

## ICF10 Report

### Report on the Tenth International Conference on Fracture (ICF10) held December 2-6 2001, Hawaii, USA

This report is submitted to the UK Royal Society by Professor David Taplin, ICF Treasurer and UK National Representative on the ICF Council at ICF10 and ICF Founding Council Member. ICF10 was organised jointly by the United States and Japan in the Hilton Hawaiian Village, Waikiki Beach, Honolulu, Oahu, State of Hawaii, USA. There were some 635 Delegates at ICF10 from 44 countries. This compares to 325 delegates at ICF9 in April 1997 in Sydney, Australia -- a significant increase especially in the circumstances following the international terrorism of 11 September 2001 and the subsequent War on Terrorism. However a steady-state attendance for the four interquadrennial conferences between ICF4 (1977) and ICF7 (1989) was attained of about 800 delegates and for ICF11 this might well now reach 1000 delegates. ICF8 in Kyiv, Ukraine in 1993 was another special case in the history of ICF related to the consequences of the break up of the USSR. This is a large conference with many parallel sessions and I shall simply highlight four aspects of ICF10 to provide a fragrance of this important event. Firstly should surely be mentioned the Honour Lecture delivered by Professor & Academician Anthony Evans FRS which followed the opening ceremony and the Lecture by the Founder President Professor Takeo Yokobori. Yokobori addressed the direction of future research concerning strength and fracture of materials as complexity science and engineering. Evans (who is the world's most cited materials author, recently of Harvard, then Princeton and now back at UC Santa Barbara) addressed the "Grand Challenges" which we need to identify in our future research in an outstanding and very broad-ranging presentation, setting the tone for active and creative debate throughout ICF10 in Hawaii. Secondly the paper on "Fatigue" by the ICF President (1997-2001), Professor and Academician Robert Ritchie, should be highlighted as a high-key "tour de force" presented to a full Ballroom in thundering style (at the end of this paper the Ballroom somewhat embarrassingly largely emptied as delegates went to other sessions). Thirdly the paper on forensic studies of a helicopter crash by Graham Clarke was to my mind masterfully conceived and presented with a characteristic low-key professionalism. Finally the contribution of Professor Gordon Williams FRS should be mentioned as someone assiduous in attending sessions (which not all delegates were as religious about, with the temptations of Waikiki) and contributing to the debate and questions -- especially of younger authors. This is worthy of mention in highlighting the fact that the heart of a large conference is often through such contributions and in the encouragement of younger scientists in often the less well (even sparsely) attended sessions towards the end of the final day. The ICF10 Organisers, especially Professor Robert Ritchie, ICF President (USA) and Professor Teruo Kishi, ICF10 Chairman (Japan) are to be deeply congratulated on a very successful international conference which was well attended in a world-class and extremely pleasant conference environment. Due to the nature of the USA/Japan collaboration on ICF10 and the location in Hawaii, distant from any core industrial, government or university activity in the ICF disciplines, a professional conference organiser ("PCO") was for the first time contracted by ICF/ICF10 (Elsevier Science Limited). Elsevier also acted as the Publisher of the ICF10 Conference Proceedings. Matters related to the publication process (via CD-ROM) are still to be resolved with Elsevier and ICF anticipates a full report on the financial and organisation aspects of ICF10 from Elsevier by June 6 2002 (six months after the conclusion of ICF10). ICF11 will be held March 20-25 2005 in Turin, Italy under the Chairmanship of Professor Alberto Carpinteri with Professor Yiu-Wing Mai as the ICF President (2001-2005). It is anticipated that following the negotiation and agreement of a suitable contract with ICF/ICF11, within the next six months, the Conference Management will be in the hands of "Centro Congressi Internazionale Torino". Discussions have commenced with a number of publishers regarding the ICF10 Proceedings - in the

context of the ICF Statutes. An "ICF Interquadrennial Seminar" will be organised in September 2003 by Professor R V Goldstein in Moscow, Russian Federation on "Fracture in Hierarchical Systems" under the auspices of the Russian Academy of Sciences. There is a strong indication that ICF12 will be held in Beijing, People's Republic of China in September 2009. The location of ICF12 will be decided by vote of the ICF Council at the Council Meeting on March 21 2005, Lingotto Centre, Turin, Italy. There is some encouragement for ICF13 to be held in South/Latin America in 2013 in accord with the orderly rotational progression of the ICF Quadrennial Conferences (Europe/Africa - Asia/Pacific - Americas). ICF is in a very healthy state for the 21st Century to face the Grand Challenges yet probably retaining the name and ICF "brand" (pace Evans). David Taplin Past President & Treasurer February 14 2002