



Venue

From 19 to 21 September 2007, the European Space Agency (ESA) and ESTL-ESR Technology, in cooperation with the British National Space Centre (BNSC), the Centre National d'Etudes Spatiales (CNES), and various sponsors and supporters, will hold the 12th European Space Mechanisms And Tribology Symposium at the Crowne Plaza Hotel in Liverpool (UK).

Aims and Scope

The aims of the Symposium are to:

- foster a dialogue between space mechanisms engineers on the design, development, testing, production and in-flight experience of spacecraft and payload mechanisms to encourage personal contacts in the mechanisms and tribology community;
- provide a networking opportunity and a presentation platform for companies and organisations;
- encourage the transfer of technology to and from space applications;
- to promote awareness that space opportunities afford sustainable industrial growth.

Calendar of Events

November 2006	First Announcement/Call for Papers
31 January 2007	Abstracts deadline
31 March 2007	Authors informed
June 2007	Second Announcement/Programme
30 June 2007	Deadline for Papers
19-21 September	Symposium and Distribution of Proceedings

Up-to-date information is available on the web at

www.esmats2007.co.uk

Preliminary Programme

The areas listed below are expected to be the major themes for the Symposium. Papers covering these areas, coming from European and non-European entities, are specifically encouraged – though all abstracts submitted will be given due consideration.

Mechanisms Design, Analysis and Hardware

- Descriptions of novel and challenging designs
- New methods for design, analysis and verification of mechanisms
- Design guidelines, high reliability
- Design/manufacturing/verification for high-volume production
- Design for disturbance attenuation, low-shock, low-noise performance

Components/Equipment, Micro/Nano Devices

- Motors, actuators, transmission devices, bearings
- Hold-down/release, deployment, pointing, scanning, high-precision devices
- Wheels, mechanical coolers, pumps, valves, solar array drive mechanisms, etc.
- Sensors, miniaturisation of space mechanisms, MEMS, micro/nano developments

Tribology and Materials

- Lubricants and lubrication for bearings, gears, joints, electrical contacts
- Application of smart materials in mechanisms
- Extreme temperatures, environments and operating conditions
- New tribo-materials and /or surface modification, micro/nano-tribology

Launch Vehicles

- Separation systems, engine/propulsion regulation, gimbaling devices, turbopumps, cryogenic tribology

In-Orbit Performance and Post-flight Investigations

- Experience with flown hardware, including reports on in-flight mechanism performance and anomalies, lessons learned
- Post-flight investigation of mechanisms and tribological components

Science Observatories, Earth Remote Sensing, and Planetary Exploration Mechanisms

- Mechanisms for manipulations, robots, rovers
- Sampling systems and in-situ analysis devices
- Mechanical devices for science and remote-sensing instruments

Space Platforms, Tethers, Reentry Vehicle Mechanisms

- Mechanisms for reentry vehicles and the International Space Station
- Long-term mechanism operation and maintenance in space
- Oral or poster presentations may be accompanied by the demonstration of novel mechanisms and products.

Registration and Fees

The Symposium programme containing details of the registration procedure will be issued in June 2007. Information on the submission of abstracts is given in the section 'Call for Papers' and on the website.

The registration fee (covers participation in the Symposium, coffee breaks, lunches, social events and a CD as well as a hand-out of the Symposium proceedings) is GBP300 + VAT (17.5%).

Working Language and Presentation Time

The working language of the symposium will be English. For each paper presented orally, 15 minutes are allocated followed by 5 minutes for discussion. Posters will be displayed during the whole symposium in the exhibition area.

Call for Papers

Authors are invited to submit proposals for presentations to the Symposium in the form of an extended abstract (approx. 500 words including, if any, cross-sectional drawings).



The abstract submission shall include

- title of the paper
- author(s) name(s) and affiliation(s), telephone, fax and e-mail address
- a clear and precise outline of the novelty of the paper and major points of interest
- an indication as to whether a paper on the subject has previously been published

Abstract selection will be based on the following criteria

- relevance to space mechanisms and tribology
- originality/novelty of the ideas presented
- quality and clarity of abstract

Poster session papers should be marked as such by the authors.

The abstract form is available on

www.esmats2007.co.uk

Deadline for Abstracts

Abstracts should be sent before 31 January 2007 by email to esmats@esrtechnology.com or by post/fax to:

Attention of Simon Griffin
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United Kingdom
Tel: +44 1925 843499 Fax: +44 1925 843497

Proceedings

Authors will be notified of the Organising Committee's decision by 31 March 2007. Authors whose papers have been accepted will receive instructions for the preparation and delivery of a paper for inclusion in the symposium Proceedings that will be distributed to all participants at the symposium. The Proceedings will be available as a CD and a hand-out. The deadline for delivery will be 30 June 2007 to the ESA Editor.

Local Arrangements

Block bookings of local hotels have been made in various price categories and at preferential rates. A hotel reservation service is available on the website as well as further information on transport, etc.

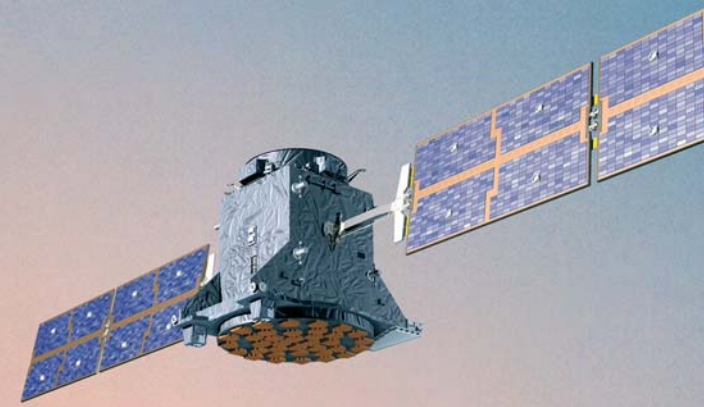
Organising Committee

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General information about ESA is available on the web at

www.esa.int



19-21 September

ESMATS

12th European Space Mechanisms And Tribology
Symposium 2007

Liverpool, UK

