Message from the President of the International Council of the Aeronautical Sciences

It was with great pleasure that the International Council of the Aeronautical Sciences accepted the invitation from the German Society of Aeronautics and Astronautics (DGLR) to come to Germany to hold the 25th ICAS Congress in Hamburg 3 – 8 September 2006.

At the inaugural meeting of ICAS in 1957, the vision set out by Theodore von Karman and the Founding Fathers was that the ICAS Congress should provide aeronautical scientists and engineers from all over the world with a forum in which they could meet to learn about new discoveries in aeronautical science, technology and products, exchange ideas and experiences and develop a friendly professional network free from cultural, political and ideological constraints. ICAS has served that vision well and over the years has increasingly established itself as the foremost international forum for aeronautical science and engineering. Today, special attention is being given to students and young engineers and scientists and the opportunity that the ICAS Congress provides for them to meet with colleagues from all over the world. Also, due to the increasingly global nature of our industry and the increasingly international nature of all aspects of aeronautical products, from research through development, production, operations, training and maintenance, the ICAS Congress provides opportunities for scientists and engineers, researchers and designers, manufacturers and managers, and university faculty and students from all over the world to share ideas and technical information, and to build relationships that are important to the globalization of our profession and our aeronautics industry.

The global changes in the structure of the industry along with new priorities in R&T topic areas such as information technology, electronics, microsystems and system of systems solutions are challenges for our established scientific and engineering community. The ICAS Executive Committee and the Programme Committee are seriously watching these changes and are adjusting to both today’s and future requirements to support a healthy collaboration between academia, research and industry.

The Call for Papers for the 25th Congress attracted nearly 700 submissions from 40 countries. From these, the ICAS Programme Committee, chaired by Fred Abbink of the Netherlands, had the difficult task of selecting about 400 papers for presentation. The caliber of the authors and the quality of their submission were well up to the high standards set by previous ICAS Congresses and, as is evident from the programme set out in the following pages, ICAS 2006 promises to be a highly stimulating and rewarding event.

The City of Hamburg will provide a most attractive venue for the Congress and, on behalf of ICAS, I would like to thank the DGLR for undertaking the substantial organizational task that is entailed in hosting this event. I am personally delighted that DGLR proposed Hamburg for 2006. I would also like to extend my grateful thanks to all authors who are sharing their work and ideas with us as well as to all session chairs who are bringing in their expertise. I have no doubt that, for everyone who participates in the Congress, it will be a meeting to remember.

Jerry Hefner, President of ICAS

Message from the President of the German Society of Aeronautics and Astronautics (DGLR)

I am very pleased to invite you to attend the 25th Congress of ICAS, to be held once again in Germany after 20 years and hosted by the German Society of Aeronautics and Astronautics (DGLR).

Celebrating the 25th Congress of ICAS, this prestigious event is gaining increasing recognition in the field of aeronautics. We are therefore proud to present a technical programme including over 400 high quality papers and a series of lectures held in 10 parallel sessions.

The Congress will be held in the Free and Hanseatic City of Hamburg. With 1.7 million inhabitants, it is the second largest city in Germany and as one of the 16 federal states of the Federal Republic of Germany, Hamburg is both a city and a state.

Economically and culturally, Hamburg is also the centre of the whole Northern Germany. 3.5 million people live in the greater region of Hamburg - for them Hamburg is a shopping and cultural metropolis.

As a centre of trade, Hamburg has always been outward-looking, and this has shaped the mentality of its inhabitants. Hamburg was literally the gateway to the world. Continuing this tradition today, Hamburg is - besides Seattle and Toulouse – one of the three leading centres of civil aviation worldwide and thus a perfect location for an international aeronautical conference.

I look forward to meeting you in September at the 25th ICAS Congress in Hamburg.

Joachim Szodruch, President of DGLR

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