



Associate Professor Terry Williamson

In 2009 Terry was awarded the IBPSA Award for Distinguished Service to Building Simulation. This IBPSA award recognizes an individual who has a distinguished record of contributions to the field of building performance simulation, over a long period.

Terry was educated in engineering and architecture in Australia and is Associate Professor of the School of Architecture, Landscape Architecture and Urban Design at Adelaide University, Australia. He has taught, researched and published in areas of energy, thermal performance and sustainability related to the built environment. Terry is the author (or co-author) of over one hundred publications including books, journal articles and conference papers. He is currently Associate Dean (Information Technology) of the Faculty of Professions.

His earlier research was concerned with the basic issue of providing relevant design advice for improving the thermal and environmental performance of buildings. He developed a variety of research tools and techniques to provide information to backup arguments regarding these issues including, computer simulation software, householder surveys and interviews, the recording of occupant behaviour (eg. Comfort Vote Logger) and building performance monitoring (eg temperature and energy consumption).

An ARC Discovery project awarded in 2002 Building and Ethics: Understanding A Corpus of Contemporary Australian Award-Winning Houses as Responses to Ecological, Social and Built Contexts broadened research interests into the general area of the design of sustainable building. Early output of this research was a book Understanding Sustainable Architecture (Williamson, Radford & Bennetts, 2003) which is a concise review of the assumptions, beliefs, goals and bodies of knowledge that underlie the endeavour to design environmentally (more) sustainable buildings and other built developments. It shows that much of the available advice and rhetoric about sustainable architecture begins from positions where important ethical, cultural and conceptual issues are simply assumed.

Recent and continuing research has concentrated on two issues. First, data has been collected with the objective of corroborating the operation of the Building Code of Australia's energy-efficiency provisions, in particular the effectiveness of the NatHERS Star Rating Scheme for dwellings. In 2004 Terry made a major submission to the Productivity Commission's enquiry into Energy-efficiency in the Australian economy. Subsequent papers have also investigated this issue and questioned the efficacy of the scheme.

The second research area concerns the urban micro-climate. In collaboration with Dr Evyatar Erell of the Ben Gurion University of the Negev, Israel the urban micro-climate model CAT has been developed and evaluated on the basis of field measurements. The model predicts hourly air temperature in an urban street canyon for extended periods in a variety of weather conditions, on the basis of meteorological time series recorded at an open site exposed to the same meso-scale conditions, taking into account the geometry of the two sites and the thermal properties of their respective surface materials. This model is used to study design implications in relation building energy consumption associated with factors such urban density and street geometry.