



CALL FOR PAPERS

The 31st AAS/AIAA Space Flight Mechanics Meeting Sheraton Charlotte, Charlotte, North Carolina

ABSTRACT DEADLINE: 5 October 2020

The 31st Space Flight Mechanics Meeting will be held January 31-February 4, 2021 at the Sheraton Charlotte in Charlotte, North Carolina. The conference is organized by the American Astronautical Society (AAS) Space Flight Mechanics Committee and co-sponsored by the American Institute of Aeronautics and Astronautics (AIAA) Astrodynamics Technical Committee. Manuscripts are solicited on topics related to space-flight mechanics and astrodynamics, including but not limited to:

- Space robotics and autonomous space operations
- Earth orbital and planetary mission studies
- Asteroid and non-Earth orbiting missions
- Trajectory / mission / maneuver design and optimization
- Orbital dynamics, perturbations, and stability
- Rendezvous, relative motion, proximity missions, and formation flying
- Satellite constellations
- Dynamical systems theory applied to space flight problems
- Reusable launch vehicle design, dynamics, guidance, and control
- Machine learning, artificial intelligence, applied math applied to space flight problems
- Orbital debris and space environment
- Space Situational Awareness (SSA), Conjunction Analysis (CA), and collision avoidance
- Orbit determination and space-surveillance tracking
- Spacecraft guidance, navigation and control (GNC)
- Attitude dynamics, determination and control
- Ground-based sensors for space applications and payload-sensors
- Atmospheric re-entry guidance and control
- Dynamics and control of large space structures and tethers

Manuscripts will be accepted based on the quality of the extended abstract, 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 especially encouraged. Complete manuscripts are required before the conference. English is the working language for the conference.

SPECIAL SESSIONS

Proposals are being considered for suitable special sessions, such as topical panel discussions, invited sessions, workshops, mini-symposia, and technology demonstrations. A proposal for a panel discussion should include the session title, a brief description of the discussion topic(s), and a list of the speakers and their qualifications. For an invited session, workshop, mini-symposium, or demonstration, a proposal should include the session title, a brief description, and a list of proposed activities and/or invited speakers and paper titles. Prospective special-session organizers should submit their proposals to the Technical Chairs.

BREAKWELL STUDENT TRAVEL AWARD

The AAS Space Flight Mechanics Committee announces the John V. Breakwell Student Travel Award. This award provides travel expenses for up to three (3) students currently enrolled at U.S. and Canadian universities presenting at this conference. Students wishing to apply for this award are strongly advised to submit their completed manuscript by the abstract submittal deadline. The maximum coverage per student is limited to \$1000. Details and applications may be obtained via <http://www.space-flight.org>.



INFORMATION FOR AUTHORS

Because the submission deadline of 5 October 2020 has been fully extended for the convenience of contributors, there are no plans to defer this deadline due to the constraints of the conference planning schedule. Notification of acceptance will be sent via email by 5 November 2020. Detailed author instructions will be sent by email following 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 are expected to provide:

1. a paper title, as well as the name, affiliation, postal address, telephone number, and email address of the corresponding author and each co-author,
2. an extended abstract in the Portable Document File (PDF) format of at least 500 words that includes the title and authors, and provides a clear and concise statement of the problem to be addressed, the proposed method of solution, the results expected or obtained, and an explanation of its significance to astrodynamics and/or space-flight mechanics, with pertinent references and supporting tables and figures as necessary, and,
3. a condensed abstract (100 words) to be included in the conference program, which 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 contact the Technical Chairmen by email at their earliest opportunity.

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-Podium Policy – A complete manuscript must be electronically uploaded to the web site prior to the conference in PDF format, be no more than twenty (20) pages in length, and conform to the AAS manuscript format. If a complete manuscript is not received on time, then its presentation at the conference shall be forfeited; and if a presentation is not made by an author at the conference, then the manuscript shall be omitted from published proceedings.

Questions concerning the submission of manuscripts should be addressed to the technical chairs:

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All other questions should be directed to the General Chairs:

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