



The Australasian Wind Engineer

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Welcome Wind Engineers to the December 2012 edition of the AWES Newsletter.

We lead with all the details of the latest amendments to AS/NZS 1170.2:2011, which has undergone some changes in 2012.

Details on the APEC-WW conference in Vietnam have been supplied by John Ginger, who along with Harry Fricke, recently attended this event.

We also have news from the most recent Australasian Fluid Mechanics Society conference which was attended by AWES members, and proceedings are also available to download for our readers.

Finally, as most members would already know, Jack Cermak recently passed away in August of this year. We have an extract from the AAWE newsletter from Leighton Cochran, with a personal tribute to the man known as the “Father” of Wind Engineering.

As the year draws to a close I'd like to take this opportunity to wish all members a happy and safe holiday period, and a prosperous new year.

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John Ginger and Harry Fricke at APEC-WW in Vietnam



AS/NZS 1170.2:2011 amended in 2012**Contributor: John Holmes**

Cyclone ‘Yasi’ in February 2011, and data from the dropwindsondes released into Atlantic hurricanes, provided evidence for a re-definition of over-water winds as Terrain Category 1 or 1½, in the recent amendments to the Australia/New Zealand Wind Standard.

The terrain category descriptions have now been made fully consistent between AS/NZS 1170.2 and AS 4055 (Wind loads for housing). The special table of terrain-height multipliers for tropical cyclone regions (Table 4.1 (B)) was removed, so that in future structures in all regions will be designed using the same set of $M_{z,cat}$ values. Other changes include simplification of the change of terrain/averaging of terrain provisions, and drag coefficients for circular cylinders in the supercritical regimes and for lattice towers and frameworks made up of circular members.

Two new sections were added to provide fatigue loading cycles for high-cycle fatigue under wind action, and wind loads on solar panels.

In addition the peak gust in the Standard has been re-defined with a duration of *0.2 seconds* (using a ‘moving average’ definition of duration). This follows research on the response of the Dines anemometer, as reported in an earlier AWES newsletter, and an assessment of the effective frontal areas represented by gusts of defined durations. However, this change will not affect the values of any parameters in the Standard – and hence will have no effect on the user of it.

Thanks to all the AWES members, and others, who contributed on the SA/SNZ sub-committee BD006-02 towards these amendments.

APEC-WW in Vietnam**Contributor: John Ginger**

John Ginger and Harry Fricke attended the 7th Workshop on Regional Harmonization of Wind Loading and Wind Environmental Specifications in Asia-Pacific Economies (APEC-WW 2012) in Hanoi, Vietnam on 12-13 November 2012. This workshop held at the Vietnam Institute for Building Science and Technology (IBST), is part of the series of on regional harmonization of wind

loading and wind environmental specifications in the Asia-Pacific economies, initiated and supported by the 21st Century COE Program of Tokyo Polytechnic University.

The reports for Australia summarised the activities of the AWES in 2011-12, and the revisions in AS/NZS1170.2. John presented the structural wind loading report which focussed on the re-definition of the gust duration in AS/NZS1170.2 and Cyclone Yasi. Harry presented the environmental wind report which focussed on the criteria applied for assessing the pedestrian wind climate.

The group plans to meet again at Asia Pacific Conference next year. The Structural Group was requested to calculate the design external and internal pressures on a standard low-rise building configuration for the design of the envelope and structural frame, for a specified design wind speed. These results will be submitted to the Secretariat by March 2013, and used for comparing wind loading design codes and standards of each country. The Wind Environment group will compile information on current assessment criteria and statutory requirements in APEC countries for the pedestrian level wind environment.

A final draft report will be prepared by the end of January 2013 and sent to all the participating countries for their feedback.

18AFMC in Launceston**Contributor: Rajnish Sharma and John Holmes**

The 18AFMC was held in Launceston Tasmania recently. It was well attended and included very high quality plenary sessions and other papers.

We had one dedicated wind engineering session; there were three speakers in that session; and they were: Sharma, Richards, and Flay.

I encourage our wind engineering ‘aussie’ colleagues to get involved with the AFMS (<http://www.afms.org.au/>). The 19AFMC will be hosted by the RMIT University and will probably be held during the 2nd week of December, 2014.

Also, past proceedings from these conferences can be found online at:

<http://www.afms.org.au/conference/>



Personal Thoughts on Jack Cermak

Contributor: Leighton Cochran (courtesy of AAWE)

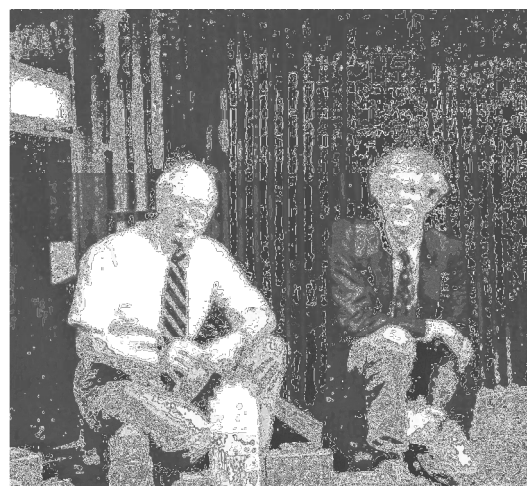
Dr. Cermak was my academic advisor in graduate school at Colorado State University (CSU). I first talked to him in 1983 while he was at the Sixth ICWE in Queensland and was visiting Townsville, Australia. We talked at length about coming to Fort Collins to study in his Fluid Mechanics and Wind Engineering Program within the Civil Engineering Department. Right from the beginning he was a supportive and encouraging mentor, and that continued after graduation, with ASCE committees and working at CPP. When I was studying at CSU, and he saw me enthusiastically reading a hallway advertisement about a week-long Planetary Society Conference and workshop at the Jet Propulsion Laboratory (not exactly wind engineering) in Los Angeles, he offered to write a recommendation letter. And so, off I went to California. I doubt if that opportunity would have been there without his name on a letter to CalTech. He routinely encouraged his students to expand their educations outside our niche field.

In the early 1990s I found a large box of black and white photographs on top of the Meteorological Wind Tunnel's power room at the Engineering Research Center (ERC). These forgotten images included ten-by-eights of the 1963/1964 World Trade Center study (now republished in many places). One image in the box was of Dr. Jack (as many of his students called him) in the Industrial Wind Tunnel with Andy Warhol (see image). There had to be a story behind this discovery! I took the photograph to his office to find out. It seems that Mr. Warhol taught during a couple of summers at the CSU Art Department in the late 1960s, where he donated two of his famous large Campbell's Soup tins. Curiously these two titans of their respective fields became drinking buddies at the Wine Cellar on College Avenue. Dr. Jack's pioneering work had piqued Mr. Warhol's interest and these two people from very different worlds became friends. It would have been fun to sit in on those conversations at the Wine Cellar!

Every few years Dr. Jack taught a course at CSU on nonlinear differential equations with an historic focus on pre-chaos theory methodologies caused by the limited availability of serious computing in the 1950s. In fact, the "text" was a translated Russian dissertation on approximate solutions to these nonlinear systems. This intellectually

stimulating course remains a memorable event for many of Dr. Jack's students. Professor Cermak had a profound impact on my professional, intellectual and personal life. Without his encouragement I may not have spent so much time in Colorado or even, discovered wind engineering as a career direction.

Jack will be missed by so many, and his influence on individual lives has spanned the globe.



Dr. Jack Cermak (left) and legendary artist Andy Warhol

Member News

Member news is baby related this edition!

Katrina Swalwell & Kris are delighted to announce the arrival of Emily Ryan Swalwell – Congratulations to Katrina!

Leighton Aurelius and Lucy are expecting their first new addition to the Aurelius clan in May 2013!

Well, that's it for this edition of the AWES Newsletter. Many thanks must go to our contributors. 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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