

Abstract Submission Process for SpaceOps 2018

Make sure you submit your Abstract before the deadline for submission, i.e. July 06, 2017.

Once connected on ScholarOne, after selecting the “Submit an Abstract” button, follow the next steps of the present process.

Please, read the Abstract Submission Guidelines and use the Abstract Template.

Step 1:

- a. Submitting Author to list the title of the abstract.
- b. Submitting Author to enter the Presenter biography.

Step 2:

- a. Select your first choice of presentation type (required) and a presentation sub- type (optional) among:
 - i. Oral Presentation
 - a) Oral classical
 - b) Oral with a software demo
 - ii. Traditional Poster
 - iii. Electronic Presentation
 - a. Electronic Poster
 - b. Open Access Presentation

To make sure of your choice, read the information on presentation types .

- b. If your first choice is “Oral Presentation”, check the box to indicate you would accept to present in a different presentation type.
- c. If your first choice was not “Traditional Poster Presentation”, check the box to indicate you would accept to present a Traditional Poster.
- d. Select submission topic and subtopic
Note: The author can only select one topic and one subtopic
- e. Select 1-3 key words relating to the abstract

Step 3:

- a. Enter each author(s) name(s)
- b. Enter each author(s) affiliation(s)
- c. For each author indicate whether he is a student or not.

Step 4:

- a. Read the “rules and reminders” and check the box that you agree to them
- b. Read the “Abstract template and guidelines ” and check the box that you agree to them
- c. Upload your abstract file and check the box to acknowledge that you are submitting your abstract file only once

Step 5:

- a. Review your submission input
- b. Click the submit button at the bottom right
- c. Authors will be notified via email after completing their submissions

Guidelines / Definitions for Abstract Submission

Several aspects and choices in the submission process are new compared to the previous SpaceOps conferences. They reflect the presentation types that are offered at the 2018 conference.

Therefore, it is recommended to read the following definitions as they point out those novelties, in particular on the new presentation types and sub-types. The intent is also to explain what may happen at the time of selection or later on, after being selected, in terms of changes in the presentation type with respect to the initial submission.

A. Presentation Type and Sub-Type

The Call for Papers will offer the authors the freedom to submit an abstract for a selection as:

- An Oral presentation (Oral Classical or ~~New for this conference~~ Oral Demo style),
- A Traditional Poster presentation
- An Electronic presentation (Electronic Poster or ~~New for this conference~~ Open Access Presentation)

The various submission types and sub-types that are proposed and the possibilities for initial selection by the submitting Author and later changes by the Selection Committee (SC) are summarized in the table below:

Author's first choice presentation type	Definition	Possible proposal by the SC (if author accepted alternate types)	Possible later change if initially selected for this type, in case of other papers withdrawals
Oral presentation (O)	Presentation given in oral session room (<i>see OC and OD sub types below</i>)	O, EP or T-P	None
Electronic presentation (EP)	Presentation given out of oral session rooms, on a computer in the poster area (<i>see EP-OA and EP-eP sub types below</i>)	EP, O or T-P	O may be offered instead of EP, if known in advance or, if a last minute opportunity, O may be offered in addition to EP
Traditional poster (T-P)	Free format printed paper poster presented by the author(s) on a wall / support in the poster area	T-P	None
Author's first choice presentation sub type	Definition	Possible proposal by the SC (if author accepted alternate types)	Possible later change if initially selected for this type, in case of other papers withdrawals
<i>Oral Classical (OC)</i>	Presentation basically given in free format, e.g. classical power point (without software demos).	<i>OC, EP-OA or T-P</i>	None
<i>Oral with Demo (OD)</i>	Presentation given with a software demo in free	<i>OD or EP-eP</i>	None

	format, possibly associated to an oral classical introduction		
<i>Electronic Open Access presentation (EP-OA)</i>	Free access presentation (via menus) on a stand alone computer in the poster area. Similar to an Oral Classical presentation.	<i>EP-OA, OC or T-P</i>	<i>OC if in advance to the conference</i>
<i>Electronic poster presentation (EP-eP)</i>	Presentation on the author's computer, possibly including a software demo associated to an oral classical introduction. Similar to an Oral with Demo presentation.	<i>EP-eP, OD or T-P (except if a demo is included)</i>	<i>OD if in advance to the conference</i>

Note: **New for this conference** - Oral presentations may be called to be presented in interactive oral sessions (or mini workshop), meaning that the presentations in the session will be followed by a 30 minutes discussion.

B. Topics

The selection of Topics and sub-Topics for the SpaceOps 2018 is possible via menus on ScholarOne.

The Author(s) should do their best effort to suggest what they understand to be the 1st best fit of the Abstract to the Topics which are under consideration by the Conference organization; this Topic is the one where the Author will deposit his Abstract on the AIAA web site.

New for this conference: In case of hesitation, the author may use the pseudo-Topic "Decision on the allocation to one Topic is left to Selection Committee", meaning that the allocation to a Topic will not be a decision of the Author.

The indication of sub-Topics is more optional and may help in the session building process that will follow the selection.

However, the TPC retains the right to overrule the author's selection if deemed necessary to optimize the overall program.

SPACEOPS 2018 List of Topics / Sub Topics

1 *Mission Design and Management*

- Mission Design
- Mission Architectures
- Mission Engineering and Planning
- Mission Simulation and Modelling
- Early Concepts for Advanced Missions
- Evolving Mission Capabilities
- Long-Range Planning and Mission Optimization
- Mission Design for Complex Constellations
- Mission Design for Robotic Missions
- Multi-mission Approaches and Strategies
- Planning for Planetary Relay and Surface Communications
- Revectoring Old Missions to New Tasks
- Space Debris and Mission Design Mission Management
- Cost-Effective Operations Approaches
- International Cooperation for Mission Management
- Managing Mission Risks and Opportunities
- Public Engagement
- Regulations and Laws Affecting Operations
- International, Public, and Private Cooperation
- International Cooperation on Other Planets

2 *Operations Concepts and Flight Execution*

- Mission Operations Concepts (application layer)
- Flight Operations Concepts (end-to-end)
- Flight Execution Processes
- Real-time Flight Control, Lessons Learned and Plans
- Operations Automation and Optimization
- Operations Engineering
- Operations Procedures Management
- Operational Validation
- Operations Management
- Operations Concepts for Constellation & In Situ Operations
- Operations Concepts for Robotic Missions
- Payload Operations Concepts
- End of Life Operations
- Fault Management and Recovery

- Processes for Designing Operations
- Spacecraft Emergency and Contingency Operations

3 *Ground Systems Engineering and Data Management*

- Ground Segment Engineering
- Ground Systems Engineering
- Control Centre Architectures
- Ground Data Systems Development, Validation and Maintenance
- Advanced Technologies for Space Operations
- Flight Control Systems and EGSE
- Ground Segment Architectures and Design
- Payload Monitoring and Control
- On-board/ground Interfaces
- Data Management
- Space Cyber Security
- Archive Systems and Data Mining
- Automation and Health Monitoring, Flight and Ground
- Data Distribution
- Information Architectures and Information Models
- Operations System Architectures and Services
- Payload and Science Data Handling
- Service Oriented Architectures
- Software Development and Maintenance
- Systems Engineering and System Design for Operability
- Ground Systems Testing and Validation

4 *Planning and Scheduling*

- Mission Planning and Scheduling Methods
- Mission Planning Systems
- Planning and Scheduling Systems
- Asset Scheduling
- Merging Plans from Different/many Agencies
- Merging Plans from MOCs and SOCs
- Resource Management
- Realtime Replanning Techniques
- Science Observation Planning
- Detailed Crew Planning versus “Job Jars”

5 *Guidance, Navigation, and Control*

- Flight Dynamics and Navigation
- Attitude Determination and Control

- Challenges in Trajectory Design and Analysis
- Interplanetary Missions
- Formation/Constellation Management
- Global Navigation Systems and Applications
- GNC and Astrodynamics Software
- Space Debris and Collision Avoidance
- Techniques for Using Earth-Orbital Global Positioning System (GPS) at Lunar Distances
- GPS Constellations for Other Planetary Bodies

6 *Communications Architectures and Networks*

- Communications, Ground and Space Networking
- Network Operations and Management
- Ground Network Implementation
- Integrating Communications Networks
- Ground Communications
- Ground Network and Antenna Concepts
- Communications Architectures for Complex Constellations
- Operational Impact of Spectrum Allocations
- Layered versus Integrated Architectures
- Network Transitions during Operations
- Reliance on Public Networks
- Backup Communications Approaches
- Interplanetary Networking
- Integrating space and Ground Networks

7 *Human Systems and Operations*

- Human Spaceflight
- ISS Operations
- Training for Human Operations
- Mission Architectures for Human Spaceflight
- Flight Crew Operations Techniques
- Human Operations with Long Lightspeed Delays
- Long Duration Human Missions – New Concepts
- International Factors for Crew Operations
- Crew-driven Requirements (videoconference, comm bandwidth, etc.)
- Medical Operations in Human Missions (not an emphasis on medical techniques)
- Reliability (RMA) Standards and Methods, Unique for Human Spaceflight
- Human/Robotic Integration and Cooperation
- Habitat Operations, Orbital and Planetary Surface
- Mission Analog Operations on Earth
- Space Environment Factors for Human Lunar/Mars Mission Design

8 *Cross Support, Interoperability, and Standards*

- Communications Standards (Link Layer, Network Layer, Application Layer etc.)
- Communications Standards - Network
- Communications Standards - Application Layer
- Software Standards
- Interoperability and Cross Support Standards
- Telerobotics Standards
- Advanced Standards for Future Missions
- Secure Interoperability and Cross Support
- Other Relevant Standards
- Applying Commercial Standards to Space Missions
- 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 Internetworking Standards
- Standardizing at the Architecture Level
- Systems of Systems Interoperability

9 *Training and Knowledge Transfer*

- Knowledge Management
- Knowledge Transfer
- Lessons Learned Assessment & Management
- Training Methodologies
- Simulation Methods & Tools
- Human Factor & Behaviour in Operations
- Training Simulators
- Simulation and Training Operations, Techniques

10 *Launcher, Rocket, and Balloon Operations*

- Operations Concepts for Launchers and Ground Facilities
- Launch Vehicle Operations
- Launch Facilities Operations
- Launch Vehicle Systems Operability
- Pre-Launch Integration and Test
- Launch Vehicle Availability, Reliability, and Risk Management
- Launcher Integrated Health Monitoring
- Engine Test Stand Operations
- Ground Processing for Vehicles and Payloads

- Integrated Vehicle Health Monitoring and Operations
- Launch Monitoring Strategies: Sensors, Cameras, etc.
- Launch Pad Conversion for New Launch Vehicles
- Launch Pad Infrastructure – Complex to Clean
- Launch Site Logistics
- Launch Site Selection Strategies
- Payload and Customer Integration
- Realtime Launch Operations
- Responsive (Fast) Launch Processes
- Special Challenges of Commercial Launch Operations
- Balloons and Sounding Rockets

11 *Small Satellite Operations*

- CubeSat and NanoSat Operations
- TT&C Systems
- Flight Operations
- Frequency Allocation Challenges
- Regulations and their Challenges
- Challenges with Small Satellite Operations
- Small Satellite End of Life Operations
- CubeSat Networks/Swarms; Constellation Operations
- Nano-Technologies
- Small Satellite Control Center Ops Concepts

12 *Commercial Space Operations*

- Air and Space Traffic Management
- Commercial Manned Spaceflight
- Commercial Orbital Transportation Services
- Commercial Spaceports
- Lean and Lights-out Commercial Control Centres
- Managing Constellation of Satellites
- Operations with Space Tourists On-board
- Training Spaceflight Participants
- Commercial Utilization of International Spatial Station (ISS)

13 *Inspiring the Next Generations*

- Educational and Inspirational applications of Space Operations
- Space operations challenges in the New Space World
- Space Education Initiatives
- Government, Agencies and corporate outreach programs
- Educators, students and young professionals' projects

- Satellite and Science Operations by academia
- New ideas for conducting operations on academia side
- Mission operations support from academia to others

14 “Decision on the allocation to one Topic is left to Selection Committee”

This is a Topic that will be exposed just at the time of the Call For Paper, to offer an option to those who are not sure which Topic best fits their Abstract. The final allocation to one of the above Topics will be made by the Selection Committee who is composed of members of the Technical Program Committee.