

ENHANCING SPACE OPERATIONS WORKSHOP

Track Descriptions

The **Training and Simulation** track means to address the issues and the solutions to preparations for future missions. The complexity and length of exploration missions, the multitude of vehicles and mission phases will be a challenge to prepare the crews in space and on the ground. The workshop also hopes to attract papers on the history of training or simulation that provide perspective on this new enterprise that the space community faces.

The **Risk Management** track allows operations professionals to exchange ideas and techniques with a wide variety of operations communities to reduce the risks associated with space operations. This year's focus will be on tools and processes used to investigate incidents and mishaps. Invited speakers include representatives from the Federal Aviation Administration, the Federal Railroad Administration, NASA, and the petrochemical industry, as well as representatives from commercial, military, and scientific space operations.

The **Advanced Concepts / Automation** track will focus on future directions that spacecraft systems and associated operations might take and the impact on current approaches. The goal is to identify and pursue advanced concepts that will increase overall mission efficiency in the end-to-end life cycle. A series of speakers will present their organization's current and future implementations of autonomous systems. Presentations, demonstrations and tours will showcase future approaches for both manned and unmanned missions.

The **Best Practices** track will focus on the theme of how organizations design and implement effective systems and processes that (1) capture appropriate lessons learned/best practices across multiple, ongoing missions and (2) integrate that information into the spacecraft design and operations processes. The Track will feature several presentations from organizations that have a variety of experiences in this area, with ample time allotted for open forum discussion. We will focus on questions such as how to efficiently capture the right kind of information, how to ensure that information is kept current and relevant, and how that information is fed into the process for designing and operating future spacecraft.

The **Tools and Technology** track is designed to address how technology innovations and ongoing tool development is impacting both existing and future operations. This is an opportunity for both operations experts and technologists to work in an open forum to define the current state of the art and identify the gaps between existing and needed capabilities required to support future operational concepts. Representatives from Academic, Industry and Government will present the latest planned developments and how they tie into the overall vision for operations supporting manned and unmanned spaceflight.

The **Mission Operations** track will focus on various areas of overall mission management and execution. This track will have presentations by people involved in all stages of mission planning and operations. We will also have an opportunity to share experiences and discuss today's challenges for the operations community. Because of the nature of the workshop location, on-orbit operations will be the focus, but launch operations people are welcome and encouraged to attend!

