

**Wind  
Engineering  
Society**

**9th Biennial  
SCRUTON LECTURE**  
5:00pm, 2nd November 2005

The Wind Engineering Society is pleased to announce the 9th Biennial Scruton Lecture at the Institution of Civil Engineers on 2nd November 2005. The title of the lecture will be:

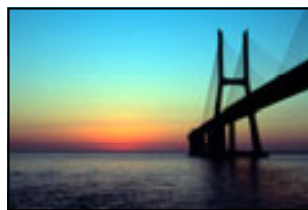
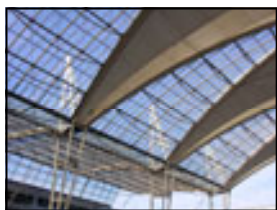
## **Developing wind engineering techniques to optimise design and reduce risk in construction**

***Peter Irwin PhD, PEng,  
President of RWDI, Ontario, Canada***

Powerful economic and demographic factors are creating the biggest boom in tall buildings that the world has ever seen. This state-of-the-art review of wind engineering for tall buildings will include current wind tunnel and analytical methods, assessment criteria, and probable future developments. It will give examples of a building's shape being developed to deliberately reduce wind loading, improve the response to wind action and reduce the impact of winds on pedestrians. An interesting development is that, as buildings approach 1km in height, we need to know more about how wind speed and turbulence vary with height in different types of weather systems.

Beyond tall buildings there has also been a substantial increase in other large structures such as stadiums, arenas and long span bridges. The cost of the large-span roofs is greatly affected by the wind loads especially where a retractable roof is used. They have their own special class of wind issues since the loads can vary enormously depending on the position of the roof. Large span roofs are also susceptible to unusual load distributions from drifting snow and special prediction methods have been developed; an example of how the field of wind engineering has broadened since Scruton's days.

Finally, the review will consider current trends and speculate where wind engineering is going. Building codes have become increasingly complex and there has been a backlash against this. The balance between simplicity and accuracy remains a contentious issue and the speaker will offer opinions on how this problem will probably get addressed in future. Another contentious area is the use of Computational Fluid Dynamics, which is currently used primarily in a qualitative sense but is sometimes used more inappropriately. What are CFD's abilities, shortcomings and likely path in the future?



### ***Peter Irwin***



Peter joined RWDI in 1980, becoming President in 1999. His wind engineering experience began in 1974 and includes extensive research and consulting in wind loading, aeroelastic response, wind tunnel methods and instrumentation. He also spent 6 years as a research officer with Canada's NRC and 2 years with the RAE in Farnborough, UK. He is a Registered Professional Engineer in the Province of Ontario who has published over 100 papers and won several awards for his work, including the Canadian Society for Civil Engineering's Gzowski Medal in 1995. He serves on several committees for codes, such as the Standing Committee on Structural Design for the Canadian Building Code and the wind committee of the US ASCE 7 standard.

**There is no charge. All are welcome to attend**  
**Drinks and nibbles will be served from 5:00pm**  
**The Lecture will commence at 6:00pm at the**

**Institution of Civil Engineers,  
1 Great George Street, London, SW1P 3AA  
Tel: 020 7665 2238 Fax: 020 7799 1325  
Contact: Maya Yamashita Shcherbakova**

***maya.shcherbakova@ice.org.uk***