

Dr John Middleton, Oceanography

SARDI Aquatic Sciences

Areas of expertise

Physical Oceanography, data analysis, ocean dynamics, ocean processes, numerical modelling and prediction, the physical processes of Australia's southern shelves including upwelling, dispersion and diffusion analysis, extremal analysis

Countries of work experience

Australia, Canada

Overview of experience and qualifications

Associate Professor Middleton has an outstanding record in research of ocean dynamics and coastal ocean modelling. He has developed a new theory for the circulation of large sea straits (Bass Strait). Through numerical model development and analyses of data, he has also made major advances in understanding the circulation along Australia's continental southern shelves and the upwelling system off South Australia. Highlights include advances in understanding the fundamental processes of upwelling, the identification of the Flinders Current as a small sister to the world's great western boundary currents, and the determination that El Nino signals have led to more effective upwelling off S.A.

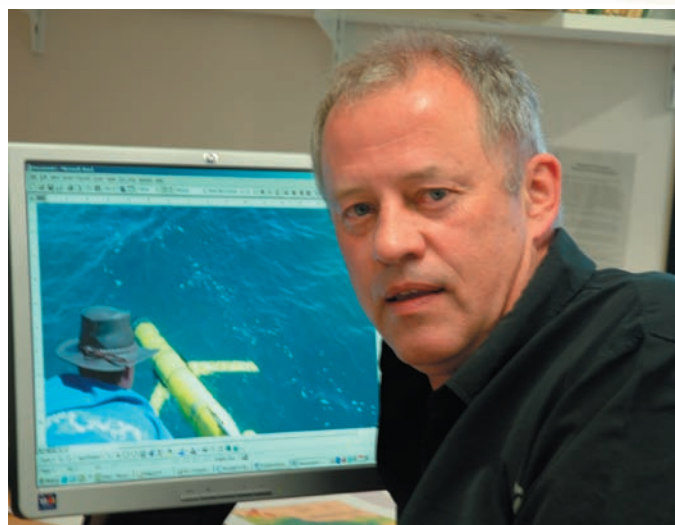
The quality of Dr Middleton's work has been recognised through the awarding of \$4,000,000 in research grants since 1987 (ARC, FRDC, NCRIS). He has taken a lead role in experimental and theoretical projects involving collaboration with colleagues from Flinders University, UNSW, ADFA, CSIRO, VIMS, Chile, Russia and Canada. He has taken a leading role in the development of the Southern Australian Integrated Marine Observing System for S.A. and its expansion to include the Bonney Coast and Victorian agencies. The system is valued at over \$6.4M. He is also the author of more than 50 papers and reports, most of which have appeared in premier oceanographic journals.

Service

- Associate Editor of Progress in Oceanography (2003--)
- Appointed (2006) to the DEST (RQF) External Expert Review Panel of the Australian Institute of Marine Science Environmental Change and Impacts research program,
- IAPSO Executive member, 2003 –
- Member, SCOR WG 129 Deep Ocean Exchange with the Shelf 2007- 2009
- Treasurer and Scientific Program Committee for "Dynamic Planet" a Joint Assembly of IAPSO, IABO and IAG (Cairns 2005).

Professional appointments (since 1991)

2008 - Leader, Physical Oceanography Program
2007 - Adjunct A/Professor Flinders University
2006 - Principal Research Scientist, SARDI.
1991 - 2005 Senior Lecturer, School of Mathematics, UNSW.



Responsibilities

Oceanography Program Leader
Mooring Facility Leader for SAIMOS
HF RADAR Facility Leader for SAIMOS

Current and Recent Research Projects

2008: Optimising the prawn harvest in Spencer Gulf (FRDC, \$300K, with Dixon, Svane)

2007: The role of submarine canyons in upwelling sediment transport, and productivity hotspots off the Bonney Coast and Kangaroo Is, S.A. (RV Southern Surveyor, ~\$860K, with McClatchie, Currie, Nayar, Payenburg)

2006: An HF Ocean RADAR system for S.A. (SA DFEEST, \$516K)

2006: The Southern Australian Integrated Marine Observing system: Mooring facility (NCRIS, \$2.84M, with Mitchell, McClatchie, Seuront, Fairweather, Kaempf)

2004: Trophodynamics of the Great Australian Bight (FRDC, \$420K, with Tim Ward)

John maintains links with Flinders University School of Biological Sciences. More information can be obtained from:

Publications & Student Projects

Contact

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