

**CFD: Past, Present and Future by Brian Spalding
Lecture at the Sixteenth Leontiev School-Seminar**

From May 21 – 25 Brian Spalding visited the St Petersburg Technical University where he was one of the handful of foreign academics invited to honour Professor Alexander Ivanovich Leontiev on the occasion of his 80th birthday.



Sasha Leontiev and Brian have been friends and colleagues for over 40 years now and, as you will see if you visit www.cham.co.uk/... Brian translated *Turbulent Boundary Layers in Compressible Flow* by Leontiev and Kutatladze from Russian into English in 1964.

Brian was one of the three keynote lecturers to open the Conference Proceedings on May 21 in the White Hall of the Main Building an elegant lecture hall with crystal chandeliers and a minstrel's gallery.

He delivered his lecture in English with some interjections in Russian but introduced the novelty of having two computers and two screens so that the lecture was projected in both Russian and English catering for the two major languages of those present in the hall.

The topic, as is indicated by the title, was *CFD: Past Present and Future* and Brian used the opportunity to refer back to *boundary-layer theory* (or as he called it prehistory) moving through to the introduction of the *finite volume method*, work on *two-dimensional re-circulating flows* and the use of *turbulence models* followed by *three-dimensional flows* and the *SIVA* and *SIMPLE* methods.

These various studies and methods became incorporated under the title of *Computational Fluid Dynamics (CFD)* which moved from the academic into the commercial arena with the introduction of *PHOENICS* and the many other codes which now exist. In the last section of his lecture Brian dealt with how he sees the future of this field – where will CFD go next? What will be the impact of secondary markets? The lecture on the web site gives a brief outline of possibilities from one of the founding fathers of the subject.