AIAA Aircraft Design Technical Committee

Call for Papers

AIAA SCITECH 2022 Forum and Exposition

Papers are sought on all aspects of atmospheric flight vehicle design, including fixed and rotary wing, subsonic through hypersonic, micro air vehicles to very large aircraft, general aviation, urban/on-demand mobility, and manned or unmanned aircraft. Topics such as design methodologies and processes, design tools, design integration, technology developments, innovative designs, case studies, and design education are welcome. Review papers on recent developments and trends in aircraft design are also sought. Design considerations such as environmental issues, energy optimization, noise reduction, electric aircraft systems, reducing manufacturing, operating, and life-cycle costs, etc. are also important topics of interest.

- Aircraft Configurations (Sailplanes, BWB, Joint Wing, Folding Wing, Canard, Multi-Wing, etc.)
- Aircraft Design Education
- Aircraft Design Optimization (Multidisciplinary Design, Integration, Methods and Processes, etc.)
- Aircraft Structural Design (Methods, Materials, Morphing Structures, Multifunctional Structures)
- Aircraft electrification- primary power (electric, hybrid and/or distributed propulsion, etc.)
- Aircraft electrification- secondary power (More Electric Aircraft, electrified system architectures)
- Design for Performance and Operations (Braced-Wing, Boundary Layer Control, Formation Flying)
- Design Processes and Tools (Integration, Estimation Methods, Concurrent Design, Life-Cycle, etc.)
- Light Aircraft Design (General Aviation, On-Demand Mobility Aircraft, Personal Air Vehicle, etc.)
- Trends in Aircraft Design: Technology Impact, Requirements, Cost, Propulsion, Automation, etc.
- Unmanned Aircraft Design, Including Micro Air Vehicles

Please direct questions to the Aircraft Design Technical Discipline Chair: imonchakraborty@auburn.edu

Note: Authors submitting abstracts are strongly encouraged to review the extended abstract guidelines below. Non-conforming abstracts will be rejected during the review process.

Guidelines for Submitting Extended Abstracts:

To ensure high-quality technical papers, extended abstracts must conform to the guidelines stated below. Submissions that do not comply with these requirements will be rejected during abstract review.

- Submitted extended abstracts must conform to the AIAA template for conference papers: https://www.aiaa.org/events-learning/events/Technical-Presenter-Resources
- Extended abstracts must have a minimum of 1,000 words but must not exceed 25 pages in length.
- Authors should follow the following guidelines regarding the contents of the extended abstract.
    - **Abstract:** The extended abstract must begin with a 100-200 word abstract.
    - **Introduction:** This must be followed by an introduction section that provides the background/context for the paper, a brief assessment of prior work by others, and an explanation of the paper's main contributions.
    - **Technical sections:** Appropriately titled technical sections should be included that provide sufficient details on the methodology or technical approach.
        - Authors should provide as much relevant information as possible/available to allow reviewers to make an informed evaluation of the extended abstract.

- Relevant figures, diagrams, or flowcharts that aid in understanding the technical approach are strongly encouraged.
- Though not mandatory, any preliminary results, if available and releasable, may be included in the extended abstract.
- Authors should provide evidence that the proposed scope of the paper and current status of work is such that there is a very high chance of on-time completion (by manuscript deadline).

o **References:** A list of references used by the authors or relevant to the proposed work must be provided. All such references must be cited in the extended abstract.