Aerospace Sciences Group
2024 SciTech

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ASG Deputy Directors:
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January 2024
AIAA Strategic Plan

MISSION
AIAA EXISTS TO HELP AEROSPACE PROFESSIONALS AND THEIR ORGANIZATIONS SUCCEED

CORE STRATEGIES
1. DATA DRIVEN Use the appropriate data in the analysis of decisions
2. CURATE CONTENT Be the leader in curated aerospace content
3. THOUGHT LEADER Be the thought leader in technology and capability advancement

GOALS
1: INCREASE ENGAGEMENT and overall customer growth.
2: IMPROVE VOLUNTEER & LEADERSHIP DEVELOPMENT for AIAA’s future.
3: ALIGN VOLUNTEER ACTIVITIES to the strategic plan in partnership with AIAA staff.
4: ACHIEVE POSITIVE net revenue.
5: REFLECT SOCIETY’S DEMOGRAPHICS in AIAA membership & leadership.
AIAA MISSION:
To help aerospace professionals and their organizations succeed
AIAA Member Engagement & Resources

**EVENTS**
- In-person and Virtual
- 10,000 FORUM PARTICIPANTS
- 5,200 TECHNICAL PRESENTATIONS

**MEMBER PARTICIPATION**
- 71 TECHNICAL COMMITTEES
- 21 INTEGRATION & OUTREACH COMMITTEES
- 56 LOCAL SECTIONS ACROSS 7 GEOGRAPHIC REGIONS
- 20 COMMITTEES ON STANDARDS

**TECHNICAL RESOURCES**
- 8 PEER-REVIEWED JOURNALS
  - Meeting Papers/Proceedings
  - Aerospace America – the flagship publication of AIAA
  - Technical, business courses, and online learning
  - Aerospace Perspectives Webinars
  - Career Center
Goal: Each TC should add at least one (1) new student member to their 2024-2025 roster.

Aligns with AIAA Strategic Goals
1. Increase Engagement
2. Improve Volunteer and Leadership Development
3. Align Volunteer Activities
4. Reflect Society's Demographics
TAD Goal: Increase Diversity in TAD

1. Increase the percent of women engaged in TAD each year.
   
   2020 Ref: 11%    2023: 13.1%    2024 Goal: 16%

2. Increase the percent of TAD members reporting ethnicity each year.
   
   2020 Ref: 28%    2023: 84%    2024 Goal: 100%

### Table: Diversity in TAD Members

<table>
<thead>
<tr>
<th>Metric</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2023 Goal</th>
<th>Net Change (2020 to 2023)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total TAD Members</td>
<td>2,472</td>
<td>2,515</td>
<td>2,571</td>
<td>2,727</td>
<td>Increase over 2020</td>
<td>+255 Members (+10.3%)</td>
</tr>
<tr>
<td>% Female Members</td>
<td>10.6%</td>
<td>11.9%</td>
<td>12.3%</td>
<td>13.0%</td>
<td>16%</td>
<td>+2.4%</td>
</tr>
<tr>
<td>% Reporting Ethnicity</td>
<td>26.7%</td>
<td>56.4%</td>
<td>82.1%</td>
<td>84.7%</td>
<td>100%</td>
<td>+56%</td>
</tr>
</tbody>
</table>
At the November Council of Directors meeting, verbal update on AIAA’s financial state: now projecting a $2.8M loss (rather than $4.5M loss as estimated at start FY23). This better-than-projected financial outcome is a result of exhibit sales at forums exceeding goals and growth in forum attendance.
# Domain Task Forces

## Aeronautics
- **Advanced Air Mobility**
  - Phase 2 to be assessed by new Aero DL
- **Carbon Emissions & Sustainability**
  - Phase 2 to be assessed by new Aero DL
- **Certification**
  - Mike Borfitz and Nick Lappos
  - Report out at SciTech 2024
- **High-Speed Flight**
  - Todd Magee, Rodney Bowersox
  - Formal Launch at SciTech 2024

## Aerospace R&D
- **Transformative Systems Engineering**
  - Jim Faist
  - Focus on procurement, system modeling
- **Autonomy/AI/ML**
  - John Valasek
  - Current focus: challenge / competition development
- **Advanced Materials/Advanced Manufacturing**
  - In formation

## Space
- **Space Traffic Coordination**
  - Roger McNamara
  - Phase 2 in development
- **Cislunar Ecosystem**
  - Dennis Paul
  - Focus on economic, policy impacts
  - Partnerships with counterpart associations

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https://www.aiaa.org/domains/aeronautics
https://www.aiaa.org/domains/aerospaceRandD
https://www.aiaa.org/domains/space
New Domain Leads

Aeronautics: Russell R. Boyce, Mission Assurance Pty Ltd (AIAA Fellow)
Russell previously served as Director of UNSW Canberra Space and was Professor and Chair of Hypersonics at the University of Queensland. Additionally, he has advised the MILO Space Science Institute and Australian Space Agency and chaired the Australian Academy of Science’s National Committee for Space and Radio Science.

Aerospace R&D: Greg Zacharias, Pasteur Labs (AIAA Senior Member)
Greg previously served as Chief Scientist for the Director of Operational Test and Evaluation, Office of the Secretary of Defense (2018–2021) and Chief Scientist of the United States Air Force (2015–2018). He was cofounder and later president of Charles River Analytics. He has served on the National Research Council and the USAF SAB.

Space: Brent Sherwood, Blue Origin (retired) (AIAA Associate Fellow)
Brent recently retired from Blue Origin as Senior Vice President, Advanced Development Programs. Before joining Blue Origin, he held various positions at NASA Jet Propulsion Laboratory and The Boeing Company. Brent is a former chair of the AIAA Space Architecture Technical Committee.
Russell R. Boyce  
Aeronautics Domain Lead

Greg Zacharias  
Aerospace R&D Domain Lead

Brent Sherwood  
Space Domain Lead

Domain Meetings at SciTech

➢ High Speed Task Force  
  – Mon, 1/8: 1300-1500, Columbia 37

➢ Autonomy/AI/ML Task Force  
  – Mon, 1/8: 1400-1530, Discovery 43

➢ Commercial Aviation Sustainability Working Group  
  – Tue, 1/9: 1600-1800, Columbia 36

➢ Transformative Systems Engineering Task Force  
  – Wed, 1/10: 1000-1130, Columbia 36

➢ Cislunar Ecosystem Task Force  
  – Wed, 1/10: 1600-1730, Columbia 37

➢ Advanced Materials Task Force  
  – Thu, 1/11: 1600-1700, Regency O&P

➢ Space Traffic Coordination Task Force  
  – Fri, 1/12: 0900-1000, Winter Park 54
Technical Integration Subcommittee: Near-Term Priorities

- Chair: Megan Scheidt
- Assess TC health and TAD group structure
  - Define Metrics for a “Healthy TC” and a Process for De-chartering a TC
- Identify from the TC Annual Reports and communicate emerging technical topics
- Develop action plan to engage students in TC activities
- Explore TC Showcase-like events at forums
- Improve coordination between forums and publications
Forums Integration Subcommittee: Near-Term Priorities

- Chair: Joao Luiz Azevedo
- Technical plenaries and deconflicting relevant talks
- Integration domain priorities into technical content for forums
- De-conflict deadlines for the forums (general calendar for the forums)
- Technical talk lengths: 20 versus 30-minute talks
- Better understanding of AVIATION/ASCEND collocation
- Develop TC Chair Training
Converting Conference Papers to Journal
Authors are encouraged to submit conference papers for consideration at an AIAA journal: https://www.aiaa.org/publications/journals

TCs can help! Session chairs & technical program chairs identify high-quality papers & personally encourage authors to submit to a journal at the conference & follow up w/email.

New: AI Ethics in Publishing Policy
A committee of Publications and TAD representatives has developed a new policy regarding ethics for the use of generative AI in publishing. It has been integrated into the current publishing ethics policy: https://www.aiaa.org/publications/Publish-with-AIAA/Ethical-Standards-for-Publication-of-Aeronautics-and-Astronautics-Research

Publications Awards
AIAA awards two publications awards…
… we need nominations from TCs!
→ Pendray Award: awarded to individual for excellence in aerospace publishing
→ Summerfield Award: awarded to authors of an AIAA-published book
Find out more: https://www.aiaa.org/get-involved/honors-awards/awards/publication-awards

Questions?
For Publications questions, contact:
Jacqueline O’Connor, Publications Chair, jxo22@psu.edu
David Arthur, AIAA Staff, DavidA@aiaa.org
Forum Technical Chairs

2024 SciTech -- Thank you!!
- FTC: Mrinal Kumar, GNC
- Deputy FTC: Atila Dogan, AFM

2024 AVIATION
- FTC: Andrew Magstadt, FD
- Deputy FTC: Jim Coder, APA

2025 SciTech
- FTC: Atila Dogan, AFM
- Deputy FTC: MS

2025 AVIATION
- FTC: Jim Coder, APA
- Deputy FTC: AMT
Upcoming Conference Events & TC Deadlines

- SciTech Committee Lounge – Tower 2, Room 22512 (25th Floor)
  - 8am-6pm, Open drop-in space in the parlor of a hotel suite
- ASG Meeting – Tues 9 Jan, 11am, Columbia 37
- Associate Fellows Reception – Wed 10 Jan, 6pm, Plaza F&G

Update Awards description on AIAA website – due 26 Jan
- Official TC Rosters for 2024-2025 - due 31 Jan
- Annual Reports – due 31 Jan
Upcoming Election Candidates

The Election will be open **29 January – 23 February 2024**

**Aerospace Design and Structures Group Director**

Dawn Phillips  
NASA Marshall Space Flight Center

Masoud Rais-Rohani  
University of Maine

**Aerospace Sciences Group Director**

Chris Cotting  
EpiSci

Martiqua Post  
Air Force Academy
Important Dates to Remember

- **January**
  - READ/IOD/TAD and Council Meetings

- **January 31**
  - Annual Report online submission
  - Committee Rosters to Director & AIAA

- **April 15**
  - Associate Fellow Nominations

- **Spring Business Meetings**
  - READ/IOD/TAD/Council/Board Meetings

- **May 15**
  - Associate Fellow References

- **June 15**
  - Fellow/Honorary Fellow Nominations

- **July**
  - Nominations for AIAA Board of Trustees

- **July 15**
  - Fellow/Honorary Fellow References

- **August**
  - READ/IOD/TAD/Council/Board Meetings

- **September 1**
  - Aerospace America YIR Article (YIR) to AIAA Headquarters

**As Appropriate**
- AIAA Award Recipient Recommendations
- Senior Member Applications (anytime)
AIAA Upcoming Events

AIAA SciTech Forum
8–12 January 2024
Orlando, Florida

AIAA DEFENSE Forum
16–18 April 2024
Laurel, Maryland

AIAA Awards Gala
15 May 2024
Washington, DC

AIAA AVIATION Forum
29 July–2 August 2024
Las Vegas, Nevada

ASCEND
30 July–1 August 2024
Las Vegas, Nevada
Domain Vision Development Logic Flow

Domain inputs provided by CMSAC, IOD, TAD, READ, PPC, Pubs, SSC, HQ staff

Domain Lead integrates inputs and proposes mods for the 5-year domain roadmap

Domain Leads in concert with TFs and others develop baseline Domain plan for Institute 5-year strategy

HQ staff w/ Domain Leads integrates into overarching Inst. 5-year strategy

5-year strategy BoT approval

Finalize 5-year strategy with BoT guidance

HQ team develop FY+1 operations budget

FY+1 operations budget BoT approval
TC Member Responsibilities

- TC Members must be AIAA Members
- Stay in Communication
  - Attend TC and Subcommittee/Working Group meetings
  - Notify TC and Subcommittee Chairs if you are unable to attend
- Participate Actively…
  - In any combination of two Subcommittees/Working Groups or conference support roles
  - Be a major contributor/leader of at least one of these activities
- When the Opportunity Arises…
  - Help recruit new TC members
  - Submit nominations for Awards and member grade promotions