

# AIAA Aircraft Design Technical Committee

## Call for Papers

### 2022 AIAA AVIATION

We seek technical papers in all of areas 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. Areas of interest include system level design studies of complete aircraft (both traditional and unconventional). We also seek papers covering the requirements development process as well as discipline-level studies most applicable to the conceptual and preliminary design process including aircraft performance, aerodynamics, propulsion, flight mechanics, structures, manufacturing, overall aircraft sizing as well as subsystem component sizing.

- Complete Aircraft Design (Military, GoFly, UAV, UCAV, UAM, MAV, etc.)
- Complete Civil Transport Aircraft Design for minimal environmental impact
- Assessment of integrated propulsion concepts at aircraft level (Open Rotor, Hybrid Electric, H2,...)
- Assessment of integrated new technologies at aircraft level (performance, production, cost)
- Aircraft Design Case Studies, Operational Market and Systems Engineering Analysis
- Aircraft Design Tools & Processes (Aero, Perf, Prop, S&C, Flt Mech, Structures, Weight, Sizing, etc)
- Aircraft Subsystems Design, Tools & Processes (i.e. Size, Weight, Power, Thermal, Redundancy)
- Aircraft Requirements Studies (to Drive System Design; i.e. UAM, Airports, AirTaxi, Hub & Spoke)
- Aircraft Design Tools & Processes to improve Safety and ensure Regulatory Compliance

Please direct questions to the Aircraft Design Technical Discipline Co-chairs: [ttakahas@asu.edu](mailto:ttakahas@asu.edu) and/or [Peter.Schmollgruber@onera.fr](mailto:Peter.Schmollgruber@onera.fr)

Authors submitting abstracts are strongly encouraged to consider our review guidelines. Submissions will be scored based on the following rubric:

- **Technical quality**
  - EXCELLENT = 5 = ideas are clearly presented and well supported
  - ABOVE AVERAGE = 4 = ideas are clearly presented
  - AVERAGE 3 = ideas are not fully worked out
  - BELOW AVERAGE 2 = ideas are interesting, but not worked out
  - POOR = 1 = ideas are not clearly articulated
- **Importance/relevance to the field**
  - EXCELLENT = 5 = fundamental work leading to step changes in aircraft design
  - ABOVE AVERAGE = 4 = on-topic with call-for-papers, hot topic in the field
  - AVERAGE = 3 = on-topic with call-for-papers, cold topic area
  - BELOW AVERAGE = 2 = weak link with the call-for-papers
  - POOR = 1 = off-topic

- **Originality**
  - EXCELLENT = 5 = revolutionary, insightful work, transformational
  - ABOVE AVERAGE = 4 = Important evolutionary study with respect to state of the art
  - AVERAGE = 3 = Evolutionary work with respect to state of the art
  - BELOW AVERAGE = 2 = Simple new test case base on existing approaches / method
  - POOR = 1 = rehash of existing paper
- **Conciseness/style/clarity**
  - EXCELLENT = 5 = well written on AIAA template, no/few typographical errors
  - ABOVE AVERAGE = 4 = needing of a final proofread / generally well written
  - AVERAGE = 3 = obvious lack of proofing but easy to understand
  - BELOW AVERAGE = 2 = rough and somewhat difficult to understand
  - POOR = 1 = very rough and difficult to understand / not on template
- **Potential to be a good paper**
  - EXCELLENT = 5 = a complete paper (no upper page count)
  - ABOVE AVERAGE = 4 = a draft paper showing all results that have been achieved to date
  - AVERAGE = 3 = a 50% complete paper - obvious areas noted for completion
  - BELOW AVERAGE = 2 = 1500 word extended abstract
  - POOR = 1 = < 1000-words