



# The Australasian Wind Engineer

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Greetings Wind Engineers to the first AWES Newsletter of the year! A little late, but all good things to those who wait... patience is a virtue... oh, enough of the cliché's – on with the show!!

Thanks to our contributors we have a great range of stories to welcome us into 2008 and to keep us up to date of what has been happening in the world of wind engineering.

Recently, the Cyclone Testing Station in Townsville, home too many of our members, has recently celebrated their 30<sup>th</sup> anniversary of operation, and John Holmes was there to cover this event. We also have a review of the most recent ICWE conference, held in none other than our own tropical backyard, Cairns, Queensland.

One of our key contributors' latest editions of his book – “Wind Loads on Structures – Second Edition” by John Holmes, has recently been published, and Leighton Cochran provides an in depth review of this book.

There was also the sad news on the passing of Herbert Saffir, one of the world's most recognised wind engineers. Many of our members would have met him over the years, and George Walker has provided a few thoughts on his passing.

Finally, the next AWES/AMOS conference will be happening in a few short weeks in Geelong, Victoria, in conjunction with the next general meeting of the AWES following the recent committee elections. This conference should be an excellent conference with both the AWES and AMOS providing a host of papers on atmospheric and oceanic extremes, and the latest information is within these pages.

Happy New Year, and see you in Geelong!

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Delegates at the 12<sup>th</sup> International Conference on Wind Engineering, Cairns, Queensland, July 2<sup>nd</sup> to 6<sup>th</sup>



## AWES/AMOS Conference News

The Australasian Wind Engineering Society, in conjunction with the Australian Meteorological and Oceanographic Society and the Meteorological Society of New Zealand will be hosting their next conference at the Deakin University Waterfront campus in Geelong, Victoria between January 29<sup>th</sup> and February 1<sup>st</sup>, 2008.

The conference theme is “Atmospheric and Oceanographic” extremes, and should provide some excellent papers, both on these topics and more wind engineering related disciplines.

Keynote speakers include Chris Letchford and Greg Holland, along with a number of papers from our members.

In addition to the regular conference sessions, there will be two full-day workshops on January 31<sup>st</sup> – 1<sup>st</sup> February focussing on:

- Cyclone Tracey revisited
- Wind Vulnerability

Following the recent committee elections (many thanks to George Walker for handling the Returning Officer responsibilities), the committee roles for those elected for the 2008-2009 term will be decided. The list of elected committee members was as follows:

- Leighton Aurelius
- Michael Eaddy
- Matthew Glanville
- Chris Letchford
- Katrina Swalwell
- Graeme Wood

Congratulations to those members.

At the conference the committee will elect the Chairperson from its own members. The committee may also co-opt up to two additional members from the overall AWES membership to support the committee for the next term.

Further information on the conference can be found online at:

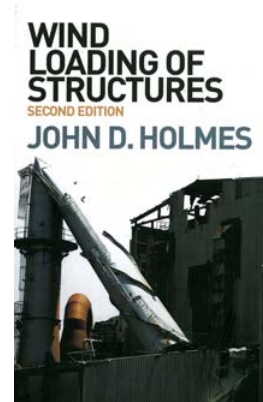
[www.amos.org.au/conf2008/AMOSconf2008.htm](http://www.amos.org.au/conf2008/AMOSconf2008.htm)

## Book Review of “Wind Loading of Structures – Second Edition” by John D. Holmes

**Contributor: Leighton Cochran**

This second edition (2007) of Dr. Holmes book is published by Taylor and Francis and is a substantial expansion on the first edition published in 2001.

Every chapter is updated with new or expanded information.



The fundamental atmospheric physics are discussed first, and then the many topics associated with wind engineering and bluff-body aerodynamics are explored in logically broken-down chapters. This very readable text now has considerably more recent research on thunderstorms, tornadoes and downbursts than the first edition. There is a new section on modelling tornadoes in the laboratory and some interesting images and discussion on failures of lattice towers and a relatively new and important structural form – the wind turbine support tower.

There is a much expanded chapter on wind loading standards used around the world, many of which have had new editions themselves since the first edition of this book. There is a very interesting “world survey” of extreme wind climates in Appendix D that illustrates the varying wind regimes we have to deal with around the world. One of the final chapters discusses wind loading on a variety of odd structures that are designed by various specialty engineering teams: microwave dishes, rooftop solar panels, freestanding roofs and walls, awnings, parapets, rotating radar antennas and radio telescopes, as well as the ubiquitous mobile phone tower.

I was hoping to see some discussion of wind loads on small tensile fabric roofs, as this industry is truly ignored in most codes around the world (AS/NZ1170 has some data on free hypar fabric roofs) and they are grasping for viable design pressures. Perhaps this will appear in the third edition?

Anyway, “Wind Loading of Structures” by John Holmes is a must have for any wind engineer’s library.

## ICWE 12 Conference Review

The 12<sup>th</sup> International Conference on Wind Engineering was recently held in Cairns, Queensland from July 2<sup>nd</sup> to 6<sup>th</sup>.

This prestigious event, held every four years, was organised superbly by the Australasian Wind Engineering Society, and many thanks must go to those on the organising committee.

The event saw 4 days of highly interesting research presentations and discussion on a wide variety of wind topics.

In addition, many of our AWES members pledged their support to a world wide investigation in high frequency force balance testing and comparison, which, under the organisation of John Holmes, should provide some valuable insight and discussions into this popular testing method. I'm sure John will keep everyone informed on these developments.

As for the social scene, a great ice-breaker event opened the conference giving delegates a chance to get used to the warm weather Cairns style, with a few cold beers!

The free day organised saw delegates take in some of the sites of Cairns, and a tour of Green Island for snorkelling, glass bottom boat tours and a crocodile show! Some of the more intrepid members even took part in activities such as handling some baby crocs, or jumping out of perfectly good aeroplanes to get a spectacular view of Cairns (*Editors Note – I still can't believe I did that!*)

The conference dinner also saw the presentation of the inaugural "Davenport Medal", named after Professor Alan Davenport, who is widely recognised as one of the most prominent figures in modern wind engineering. Fortunately, Professor Davenport was in attendance to present the awards winners, and to receive a well deserved standing ovation from the delegates.

The following is the list of recipients of this medal:

### **Senior Awards**

Nicholas J. Cook  
Ahsan Kareem  
Shuzo Murakami

### **Junior Awards**

Luigi Carassale  
Kurtis R. Gurley  
Tetsuya Kitagawa

The AWES wishes to congratulate the winners of this award, and their contribution to the field of wind engineering.

Further information on the award winners and additional photos from the conference can be found at:

<http://www.iawe.org/>



Conference Chair John Cheung at the crocodile show, Green Island



Chris Letchford ready to explore the reefs around Green Island

## 30<sup>th</sup> Anniversary of the Cyclone Testing Station

**Contributor: John Holmes**

More than eighty people attended a dinner in at the Museum of Tropical Queensland in Townsville on November 14<sup>th</sup>, to celebrate the 30<sup>th</sup> anniversary of the Cyclone Testing Station of James Cook University.





The Station started in 1997 in the wake of Cyclones Ada, Althea and Tracy and has helped Northern Australia lead the world in cyclone-resistant construction. Starting off with a staff of just 2, a Technical Director (Greg Reardon) and a Technical Officer, the CTS now serves the whole nation with a staff of 7, and has expanded its activities from physical load testing, to wind-tunnel model studies and to risk and vulnerability modelling.

The dinner was attended by some of the original drivers of the CTS in the 1970s including Professor Hugh Trollope and local Townsville architect Kevin Macks. Former employees and associates present included Geoff. Boughton (who ably MC'd the occasion) and George Walker (both members of AWES). Representatives of the building and insurance industries who had supported the Station throughout its history were strongly represented at the dinner.

A tour of the Station facilities before the dinner covered the full-scale house testing facility, the fluctuating load air-box, the wind-driven impact test, the boundary-layer wind tunnel and David Henderson's latest 'toy', the impressive pressure load actuator (PLA) developed in collaboration with the University of Western Ontario.

Further details of the CTS and its thirty year history can be found on the web site:

[www.eng.jcu.edu.au/csts](http://www.eng.jcu.edu.au/csts)



Emeritus Professor Hugh Trollope receives an award from former Technical Director Greg Reardon for 'Outstanding Vision' in setting up the James Cook Cyclone Structural Testing Station in the 1970s.

## Herbert Saffir (1929-2006) A personal tribute by George Walker

It is sad to announce that on November 21<sup>st</sup>, 2007, Herbert Saffir passed away at the age of 90.

While not as technically recognised as other wind engineers, his public recognition, through the development of the Saffir-Simpson Hurricane Scale, is perhaps greater than any other wind engineer, and he was certainly a personality who made a unique contribution to our discipline.

For those of us who had the pleasure of visiting him and Sarah in Florida we will also remember him for his generous hospitality.



Herbert Saffir (on right) receives a framed poster of Hurricane Andrew depicting the Saffir-Simpson scale from U.S. National Weather Service Director Jack Kelly

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Well, that's it for this edition of the AWES Newsletter.

As always, a newsletter cannot exist without news, so any stories, photos or information on upcoming events will always be appreciated.

Cheers,

Leighton Aurelius  
AWES Newsletter Editor.

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