

## Water Research Laboratory

# Ian Turner

## Professor and Director



Ian is the Director of WRL and a Professor in the School of Civil and Environmental Engineering. He is also a Senior Coastal Specialist in WRL's Coast and Estuary investigations group. Ian's current research interests include beach groundwater dynamics and sediment transport at the beach face, monitoring of coastal change and impacts of climate variability, coastal erosion control and coastal management, and coastal aquifer hydrogeology. In recognition of Ian's leadership in the field of Coastal Engineering, since 2005 he has been an active member of the Engineers Australia 'National Committee on Coastal and Ocean Engineering'. For further information please see: [www.civeng.unsw.edu.au/staff/ian\\_turner/](http://www.civeng.unsw.edu.au/staff/ian_turner/)

### Qualifications and affiliations

BSc Hons 1 & Uni. Medal, University of Sydney, 1989  
 MEngSc (Environmental Engineering Science), UNSW, 1995  
 PhD (Marine Science), University of Sydney, 1994  
 MIEAust (Member of the Institution of Engineers Australia)  
 Member American Geophysical Union

### Professional history

2015-:	Project Engineer, UNSW WRL	1997-2000:	Senior Lecturer – UNSW
2013-2014:	Undergraduate Engineer, Summer Internship, Leighton Contractors	1998-2001:	Manager - UNSW Groundwater Centre
1994-1995:	Contractor (Coastal Scientist) - NSW Dept Public Works	2000-2006:	Senior Engineer & Research Fellow - WRL, UNSW
1995-1997:	Research Faculty - Coastal Lab, Uni of Maryland, USA	2007-2009:	Senior Lecturer – UNSW
1997-2000:	Senior Project Engineer - WRL, UNSW	2007-:	Deputy Director (Research) - WRL, UNSW
		2010-2014:	Associate Professor - UNSW
		2014-:	Professor – UNSW
		2015-:	Director – WRL, UNSW

### Expertise

- Coastal processes
- Coastal engineering design
- Coastal imaging (remote sensing)
- Physical modelling
- Numerical coastal modelling
- Field data collection
- Coastal groundwater dynamics
- Coastline forecasting
- Project management
- Research and publication

### Selected journal publications (♦ = Denotes supervised student of postdoc)

- Turner, I.L.** and Masselink, G. (2012) "Coastal Gravel Barrier Hydrology – Observations from a Prototype-Scale Laboratory Experiment (BARDEX)" *Coastal Engineering*, 63, 13-22
- ♦**Tarbotton, C.J.**, Dominey-Howes, D., Goff, J. and **Turner, I.L.** (2012) "GIS-Based Techniques for Assessing the Vulnerability of Buildings to Tsunami – Current Approaches and Future Steps" In: Terry, J.P. and Goff, J. (eds), *Natural Hazards in the Asia-Pacific Region: Recent Advances and Emerging Concepts*, Geological Society of London, Special Publications, 361, 115-125, DOI: 10.1144/SP361.10

- Blenkinsopp, C.E., **Turner, I.L.**, Allis, M.J., Peirson, W.L. and Gerden, L.E. (2012) "Application of LiDAR Technology for Measurement of Time-Varying Free-Surface Profiles in a Laboratory Wave Flume" *Coastal Engineering*, 68, 1-5
- Masselink, G. and **Turner, I.L.** (2012) "Large-Scale Laboratory Investigation into the Effect of Varying Back-Barrier Lagoon Water Levels on Gravel Beach Morphology and Swash Zone Sediment Transport" *Coastal Engineering*, 69, 23-38
- Williams, J.J., Buscombe, D., Masselink, G., **Turner, I.L.**, and Swinkels, C. (2012) "Barrier Dynamics Experiment (BARDEX): Aims, Design and Procedures" *Coastal Engineering*, 63, 3-12
- Turner, J.S. and **Turner, I.L.** (2012) "Foam Patches Behind Spilling Breakers" *Journal of Marine Research*, 69, 843-869
- Matias, A., Masselink, G., **Turner, I.L.**, Williams, J.J. and Ferreira, O. (2011) "Detailed Analysis of Overwash on Gravel Barriers" *SI64 Journal of Coastal Research (International Coastal Symposium)*, 10-14, ISSN 07490208
- Harley, M.D., **Turner, I.L.**, Short, A.D. and Ranasinghe, R. (2011) "A Re-Evaluation of Coastal Embayment Rotation: The Dominance of Cross-Shore Versus Alongshore Processes, Collaroy-Narrabeen Beach, Southeast Australia" *Journal of Geophysical Research – Earth Surface*, 116, F4, doi:10.1029/2011JF001989
- Sénéchal, N., Abadie, S., Gallagher, E., MacMahan, J.H.M., Masselink, G., Michallet, H., Reniers, Ad J.H.M., Ruessink, B.G., Russell, P.E., Sous, D., **Turner, I.L.**, Arduin, F., Bonneton, P., Bujan, S., Capo, S., Certain, R., Pedreros, R. and Garlan, T. (2011) "The ECORS- Truc Vert'08 Nearshore Field Experiment: Presentation of a Three-Dimensional Morphologic System in a Macro-Tidal Environment during Consecutive Extreme Storm Conditions" *Ocean Dynamics*, 61, 2073-2098, DOI: 10.1007/s10236-011-0472-x
- Davidson, M.A., **Turner, I.L.** and Guza, R.T. (2011) "The Effect of Temporal Wave Averaging on the Performance of an Empirical Shoreline Evolution Model" *Coastal Engineering*, 58, 802-805
- Austin, A., Masselink, G., Russell, P.E., **Turner, I.L.** and •Blenkinsopp, C.E. (2011) "Alongshore Current Motions in the Swash Zone of a Sandy and Gravel Beach" *Coastal Engineering*, 58, 690-705
- Blenkinsopp, C.E., Masselink, G., **Turner, I.L.** and Russell, P.E. (2011) "Can Swash-by-Swash Velocity Moments be used to Predict Net Cross-Shore Sediment at the Beach Face?" *Australian Journal of Civil Engineering*, 9(1), 19-34
- Harley, M.D., **Turner, I.L.**, Short, A.D. and Ranasinghe, R. (2011) "Assessment and Integration of Conventional, RTK-GPS and Image-Derived Beach Survey Methods for Daily to Decadal Coastal Monitoring" *Coastal Engineering*, 58(2), 194-205
- Blenkinsopp, C.E., **Turner, I.L.**, Masselink, G. and Russell, P.E. (2011) "Swash Zone Sediment Fluxes - Field Observations" *Coastal Engineering*, 58, 28-44