

## *Prof Charles Lemckert*

*Griffith School of Engineering*

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Charles Lemckert is a Professor in Coastal And Water in the Griffith School of Engineering on the Gold Coast Campus. He has had over 25 years of experience in studying and reporting on coastal, river and lake



dynamics, along with teaching undergraduate and postgraduate engineering students in a wide range of fundamental and professional courses in the areas of water science and engineering, coastal engineering, environmental engineering and marine science.

Professor Lemckert's research activities in environmental studies (which have been based upon his physical oceanography background) has resulted in him being involved in a variety of water related consultancy related activities at a local and national level. He has also produced numerous publications and provided an excellent training ground for both Honours and postgraduate students addressing environmental flow problems, instrumentation and methodology development, and coastal management. His most significant contribution has been the development of novel environmental monitoring techniques and related studies.

### **Education**

- 1993 PhD, Centre for Water Research, University of Western Australia
- 1990 MSc, Marine Studies Centre, University of Sydney
- 1985 BSc (Hon), University of Sydney

### **EDITORIAL BOARD MEMBER**

Journal of Coastal Research  
Australian Meteorological and Oceanographic Journal

### **Fields of Expertise**

Environmental fluid dynamics  
Physical limnology and oceanography  
Coastal, reservoir and environmental monitoring techniques  
Engineering education

### **Professional Membership** (selected examples)

Australian Marine Science Association  
Australian Water Association  
Australian Meteorological and Oceanographic Society  
AOGS  
Engineers Australia  
Coastal and Estuarine Research Federation (CERF) – Life member and Member of the Board of Trustees

### **Selected Project Experience** (selected examples)

Project Leader - Assessing oceanic and tidal forecast data for search and rescue purposes

Project Member - Sources of phosphorus promoting cyanobacteria in subtropical reservoirs

Project Leader - Splyard Creek Study for Calibration of Wivenhoe Reservoir hydrodynamic model

Project Leader - Torres Strait Tide Gauge Survey

Project Leader - Pimpama River Environmental Study – Tidal Water Level Gauging and Advection Dispersion Study Component

### **Selected Publications**

Project Leader - Torres Strait Tide Gauge Survey

No. of book chapters: 5

No. Refereed journal papers: 68

No. of refereed conference papers: 52

### **Example Publications**

Yu, Y., Zhang, H. and Lemckert, C. J. (2014) Numerical analysis on the Brisbane River plume in Moreton Bay due to Queensland floods 2010-2011, *Journal of Environmental Fluid Mechanics*, 14, 1-24

Brushett, B. A., Allen, A. A., Futch, V. C., King, B. A., & Lemckert, C. J. (2014). Determining the leeway drift characteristics of tropical Pacific island craft, *Applied Ocean Research*, 44, 92-101

Dunn, R. J. K., Lemckert, C. J., Teasdale, P. R. and Welsh, D. T. (2013) Macro-infauna dynamics and sediment parameters of a sub-tropical estuarine lake - Coombabah Lake (Southern Moreton Bay, Australia), *Journal of Coastal Research*, *Journal of Coastal Research*, 29 (6a), 156 - 167

Cooper, J. A. G. and Lemckert, C. J. (2012) Extreme sea level rise and adaptation options for coastal resort cities: A qualitative assessment from the Gold Coast, Australia, *Ocean and Coastal Management*, 64, 1-12, doi:10.1016/j.ocecoaman.2012.04.001

Helfer, F., Lemckert, C. J. and Zhang, H. (2012) Impacts of climate change on temperature and evaporation from a large reservoir in Australia, *Journal of Hydrology*, 475, 365–378, doi: 10.1016/j.jhydrol.2012.10.008

Ali, A., Lemckert, C. J. and Dunn, R. J. K. (2010) Salt fluxes in a very shallow sub-tropical estuary, *Journal of Coastal Research*, 26 (3), 436-443, doi: 10.2112/08-1118.1

Werry J. M., Lee S. Y., Lemckert C. J., and Otway N. M. (2012) Natural or Artificial? Habitat-use by the bull shark, *Carcharhinus leucas*. PLoS ONE 7(11): e49796. doi:10.1371/journal.pone.0049796

Benfer, P. N., King, B. A., Lemckert, C. J. and Zigic, S. (2010) Modelling the effect of flow structure selection on residence time in an artificial canal system, *ASCE Journal of Waterway, Port, Coastal, and Ocean Engineering*, 136, 91-96, doi: 10.1061/ASCEWW.1943-5460.0000029

Lemckert, C. J., Zier, J. and Gustafson, J. (2009) Tides in Torres Strait, *Journal of Coastal Research*, 56, 524-528