

# Ocean radar



## Research Projects

New tools for managing ecosystem responses to climate change on the Southern Great Barrier Reef, James Cook University, Ove Hoegh-Guldberg, Kenneth Anthony, Andrew Bakun, Brad Congdon, Sophie Dove, Gene Feldman, Mal Heron, Ron Johnstone, Andrew Krockenberger, Laurence McCook, Allan Strong, Paul Marshall, Diane DiMassa, Julian Michael Caley, 2007-2011

Wave climate in the Southern Great Barrier Reef, James Cook University, Mal Heron, Michael Banner, Lucy Wyatt, 2009-2012, Partner Institution(s): Helzel Messtechnik GmbH, Seaview Sensing Ltd

Cross shelf processes and nutrient enrichment in the East Australian Current regime, University of New South Wales, Amandine Schaeffer, Moninya Roughan, 2010-2015

HF radar applications on coral reefs, James Cook University, Mal Heron, Diane DiMassa, 2010-2012, Partner Institution(s): Massachusetts Maritime Academy, Funding: James Cook University, Massachusetts Maritime Academy, Bureau of Meteorology

Ocean-reef interactions as drivers of continental shelf productivity in a changing climate, University of Western Australia, University of New South Wales, Anya Waite, Moninya Roughan, Charitha Pattiaratchi, Jonne Kotta, Helen Orav-Kotta, 2010-2012, Funding: ARC

Shaping integrated monitoring for the Great Barrier Reef World Heritage Area, Paul Hedge, 2011-2015, Funding: National Environmental Research Program (NERP)

New pathways of exchange at the mouth of Spencer Gulf: double diffusion., South Australian Research and Development Institute, Griffith University, Mark Doubell, John Middleton, Charles Lemkert

Sea breeze forcing of near-inertial wave near the critical latitude for resonance, University of Western Australia, Florence Kaempf, Charitha Pattiaratchi, 2011-2012, Partner Institution(s): Bangor University, UK (John Simpson) and Hydrographic Institute of the Republic of Croatia, Split, Croatia (Hrvoje Mihanovic), Funding: Group of Eight European Fellowship

Utilising the Capricorn Bunker HF radar, James Cook University, Lucy Wyatt, 2012-2012

Diffusion on the sea surface, James Cook University, Mal Heron, 2012-2014, Funding: ARC

Topological, statistical and signal-theoretic methods for identifying Lagrangian coherent structures in the East Australian Current, University of New South Wales, Shane Keating, 2013-2013, Partner Institution(s): SIMS, Funding: University of New South Wales

Physical oceanographic influences on Queensland reef fish and scallops, Queensland Department of Agriculture, Fisheries and Forestry, Tony (Anthony) Courtney, 2013-2015, Partner Institution(s): DAFF-BOM-CARM, Funding: Fisheries Research and Development Corporation

eReefs - hydrodynamic modelling validation, BOM Queensland Regional Office, Arthur Simanjuntak, 2013-2014, Partner Institution(s): CSIRO, AIMS, Funding: Bureau of Meteorology

Australian national shelf reanalysis, Emlyn Jones, Moninya Roughan, Tim Moltmann, Andreas Schiller, Peter May, 2014-2014, Funding: Integrated Marine Observing System (IMOS)

A high resolution re-analysis for the East Australian Current, University of New South Wales, University of Hawaii, Colette Kerry, Moninya Roughan, Brain Powell, 2014-2015, Funding: US-NRL

Advancing dynamical understanding in the East Australian Current: optimising the ocean observation and prediction effort, Sydney Institute for Marine Science, Moninya Roughan, 2014-2016, Funding: ARC

Coastal radar observations of frontal eddies in the Tasman Sea, University of New South Wales, Moninya Roughan, Shane Keating, Iain Suthers, Matt Archer, 2015-2017, Funding: NSW Research Attraction and Acceleration Program

Predicting circulation patterns along the south-west Australian continental shelf, University of Western Australia, Ivica Janekovic, Charitha Pattiaratchi, Sarath Wijeratne, Yasha Hetzel, Simone Cosoli, 2015-2016, Partner Institution(s): IMOS, Funding: University of Western Australia

Accuracy of wind data from WERA radars, University of Western Australia, Charitha Pattiaratchi, Simone Cosoli

Feasibility of SeaSonde radar calibration via autonomous drones, University of Western Australia, Simone Cosoli, Jim Pettigrew

eSA-Marine: Phase I: the first step towards an operational now-cast/forecast model ocean prediction system for Southern Australia (FRDC 2016/005), John Middleton, et al., 2016-2017, Funding: Fisheries Research and Development Corporation

Feasibility of extraction of meteotsunami signals from HF Radar, University of Western Australia, Simone Cosoli, Charitha Pattiaratchi

Develop a strong current warning system and inform knowledge of the nearshore current regime influencing the Western Rock Lobster fishery, University of Western Australia, Charitha Pattiaratchi, Timothy Langlois, Simone Cosoli, Simon de Lestang, 2018-2021, Funding: Fisheries Research and Development Corporation

Develop/enhance the Marine Virtual Laboratory (MARVL) to provide the information infrastructure in support of the national ocean modelling system, University of Tasmania, Roger Proctor, 2018-2018, Partner Institution(s): BOM (Oceans), BOM (water), NCI, SARDI, TPAC, UWA, Funding: Australian National Data Service (ANDS), National eResearch Collaboration Tools and Resources (NeCTAR), Research Data Cloud (RDS)

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## Postgraduate Research Projects

Masters degree, Acoustic identification and tracking of marine megafauna, Curtin University, Chalmers University of Technology; Benjamin Trimoreau, 2010-2011, Supervisor(s): Rob McCauley, Alexander Gavrilov, Chandra Salgado Kent

Doctor of Philosophy (PhD), Circulation of surface water on the Rottneest continental shelf in Western Australia using HF Radar, University of Western Australia; Jennifer Penton, 2012-2014, Supervisor(s): Charitha Pattiaratchi

Doctor of Philosophy (PhD), Upwelling dynamics in Southern Australia - Numerical Modelling and Observations, University of Tasmania, South Australian Research and Development Institute, Commonwealth Scientific Industrial Research Organisation; Hugo Bastos de Oliveira, 2013-2017, Supervisor(s): John Middleton, Peter Oke, Richard Coleman; Partner Institution(s): CSIRO, SARDI; Funding: QMS - Quantitative Marine Sciences and CAPES (Brazilian federal foundation) - Coordination for the Improvement of Higher Education Personnel

Honours degree, Surface current measurements using HF radar, University of Western Australia; Vincent Oliveri, 2013-2013, Supervisor(s): Charitha Pattiaratchi

Doctor of Philosophy (PhD), Looking inside and outside SeaSonde data, James Cook University; Dan Atwater, 2013-2017, Supervisor(s): Lucy Wyatt, Richard Brinkman, Peter Ridd; Partner Institution(s): AIMS

Doctor of Philosophy (PhD), Surface gravity waves and circulation on the Rottneest continental shelf, Western Australia, University of Western Australia; Moritz Wandres, 2013-2017, Supervisor(s): Charitha Pattiaratchi, Sarath Wijeratne

Masters degree, 3D structure of the mesoscale eddies offshore Rottneest Island, University of Western Australia; Yijun Chen, 2016-2016, Supervisor(s): Charitha Pattiaratchi, Simone Cosoli

Masters degree, Interaction between currents and waves offshore Rottneest Island, University of Western Australia; Julian Rodino, 2016-2016, Supervisor(s): Simone Cosoli, Charitha Pattiaratchi, Andrew Middleditch

Masters degree, Accuracy of wind mapping from HF WERA radars, University of Western Australia; Joseph Walder, 2017-2017, Supervisor(s): Charitha Pattiaratchi, Simone Cosoli

Masters degree, Detection of meteotsunamis along the Western Australia coastal region from High-Frequency radar data, University of Western Australia; Martyn Craft, 2017-2017, Supervisor(s): Simone Cosoli

Masters degree, Detection of Meteotsunami along the New South Wales coastal region from High Frequency Radar Data, University of Western Australia; Steven Kunej, 2018-2019, Supervisor(s): Charitha Pattiaratchi, Simone Cosoli

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## Book

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## Book Chapters

Heron, SF, Heron, M, Pichel, WG 2012, Thermal and radar Overview, in JA Goodman, SJ Purkis, SR Phinn (eds.), Coral Reef Remote Sensing: A Guide for Mapping, Monitoring and Management, Springer

Heron, M, Pichel, WG, Heron, SF 2012, Radar Application, in JA Goodman, SJ Purkis, SR Phinn (eds.), Coral Reef Remote Sensing: A Guide for Mapping, Monitoring and Management, Springer

Roughan, M, Schaeffer, A, Suthers, I 2015, Sustained ocean observing along the coast of southeastern Australia: NSW-IMOS 2007-2015, in Y Liu, H Kerkering, R Weisberg (eds.), Coastal Ocean Observing Systems, Elsevier, pp.76-98

Wyatt, LR 2015, The IMOS Ocean Radar Facility, ACORN, in Y Liu, H Kerkering, R Weisberg (eds.), Coastal Ocean Observing Systems, Elsevier, pp.143-158

Willis, Z 2015, National Ocean Observing Systems in a Global Context, in Y Liu, H Kerkering, R Weisberg (eds.), Coastal Ocean Observing Systems, Elsevier, pp.11-25

**Book Chapters 5**

## Community White Papers / Technical Papers

Heron, M, Jaffres, JBD, Middleditch, A; 2010, Wave and wind parameters from HF ocean radar, Proceedings of the Australian Wind Waves Research Science Symposium, 19-20 May 2010, Gold Coast, Queensland, Comments: CAWCR Technical Report No. 029

Jaffres, JBD, Heron, M, Banner, MML, Middleditch, A, Steinberg, C, Durrant, TH; 2010, Evaluation of ADCP wave, WaveWatch III and HF Radar data on the GBR, Waves Research Science Symposium, 19-20 May 2010, Gold Coast, Queensland, Comments: CAWCR Technical Report No. 029

Babanin, A, Schiller, A; 2014, Marine Sovereignty, Security and Safety Theme, Comments: National Marine Science Plan Biodiversity Conservation and Ecosystem Health, Canberra, Australia

Moltmann, T, Llewellyn, L; 2014, Research Vessels, Experimental Facilities, Observing Systems and e-Research, Comments: National Marine Science Plan Biodiversity Conservation and Ecosystem Health, Canberra, Australia

Turner, I, et, al.; 2014, Australian National Coastline Observatory Facility, Comments: National Marine Science Plan Biodiversity Conservation and Ecosystem Health, Canberra, Australia

Griffin, C, et, al.; 2017, Report on first methodological improvements on retrieval algorithms and HF radar network design, Comments: JERICO-NEXT WP3, D3.3

**Community White Papers/Technical Papers 6**

## Conference Proceedings

Heron, M 2007, Tsunami monitoring by HF ocean radar: time and space scales, Proceedings of Oceans 2007 IEEE, Aberdeen, UK, May, 2007, Aberdeen

Heron, M, Prytz, A 2009, HF radar role in an integrated ocean observing system, Proceedings of Oceans 2009 MTS/IEEE, Bremen, Germany, May, 2009, Bremen

Jaffres, JBD, Heron, M, Middleditch, A, Steinberg, C 2010, Waves in the southern Great Barrier Reef, Proceedings of Oceans 2010 IEEE, Sydney, Australia, May, 2010, Sydney

Bainbridge, S, Steinberg, C, Heron, M, Furnas, M 2010, Integrating observation systems: an example from the Great Barrier Reef, Proceedings of Oceans 2010 IEEE, Sydney, Australia, May, 2010, Sydney

Mantovanelli, A, Heron, M, Prytz, A 2010, The use of HF radar surface currents for computing Lagrangian trajectories: benefits and issues, Proceedings of Oceans 2010 IEEE, Sydney, Australia, May, 2010, Sydney

Heron, M, Marrone, P 2010, Wind direction manifestation on HF ocean radar echoes, Proceedings of Oceans 2010 IEEE, Sydney, Australia, May, 2010, Sydney

Atwater, DP, Heron, M 2010, Error estimates for HF ocean radar surface currents, Proceedings of Oceans 2010 IEEE, Sydney, Australia, May, 2010, Sydney

Heron, M, Prytz, A 2011, The data archive for the phased array HF radars in the Australian Coastal Ocean Radar Network, Proceedings of Oceans 2011 OES/IEEE, Santander, Spain, June, 2011, Santander

Heron, M, Prytz, A, Steinberg, C 2011, High resolution ocean radar observations in ports and harbours, Proceedings of Coasts and Ports 2011: 20th Australasian Coastal and Ocean Engineering Conference and the 13th Australasian Port and Harbour Conference, Perth

Mantovanelli, A, Heron, M, Prytz, A, Steinberg, C, Wisdom, D 2011, Validation of radar-based Lagrangian trajectories against surface-drogued drifters in the Coral Sea, Australia, Proceedings of Oceans 2011 MTS/IEEE, Kona, USA, September, 2011, Kona

Heron, M 2012, VHF ocean radar for surface currents appraisal at ocean power sites, Proceedings of the 10th European Wave and Tidal Energy Conference, Southampton

Heron, M, Mantovanelli, A, DiMassa, D, Heron, SF 2012, Coastal ocean radars applied to coral reef science and management, Proceedings of the 12 International Coral Reef Symposium, Cairns

Mantovanelli, A, Heron, M 2012, Radar-based tracking of pollutants and larvae in the Coral Sea, Proceedings of the 12th International Coral Reef Symposium, Cairns, Presenter: Alessandra Mantovanelli

Heron, M, Savidge, D, Blanton, JO 2012, VHF radar measurements of flow in a salt marsh creek , Proceedings of Oceans 2012 MTS/IEEE, Hampton Roads, USA, October, 2012 , Hampton Roads

Wyatt, LR, Atwater, DP, Mantovanelli, A, Prytz, A, Rehder, S 2013, The Australian Coastal Ocean Radar Network: data availability and quality, Proceedings of the 14th International Radar Symposium 2013, Dresden, Presenter: Lucy Wyatt

Wyatt, LR 2013, HF Radar: applications in coastal monitoring, planning and engineering, Proceedings of Coasts and Ports 2013: 21st Australasian Coastal and Ocean Engineering Conference and the 14th Australasian Port and Harbour Conference, Sydney, Presenter: Lucy Wyatt

Wyatt, LR, Atwater, DP, Prytz, A, Rehder, S 2013, A comparison between SeaSonde and WERA HF radar current measurements, Proceedings of Oceans 2013 MTS/IEEE, Bergen, Norway, June, 2013, Bergen, Presenter: Lucy Wyatt

Penton, J, Pattiaratchi, C 2013, The effects of wind forcing on surface currents on the continental shelf surrounding Rottneest Island, Proceedings of Coasts and Ports 2013: 21st Australasian Coastal and Ocean Engineering Conference and the 14th Australasian Port and Harbour Conference, Sydney, Presenter: Jennifer Penton

Atwater, DP, Mantovanelli, A, Prytz, A, Rehder, S, Wyatt, LR 2013, Operational requirements for oceanographic ground-wave HF radars: experiences from the Australian Coastal Ocean Radar Network, Proceedings of the 2013 International Conference on Radar, Adelaide, Presenter: Dan Atwater

Wyatt, LR 2014, Wave measurements from the Australian Coastal Ocean Radar Network, Proceedings of Oceans 2014 MTS/IEEE, Taipei, Taiwan, April, 2014, Taipei, Presenter: Lucy Wyatt

Heron, M, Atwater, DP 2014, QA, QC and accuracy for HF ocean radars, Proceedings of Oceans 2014 MTS/IEEE, Taipei, Taiwan, April, 2014, Taipei, Presenter: Mal Heron

Middleditch, A, Wyatt, LR, James, C 2015, Wave measurements from the Australian Coastal Ocean Radar Network paper, Proceedings of Coasts and Ports 2015: 22nd Australasian Coastal and Ocean Engineering Conference and the 15th Australasian Port and Harbour Conference, Auckland, Presenter: Andrew Middleditch

Penton, J, Pattiaratchi, C 2015, Surface currents on the Rottneest continental shelf, Proceedings of Coasts and Ports 2015: 22nd Australasian Coastal and Ocean Engineering Conference and the 15th Australasian Port and Harbour Conference, Auckland, Presenter: Jennifer Penton

Middleditch, A, Cosoli, S 2016, The Australian Coastal Ocean Radar Network: temporal and spatial scales of HF radar wave data, Proceedings of Oceans 2016 MTS/IEEE, Shanghai, China, April, 2016, Shanghai, Presenter: Andrew Middleditch

Middleditch, A, Cosoli, S 2016, Operational data management procedures for the Australian Coastal Radar Network, Proceedings of Oceans 2016 MTS/IEEE, Monterey, USA, September, 2016, Monterey, Presenter: Simone Cosoli

Pattiaratchi, C, Cosoli, S, Mihanovic, H, Middleditch, A 2017, Sustained coastal ocean observations in south-west Australia, Proceedings of Coasts and Ports 2017, Cairns, Presenter: Charitha Pattiaratchi

**Conference Proceedings 26**

## In Press

Wyatt, LR 2018, A comparison of scatterometer and HF radar wind direction measurements, Journal of Operational Oceanography, doi:10.1080/1755876X.2018.1443625

**In Press 1**

## Journals

Bathgate, J, Heron, M, Prytz, A 2007, A method of swell wave parameter extraction from HF ocean surface radar spectra, IEEE Journal of Oceanic Engineering, vol. 31, no. 4, pp. 812-817, doi:10.1109/JOE.2006.886237

Heron, M, Prytz, A, Heron, SF, Hezel, T, Schlick, T, Greenslade, DJM, Schulz, E, Skirving, WJ 2008, Tsunami observations by coastal ocean radar, International Journal of Remote Sensing, vol. 29, no. 21, pp. 6347-6359, doi:10.1080/01431160802175371

Mao, Y, Heron, M 2008, The influence of fetch on the response of surface currents to wind studied by HF ocean surface radar, Journal of Physical Oceanography, vol. 38, pp. 1107-1121, doi:10.1175/2007JPO3709.1

Heron, SF, Steinberg, C, Heron, M, Mantovanelli, A, Jaffres, JBD, Skirving, WJ, McAllister, F, Bainbridge, S 2010, Advancing ocean monitoring near coral reefs, EOS American Geophysical Union, vol. 91, no. 41, doi:doi:10.1029/2010EO410001

- Bainbridge, S, Steinberg, C, Heron, M 2010, Integrating observations: an example from the Great Barrier Reef, lessons from the reef on why integration matters and why achieving integration is harder than it looks, *Sea Technology*, vol. 51, no. 8, pp. 33-38
- Mantovanelli, A, Heron, M, Steinberg, C, Heron, SF 2012, Relative dispersion of surface drifters in a barrier reef region, *Journal of Geophysical Research - Oceans*, vol. 117, no. C11016, doi:10.1029/2012JC008106
- Heron, M, Atwater, DP 2012, Temporal and spatial resolution of HF Ocean Radars, *Ocean Science*, vol. 48, no. 1, pp. 99-103, doi:10.1007/s12601-013-0008-z
- Penton, J, Pattiaratchi, C 2013, The effects of wind forcing on surface currents on the continental shelf surrounding Rottneest Island, *International Journal of Environmental, Earth Science and Engineering*, vol. 7, no. 1, pp. 13-18
- Fujii, S, Heron, M, Kim, K, Lai, J, Lee, S, Wu, X, Wu, X, Wyatt, LR, Yang, W 2013, An overview of developments and applications of oceanographic Radar Networks in Asia and Oceania Countries, *Ocean Science*, vol. 48, no. 1, pp. 69-97, doi:10.1007/s12601-013-0007-0
- Lee, S, Heron, M 2013, Development of oceanographic radar networks, data management and applications in Asia and Oceania countries, *Ocean Science*, vol. 48, no. 1, pp. 67-68, doi:10.1007/s12601-013-0006-1
- Wyatt, LR, Jaffres, JBD, Heron, M 2013, Spatial averaging of HF Radar data for wave measurement applications, *Journal of Atmospheric and Oceanic Technology*, vol. 30, no. 9, pp. 2216-2224, doi:10.1175/JTECH-D-12-00206.1
- Mao, Y, Luick, J 2013, Circulation in the Southern Great Barrier Reef studied through an integration of multiple remote sensing and in-situ measurements, *Journal of Geophysical Research - Oceans*, vol. 119, pp. 1621-1643, doi:10.1002/2013JC009397
- Middleton, J, James, N, James, C, Bone, Y 2014, Cross-shelf seawater exchange controls the distribution of temperature, salinity and neritic carbonate sediments in the Great Australian Bight, *Journal of Geophysical Research - Oceans*, vol. 119, no. 4, pp. 2539-2549, doi:10.1002/2013JC009420
- Schaeffer, A, Roughan, M, Wood, JE 2014, Observed bottom boundary layer transport and uplift on the continental shelf adjacent to a western boundary current, *Journal of Geophysical Research - Oceans*, vol. 119, no. 8, pp. 4922-4939, doi:10.1002/2013JC009735
- de Lestang, S 2014, The orientation and migratory dynamics of the western rock lobster, *Panulirus cygnus*, in Western Australia, *ICES Journal of Marine Science*, vol. 71, no. 5, pp. 1052-1063, doi:10.1093/icesjms/fst205
- Wyatt, LR 2014, High frequency radar applications in coastal monitoring, planning and engineering, *Australian Journal of Civil Engineering*, vol. 12, no. 1, pp. 1-15, doi:https://doi.org/10.7158/14488353.2014.11463992
- Ruiz-Montoya, L, Lowe, R 2014, Summer circulation dynamics within the Perth coastal waters of southwestern Australia, *Continental Shelf Research*, vol. 77, no. 1, pp. 81-95, doi:10.1016/j.csr.2014.01.022
- Oke, PR, Proctor, R, Rosebrock, U, Brinkman, R, Cahill, M, Coghlan, I, Divakaran, P, Freeman, J, Pattiaratchi, C, Roughan, M 2015, The Marine Virtual Laboratory: enabling efficient ocean model configuration, *Geoscientific Model Development*, vol. 8, pp. 9741-9768, doi:10.5194/gmdd-8-9741-2015
- Kerry, C, Powell, B, Roughan, M, Oke, PR 2016, Development and evaluation of a high-resolution reanalysis of the East Australian Current region using the Regional Ocean Modelling System (ROMS 3.4) and Incremental Strong-Constraint 4-Dimensional Variational data assimilation (IS4D-Var), *Geoscientific Model Development*, vol. 9, pp. 3379-3801, doi:10.5194/gmd-9-3779-2016
- Bosserel, C, Abdo, DA, Evans, SN, Markey, KL 2016, Keeping it local: dispersal limitations of coral larvae to the high latitude coral reefs of the Houtman Abrolhos islands, *PLoS One*, vol. 11, no. 1, e0147628, doi:10.1371/journal.pone.0147628
- Mihanovic, H, Pattiaratchi, C, Verspecht, F 2016, Diurnal sea breezes force near-inertial waves along Rottneest continental shelf, southwestern Australia, *Journal of Physical Oceanography*, vol. 46, pp. 3487-3508, doi:10.1175/JPO-D-16-0022.1



Oke, PR, Proctor, R, Rosebrock, U, Brinkman, R, Cahill, M, Coghlan, I, Divakaran, P, Freeman, J, Pattiaratchi, C, Roughan, M, Sandery, PA, Schaeffer, A, Wijeratne, S 2016, The Marine Virtual Laboratory (version 2.1): enabling efficient ocean model configuration, *Geoscientific Model Development*, vol. 9, no. 9, pp. 3297-3307, doi:10.5194/gmd-9-3297-2016

Archer, M, Roughan, M, Keating, S, Schaeffer, A 2017, On the Variability of the East Australian Current: Jet Structure, Meandering, and Influence on Shelf Circulation, *Journal of Geophysical Research - Oceans*, vol. 122, no. 11, pp. 8464-8481, doi:https://doi.org/10.1002/2017JC013097

Schaeffer, A, Gramouille, A, Roughan, M, Mantovanelli, A 2017, Characterizing frontal eddies along the East Australian Current from HF radar observations, *Journal of Geophysical Research - Oceans*, vol. 122, no. 5, pp. 3964-3980, doi:10.1002/2016JC012171

Mantovanelli, A, Keating, S, Wyatt, LR, Roughan, M, Schaeffer, A 2017, Lagrangian and Eulerian characterization of two counterrotating submesoscale eddies in a western boundary current, *Journal of Geophysical Research - Oceans*, vol. 122, no. 6, pp. 4902-4921, doi:10.1002/2016JC011968

Wyatt, LR, Mantovanelli, A, Heron, M, Roughan, M, Steinberg, C 2017, Assessment of Surface Currents Measured With High-Frequency Phased-Array Radars in Two Regions of Complex Circulation, *IEEE Journal of Oceanic Engineering*, vol. 43, no. 2, pp. 484-505, doi:10.1109/JOE.2017.2704165

Wandres, M, Wijeratne, S, Cosoli, S, Pattiaratchi, C 2017, The Effect of the Leeuwin Current on Offshore Surface Gravity Waves in Southwest Western Australia, *Journal of Geophysical Research - Oceans*, vol. 122, pp. 9047-9067, doi:10.1002/2017JC013006

Archer, M, Keating, S, Roughan, M, Johns, WE, Lumpkin, R, Beron-Vera, FJ 2018, The kinematic similarity of two western boundary currents revealed by sustained high-resolution observations, *Geophysical Research Letters*, vol. 45, no. 12, pp. 6176-6185, doi:10.1029/2018GL078429

**Journals 28**

## Reports

Poloczanska, ES, Hobday, A, Richardson, A 2012, Marine climate change in Australia, impacts and adaptation responses

Schaeffer, A, Roughan, M 2014, Marine Virtual Laboratory (MARVL) - high-resolution ROMS test: the East Australian Current at 30S in Solitary Island Marine Park

Coughlan, I 2014, Marine Virtual Laboratory (MARVL) SWAN Wave Model - stage 2 test cases report, Comments: WRL Research Report 257

Wijeratne, S, Pattiaratchi, C 2014, Experimental ROMS simulation using WebMARVL configuration - Perth Rottneest Shelf

Bax, N, Hedge, P 2015, Marine Biodiversity Hub, National Environmental Research Program, final report 2011-2015., Hobart

Griffin, DA 2015, OceanCurrent model validation - Applied Research Program 3

McCulloch, M, et. al. 2016, Perth Canyon ROV exploration and sampling, Comments: Schmidt Ocean Institute Cruise FK150301 Report

Middleton, SM, Griffin, DA, Luick, J, Herzfeld, M, James, C, Oke, PR 2017, Physical oceanography of the Great Australian Bight: the science that underpins. Final Report GABRP Project 1.1. Great Australian Bight Research Program, GABRP Research Report Series Number 20



## Thesis

Penton, J 2017, Effects of wind forcing on surface currents and mesoscale eddies, Doctor of Philosophy (PhD), University of Western Australia, Perth

Bastos de Oliveira, H 2018, Upwelling dynamics in Southern Australia - Numerical Modelling and Observations , Doctor of Philosophy (PhD), University of Tasmania, Hobart

**Thesis 2**

## Data Products

Bluelink (BRAN Bluelink ReAnalysis) 3p0 and 3p1, (2004 - 2009) Ocean States Estimates (or reanalysis).  
<http://www.csiro.au/Outcomes/Oceans/Understanding/BLUElink.aspx>

"Griffin" SSH, (2010 - 2029) Satellite Products. <http://oceancurrent.imos.org.au/>

**Data Products 2**

## Public Seminars

Pattiaratchi, C; Oceanic oscillations and the climate of Western Australia; Water Corporation Seminar, 15/05/2008 - 15/05/2008, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Operational oceanography: some examples from Sri Lanka and South-Western Australia; School of Environmental Systems Engineering Seminar, 27/08/2009 - 27/08/2009, University of Western Australia, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Physical oceanography of Perth coastal waters; CSIRO Marine and Atmospheric Research Seminar, 19/11/2009 - 19/11/2009, Commonwealth Scientific Industrial Research Organisation, Hobart, Presenter(s): Charitha Pattiaratchi

Wyatt, LR; ACORN in Coorow; Coorow Shire Council Meeting, 03/09/2012 - 03/09/2012, Coorow, Presenter(s): Lucy Wyatt

Wyatt, LR; ACORN Present and future; UWA Seminar, 04/09/2012 - 04/09/2012, Perth, Presenter(s): Lucy Wyatt

Pattiaratchi, C; Integration of physical, biological and chemical oceanography: a Leeuwin Current experience; Universiti Malaysia Terengganu Seminar, 09/12/2012 - 09/12/2012, Terengganu, Presenter(s): Charitha Pattiaratchi

Roughan, M, Schaeffer, A, Mantovanelli, A; The Oceanography of 30 degrees South; NMSC Public Seminar, 04/03/2013 - 04/03/2013, Coffs Harbour, Presenter(s): Moninya Roughan

Pattiaratchi, C; OzROMS: a three-dimensional continental shelf and slope model for Australia; School of Environmental Systems Engineering Seminar, 11/04/2013 - 11/04/2013, University of Western Australia, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Coastal ocean observations in the Pilbara; Oceans Institute Seminar, 08/05/2013 - 08/05/2013, University of Western Australia, Perth, Presenter(s): Charitha Pattiaratchi

Heron, M; Coastal Ocean Radars: Results and Applications; University of Victoria Public Seminar, 14/05/2013 - 14/05/2013, Victoria, Presenter(s): Mal Heron

Wyatt, LR; Applications of HF radar to marine science; TropWater Seminar, 15/05/2013 - 15/05/2013, James Cook University, Townsville, Presenter(s): Lucy Wyatt

Pattiaratchi, C; Coastal ocean observations in Western Australia; Institute of Oceanography and Fisheries Seminar, 03/10/2013 - 03/10/2013, Split, Presenter(s): Charitha Pattiaratchi

Wyatt, LR; The Australian Coastal Ocean Radar Network, ACORN; Public Seminars at Wuhan University, 14/04/2014 - 15/04/2014, Wuhan University, Wuhan, Presenter(s): Lucy Wyatt

Wyatt, LR; Wave measurement with HF radar; Public Seminars at Wuhan University, 14/04/2014 - 15/04/2014, Wuhan University, Wuhan, Presenter(s): Lucy Wyatt

Pattiaratchi, C; Sub-mesoscale processes along the Rottneest shelf; School of Civil, Environmental and Mining Engineering/Centre for Offshore Foundation Systems seminar, 08/09/2014 - 08/09/2014, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Latest oceanographic understanding relevant to coastal impacts in the south-west; 'Coastal planning and oceanographic research', WAMSI seminar series no. 2, 13/11/2014 - 13/11/2014, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Recent developments in ocean observations and modelling; UWA Energy and Minerals Institute - lunch and learn, 14/11/2014 - 14/11/2014, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Peddies and critical latitude; Australian Coastal Ocean Radar Network launch, 21/11/2014 - 21/11/2014, Perth, Presenter(s): Charitha Pattiaratchi

Heron, M; The Australian Coastal Ocean Radar Network; Dandaragan Shire Council, Perth, Presenter(s): Mal Heron

Heron, M; The Australian Coastal Ocean Radar Network; Gingin Shire Council, Perth, Presenter(s): Mal Heron

Heron, M; The Australian Coastal Ocean Radar Network; School of the Environment and Earth Sciences Seminar, James Cook University, Townsville, Presenter(s): Mal Heron

Wyatt, LR; Using radar to measure the sea surface: methods and applications; JCU Faculty of Science and Engineering Public Lecture, Townsville, Presenter(s): Lucy Wyatt

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## Conferences, Symposia or Workshops

### Conference Oral Presentation

Heron, M, Prytz, A, Cetina-Heredia, P, Mao, Y, Hoegh-Guldberg, O, Willis, B, Skirving, WJ, Heron, SF, Caley, J, Bayler, E, Coulton, M; HF ocean surface radar monitoring for coral bleaching in the Great Barrier Reef; OCEANS 2006 MTS/IEEE, 18/09/2006 - 21/09/2006, Boston

Heron, M, Prytz, A, Heron, SF, Helzel, T, Schlick, T, Greenslade, DJM, Schulz, E; Application of HF coastal ocean radar to tsunami observations; Pan Ocean Remote Sensing Conference (PARSEC) 2006, 01/11/2006 - 04/11/2006, Busan

Prytz, A, Heron, M, Searson, S; ACORN: The HF Coastal Ocean Radar Network: the facility and the archive; Australian Meteorological and Oceanographic Society (AMOS) Conference, 29/01/2008 - 01/02/2008, Geelong

Heron, M, Gill, EW, Prytz, A; A de-convolution approach to analysis of double-peaked HF Radar spectra; OCEANS 2008 MTS/IEEE - Kobe Techno-Ocean '08, 08/04/2008 - 11/04/2008, Kobe

Heron, M, Prytz, A, Searson, S; The Australian Coastal Ocean Radar Network (ACORN); IEEE Working Conference on Current Measurement Technology, 28/04/2008 - 02/05/2008, Charleston

Heron, M, Prytz, A, Page, G, Atwater, DP; The Australian Coastal Ocean Radar Network: A Facility of the Integrated Marine Observing System; 9th International Conference on Southern Hemisphere Meteorology and Oceanography (ICSHMO), 09/02/2009 - 13/02/2009, Melbourne

Heron, M; The Australian Coastal Ocean Radar Network Facility; Canadian Conference on Electrical and Computer Engineering, 03/05/2009 - 06/05/2009, St. John's, Presenter(s): Mal Heron

Heron, M, Barbin, Y; Bistatic HF Ocean Radar: Errors and Limitations; OCEANS 2009 MTS/IEEE Biloxi Conference and Exhibition, 26/10/2009 - 29/10/2009, Biloxi

Baird, ME, Roughan, M, Morris, BD, Suthers, I; An Integrated Marine Observing System for southeastern Australia: the East Australian Current and its interaction with coastal environments; Ocean Sciences Meeting, 22/02/2010 - 26/02/2010, Portland

Heron, M, Prytz, A; The data archive for the phased array HF Radars in the Australian Coastal Ocean Radar Network; OCEANS 2011 IEEE/OES, 06/06/2011 - 09/06/2011, Santander

Mantovanelli, A, Heron, M; Predicting advection and dispersion in the southern Great Barrier Reef by using Lagrangian trajectories computed from HF-radar currents; Australian Marine Science Association Conference, 03/07/2011 - 07/07/2011, Fremantle, Presenter(s): Alessandra Mantovanelli

Pattiaratchi, C; Surface current measurements off Fremantle using HF Radar; Australian Marine Science Association Conference, 03/07/2011 - 07/07/2011, Fremantle, Presenter(s): Charitha Pattiaratchi

Atwater, DP, Heron, M; A first approach to SeaSonde quality control; OCEANS 2011 MTS/IEEE, 19/09/2011 - 22/09/2011, Kona

DiMassa, D, Heron, M, Heron, SF; HF Radar: A tool for coral reef planning and management; OCEANS 2011 MTS/IEEE, 19/09/2011 - 22/09/2011, Kona

Heron, M, Prytz, A, Steinberg, C; Application of VHF high Resolution Radar to Evaluating Circulation Around a Seawater Intake Facility; OCEANS 2011 MTS/IEEE, 19/09/2011 - 22/09/2011, Kona

Jaffres, JBD, Heron, M; Wave Climate in the southern Great Barrier Reef, Australia - Evaluation of an ocean HF Radar System and WaveWatch3; OCEANS 2011 MTS/IEEE, 19/09/2011 - 22/09/2011, Kona

Mantovanelli, A, Heron, M, Prytz, A, Steinberg, C, Wisdom, D; Validation of radar-based Lagrangian trajectories against surface-drogued drifters in the Coral Sea, Australia; OCEANS 2011 MTS/IEEE, 19/09/2011 - 22/09/2011, Kona

Wyatt, LR; Use of HF radar for marine renewable applications; OCEANS 2011 MTS/IEEE, 19/09/2011 - 22/09/2011, Kona, Presenter(s): Lucy Wyatt

Heron, M; Compact Systems; HF Radar Workshop, 11/10/2011 - 13/10/2011, La Spezia, Presenter(s): Mal Heron

Heron, M; The Australian Coastal Ocean Radar Network: Lessons Learned; HF Radar Workshop, 11/10/2011 - 13/10/2011, La Spezia, Presenter(s): Mal Heron

Mihanovic, H, Pattiaratchi, C; Interaction between the Leeuwin Current and continental shelf along the Rottneest Shelf and Perth Canyon; 18th Australian Meteorological and Oceanographic Society (AMOS) Conference, 31/01/2012 - 03/02/2012, University of New South Wales, Sydney

Wyatt, LR; Measuring waves with HF radar; Progress in Radar Research 2012, 02/04/2012 - 03/04/2012, University of Adelaide, Adelaide, Presenter(s): Lucy Wyatt

Heron, M, Mantovanelli, A; Advances in Lagrangian tracking; Radio Oceanography Workshop, 17/04/2012 - 19/04/2012, Toulon

Wyatt, LR, Jaffres, JBD, Heron, M; Spatial averaging requirements to improve wave data quality and availability: report on work in progress; Radio Oceanography Workshop, 17/04/2012 - 19/04/2012, Toulon, Presenter(s): Mal Heron

Wyatt, LR; The Australian Coastal Ocean Radar Network, ACORN; Radio Oceanography Workshop, 17/04/2012 - 19/04/2012, Toulon, Presenter(s): Mal Heron

Heron, M, Prytz, A, Atwater, DP; Quality control issues in HF ocean radars; Ocean Radar Conference for Asia, 17/05/2012 - 18/05/2012, Seoul

Wyatt, LR; The Australian Coastal Ocean Radar Network, ACORN; Ocean Radar Conference for Asia, 17/05/2012 - 18/05/2012, Seoul, Presenter(s): Lucy Wyatt

Heron, M, Wyatt, LR, Atwater, DP, Prytz, A; The Australian Coastal Ocean Radar Network: Lessons learned in the establishment phase; OCEANS 2012 MTS/IEEE Xplore, 21/05/2012 - 24/05/2012, Yeosu

Wyatt, LR; Currents, waves and winds from HF radar; 3rd Australian Chinese Ocean Science and Technology Symposium, 24/06/2012 - 27/06/2012, James Cook University, Townsville, Presenter(s): Lucy Wyatt

Griffin, DA; Extreme weather events; AMSA-NZMSS (Australian Marine Sciences Association and New Zealand Marine Science Society) Conference, 01/07/2012 - 07/07/2012, Hobart, Presenter(s): David Griffin

Griffin, DA, Cahill, M; Leeuwin Current Eddies: altimetry. HF radar and SST imagery; 6th Coastal Altimetry workshop, 20/09/2012 - 21/09/2012, Riva del Garda, Presenter(s): David Griffin

Griffin, DA, Cahill, M; Oceancurrent.imos.org.au and Australia's Integrated Marine Observing System; GODAE - OceanView 20 Years of Progress in Radar Altimetry Symposium, 24/09/2012 - 29/09/2012, Venice, Presenter(s): David Griffin

Griffin, DA, Cahill, M; Assessment of CryoSat sea level anomaly using HF radar and SST imagery; Ocean Surface Topography Science Team Meeting, 27/09/2012 - 28/09/2012, Venice, Presenter(s): David Griffin

Heron, M; Turbulent mixing mapped in shallow water using HF and VHF Ocean Radar; Australian Meteorological and Oceanographic Society (AMOS) Conference, 11/02/2013 - 13/02/2013, Melbourne, Presenter(s): Mal Heron

Mantovanelli, A, Roughan, M; Lagrangian dynamics in the solitary islands Marine Park (SIMP); Australian Meteorological and Oceanographic Society (AMOS) Conference, 11/02/2013 - 13/02/2013, Melbourne, Presenter(s): Alessandra Mantovanelli

Penton, J; The effects of wind forcing on surface currents on the continental shelf surrounding Rottnest Island; Australian Meteorological and Oceanographic Society (AMOS) Conference, 11/02/2013 - 13/02/2013, Melbourne, Presenter(s): Jennifer Penton

Wyatt, LR; Australian HF radar wave measurements - current status, future prospects; 2nd Australian Wind-Wave Symposium, 04/06/2013 - 05/06/2013, Melbourne, Presenter(s): Lucy Wyatt

Roughan, M, Mantovanelli, A, MacDonald, HS; Physical variability on the continental shelf off southeastern Australia: new insights from the NSW Integrated Marine Observing System; AOGS - Asia Oceania Geosciences Society Annual Meeting, 24/06/2013 - 28/06/2013, Brisbane, Presenter(s): Moninya Roughan

Griffin, DA, Cahill, M; IMOS Ocean Current: monitoring Australia's ocean currents on a daily basis, for all to see; Australian Marine Science Association Conference, 07/07/2013 - 11/07/2013, Gold Coast, Presenter(s): David Griffin

Roughan, M, Schaeffer, A, Mantovanelli, A; Quantifying upwelling on the continental shelf of southeastern Australia; Australian Marine Science Association Conference, 07/07/2013 - 11/07/2013, Gold Coast, Presenter(s): Moninya Roughan

Pattiaratchi, C; Sub-mesoscale eddies ('peddies') on the South-West Australian continental shelf; IAHS/IAPSO/IASPEI 'Knowledge for the Future' Assembly, 22/07/2013 - 26/07/2013, Gothenburg, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; The Leeuwin Current system: a boundary current system along Western Australia; IAHS/IAPSO/IASPEI 'Knowledge for the Future' Assembly, 22/07/2013 - 26/07/2013, Gothenburg, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Peddies (petite eddies): sub-mesoscale eddies along the continental shelf off South-West Australia; 6th Warnemunde Turbulence Days Conference, 11/08/2013 - 15/08/2013, Vilm, Presenter(s): Charitha Pattiaratchi

Griffin, DA; Highlights of the IMOS observations of ocean currents; Australian Meteorological and Oceanographic Society (AMOS) Conference, 12/02/2014 - 14/02/2014, Hobart, Presenter(s): David Griffin

Wyatt, LR; HF radar short wave direction measurements in the South Australian Gulfs; Australian Meteorological and Oceanographic Society (AMOS) Conference, 12/02/2014 - 14/02/2014, Hobart, Presenter(s): Lucy Wyatt

Mantovanelli, A, Roughan, M, Keating, S, Wyatt, LR, Schaeffer, A; Has the importance of submesoscale fronts been undervalued in coastal areas bordered by the East Australian Current?; Ocean Sciences Meeting, 23/02/2014 - 28/02/2014, Honolulu, Presenter(s): Alessandra Mantovanelli

Schaeffer, A, Roughan, M, Wood, JE; Quantifying Ekman transport and bottom water uplift by a western boundary current: in-situ observations on the Australian continental shelf; Ocean Sciences Meeting, 23/02/2014 - 28/02/2014, Honolulu, Presenter(s): Amandine Schaeffer

Heron, M, Atwater, DP; Quality control in HF ocean radars; Ocean Radar Conference for Asia-Pacific, 02/04/2014 - 04/04/2014, Kaohsiung, Presenter(s): Mal Heron

Wyatt, LR, Atwater, DP, Lethaby, P, Prytz, A; Performance of the HF radars in the Australian Coastal Ocean Radar Network; Ocean Radar Conference for Asia-Pacific, 02/04/2014 - 04/04/2014, Kaohsiung, Presenter(s): Lucy Wyatt

Wyatt, LR; The Australian coastal Ocean Radar Network, ACORN (special GEO session); Ocean Radar Conference for Asia-Pacific, 02/04/2014 - 04/04/2014, Kaohsiung, Presenter(s): Lucy Wyatt

MacDonald, HS, Roughan, M, Wilkin, J, Baird, ME; Eddies in the East Australian Current; ROMS/TOMS Workshop, 26/05/2014 - 29/05/2014, Rovinj, Presenter(s): Helen MacDonald

Coughlan, I, Peirson, B, Morison, R, Banner, MML; Measured and modelled wave climates of South-Eastern Australia; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra, Presenter(s): Russel Morison

Greenwood, J, Craig, P; Modelling the vertical distribution of phytoplankton on the continental shelf; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra, Presenter(s): Jim Greenwood

James, C, Doubell, M, Luick, J, Middleton, J; SWAN model study: Effects of wind forcing temporal resolution on waves in Spencer Gulf; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra, Presenter(s): Charles James

Pattiaratchi, C; Coastal ocean observations in Western Australia: from waves to whales; Seventh world congress of scientific youth, Federation Internationale des Societes scientifiques, 06/11/2014 - 06/11/2014, Mendoza, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Dense shelf water cascades around Australia: dynamics and water column processes; International Union of Geophysics and Geology (IUGG) General Assembly, 22/06/2015 - 02/07/2015, Prague, Presenter(s): Charitha Pattiaratchi

Wijeratne, S, Pattiaratchi, C, Proctor, R; Simulation of boundary currents around Australia; International Union of Geophysics and Geology (IUGG) General Assembly, 22/06/2015 - 02/07/2015, Prague, Presenter(s): Charitha Pattiaratchi

Courtney, T, Spillman, CM; Coastal and oceanographic influences on the Queensland (Australia) east coast saucer scallop (*Amusium balloti*) fishery; Australian Marine Science Association Conference, 05/07/2015 - 09/07/2015, Geelong, Presenter(s): Tony (Anthony) Courtney

Pattiaratchi, C; Coastal upwelling along south-west Australia; Australian Meteorological & Oceanographic Society (AMOS) Conference, 15/07/2015 - 17/07/2015, Brisbane, Presenter(s): Charitha Pattiaratchi

Roughan, M, Jones, EM, Oke, PR, Moltmann, T, May, P, Schiller, A; A National Shelf Re-analysis (ANSR) project for Australia; Australian Forum for Operational Oceanography, 21/07/2015 - 23/07/2015, Fremantle, Presenter(s): Moninya Roughan

Cosoli, S; HF radar observations of ocean currents, waves and winds Australia; 4th Meeting of the Global High Frequency Radar Network, 22/09/2015 - 23/09/2015, Crete, Presenter(s): Simone Cosoli

Middleditch, A, Cosoli, S; Data Quality requirements for the phased-array HF radar systems in Australia; 3rd Ocean Radar Conference for Asia-Pacific, 10/04/2016 - 13/04/2016, Wuhan, Presenter(s): Andrew Middleditch

Cahill, M; IMOS OceanCurrent web site; Australian Society for Fish Biology (ASFB) and Oceania Chondrichthyan Society (OCS) 2016, 04/09/2016 - 07/09/2016, Hobart, Presenter(s): Madeleine Cahill

Middleton, J; Physics to fisheries: IMOS data enables; Australian Society for Fish Biology (ASFB) and Oceania Chondrichthyan Society (OCS) 2016, 04/09/2016 - 07/09/2016, Hobart, Presenter(s): John Middleton

Pattiaratchi, C; Coastal ocean observations for fisheries; Australian Society for Fish Biology (ASFB) and Oceania Chondrichthyan Society (OCS) 2016, 04/09/2016 - 07/09/2016, Hobart, Presenter(s): Charitha Pattiaratchi

Benthuisen, J; Extreme marine warming across tropical Australia during austral summer 2015-2016; Australian Marine Science Association Conference, 02/07/2017 - 06/07/2017, Darwin, Presenter(s): Jessica Benthuisen

Brinkman, R; Sustainable Development of the North's Blue Economy – the role of IMOS to date, and into the future; Australian Marine Science Association Conference, 02/07/2017 - 06/07/2017, Darwin, Presenter(s): Richard Brinkman

Roughan, M; Insight into Continental Shelf Processes Along SE Australia from 10 years of IMOS observations; Australian Marine Science Association Conference, 02/07/2017 - 06/07/2017, Darwin, Presenter(s): Moninya Roughan

Janekovic, I, Pattiaratchi, C, Hetzel, Y, Grcic, B; Nested high-resolution atmosphere and ocean-4DVar assimilative system for the west coast of Australia; AMOS ICSHMO 2018, 05/02/2018 - 09/02/2018, University of New South Wales, Sydney, Presenter(s): Ivica Janekovic

Kerry, C, Roughan, M, Powell, B; Observation impact from a regional reanalysis of the East Australian Current; AMOS ICSHMO 2018, 05/02/2018 - 09/02/2018, University of New South Wales, Sydney, Presenter(s): Colette Kerry

Pattiaratchi, C, D'Adamo, N, Feng, M, Kendrick, G, McCauley, R, Partridge, J, Antoine, D, Cosoli, S; A decade of Integrated Marine Observing (imos) in Western Australia: Legacy and vision of Gary Meyers; AMOS ICSHMO 2018, 05/02/2018 - 09/02/2018, University of New South Wales, Sydney, Presenter(s): Charitha Pattiaratchi

Roughan, M; Frontal Eddies in the East Australian Current System; AMOS ICSHMO 2018, 05/02/2018 - 09/02/2018, University of New South Wales, Sydney, Presenter(s): Moninya Roughan

Archer, M, Roughan, M, Keating, S, Lumpkin, R, Shay, LK; Intercomparison of Two Analogous Western Boundary Currents; Ocean Sciences Meeting, 11/02/2018 - 16/02/2018, Portland, Presenter(s): Matt Archer

Lara-Lopez, A, Moltmann, T, Cahill, M, Richardson, A, Evans, K, Hallegraeff, GM, Condie, SA, Pattiaratchi, C; Up the value chain - a pathway from sustained observing to policy, management and community engagement; Ocean Sciences Meeting, 11/02/2018 - 16/02/2018, Portland, Presenter(s): Ana Lara-Lopez

Suthers, I, Lowry, M, Becker, A, Taylor, M, Smith, JA; FAD or Function? The importance of towers, planktivory and connectivity for sustainable fishing on designed artificial reefs (2018); Australian Marine Sciences Association Conference, 01/07/2018 - 05/07/2018, Adelaide, Presenter(s): Iain Suthers

Heron, M; Coastal Ocean Radars: Results and Applications; IEEE Oceanic Engineering Distinguished Lecturer Series, University of Waikato, Hamilton, Presenter(s): Mal Heron

### Conference Poster

Heron, M, Roughan, M, Suthers, I, Prytz, A, Page, G, Atwater, DP; Monitoring parameters from an HF radar: Case study at Coffs Harbour, Australia; 9th International Conference on Southern Hemisphere Meteorology and Oceanography (ICSHMO), 09/02/2009 - 13/02/2009, Melbourne



Verspecht, F, Pattiaratchi, C, Mihanovic, H, Simpson, J; Sea breezes force near-inertial waves close to the critical latitude for resonance; The Physics of Estuaries and Coastal Seas (PECS) Symposium, 12/08/2012 - 16/08/2012, New York, Presenter(s): Florence Verspecht

Archer, M, Roughan, M, Keating, S, Schaeffer, A; Meandering of the East Australian Current at 30 degrees South; Australian Coastal Ocean Modelling and Observations - ACOMO, 03/10/2012 - 04/10/2012, Canberra

Mihanovic, H, Pattiaratchi, C; Interaction between the Leeuwin Current and continental shelf along the Rottneest shelf and Perth Canyon; Australian Coastal Ocean Modelling and Observations - ACOMO, 03/10/2012 - 04/10/2012, Canberra, Presenter(s): Hrvoje Mihanovic

Wyatt, LR, Rehder, S, Prytz, A, Mantovanelli, A, Jaffres, JBD, Heron, M, Atwater, DP; The Australian Coastal Ocean Network; Australian Coastal Ocean Modelling and Observations - ACOMO, 03/10/2012 - 04/10/2012, Canberra, Presenter(s): Lucy Wyatt

Wyatt, LR, Jaffres, JBD, Heron, M; Averaging requirements and other data quality issues for HF radar wave and wind direction measurement; Australian Meteorological and Oceanographic Society (AMOS) Conference, 11/02/2013 - 13/02/2013, Melbourne, Presenter(s): Lucy Wyatt

Luick, J, Mao, Y; Circulation in the Southern Great Barrier Reef studied through an integration of multiple remote sensing and in-situ measurements; Australian Meteorological and Oceanographic Society (AMOS) Conference, 12/02/2014 - 14/02/2014, Hobart, Presenter(s): John Luick

Moltmann, T, Proctor, R, Donoghue, S; The Integrated Marine Observing System: observations to support research and applications in the coastal zone; Ocean Sciences Meeting, 23/02/2014 - 28/02/2014, Honolulu, Presenter(s): Tim Moltmann

Wyatt, LR; The Australian Coastal Ocean Radar Network, ACORN (ONR Panel Session); Ocean Radar Conference for Asia-Pacific, 02/04/2014 - 04/04/2014, Kaohsiung, Presenter(s): Lucy Wyatt

Gedeon, A, Wijeratne, S, Pattiaratchi, C, Proctor, R; Current predictions for the Rottneest channel swim; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra, Presenter(s): Agi Gedeon

Kerry, C, Roughan, M, Powell, B; A high resolution re-analysis for the East Australian Current; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra

Pattiaratchi, C, Mihanovic, H; Peddies: what, where, why?; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra

Penton, J, Pattiaratchi, C, Mihanovic, H; Surface currents on the Rottneest continental shelf, Western Australia; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra

Schaeffer, A, Roughan, M; Marine Virtual Laboratory (MARVL) high-resolution ROMS test: the East Australian Current at 30 degrees South in Solitary Island Marine Park (SIMP) ; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra

Verspecht, F, Mihanovic, H, Pattiaratchi, C; Sea breeze force near-inertial waves on Rottneest Shelf, Western Australia; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra

Wijeratne, S, Pattiaratchi, C, Proctor, R; Estimates of alongshore and cross-shelf transports around Australia; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra, Presenter(s): Sarath Wijeratne

Wyatt, LR; Wave measurements from the Australian Coastal Ocean Radar Network; Australian Coastal Ocean Modelling and Observations (ACOMO), 07/10/2014 - 08/10/2014, Canberra

Cahill, M, Griffin, DA; IMOS OceanCurrent gridded sea level and ocean surface velocity; Australian Forum for Operational Oceanography, 21/07/2015 - 23/07/2015, Fremantle, Presenter(s): Madeleine Cahill



Middleton, J, Schulz, E, et, al.; eSAMarine - phase 1: the first step towards an operational now-cast/forecast ocean prediction system for Southern Australia; Australian Forum for Operational Oceanography, 21/07/2015 - 23/07/2015, Fremantle, Presenter(s): John Middleton

Roughan, M, Kerry, C, Powell, B, Oke, PR; Using multiple ocean observations to constrain a high-resolution model of the East Australian Current; Australian Forum for Operational Oceanography, 21/07/2015 - 23/07/2015, Fremantle, Presenter(s): Moninya Roughan

Ribbat, N, Roughan, M, Powell, B; Mean circulation on the continental shelf off South-East Australia 31.5-34.5: the Hawkesbury Bioregion 2012-2013; Australian Coastal and Oceans Modelling and Observations (ACOMO) Workshop, 11/10/2016 - 12/10/2016, Canberra

### **Course Presentation**

Suthers, I; Observations and implications at the two separation zones of the East Australian Current (EAC); Topics in Australian Marine Science (TAMS) Workshop, 06/03/2014 - 30/05/2014, Sydney Institute for Marine Science, Sydney, Presenter(s): Iain Suthers

### **Key Note Speaker**

Heron, M; HF ocean surface radar: successes, developments and challenges; Ocean Sciences Meeting, 20/02/2006 - 24/02/2006, Honolulu, Presenter(s): Mal Heron

### **Meeting Presentation**

Pattiaratchi, C; Physical oceanography in South-Western Australia; Australasian Abalone Association Meeting, 10/05/2007 - 10/05/2007, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; The UWA Oceans Institute and IMOS (Integrated Marine Observing System); IMarEST WA Branch Meeting, 20/04/2011 - 20/04/2011, University of Western Australia, Perth, Presenter(s): Charitha Pattiaratchi

Bondarenko, O, Pattiaratchi, C, Hanson, CE, Gavrilov, AS, Feng, M; The behavioural ecology of pygmy blue whales in the Perth Canyon; WAIMOS Annual Science Meeting, 05/11/2012 - 05/11/2012, University of Western Australia, Perth, Presenter(s): Olga Bondarenko

Pattiaratchi, C, Mihanovic, H; Peddies: what, where why?; WAIMOS Annual Science Meeting, 05/11/2012 - 05/11/2012, University of Western Australia, Perth, Presenter(s): Charitha Pattiaratchi

Penton, J, Pattiaratchi, C; The effects of wind forcing on surface currents on the continental shelf surrounding Rottnest Island; WAIMOS Annual Science Meeting, 05/11/2012 - 05/11/2012, University of Western Australia, Perth, Presenter(s): Jennifer Penton

Verspecht, F, Pattiaratchi, C, Simpson, J; Sea breezes force near-inertial waves close to the critical latitude for resonance; WAIMOS Annual Science Meeting, 05/11/2012 - 05/11/2012, University of Western Australia, Perth, Presenter(s): Florence Verspecht

Wyatt, LR; ACORN present and future; QIMOS Node Meeting, 07/12/2012 - 07/12/2012, Brisbane, Presenter(s): Lucy Wyatt

Pattiaratchi, C; Ocean observations: new ideas; Oceans Institute Retreat, 08/02/2013 - 08/02/2013, Perth, Presenter(s): Charitha Pattiaratchi

Wyatt, LR; Australia's Integrated Marine Observing System; OCEANS 2013 MTS/IEEE, 10/06/2013 - 13/06/2013, Bergen, Presenter(s): Lucy Wyatt

Wyatt, LR; Best practice in deployment and operation: capacity building; OCEANS 2013 MTS/IEEE, 10/06/2013 - 13/06/2013, Bergen, Presenter(s): Lucy Wyatt

Pattiaratchi, C; Peddies (petite eddies): sub-mesoscale eddies along the continental shelf off South-West Australia; Ocean Sciences Meeting, 23/02/2014 - 28/02/2014, Honolulu, Presenter(s): Charitha Pattiaratchi

Steinberg, C, Moltmann, T; Australia's Integrated Marine Observing System; Joint WMO-IOC Commission for Oceanography and Marine Meteorology DBCP PI-1, 04/05/2015 - 07/05/2015, Koror, Presenter(s): Craig Steinberg

Steinberg, C; Australia's Integrated Marine Observing System; GOOS Steering Committee 4, 24/05/2015 - 26/05/2015, Australian Institute of Marine Science, Townsville, Presenter(s): Craig Steinberg

Extracting wave parameters from HF radar installations around Australia; Wave buoy user group meeting, 15/06/2016 - 16/06/2016, Fremantle

Cosoli, S; RF noise and interference within the ITU bands: the ACORN experience; 5th meeting of the GEO Global HF Radar Network, 12/12/2016 - 12/12/2016, San Fransisco, Presenter(s): Simone Cosoli

Middleditch, A, Cosoli, S; Wave and wind measurements from HF radars in Australia; American Geophysical Union (AGU) Fall Meeting, 12/12/2016 - 16/12/2016, San Fransisco, Presenter(s): Simone Cosoli

Archer, M, Suthers, I; NSW coastal radar - data and developments ; NSW IMOS Community Meeting and RAAP Project Update, 08/05/2017 - 08/05/2017, Sydney Institute for Marine Science, Sydney, Presenter(s): Matt Archer

Moltmann, T; IMOS observations for coasts and extremes (Meeting Nov 2014); CAWCR, Melbourne, Presenter(s): Tim Moltmann

### **Plenary Address**

Heron, M; The Australian Coastal Ocean Radar Network (ACORN); Marine Safety Conference, 26/05/2008 - 29/05/2008, Adelaide, Presenter(s): Mal Heron

### **Symposium Presentation**

Gillibrand, P, Mongin, M, Cahill, M, Tilbrook, B, Steinberg, C; Wave- and wind-driven circulation over Heron Island Lagoon in the Southern Great Barrier Reef: A Model Study; AMSA-NZMSS (Australian Marine Sciences Association and New Zealand Marine Science Society) Conference, 01/07/2012 - 07/07/2012, Hobart

Pattiaratchi, C; The influence of the Leeuwin current on wave propagation onto the continental shelf off south-west Australia; 2nd Australian Wind-Wave Symposium, 04/06/2013 - 05/06/2013, Melbourne, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Integrated Marine Observing System infrastructure in north-west Australia; WAMSI North-West Marine Science Symposium, 21/02/2014 - 21/02/2014, Perth, Presenter(s): Charitha Pattiaratchi

### **Workshop Presentation**

Heron, M, Prytz, A; Oceans and Tides; GEOSS Users & Architecture Workshop XX: Oceans and Water, 07/04/2008 - 07/04/2008, Kobe

Heron, M, Mao, Y; Air-Sea Coupling by Stokes plus Stress; International Radiowave Oceanography Workshop 8 (ROW), 28/04/2008 - 02/05/2008, Honolulu

Heron, M; The Australian Coastal Ocean Radar Network (ACORN); International Radiowave Oceanography Workshop 8 (ROW), 28/04/2008 - 02/05/2008, Honolulu, Presenter(s): Mal Heron

Heron, M; The Australian Coastal Ocean Radar Network; International Radiowave Oceanography Workshop 9 (ROW), 19/05/2009 - 22/05/2009, Split, Presenter(s): Mal Heron

Page, G, Heron, M, Prytz, A, Mazzoldi, A, Gacic, M, Cosoli, S; High spatial resolution radar observations at the Lido; International Radiowave Oceanography Workshop 9 (ROW), 19/05/2009 - 22/05/2009, Split, Presenter(s): Mal Heron

Pattiaratchi, C; Interactions between the Leeuwin Current and the continental shelf; Institute of Marine Engineering, Science and Technology Seminar, 20/05/2009 - 20/05/2009, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; The West Australian Integrated Marine Observation System (WAIMOS); Institute of Marine Engineering, Science and Technology Seminar, 20/05/2009 - 20/05/2009, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Physical oceanography; WAMSI Node 3 Synthesis Workshop, 23/03/2010 - 23/03/2010, Commonwealth Scientific Industrial Research Organisation, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Ocean radar; WAIMOS Science & Data Uptake Workshop, 25/02/2011 - 25/02/2011, University of Western Australia, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; The role of coastal engineering and oceanography on the environment and infrastructure; Environment and Infrastructure Workshop, 12/06/2012 - 12/06/2012, University of Western Australia, Perth, Presenter(s): Charitha Pattiaratchi

Atwater, DP; SeaSonde Quality Control: A First Approach; ACORN Workshop, 14/06/2012 - 15/06/2012, James Cook University, Townsville, Presenter(s): Dan Atwater

Griffin, DA; How ACORN data is shown on the IMOS OceanCurrent website; ACORN Workshop, 14/06/2012 - 15/06/2012, James Cook University, Townsville, Presenter(s): David Griffin

Heron, M; The development and design of ACORN; ACORN Workshop, 14/06/2012 - 15/06/2012, James Cook University, Townsville, Presenter(s): Mal Heron

Jaffres, JBD; Wind climate in the southern GBR - local observations vs QuikSCAT and MesoLAPS; ACORN Workshop, 14/06/2012 - 15/06/2012, James Cook University, Townsville, Presenter(s): Jasmine Jaffres

Malthouse, P; SAIMOS progress update; ACORN Workshop, 14/06/2012 - 15/06/2012, James Cook University, Townsville, Presenter(s): Paul Malthouse

Mancini, S; The data portal; ACORN Workshop, 14/06/2012 - 15/06/2012, James Cook University, Townsville, Presenter(s): Sebastien Mancini

Mantovanelli, A, Heron, M; Radar-based tracking of pollutants/larvae in the Coral Sea; ACORN Workshop, 14/06/2012 - 15/06/2012, James Cook University, Townsville, Presenter(s): Alessandra Mantovanelli

Pattiaratchi, C; WA radar experiences; ACORN Workshop, 14/06/2012 - 15/06/2012, James Cook University, Townsville, Presenter(s): Charitha Pattiaratchi

Prytz, A; WERA processing and quality control; ACORN Workshop, 14/06/2012 - 15/06/2012, James Cook University, Townsville, Presenter(s): Arnstein Prytz

Roughan, M; 2 months of radar data at Coffs harbour; ACORN Workshop, 14/06/2012 - 15/06/2012, James Cook University, Townsville, Presenter(s): Moninya Roughan

Wyatt, LR; Introduction to oceanographic HF radar; ACORN Workshop, 14/06/2012 - 15/06/2012, James Cook University, Townsville, Presenter(s): Lucy Wyatt

Griffin, DA, Oke, PR; Ocean forecasting and hindcasting: the importance of remote sensing; 3rd Oil and Gas Earth Observation Group Workshop, 14/09/2012 - 14/09/2012, Perth, Presenter(s): David Griffin

Griffin, DA; Remote sensing: observing a big country; Australian Coastal Ocean Modelling and Observations - ACOMO, 03/10/2012 - 04/10/2012, Canberra, Presenter(s): David Griffin

Jones, EM, Brinkman, R, Gillibrand, P, Herzfeld, M, Margvelashvili, N, Mongin, M, Rigby, P, Sharman, C, Timms, GP, Tonin, H, Wild-Allen, K; Australian coastal modelling and information systems: assisting management decision making; Australian Coastal Ocean Modelling and Observations - ACOMO, 03/10/2012 - 04/10/2012, Canberra, Presenter(s): Emlyn Jones

Steinberg, C, Baird, ME, Middleton, J, Pattiaratchi, C, Roughan, M, Stevens, C, Wyatt, LR; Ocean observation uptake: Present status and the way forward; Australian Coastal Ocean Modelling and Observations - ACOMO, 03/10/2012 - 04/10/2012, Canberra, Presenter(s): Craig Steinberg

Pattiaratchi, C; Modelling mesoscale dynamics along western and southern Australian shelf and slopes: a ROMS modelling approach; ROMS/TOMS Workshop, 24/10/2012 - 24/10/2012, Rio de Janeiro, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Peddies: what, where, why?; WAIMOS Science and Data Uptake Workshop, 05/11/2012 - 05/11/2012, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Welcome, introduction and overview of IMOS and WAIMOS; WAIMOS Science and Data Uptake Workshop, 05/11/2012 - 05/11/2012, Perth, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Modern ocean observations and prediction: from waves to whales; Zhejiang University Seminar, 04/12/2012 - 04/12/2012, Hangzhou, Presenter(s): Charitha Pattiaratchi

Pattiaratchi, C; Modern ocean observations and prediction: from waves to whales; Hohai University Seminar, 06/12/2012 - 06/12/2012, Nanjing, Presenter(s): Charitha Pattiaratchi

Wyatt, LR; Latest results from the Australian Coastal Ocean Radar Network; Radiowave Oceanography Workshop (ROW), 11/05/2014 - 15/05/2014, Savannah, Presenter(s): Lucy Wyatt

Middleditch, A, Wyatt, LR, James, C; Wave measurements from the Australian Coastal Ocean Radar Network; Radiowave Oceanography Workshop Meeting, 04/11/2015 - 06/11/2015, Woods Hole Oceanographic Institute, Massachusetts, Presenter(s): Andrew Middleditch

Cosoli, S; The ACORN radar network: adopted practices, QAQC approaches and critical points; INCREASE (Innovation and Networking for the integration of Coastal Radars into European Marine Services) HF Radar experts workshop, 13/09/2016 - 15/09/2016, Lerici, Presenter(s): Simone Cosoli

Janekovic, I, Pattiaratchi, C, et, al.; Predicting the ocean and continental shelf dynamics off southeastern and central Western Australia using advanced ROMS capabilities; Australian Coastal and Oceans Modelling and Observations (ACOMO) Workshop, 11/10/2016 - 12/10/2016, Canberra, Presenter(s): Ivica Janekovic

Roughan, M, Kerry, C, Rao, S, et, al.; Modelling and observing the East Australian Current system and its impacts on shelf circulation, Lagrangian transport and biogeochemistry; Australian Coastal and Oceans Modelling and Observations (ACOMO) Workshop, 11/10/2016 - 12/10/2016, Canberra, Presenter(s): Moninya Roughan

Schaeffer, A, Cosoli, S, Gramouille, A, et, al.; Submesoscale eddies observed by HF radars along the East Australian Current and Rottneest continental shelf; Australian Coastal and Oceans Modelling and Observations (ACOMO) Workshop, 11/10/2016 - 12/10/2016, Canberra, Presenter(s): Simone Cosoli, Amandine Schaeffer

Cosoli, S, et, al.; Quality Control procedures for the ACORN HF radars; International Radiowave Oceanography Workshop, 19/09/2017 - 21/09/2017, Geelong, Presenter(s): Simone Cosoli

Mihanovic, H, Cosoli, S, Pattiaratchi, C, Verspecht, F; Resonant near-inertial oscillations at critical latitudes from HF radar measurements; International Radiowave Oceanography Workshop, 19/09/2017 - 21/09/2017, Geelong, Presenter(s): Hrvoje Mihanovic