The 12th International Conference on Space Operations ...

... for the Benefit of our World

Call for Papers

Welcome to SpaceOps 2012 in Stockholm

DLR and SSC are delighted to welcome you to Stockholm, Sweden, for SpaceOps 2012. The conference will, as always, provide opportunities for experts to meet, exchange ideas and discuss potential collaborations in the domain of space operations. An intensive week of presentations (oral and poster) lies in store during this exceptional and memorable event.

The SpaceOps 2012 Technical Program Committee, composed of experts from the major space organizations in the world, will prepare an ambitious program focused on today's achievements in space operations and outlining trends in the operations of future missions. An additional feature of the program will be the presentation of the SpaceOps Outstanding Achievement Award and the Distinguished Service Medal.

The conference program will bring together both experienced and young professionals and students from all over the world to discuss the current status and future ideas of space operations.
In addition to the recurring successful topics, we offer two new exciting tracks: Training and Knowledge Transfer and University Space Operations.

The program consists of presentations (oral, e-posters and posters) on the following areas:

- ★ Mission Execution
- ★ Data and Communications System Facilities
- ★ Mission Design and Mission Management
- ★ Training and Knowledge Transfer **(NEW!)**
- ★ Cross Support, Interoperability and Standards
- ★ Commercial Space Operations
- ★ Launcher, Rockets and Balloon Operations
- ★ University Space Operations **(NEW!)**

Additionally, there are plenaries on the topics:

- ★ Earth Observation
- ★ Exploration and Human Spaceflight
- ★ Communication and Navigation
- ★ Sounding Rockets and Balloons

Abstract Submission
NEW CLOSING DATE
30 November 2011

Important dates

Abstract submission opens	**12 September 2011**
Abstract submission closes	**30 November 2011**
Online registration opens	**28 November 2011**
Notification to authors	**1 March 2012**
Final paper submission closes	**30 April 2012**
Final presentation submission closes	**31 May 2012**
Conference dates	**11-15 June 2012**

Technical Program Committee
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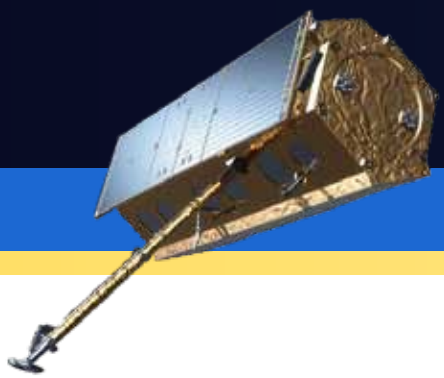
Abstract Submission

We invite to submit abstracts for SpaceOps 2012 via the conference web site at www.spaceops2012.org. The submission of abstracts will start on 12 September 2011. Simply click on Paper Submission and you will be forwarded to our web-based abstract and paper submission tool. Please do not hesitate to contact us in case of questions.



Track Descriptions

Mission Execution (ME)

All aspects of spacecraft operations of on-going missions (incl. lessons learned) as well as concepts of missions planned for the near future:

- ★ Mission planning and scheduling processes
- ★ Flight dynamics / navigation
- ★ Flight operations (satellite bus)
- ★ Instrument operations (payload)
- ★ Launch and early orbit phase operations
- ★ Commission phase operations / in-orbit tests
- ★ "Routine" (automated) operations
- ★ End of life operations
- ★ Space debris and collision avoidance
- ★ Procedure development
- ★ Fault management and recovery
- ★ New operational concepts and methods
- ★ Operations support tools (for space flight operations only; for other tools, especially for ground operations see DCSF)

Mission Design & Mission Management (MDMM)

This topic covers all aspects of mission design projects & mission management in space operations:

- ★ MDMM complements the ME topic by addressing design and management aspects.
- ★ MDMM focuses on management aspects, lessons learned and design aspects for the far future.

Data and Communications System Facilities (DCSF)

All aspects of ground facilities necessary for space operations including all H/W-components like antennas, networks and associated S/W-components:

- ★ Antenna technology:
  Antenna networks, modulation technologies, antenna design
- ★ Communications:
  Network design and technologies, network modelling / simulation, space link and space internet working, network management
- ★ Operations applications and tools:
  TM/TC processing, operations tools, operations support tools
- ★ Control center design and architecture:
  Control center design, data distribution, data archiving, virtualization, maintenance and refurbishing (strategy)

Training and Knowledge Transfer (TKT) NEW

In order to provide a high level of operational quality, it is mandatory to methodically collect knowledge and experience. Many ways of preserving, accessing and generalizing this knowledge and passing it on to other projects and new team members are in use. Gained levels of proficiency have to be maintained and to be demonstrated to auditors and customers. For the first time at a SpaceOps conference, this new topic provides a single platform for all aspects of training and knowledge transfer:

- ★ Trainers, methods, software
- ★ Certifications, programs, courses
- ★ Simulations and simulators
- ★ Cross-qualification (multi-mission)
- ★ Gaining and applying lessons learned
- ★ Preserving experience
- ★ Team training
- ★ Training facilities

SSC DLR

Cross Support, Interoperability and Standards (CSIS)

The SpaceOps community is an international community of mutual support. This topic spells out the tools and techniques of cross support and security, which has to come along with the operations:

- ★ Advanced communications protocols
- ★ Advanced standards for future missions
- ★ Applying commercial standards to space missions
- ★ Communication systems interoperability
- ★ Control center interoperability for international missions
- ★ Cross support catalogs, development and utilization
- ★ Influencing missions to adopt cutting-edge standards
- ★ Interoperability successes and failures
- ★ Security and secure interoperability
- ★ Space internet working standardizing at the architecture level
- ★ Systems of systems interoperability

Launcher, Rockets and Balloon Operations (LBO)

Rockets and balloons provide valuable platforms for upper-atmospheric and microgravity experiments as well as the familiar access to space. This topic focuses on the specific intricacies of rocket and balloon operations as well as the challenges of preflight and testing activities, ground and facility operations, launch, in-flight and recovery operations. Papers discussing all operational aspects of rocket and balloon flight from concept through implementation to flight and final recovery and evaluation are invited for this topic:

- ★ Balloon operations
- ★ Educational & scientific (sounding) rocket operations
- ★ Suborbital launch operations
- ★ Microgravity research
- ★ Launch site / launch operations concepts
- ★ Payload and customer integration
- ★ Simplifying the launch readiness process
- ★ Launch site selection, operations, infrastructure and conversion
- ★ Real-time launch and range safety operations
- ★ Launch monitoring strategies: tracking, sensors, cameras, etc.
- ★ Special challenges of commercial launch operations
- ★ Vehicle and payload recovery

NEW

University Space Operations (USO)

The USO topic covers any aspect of space operations as described within the other topics. In addition, the following is included:

- ★ New ideas for conducting operations on university side
- ★ Operations support from universities to others
- ★ Payload science, payload operations by universities
- ★ University mission operations and third party mission operations performed by universities, including launch brokering (Cubesat launches), standard operations architectures (e. g. standard elements of Cubesats, open common bus protocols)
- ★ Ground infrastructures (e.g. shared ground station systems such as GENSO, the university answer to SLE)
- ★ Career perspectives for students

Commercial Space Operations (CSO)

Operational approach for all ground and satellite operations of commercial providers for data, voice and video services, public-private partnerships (PPP), commercial orbital transportation services (COTS) and commercial crew development (CCDev) companies.

- ★ Spacecraft operations
- ★ Ground operations
- ★ Private public partnerships (PPP)
- ★ Commercial orbital transportation services
- ★ Commercial crew development
- ★ Space tourism

Conference Overview

Contact and Information

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Congress venue
Stockholm Waterfront Congress Centre
www.stockholmwaterfront.com

Congress web site
www.spaceops2012.org

Key statistics from SpaceOps 2010
- ★ Over 700 attendees
- ★ 24 countries represented
- ★ Over 300 technical papers
- ★ 30 exhibitors

SpaceOps
The leading conference for the space operations community

The SpaceOps conference is a technical forum of the space operations community that addresses state-of-the-art operations principles, methods and tools. Held biennially since 1990 as part of the SpaceOps Organization's activities, the conference attracts technologists, scientists, managers and experts from space agencies, academia, space-related industry and military organizations.

Conference Overview

The space technology and service provider SSC and the German Aerospace Center DLR will combine their expertise to organize and host SpaceOps 2012 in the week **11-15 June 2012**, in association with Congrex and AIAA. All partners look forward to welcoming you to Stockholm for a thought-provoking and innovative exchange of ideas and concepts.

- ★ See what's new
- ★ Share your experience
- ★ Exchange innovative ideas
- ★ Learn from other missions
- ★ Listen to renowned experts
- ★ Meet and cooperate