

Introduction

Internal waves and coastal currents: a special research forum in honour of Peter Holloway

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Peter Holloway (1953–2002) was an Australian physical oceanographer who was deeply respected for his scientific skills and personal qualities. His sudden death in 2002 created a sense of sadness and loss across the scientific community. At the time of his death, Peter was Head of the School of Geography and Oceanography at the Australian Defence Force Academy, and was on the Editorial Advisory Committee for this journal. I wrote an obituary for the journal that appeared in Volume 54 (Craig 2003).

Peter's research passion was internal waves. This was an interest that grew when he was a postdoctoral fellow at the University of Western Australia and saw the remarkable data that Woodside Petroleum was collecting on Australia's North West Shelf. He moved from linear analysis of the internal waves, through non-linear analysis and modelling, to fully 3-dimensional modelling of the events. In the mid-1990s, he joined the Hawaiian Ocean Mixing Experiment (HOME), working in a productive collaboration with Mark Merrifield on the internal tides generated by the Hawaiian mid-ocean ridge.

In July 2004, the Australian research community held a 2-day symposium in Peter's honour, as part of the Australian Marine Sciences Association Conference in Hobart. Twenty-eight of Peter's colleagues presented papers. The symposium was unique, at least in my experience, in that virtually every speaker acknowledged Peter and his influence in their introduction. The two keynote speakers were Gunther Krause and Mark Merrifield. Gunther (Retired Head of the Section Marine Physics, Alfred Wegener Institute for Polar and Marine Research, Bremerhaven) was Professor of Oceanography at Flinders University, and Peter's Ph.D. supervisor, in the late 1970s. Peter and he also did a *Polarstern* cruise to the Greenland Sea in 1990. Gunther's address was a wonderful reflection on his interactions with Peter, combined with his own most recent results from his Arctic cruises.

Mark is the Chair of the Physical Oceanography Division and Director of the Sea Level Center at the University of Hawaii, and was Peter's closest collaborator over the last

several of Peter's working years. Mark's address provided an overview of the HOME program and focussed on Peter's contribution to it. The two have had several joint publications appear since Peter's death.

Other speakers were Stan Stroud, from Woodside Petroleum, and Steve Buchan, from MetOcean Engineers. Both talked about their most recent measurements of internal waves. These two were pioneers of measurement on the North West Shelf, collecting the data that first aroused Peter's interests. Another pioneer, whom I remember as first identifying the internal waves in the North West Shelf data, was Ray Steedman, who chaired one of the sessions. Peter had a long collaboration on non-linear wave dynamics with Russian colleagues who were represented by Andrey Serebryany from the N.N. Andreyev Acoustics Institute in Moscow, and Yury Stepanyants, now based at the Australian Nuclear Science and Technology Organisation.

I should note that the symposium was generously supported by all of the Australian institutions with which Peter had been associated. Flinders University funded Gunther Krause's visit, the Australian Defence Force Academy supported Mark's visit and the production of bound editions of Peter's publications, and Jorg Imberger (Peter's postdoctoral host at University of Western Australia) funded Mrs Holloway's trip to Hobart. Woodside Petroleum, MetOcean Engineers and CSIRO Marine Research were also generous sponsors of accommodation, running costs and social events. In fact, there was a small residual that went to the Australian Marine Sciences Association to add to their fund for the annual Peter Holloway Student Award for Physical Oceanography, which is presented each year. The 2004 recipient was James Bird, of James Cook University.

After the symposium, presenters were invited to contribute manuscripts to a special research forum to appear in *Marine and Freshwater Research*. Not many had papers close enough to completion to meet a tight turnaround time. Although most had to regretfully decline, five sets of authors were able to meet the deadline. Appropriately, three of these papers are on

internal waves. Two are on dissipation estimates for internal waves on the west coast of Australia. One is by Katsumata (2006), who was a postdoctoral student with Peter in 2002. The other is by Antenucci and Ivey (2006), from the University of Western Australia, where there has been a recent upsurge of interest again in internal waves. It is pleasing to see a paper on non-linearities from Grimshaw *et al.* (2006), who were all active collaborators with Peter, Pelinovsky and Talipova co-authoring at least six papers with him. The final two papers are on dynamics associated with Australia's two major coastal current systems: the East Australian Current (Mata *et al.* 2006) and the Leeuwin Current (Woo *et al.* 2006).

References

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