

# Aerodynamic Decelerator Systems Technical Committee

## Technical Committee Guidelines

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### SCOPE

Development and application of aerodynamic decelerator systems and lifting parachutes, pararotators, and inflatable decelerators for aerodynamic deceleration, sustentation, and landing of manned and unmanned vehicles.

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## **CHARTER**

### **Purpose**

This technical committee serves the following purposes:

1. To assemble a group of specialists in the technologies related to Aerodynamic Decelerator Systems (ADS) research and technology that can best identify the ADS capabilities, requirements, and opportunities for new development.
2. To focus attention on the present and future needs for ADS to improve the capabilities, quality, reliability, and customer knowledge of ADS.
3. To promote the transfer of ADS technology between related technical disciplines to include other AIAA TC's.
4. To help manage the timely dissemination of state-of-the-art information regarding ADS technology to the Aerospace Community and the public through sponsoring of seminars, conferences, short courses and other methods.
5. To sponsor, facilitate and organize the bi-annual ADS Seminar and Conference.
6. To encourage nominations for and vote on the AIAA Theo Knacke Award winner and organize the awards banquet during each ADS Conference.
7. To maintain liaison activities with related ADS groups/teams/organizations
8. To sponsor a Short Course at a frequency that meets the ADS communities needs.

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### **Technical Emphasis**

The committee will emphasize and maintain knowledge on ADS related technologies. Examples of the technologies to be considered and monitored include aerodynamic decelerator systems and lifting parachutes, pararotators, and inflatable decelerators for aerodynamic deceleration, sustentation, landing of manned and unmanned vehicles, testing capabilities and facilities and related instrumentation technologies, and all related and supporting technologies utilized during for ADS systems.

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### **Forums and Meetings**

The primary means for communication to the Aerospace Community will include the organization of conferences, seminars, and short courses at ADS sponsored and/or national AIAA meetings and the promotion of summary articles and technical papers in AIAA publications and other publications. The principal forum will be the bi annual Aerodynamic Decelerator Systems Seminar and Conference. However, the committee will remain diligent to identify other AIAA and jointly sponsored technical meetings in which aerodynamic decelerator systems technology is of interest and an appropriate topic.

The committee will meet at least twice each year, at various locations agreed to by the TC. Locations for meetings can include large AIAA conferences/meeting, at a host facility of choice, in conjunction with related events such as in conjunction with the Parachute Industry Association or in conjunction with a test and a test range. At its meetings, the committee will conduct “ADS team” update briefings, future events planning, new business opportunities, and potentially tours for its members to promote technology transfer between the organizations represented by its members.

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### **Membership**

To facilitate the transfer of technology between disciplines sharing related Aerodynamic Decelerator Systems objectives, the committee seeks members from a wide range disciplines and the AIAA community around the world. However, to preserve the fundamental emphasis of this technical committee, membership selection is to be biased toward individuals who are actively engaged in the project management, research, or development of aerodynamic decelerator related technologies and/or requirements. A broad representation from government, universities, and industry is encouraged and desired.

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### **Membership Obligations**

Appointment to an AIAA technical committee signifies professional recognition as a technical expert within the aerospace community. In addition, it offers a unique opportunity for periodic interaction with a broad cross section of professionals sharing similar technical interests. However, the acceptance of membership also implies an accepted obligation to participate actively. The technical committee is a volunteer organization that depends on its members to willingly contribute their time and energy at least in the following ways:

- a. To participate in a leadership role or as a contributor to a subcommittee(s)/Team(s).
- b. To offer ideas promoting the goals and activities of the technical committee.
- c. To solicit contributed papers for sessions of national meetings sponsored by the technical committee.
- d. To propose and contribute technology updates on ADS programs and share overview information regarding new ADS initiatives at technical committee meetings.

Depending on a member's technical background, interests, and professional commitments, members should also assume responsibility for advocating and organizing special projects which provide a specific service to the aerospace community such as a review article for **Aerospace America**, participation in an AIAA short course, organization of special ADS presentations, etc.

In accordance with the AIAA guidelines, technical committee membership is a one-year appointment that is normally renewable twice for a total of three years of service. Extended membership and ex-officio membership is also accepted when it is advocated as beneficial to the function of the technical committee. In this technical committee, a fundamental requirement for the continuation of membership is the attendance of at least one of every two-three consecutive semi-annual meetings and/or significant contributions towards that meeting forwarded to an appropriate Team Leader or the ADS chairman. A further obligation is to become an AIAA member in advance of joining the ADS TC and to maintain good status with AIAA during the period of technical committee participation. Finally, members unable to continue their active participation should strive to recruit a replacement for their position, preferably from within their own organization.

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## ORGANIZATION

## **Overview**

- **Officers**
  - Chairman
  - Chairman-elect
  - Secretary (a different volunteer each meeting)
- **ADS Teams**
  - Awards/Membership Team
  - Finance Team
  - Seminar and Conference Team
  - Short Course Team
  - Newsletter Team
  - Homepage Team
  - Specs and Standards Team
  - Database Team
  - Congressional Visits Day Team
  - Other Team(s) as needed

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## **Officers and their Duties**

- **Chairman**

Elected by the committee members for a two-year term beginning at the conclusion of the bi-annual ADS Seminar and Conference (generally held in the May/June timeframe). One additional year will be spent as Chairman-Elect followed by two years as TC Chairman. Chairman responsibilities include:

- Provide leadership to the ADS TC.

- Appoint secretary, subcommittee chairman and task assignments with ADS TC support.
- Produce the AIAA ADS annual report.
- Foster special and/or new projects.
- Prepare the agenda for TC meetings and preside over TC meetings.
- Report to the AIAA Technical Activities Committee (TAC).
- Provide for the election of a new Vice-Chairman before the expiration of his term.
- Oversees the operation and communications within the ADS TC.
- Review the purpose, goals, and performance of the ADS TC.
- Propose and evaluate new TC projects.
- Select sites for TC meetings.
- Reviews AIAA business that might have impact on the ADS TC.
- **Vice Chairman**

Elected by the committee members for a three-year term beginning within 1-6 months of none bi-annual ADS Seminar and Conference years. Approximately one year will be spent as TC Chairman-elect followed by two years as TC Chairman. Chairman-elect responsibilities include:

- Assist the Chairman in providing leadership for the ADS TC.
- Fulfills all duties and responsibilities of the Chairman in the absence of the Chairman.
- Performs assignments from the Chairman.
- Automatically succeed the Chairman on a biennial cycle.
- Be actively involved in multiple ADS Team activities

- **Secretary**

Appointed by the chair each meeting with the following responsibilities:

- Record and distribute the minutes and copies of presentation material for each TC meeting in a timely manner.
- Distribute all TC publications to Team Leader of the homepage team for homepage posting.
- Update and distribute the membership roster and membership summary.

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### **ADS Teams (general and additional functions)**

- The Chair will assign all members to one or more team(s) with input and preference considerations.
- The purpose of these teams is to promote their technical disciplines and to advise the full committee on programs, conferences, special activities, etc. relative to their discipline areas.
- Propose and solicit TC meeting speakers for topics and technology reviews of interest to the general TC membership.
- Supply inputs to the publication committee for the annual Aerospace America Article (normally due at the summer meeting)
- Reports on activities at the full TC meetings.
- Support and promote technical conferences, symposia, and courses for the benefit of the ADS community.
- Act as a catalyst for the transfer of discipline technology to the ADS community and beyond.
- Act as a focal point for discipline information and education.

- **Short Course Team**

- The Team Leader shall assign team leaders and tasks for each activity.
- Actively market scheduled Short Course well in advance
- Plan, pre-fund, and execute short courses as needed/desired by the ADS community.
- Maintain archival records of short course material.
- Seek input from attendee's and modify curriculum based on feedback and current state-of-the-art practices in ADS.
- Assure that Short Courses do not negatively impact the ADS TC's financial account status.
- MORE

○ **Finance Team**

- The Team Leader shall assign team leaders and tasks for each activity.
- Maintain a ADS TC bank account that allows for direct automated teller deposits but only 2-signature (agreed by Chairman) check withdrawals.
- Report to the TC the current ADS TC account balance at TC meetings with details of all transactions. Provide the Team leader of the Homepage team a digital history of all such transactions for inclusion on the homepage.
- Make recommendations to the TC on potential ADS TC investments (i.e. best paper awards, invited speakers, scholarships, design competitions, etc.).
- MORE

○ **Homepage Team**

- The Team Leader shall assign team leaders and tasks for each activity.
- Maintain a current URL to house the ADS TC homepage..



- Keep the homepage current with: Schedule of ADS TC related events, current membership and member bios (sought from each member), posting of meeting minutes, annual Aerospace America Highlights articles, newsletters, award recipients, related links, short course announcements/surveys, and seminar and conference announcements.
- Maintain a current ADS TC email and snail mail distribution list and seek to expand this list to assure maximum distribution of ADS TC information.
- MORE

- **Database Team**

- The Team Leader shall assign team leaders and tasks for each activity.
- Encourage the utilization of the MOA with the Linda Hall Library (LHL).
- Seek alternative funding sources to assist large database collections are submitted to the LHL.
- MORE.

- **Specs and Standards Team**

- The Team Leader shall assign team leaders and tasks for each activity.
- Maintain the AIAA Aerodynamic Decelerator Systems Standard and keep it current.
- MORE.

- **Newsletter and Publication Team**

- The Team Leader shall assign team leaders and tasks for each activity.

- Publish and maintain a TC promotion package and a TC information booklet.
  - Draft the annual Aerospace America Highlights contribution for TC review and final approval prior to submission to AIAA for publication.
  - Coordinate special publications of the ADS TC.
  - Publish a bi-annual (or more frequent) ADS newsletter.
  - Establish liaison with the appropriate AIAA technical journal editors to offer them technical support.
  - MORE
- **Awards/Membership Team**
    - The Team Leader shall assign team leaders and tasks for each activity.
    - Promote the ADS TC and solicit new member applications from local AIAA sections, the AIAA membership at large, and appropriate government, academic, and industrial facilities.
    - Administer TC response to annual TC membership solicitation.
    - Provide new members with introductory material and training.
    - Promote membership upgrades of TC members.
    - Select new members for upcoming year.
    - Ensure an appropriate membership balance between industry, government and academia.
    - Conduct one-on-one new member orientation.
    - Provide an updated membership list at each TC meeting.
    - Solicit nomination for the Theo Knacke ADS award.
    - Facilitate the selection of the Theo Knacke ADS award.
    - Assist the Seminar and Conference team in the annual awards banquet preparation and presentation of the Theo Knacke award
    - MORE

- **Seminar & Conference Team**

- The General Chairman (Team Leader) shall assign team leaders and tasks for each activity to include a Seminar Chairman, Administrative Chairman, Technical Chairman, and other positions.
- Establish contacts with AIAA national meeting organizers to establish conference details/arrangements and/or arrange TC participation and session organization if the conference is part of a larger AIAA event.
- Coordinate session organization with other technical committees as required.
- Solicit session chairman and invited speakers for TC-sponsored sessions.
- Coordinate technical reviews of contributed meeting papers.
- Assure timely announcements to the ADS community through announcements in Aerospace America, mass mailings and the ADS TC email list.
- Determine the location of the event ....
- More

- **Liaison Members**

- The Team Leader shall assign team leaders and tasks for each activity.
- Develop liaison with local AIAA sections.
- Maintain liaison with other TCs by assigning a representative to attend their meetings and/or monitor other TC's activities. Report the activities of the ADS TC to other TC's and report other TC activities to the ADS TC.
- Through liaison contacts, review and evaluate technology developments from other disciplines that may impact Aerodynamic Decelerator Systems technology.

- Through liaison contacts, review and evaluate the organization, goals, and activities of other groups within and without the AIAA that may influence the activities of the ADS-TC.
- Maintain liaison activities (designated ADS TC members) with the Parachute Industry Association (PIA) and the National Parachute Technology Council (NPTC).
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### **Ad-Hoc Committees**

- Ad-Hoc committees will be formed, with the oversight of the ADS Chairman, for special tasks to be performed on a short term basis
- Function and duration of these committees will be task specific.
- If the task appears to be permanent, a standing team will be proposed and voted on (approved) by a majority vote of the ADS TC members.

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