

Professor Jon Olley – short CV

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Prof. Jon Olley is Professor of Water Science at Griffith University and Deputy Director of the Australian Rivers Institute. Prior to joining Griffith University in August 2008 he was the Deputy Chief of CSIRO Division of Land and Water with responsibilities for the Division's research and development portfolio, health safety and environment, communication, human resources, and operations. He has supervised seven successful PhD and six Honours students, and is currently supervising four PhD students in their final year. He has been an adjunct Professor at Griffith University since 2005

Science standing

- Over the past 20 years Professor Olley has conducted research, both as a researcher and research manager, to improve our understanding of how large river systems respond to changes in land use and climate; in particular, where sediment and nutrients are derived. Progress towards this objective has involved developing and assessing new methods of tracing sediment and nutrients through catchments, as well as dating of fluvial sediments using innovative luminescence methods which he pioneered. Authored and co-authored more than 90 scientific papers, 13 Conference papers and 26 Technical Reports in this or related fields. Career ISI citations >1984, with 23 papers each exceeding 23, 7 exceeding 100; Three co-authored papers in Nature and two in Science.
- Editorial board member for the journal Hydrological Processes until 2012
- Editorial board of Quaternary Geochronology (2009-)
- Elected Editorial advisory board member for the journal Earth Surface Processes and Landforms (ESPL) until 2012
- Invited keynote at seven conferences; most recently the River Symposium Brisbane (2006) and 3rd International Symposium on Riverine Landscapes (2007),
- Co-author of the most cited paper published in Geomorphology in the last 5 years: Olley, J.M., Pietsch, T., Roberts, R.G., (2004). Optical dating of Holocene sediments from a variety of geomorphic setting using single grains of quartz. Geomorphology, 60, 337-358 [ISI citation 83]
- Co-Convenor of the conference on 'The structure function and management implications of fluvial sedimentary systems', Alice Springs 2002 and Editor The structure function and management implications of fluvial sedimentary systems, Dyer, F. Thoms, M. and Olley, J.M International Association of Hydrological Sciences red book series, No 276. 27-34.

Board membership

- He has a demonstrated record in developing, documenting, and implementing new strategic research directions, and winning new funding to support research: a recent example is his involvement in the \$32M Federal Government funded Tropical River and Coastal Knowledge program. He has a demonstrated record in managing large research budgets (>\$10M) and significant numbers of staff (up to 125). He has a demonstrated record in developing partnerships with natural resource management agencies and funding bodies. These skills have seen him invited to the following boards and committees:
 - Currently he is on the research advisor committee of The Murray Darling Freshwater Research Centre.
 - Invited member of the Scientific Advisory board Murray Darling Freshwater Research Centre 2009 - present
 - Executive Committee member Tropical Rivers and Coastal Knowledge Program (2006-
 - Elected in 2003 as Vice-President of the International Commission on Continental Erosion (ICCE) for four years.
 - Board member, Murray Darling Freshwater Research Centre 2004 – 2008

- Invited member, Scientific Expert Panel, southeast Queensland Healthy Waterways Partnership (2001 - present).
- Member, National Land and Water Resources Audit Advisory Council 2004-2007.

Research Training

- Throughout his career, he has maintained an interest in research training and has been directly involved in the supervision of nine successful PhD and six Honours students, and is currently supervising two PhD students in their final year.

Impact on the Australian Community

- Changed government in policy in NSW, shifting the focus for erosion control works from the hillslope to the channel banks. Jon demonstrated, with others, the importance of gully erosion as a source of sediments to rivers in south-eastern Australia. He also showed the importance of subsurface sediment as a phosphorus source in rivers of the Murray Darling Basin. This controversial finding went against the conventional view that anthropogenic sources dominate phosphorus fluxes these rivers. He was actively involved in promoting the broader implications of this research to Federal and State water management authorities, with presentations to the Specialist Workshop on Nutrients in the Landscape and the SACC Erosion and Fertilisers Working Group. These and other presentations have resulted in the change in policy. In 1999, he and others were awarded the BHP Landcare Research Award (ACT) for this work
- Jon led the development of a linked modelling and tracing approach to identify the primary sources of sediment and nutrients in large catchments – these techniques are now widely applied across Australia to target remediation including major investments in the Murray Darling Basin, SE Queensland and the catchments of the lagoon of the Great Barrier Reef. Aspects of this work have been incorporated into the Catchment Modelling Tool Kit (eWater CRC)
- Developed a new technique for dating young and partially bleached fluvial deposits using optically stimulated luminescence. The lack of long term water quality data in Australia meant that the only way to assess temporal variations in sedimentation rates and phosphorus concentrations in our major rivers was to use sediment cores. Prior to this work there was no dating technique suitable to developing chronologies for these sediment records. The dating technique developed in response to this need is now widely applied both nationally and internationally.
- Jon has also significantly contributed to Australia cultural heritage through involvement in key archaeological studies.