

CALL FOR PAPERS

The 2020 AAS/AIAA Astrodynamics Specialist Conference

Lake Tahoe Resort Hotel – South Lake Tahoe, CA

ABSTRACT DEADLINE: APRIL 10, 2020

The 2020 AAS/AIAA Astrodynamics Specialist Conference will be held August 9-13, 2020 at the Lake Tahoe Resort Hotel in South Lake Tahoe, CA. 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 necessarily limited to:

- Asteroid and non-Earth orbiting missions
- 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
- Dynamics and control of large space structures and tethers
- Earth orbital and planetary mission studies
- Flight dynamics operations and spacecraft autonomy
- Orbital dynamics, perturbations, and stability
- Orbit determination and space-surveillance tracking
- Orbital debris and space environment
- Rendezvous, relative motion, proximity missions, and formation flying
- Reusable launch vehicle design, dynamics, guidance, and control
- Satellite constellations
- Spacecraft guidance, navigation and control (GNC)
- Space Situational Awareness (SSA), Conjunction Analysis (CA), and collision avoidance
- Trajectory / mission / maneuver design and optimization
- Technology Anniversary: Lessons Learned and Impact
- The history of Astrodynamics: Review of seminal astrodynamical, theoretical and practical developments

Artemis Program Special Session: In addition to the above general topics, papers are also solicited for a special session on the flight dynamics of NASA's Artemis Program, which includes research and development on the Space Flight System, Orion spacecraft, Lunar Gateway, as well as longer-term plans for crewed flights to Mars. Authors are asked to indicate on the abstract submission if you would like to be considered for inclusion in this special session. Manuscripts not selected for this special session will be allocated to other relevant sessions.

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 no later than July 31, 2020. English is the working language for the conference.

INVITED SESSIONS

Proposals are being solicited for invited sessions on topics of interest to the space flight community but currently not being covered in conference. Session proposal should concisely (not more than 4 pages) provide a rationale and objectives for the proposed session topic, relevance to AAS community, and a list of minimum 6 papers with their authors & abstracts. It is the session organizer's duty to collect all listed paper abstracts and attach them to the session proposal in a single file. The session proposal should discuss how listed papers comprise an interesting and cohesive session on the topic. Prospective invited session organizers should submit their proposals to the Technical Chairs.

SPECIAL SESSIONS

Proposals are being solicited for suitable special sessions, such as topical panel discussions, 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. 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) U.S. and Canadian students presenting at this conference. The travel award applications have the same due date as the extended abstracts unless otherwise noted on the conference Call for Papers. The maximum coverage per student is limited to \$1000. Details and applications may be obtained via https://www.space-flight.org/docs/Breakwell/Breakwell_award.pdf.

INFORMATION FOR AUTHORS

Because the submission deadline of April 10, 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 May 9, 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 Chairs 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 July 31, 2020 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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