CALL FOR CONTENT
37th AAS/AIAA Space Flight Mechanics Meeting
Loews New Orleans Hotel, New Orleans, Louisiana
NEW ABSTRACT DEADLINE: SUNDAY OCTOBER 4, 2026

NOTE: the abstract submission requirements have recently been revised. We encourage prospective authors to carefully read the call for content, as the abstract submission requirements will be used as criteria in the selection process.

The 37th AAS/AIAA Space Flight Mechanics Meeting (SFM-2027) will be held January 17–21, 2027 at the Loews New Orleans Hotel, New Orleans, Louisiana. SFM-2027 is organized by the American Astronautical Society (AAS) Space Flight Mechanics Committee and the American Institute of Aeronautics and Astronautics (AIAA) Astrodynamics Technical Committee. Manuscripts and posters are solicited on topics related to space flight mechanics and astrodynamics, including but not limited to:

- Asteroid and interplanetary mission and trajectory design
- Cislunar astrodynamics
- Atmospheric re-entry guidance and control
- Attitude dynamics, determination, and control
- Attitude-sensor and payload-sensor calibration
- Dynamical systems theory applied to space flight problems
- Earth orbital and planetary mission studies
- Machine learning and artificial intelligence applied to space flight
- Space autonomy and space robotics
- Orbital dynamics, perturbations, and stability
- Orbit determination and estimation
- Orbital debris and space environment
- Rendezvous, relative motion, proximity operations, and docking
- In-space assembly, manufacturing, and servicing
- Satellite constellations and formations
- Small satellite missions
- Spacecraft guidance, navigation, and control (GNC)
- Space Domain Awareness (SDA) and space-surveillance
- Trajectory / mission / maneuver design and optimization
- Low thrust trajectories
- Multibody dynamics and trajectory design
- History of space and future concepts

Submissions will be accepted based on the quality of the extended abstract or draft manuscript for oral/poster presentations, the originality of the work and/or ideas, and the anticipated interest in the proposed subject. Submissions that are based on experimental results or current data, or report on ongoing missions, are also of interest. Complete manuscripts are required before the conference. English is the working language for the conference.

ORAL/POSTER PRESENTATION SELECTION PROCESS

The extended abstracts or draft manuscripts will be reviewed by a team of reviewers appointed by the program committee. The conference chairs will inform the authors of the acceptance of their papers by November 2, 2026. Instructions about preparing the extended abstract or draft manuscript to enhance the chances of acceptance are provided in the information for the authors.

SPECIAL SESSIONS

Proposals are sought for suitable special sessions, such as plenary and keynote talks as well as larger-scale thematic talks. A proposal for either of these should include the session title, a brief description of the topic(s), and a list of the speakers and their qualifications. For a themed session, a proposal should include the session title, a brief description, and a list of prospective speakers and paper titles. Themed session speakers are expected to provide a full paper. Note that the abstracts considered for the Special Session shall be submitted through the Abstract submission system and individually accepted for oral presentations. Prospective special session organizers should submit their proposals to the Technical Chairs by September 16th, 2026, and acceptance will be notified by the abstract submission deadline.

STUDENT TRAVEL AWARDS

The AAS Space Flight Mechanics Committee selects the John V. Breakwell Student Travel Award. This award provides travel expenses for up to five (5) students from U.S. and Canadian universities presenting at the conference. Awardees will receive monetary support (up to $2,000) to attend the conference. The award applications have the same due date as the extended abstracts. Details and application instructions may be found on the conference website. Students are strongly encouraged to submit a draft manuscript as part of their award application.

Additional student travel awards may become available closer to the conference, pending the availability of external funding. To be considered for any additional student travel awards, follow the same application instructions and deadline as the John V. Breakwell Student Travel Award.

INFORMATION FOR AUTHORS

Oral Presentations. The extended abstracts submitted by the deadline of October 4 will be reviewed and considered for acceptance by the conference organizing committee. Notification of acceptance will be sent via email by November 2. Detailed author instructions will be sent by email after acceptance. By submitting an abstract, the author affirms that the manuscript's majority content has not been previously presented or published elsewhere.

Authors may access the web-based abstract submittal system using the link available via the official website http://www.space-flight.org. During the online submission process, authors applying to the oral presentations are expected to provide:

1. A paper title, as well as the name, affiliation, postal address, and email address of the corresponding author and each co-author.
2. An extended abstract or draft manuscript in the Portable Document File (PDF) format of

at least 1000 words that includes the title and authors; provides a clear and concise statement of the problem to be addressed; the proposed solution method and intellectual merit with respect to prior literature; the results expected or obtained in detail; and an explanation of its significance to astrodynamics and/or space flight mechanics, with pertinent references and supporting tables and figures as necessary. The authors are requested to provide sufficient detail in the extended abstract or draft manuscript to aid the reviewers in making an accurate assessment of the potential of the contributions, the originality of the work and/or ideas, and the anticipated interest in the proposed subject.

3. A condensed abstract (100 words) to be included in the conference program. This is directly typed into the text box provided on the web page and avoids the use of special symbols or characters, such as Greek letters.

Foreign contributors requiring an official letter of acceptance for a visa application should indicate it on the abstract submission form and contact the Technical Chairs by email at their earliest opportunity following paper acceptance.

Poster Presentations. One or more poster sessions are being considered for this event, which would allow presenters to showcase and discuss their work over an extended period (e.g. two hours). Abstract submission requirements for a poster would be the same as an oral presentation, and all poster session participants may be required to submit a full paper to be included in the conference proceedings. During the abstract submission process, authors will have the option to express a preferred presentation mode (oral or poster), noting that the conference organizers may need to adjust this according to available space. Poster mounts will be provided, and more detailed information on the poster size and format will be provided later.

Technology Transfer Notice. Technology transfer guidelines substantially extend the time required to review abstracts and manuscripts by private enterprises and government agencies. To preclude late submissions and withdrawals, it is the responsibility of the author(s) to determine the extent of necessary approvals prior to submitting an abstract.

No-Paper/No-Presentation Policy. For abstracts submitted for oral/poster presentation, a complete manuscript must be electronically uploaded to the website prior to the conference in PDF format. The manuscript shall be no more than twenty (20) pages in length and conform to the AAS manuscript format. MS Word and LaTeX templates for the AAS manuscript format will be made available on the conference website. If a complete manuscript is not received on time, then its oral presentation at the conference shall be forfeited. If a presentation is not made by an author at the conference, then the manuscript shall be omitted from the published proceedings.

Notice to the Authors Regarding Conference Proceedings. Papers accepted to the AAS/AIAA Space Flight Mechanics meeting will be included in the Conference Proceedings. Authors are encouraged to submit their work to The Journal of the Astronautical Sciences (JASS) for publication. Articles published in the JASS present significant new results, important insights, or state of the art review process as outlined on https://link.springer.com/journal/40295.

Questions concerning the submission of abstracts/manuscripts, and special session proposals should be addressed to the Technical Chairs:

AAS Technical Chair
Dr. Brian McCarthy
Brian.p.mccarthy@nasa.gov

AIAA Technical Chair
Dr. Jinjun Shan
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All other questions should be directed to the General Chairs:

AAS General Chair
Dr. Mar Vaquero
Mar.vaquero@jpl.nasa.gov

AIAA General Chair
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