**Report on two conferences attended with financial support from the Douglas Bomford Trust.**

During the Summer I attended two conference to present our work on measurements in the atmospheric boundary layer (ABL). The first was the **9th International Colloquium on Bluff Body Aerodynamics and Applications 29th July – 2nd August 20**24 held at the University of Birmingham. Paper: **Fluctuating surface pressure measurements on the 6 m cube** Roger Hoxey, Peter Richards, Adam Robertson.

The second was the Wind Engineering Society **WES2024 14th UK Conference on Wind Engineering 4th – 6th September 2024,** held at the University of Southampton

Paper: **Reference pressure for wind load measurements in a turbulent boundary layer.** Roger Hoxey, Peter Richards and Adam Robertson

The work on wind loading commenced at NIAE in 1969. I joined the Institute in January 1972 from the Royal Aircraft Establishment where I had been working since 1966 on turbulent boundary layers in an aeronautical wind tunnel. Moving to Silsoe was only a matter of scale to work on the atmospheric boundary layer, from 6 inches to over 1000 meters! Initially the work was measurement of wind loads on agricultural buildings but from the mid 1980’s other structures were included. This was also the time that more fundamental science was carried out on the structure of the ABL, work that is still in progress. The work was initially science funded by BBSRC until SRI closed in 2005, but we retained the site and buildings at Wrest Park north of the Mansion with EPSRC funding until 2016. This provided the opportunity to repeat in more detail measurements on the ABL including sonic anemometer records and fluctuating static pressure measurements.

I recall that Derrick Wells and Jim Dawson set up the project 55 years ago and our first instrumented glasshouse was at Lancashire College of Agriculture, Myerscough near Preston but close enough to Blackpool for the illuminations: thankfully Charles Moss never found out! Instrumentation was pre digital using chart recorders and a 4 channel FM tape recorder. It was a year or so before the FM tape was digitized on the Institutes PDP8e (I think) and thanks to Dave Randle. I should also thank Graham Walker as when we received a warning of strong winds we would need a car. I would contact Graham who usually said ‘nothing available’ (or a less subtle arrangement of words!) but then with adjustments to his chart, always found something.

It was from that beginning that the work evolved with a special thanks to staff in Services and all who worked on the project. The workshops made the static pressure probe developed by Peter Moran in the 1980’s. This sensor enabled our more recent measurements and led to publications and the conference papers. Instrumentation Dept kept us abreast of digital data recording from the early 5-hole paper tape produced back at the Institute to 32 channels plus sonic anemometer digitized at up to 50 data points a second in the field. It also learnt to switch itself on so we did not need to be there. Peter and John Richards continued to support us after the closure of the Institute which enabled the measurements to be completed in 2016, after which the site was cleared.

In the 1980’s Geoff Richardson was working on windbreaks and had contact with Peter Richards from Auckland University, New Zealand which led to Peter spending two one year sabbaticals with us. You may recall that Peter and his family were here for sports days and the raft race. The contact with Peter broadened our interests and led to publications on CFD comparisons with our pressures on buildings. Adam Robertson and I remain in contact with Peter who also attended the conferences this year. Special thanks to Adam who has corrected all the papers and conference proceedings and for the cups of tea when I call in.

I would like to thank the Douglas Bomford Trust for financial support enabling me to present our work at a National and an International conference. Contacts have been made and are being followed up; the work will not stop just yet, there is more to publish.

Roger Hoxey