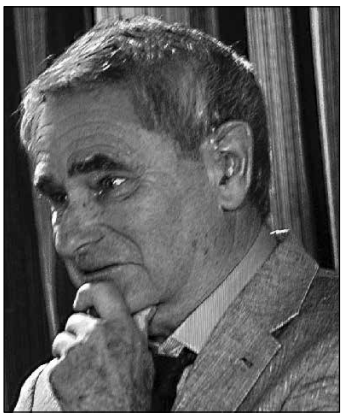
The Association awarded its annual medals to New Zealand scientists for 2015, at a function held at the Royal Society of New Zealand rooms in Wellington on 19 November 2015.

The meeting was opened by Immediate Past President of the Association, Dr Nicola Gaston. Four awards were made, and they were presented by Associate Professor Craig Stevens, President of the Association, who noted that they seek to recognise and promote both scientists and the recent past of New Zealand science. They also aim to recognise and support future science leaders. Further to this, the Communicator Medal emphasises the importance of explaining, to a range of audiences, what science is and does, now and in the future. Recipients each gave a presentation about aspects of their work that had been recognised by the award.

Marsden Medal 2015

The **Marsden Medal** is awarded for a lifetime of outstanding service to the cause or profession of science, in the widest connotation of the phrase.

This year's Marsden Medal was awarded to Dr Mike Andrews.



Dr Andrews has been a practising experimental physicist for more than 40 years, having trained academically in wave propagation, plasma physics, and vacuum techniques. This vocationally broad educational background led to over thirty years devoted to transfer of applied research to New Zealand industry, through the Department of Scientific and Industrial Research (DSIR) and then Industrial Research Limited (IRL), Lower Hutt. His major impact has been developing acoustic grading tools useful in production forestry, and producing 'Hitman', an acoustic tester now used world-wide to assess log quality and which provides New Zealand industry with benefits worth over $20 million each year via early identification of tree properties and appropriate end use. He has also demonstrated a practical concern to encourage the growth of basic scientific understanding in the wider community.

Shorland Medal 2015

The **Shorland Medal** is awarded in recognition of major and continued contribution to basic or applied research that has added significantly to scientific understanding or resulted in significant benefits to society.

This year's Shorland Medal was awarded to Dr Ian Brown.

Dr Brown is a Distinguished Scientist in the Adanced Materials Group of Callaghan Innovation. He nas had an outstandingly successful 41-year research career as a materials chemist, first in Chemistry Division of DSIR, then in IRL, and finally Callaghan Innovation. His research began in the fields of ceramics and glass manufacture. He then developed applications of significant benefit to New

Zealand, including the utilisation of waste glass and New Zealand ironsands to produce new ceramic materials, and research the chemistry of fertiliser manufacture from phosphate rock. Ian was elected Fellow of the Royal Society of New Zealand in 1999, and awarded a DSc by Victoria University in 2000. He has been Adjunct Professor at Victoria since 2006, and is the current president of the New Zealand Institute of Chemistry.

Research Medal 2015

The **Research Medal** is awarded for outstanding fundamental or applied research in the physical, natural or social sciences published during the year of the award or the preceding three calendar years. Applicants will normally be within their first 15 years after graduating PhD as at 1 January 2015, unless career breaks extend this period.

This year's Research Medal was awarded to Associate Professor Stéphane Coen.

Professor Coen works in the Physics Department at the University of Auckland, where he undertakes fundamental and applied studies of nonlinear optical phenomena in optical fibres, with the aim of developing new light sources and new all-optical devices. In particular, he is researching temporal cavity solitons – pulses of laser light that can be maintained indefinitely around a closed loop. This work has revealed fascinating physics for seemingly simple objects, and could also lead to revolutionary applications in fields ranging from telecommunications to ultra-accurate clocks. Stéphane's first observation of these solitons, 30 years after their prediction, led to a landmark publication, and subsequent research confirmed temporal cavity solitons as among the few new fundamental concepts in nonlinear optics in recent years.

Science Communicator Medal 2015

The **Science Communicator Medal** is made to a practising scientist for excellence in communicating science to the general public in any area of science or technology.

This year this award was made jointly to two scientists:

Professors Christopher Battershill and David Schiel.

Professor Battershill (left), who is Professor and Chair of Coastal Science, University of Waikato, and Professor Schiel (right), who is Professor of Marine Science, University of Canterbury, together were the main science communicators following the grounding of the MV *Rena* and oil spill off Tauranga on 5 October 2011.

As the accident unfolded into one of New Zealand's greatest marine environmental impacts, affecting habitats, kai moana, tourism, fishing, recreation and well-being, Professors Battershill and Schiel reported the effectiveness of the clean-up from an environmental perspective as well as the longer-term consequences. Over a period of 30 months, they gave over 100 talks at numerous marae, public meetings, and conferences, with over 50 interviews for the local and national media, on TV, the press and radio. They coordinated and supervised the *Rena* environmental recovery monitoring programme, Te Mauri Moana, and became the public face of *Rena* with respect to science communication.

Closing remarks at awards ceremony

'It is very pleasing to see two physicists and a chemist represented in this year's awards, illustrating the strength of the physical sciences in New Zealand', said Professor Stevens. 'It is also fantastic to see the work of Chris Battershill and David Schiel recognised in their contribution to environmental recovery after the *Rena* disaster.'