



2019-2020 **AIAA INSTITUTE REPORT**

ASCENDING TO NEW HEIGHTS

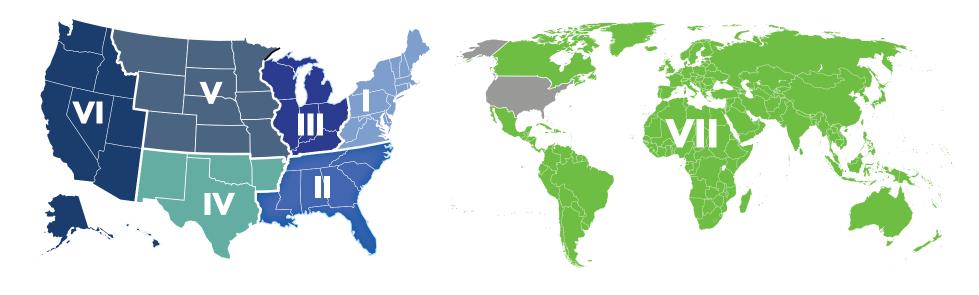
The American Institute of Aeronautics and Astronautics (AIAA) is nearly 30,000 engineers and scientists from 88 countries dedicated to the global aerospace profession. AIAA convenes yearly forums; publishes books, technical journals, and Aerospace America; hosts a collection of 160,000 technical papers; develops and maintains standards; honors and celebrates achievement; and advocates on policy issues. AIAA serves aerospace professionals around the world—who are shaping the future of aerospace—by providing the tools, insights, and collaborative exchanges to advance the state of the art in engineering and science for aviation, space, and defense.

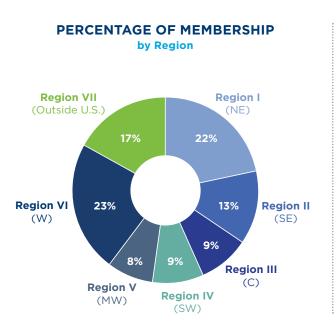
TABLE OF CONTENTS

- 3 A Snapshot of AIAA
- 5 Executive Report
- Strategic Plan 2018-2021
- Statistics 2019
- 9 Forums
- 10 Consolidated Financial Statements
- 12 Leadership

A SNAPSHOT OF AIAA

WHERE WE ARE





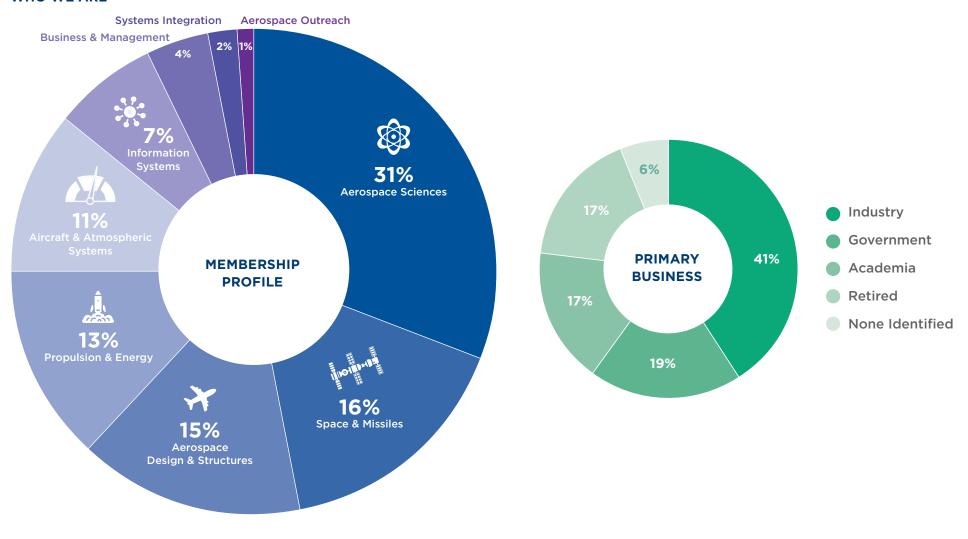




NUMBER OF CORPORATE MEMBERS

A SNAPSHOT OF AIAA CONTINUED

WHO WE ARE





EXECUTIVE REPORT

It's the start of a new decade—one where we will continue to build upon the hard work of the past and strive to make what was once thought impossible possible for the future. With your support, the American Institute of Aeronautics and Astronautics (AIAA) is charting the way forward by harnessing our members' technical expertise to help focus intent as well as guide and inform stakeholders from policymakers to technology innovators.

It's a particularly ripe time for disruptive technologies with their promise of social and economic benefits. AIAA is focused on the space economy, space exploration, cybersecurity, transformative flight, air mobility/autonomy, public policy, and perhaps the most important of all-workforce development. You'll be seeing AIAA actively moving on these fronts this year, notably in the space economy sector. We'll be using our deep technical knowledge to support expanding the aerospace community to include non-traditional players from medical professionals to economists.

AIAA Fellow A. D. Welliver introduced the Technology Clock in 1992 as a way of detailing how the economic security of the United States is tied to its leadership in aerospace. Since then, the aerospace community has grown to include other economic powers, and more countries now want to join in space exploration.

SPACE ECONOMY AND SPACE EXPLORATION

To help build the new space economy, AIAA is launching an event called ASCEND (www.ascend.events), to be held 16-18 November in Las Vegas. ASCEND represents a fresh approach for the space economy and AIAA. ASCEND is an outcomes-focused. transdisciplinary platform built from the ground up by space professionals to grow the space economy. This event will bring together scientists, engineers, economists, medical professionals, educators, legal professionals, artists, investors, and entrepreneurs to network, share ideas, and solve problems that affect our entire planet and beyond.

CYBERSECURITY INITIATIVE

Aerospace doesn't operate in silos but takes a systems-based approach to bring the parts into a whole. No other threat to our safety is quite like a cybersecurity threat. Bad actors can infiltrate the most innocuous parts of a system to create widespread damage. It's one reason why AIAA has made cybersecurity a priority. This year our members can look forward to increased aerospace cybersecurity coverage in AIAA publications. The Daily Launch now includes an aerospace cybersecurity section, and original new cybersecurity content is planned for Aerospace America and the AIAA technical journals. Upcoming AIAA forums will include more cybersecurity technical sessions, papers and talks, and also new experience offerings such as interactive, aerospace-focused cybersecurity training and "Capture-the-Flag" hacking competitions.

AIAA STRATEGIC PLAN 2018-2021

MISSION

AIAA exists to help aerospace professionals and their organizations succeed





EXECUTIVE REPORT

TRANSFORMATIONAL FLIGHT CERTIFICATION

We're also keeping our member's technical chops up-to-date with game-changing aerospace advancements. A case in point is the new Transformational Flight Certification Symposium at the AIAA AVIATION Forum, 15-19 June, in Reno, Nevada. Developed by the Transformational Flight Integration and Outreach Committee and the Aircraft Design Technical Committee, the symposium will focus on building type certification into the design of advanced aircraft.

ACCELERATING AUTONOMOUS VEHICLES

AIAA also is launching new initiatives to accelerate the introduction of autonomous vehicles into the aerospace ecosystem. The Board of Trustees has chartered a task force to align efforts across AIAA, ensure an understanding of the broad landscape of efforts within AIAA and externally across government, academia, and industry, and identify needed resources to ensure success. Ultimately the task force will identify and describe the risks and opportunities for autonomous aerospace systems, identify priorities, convene a critical mass of AIAA members, and build a plan to address the challenges associated with validation and verification of autonomous systems.

NEW PUBLIC POLICY SERIES

AIAA continues to seek new ways to spread the word about aerospace-from how it affects the economy to how it can have a profound positive societal impact. In late 2019, we started a new, "off-the-record" breakfast series to bring together policymakers and key industry players, so they can discuss aerospace issues in a collegial setting. The inaugural event was such success that we're making it a regular offering.

WORKFORCE DEVELOPMENT

Workforce development is a frequent topic of discussion in aerospace circles. When we meet a technological challenge, we frequently cite standing on the shoulders of giants as one reason behind the success. Today's challenges won't be overcome if we don't have people to continue the mission into the future. That's why AIAA is focused on workforce development for students, both K-12 and college, and career professionals. We seek diversity in gender, generation, and geography to build an aerospace workforce that could lead to the next disruptive technology.

We have set a challenging goal to connect one million students to aerospace. AIAA has a strong foundation to do this: we've expanded on Design/Build/Fly to create Design/Build/Launch; our K-12 classroom grants and support of LEGO competitions bring aerospace to local schools and excite young imaginations; and AIAA's student conferences, design competitions, scholarships, and awards have helped propel student careers. But we can't reach that many students without your help, talent, and enthusiasm. AIAA sections and student branches can work together to show K-12 students how exciting and meaningful the aerospace industry is and the future it offers.

You'll be seeing more of what matters to you from AIAA this year and in the future. Together, we can advance our mission of shaping the future of aerospace.



John S. Langford President



Dan Dumbacher Executive Director

STATISTICS 2019

PUBLICATIONS BY THE NUMBERS

TECHNICAL PAPERS

Total Number of Abstracts Submitted: 5,342*

Total Number of Abstracts Rejected or Withdrawn: 1,487

Total Number of Papers Published: **3,855***SciTech, AVIATION, Propulsion and Energy

STANDARDS DOCUMENTS

Total Number of Documents Published: 3
Number of Active Committees on Standards: 18

BOOKS

Total Number of New Titles Published: 9
Total Number of Existing Titles Reprinted: 59

JOURNALS

Number of Original Manuscripts Submitted: **3,237**

Number of Manuscripts Rejected: 1,806

Number of Articles Published in all Journals: 1,264

AEROSPACE RESEARCH CENTRAL (ARC)

Total Sessions: **2,947,005** New Users: **1,445,578** Page Views: **6,427,997**

Visit Aerospace Research Central





CONTINUING EDUCATION

FORUM COURSES AND WORKSHOPS

Total Number Held: 25

Upcoming Opportunities

ONLINE EDUCATION

Online Courses and Webinars: 32

Learn Now



STATISTICS 2019 CONTINUED

HONORS AND AWARDS

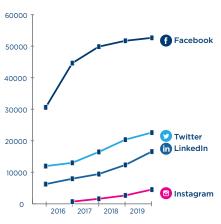
New Associate Fellows: 133 New AIAA Fellows: 29 New Honorary Fellows: 3

More on Honors and Awards



MEDIA HIGHLIGHTS

AIAA's Growing Social Media Footprint



THE NEXT GENERATION

DESIGN/BUILD/FLY

Teams Participated: 77

FIRST® LEGO® LEAGUE GRANTS

Grants Awarded: 420

UNDERGRADUATE AND GRADUATE SCHOLARSHIPS

Scholarships Awarded: 22

REGIONAL STUDENT CONFERENCES

Students Participated: 562





PUBLIC POLICY

CONGRESSIONAL VISITS DAY

Participants: 175
Office Visits: 273

CONGRESSIONAL EVENTS

Briefings: 4
Receptions: 2

TESTIMONY

National Space Council meeting (March 2019)

POLICY BREAKFAST SERIES

Initial event (November 2019)

Make your Voice Heard



FORUMS AND OTHER EVENTS

2019 AIAA SCITECH FORUM

7-11 January 2019, San Diego, CA aiaa.org/SciTech

2019 AIAA DEFENSE FORUM

7-9 May 2019, Laurel, MD aiaa.org/Defense

2019 AIAA AVIATION FORUM

17-21 June 2019, Dallas, TX aiaa.org/Aviation

2019 AIAA PROPULSION AND ENERGY FORUM

19-22 August 2019, Indianapolis, IN aiaa.org/PropulsionEnergy

70[™] INTERNATIONAL **ASTRONAUTICAL CONGRESS**

21-25 October 2019, Washington, D.C. iac2019.org

































More on AIAA Forums and Events

ASCEND

ASCEND stands for Accelerating Space Commerce, Exploration and New Discovery, and is being built from the ground up by space professionals to solve problems that affect the entire planet and beyond. ASCEND uses AIAA's world-renowned technical content to inform the creation of the new space ecosystem. The event will bring together scientists, engineers, economists, medical professionals, educators, legal professionals, artists, investors, and entrepreneurs to network, share ideas, and develop solutions.

Powered by AIAA, ASCEND's inaugural event will occur 16-18 November 2020 in Las Vegas, Nevada, and will focus on three macro themes:

- Accelerating the near-term commercialization of space
- Enabling the long-term human exploration and settlement of space
- Exploring the security, policy, and legal ramifications of space endeavors

For more information, visit www.ascend.events



CONSOLIDATED FINANCIAL STATEMENTS

AIAA & AIAA Foundation

STATEMENT OF FINANCIAL POSITION

(in thousands)	Years ended 30 September 2019 2018			
Assets:				
Cash and cash equivalents	\$	6,165	\$	3,177
Investments	-	50,472	*	49,807
Accounts receivable, net		425		197
Pledges receivable, net		2		2
Prepaid expenses and other current assets		3,183		1.113
Inventory		3,103		1,113
				-
Beneficial interest in trusts		1 4 4 0		1,163
Fixed assets, net		1,442		1,133
Total Assets	\$_	61,689	\$	56,601
Liabilities: Accounts payable and accrued expenses Deferred member dues Deferred subscriptions Deferred sponsorship, meeting, and other Other liabilities Total liabilities	\$	3,718 2,609 1,833 7,254 34 15,448	\$	4,523 2,696 2,189 1,834 35 11,277
Net assets: Net assets without donor restrictions Net assets with donor restrictions Total net assets		42,072 4,169 46,241		39,750 5,574 45,324
Total liabilities and net assets	\$	61,689	\$	56,601

STATEMENT OF ACTIVITIES

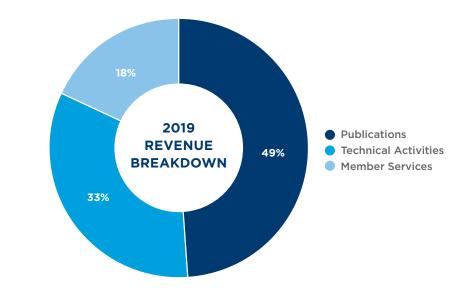
(in thousands)	Years ended 30 September 2019 2018	
Change in net assets without donor restrictions:		
Revenue		
Member services	\$ 3,662	\$ 3,586
Technical publications	9,633	8,770
Outreach	18	66
Technical activities	6,487	6,938
Strategic plan initiatives and business development		90
Revenues before investment return, contributions		
and net assets released from restriction	19,800	19,450
Investment return, net	1,262	2,734
Contributions	1,537	519
Net Assets released from restriction	1,632	738
Total revenue	24,231	23,441
Expenses		
Program services:		
Member services	4,917	4,368
Publications	4,359	4,311
Technical activities	8,734	8,905
Outreach	2,047	2,165
Total program services	20,057	19,749
Supporting services:		
Fundraising	38	62
Management & General	1,814	1,990
Total supporting services	1,852	2,052
Total expenses	21,909	21,801
Change in net assets without donor restrictions	2,322	1,640
Change in net assets with donor restrictions:		
Investment return, net	118	223
Contributions and change in fair value of beneficial interest in trusts		756
Custodial program contributions	58	113
Net assets released from restriction	(1,632)	(738)
Change in net assets with donor restrictions	(1,405)	354
Net change in net assets	917	1,994
Net assets, beginning of year	45,324	43,330
Net assets, end of year	\$ 46,241	\$ 45,324

CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

AIAA & AIAA Foundation

STATEMENT OF CASH FLOWS

(in thousands)	Years ended 2019	30 September 2018	
Cash flows from operating activities			
Net change in net assets	\$ 917	\$ 1,994	
Adjustments to reconcile change in net assets to			
net cash provided by (used in) operating activities:			
Depreciation and amortization	283	249	
Net realized and unrealized loss (gain) on investments	412	(1,733)	
Changes in operating assets and liabilities:			
Accounts receivable, net	(228)	(9)	
Pledges receivable, net	-	1	
Beneficial interest in trusts	1,163	416	
Prepaid expenses and other current assets	(2,070)	(490)	
Inventory	9	54	
Accounts payable and accrued expenses	(805)	534	
Other liabilities	(1)	(5)	
Deferred revenue	4,977	792	
Net cash provided by operating activities	4,657	1,803	
Cash flows from investing activities			
Proceeds from the sale of investments	4,074	1,436	
Purchases of investments	(5,121)	(3,174)	
Purchases of fixed assets	(622)	(48)	
Net cash used in investing activities	(1,669)	(1,786)	
Net change in cash and cash equivalents	2,988	17	
Cash and cash equivalents, beginning of year	3,177	3,160	
Cash and cash equivalents, end of year	\$ 6,165	\$ 3,177	



	Consolidated Total Assets	Consolidated Operating Revenue	Consolidated Net Assets
2019	\$ 61,689	\$ 19,800	\$ 46,241
2018	\$ 56,601	\$ 19,450	\$ 45,324

LEADERSHIP

AIAA BOARD OF TRUSTEES

PRESIDENT (2018-2020)

John S. Langford

Aurora Flight Sciences, A Boeing Company

PRESIDENT-ELECT (2019-2020)

Basil Hassan

Sandia National Laboratories

TREASURER (2018-2021)

Annalisa L. Weigel

Fairmont Consulting Group

SECRETARY

Daniel L. Dumbacher

AIAA

TRUSTEE (2019-2022)

Luisella Giulicchi

European Space Agency

TRUSTEE (2017-2020)

Robie I. Samanta Roy

Lockheed Martin Corporation

TRUSTEE (2017-2020)

James E. Vasatka

Boeing Commercial Airplanes (Retired)

TRUSTEE (2019-2022)

George C. Nield

Commercial Space Technologies, LLC

TRUSTEE (2018-2020)

David A. Throckmorton

National Institute of Aerospace

TRUSTEE (2018-2021)

R. Steven Justice

Centers of Innovation

Georgia Center of Innovation for Aerospace

TRUSTEE (2018-2021)

John R. Dowdle

Draper (Retired)

TRUSTEE (2019-2022)

G. P. (Bud) Peterson

Georgia Institute of Technology

TRUSTEE (2018-2021)

Mary (Missy) L. Cummings

Duke University

STUDENT LIAISON (2018-2020)

Victoria C. Nneji

Duke University

YP ADVISOR TO THE BOARD (2019-2021)

Cheryl O'Keefe

MIT Lincoln Laboratory

AIAA COUNCIL OF DIRECTORS LIAISON

SPEAKER (2017-2021)

Allen Arrington Jr.

HX5 Sierra, LLC - NASA Glenn

AIAA COUNCIL OF DIRECTORS

SPEAKER (2017-2021)

Allen Arrington Jr.

HX5 Sierra, LLC - NASA Glenn

Regional Engagement Activities Division

CHIEF (2017-2020)

Laura A. Richard

United Launch Alliance

Region I - DIRECTOR (2017-2020)

Steven X. Bauer

NASA Langley Research Center

Region II - DIRECTOR (2017-2020)

Kurt A. Polzin

NASA Marshall Space Flight Center

Region III - DIRECTOR (2018-2021)

Daniel T. Jensen

Rolls-Royce Corporation

Region IV - DIRECTOR (2018-2022)

Sarah Shull

NASA Johnson Space Center

Region V - DIRECTOR (2019-2022)

Orval "Rusty" Powell

Millennium Engineering & Integration Company

Region VI - DIRECTOR (2019-2021)

John Rose

Boeing Defense, Space and Security

Region VII - DIRECTOR (2018-2020)

Cees Bil

RMIT University

Integration and Outreach Division

CHIEF (2019-2022)

Jeffrev R. Laube

The Aerospace Corporation

Aerospace Outreach Group DIRECTOR (2019-2022)

Tucker Hamilton

U.S. Air Force

Business and Management Group DIRECTOR (2019-2020)

Leslie J. Lake

RS&H Aerospace & Defense

Systems Integration Group **DIRECTOR (2019-2022)**

Peter M. Hartwich

Boeing Engineering, Test & Technology

Young Professional Group **DIRECTOR (2019-2020)**

Brian R. Pomeroy

Sierra Nevada Corporation

Technical Activities Division

CHIEF (2017-2020)

James A. Keenan

U.S. Army AMRDEC

Aerospace Design and Structures Group DIRECTOR (2018-2021)

Carlos E. Cesnik University of Michigan

Aerospace Sciences Group **DIRECTOR (2018-2021)**

D. Brett Ridgely

Raytheon Missile Systems

Aircraft Technology, Integration and **Operations Group**

DIRECTOR (2017-2020)

Dimitri N. Mavris

Georgia Institute of Technology

Space and Missiles Group DIRECTOR (2017-2020)

Mark S. Whorton

University of Tennessee Space Institute

Information Systems Group DIRECTOR (2019-2022)

Allan T. (Terry) Morris

NASA Langley Research Center

Propulsion & Energy Group DIRECTOR (2019-2022)

Joaquin H Castro Aerojet Rocketdyne

AIAA Liaisons

Executive Director

Dan Dumbacher

Governance Secretary

Christopher Horton

AIAA FOUNDATION BOARD **OF TRUSTEES**

Jim Maser

Aerojet Rocketdyne; Chair

Greg Hyslop

The Boeing Company

Dana (Keoki) Jackson

Lockheed Martin Corporation

Ray O. Johnson

Bessemer Venture Partners

John Langford

Aurora Flight Sciences, A Boeing Company

Eric Paterson

Virginia Polytechnic Institute and State University

Annalisa Weigel

Fairmont Consulting Group;

AIAA Treasurer Dan Dumbacher

Executive Director, AIAA; President



American Institute of Aeronautics and Astronautics

12700 Sunrise Valley Drive, Suite 200, Reston, VA 20191-5807 703.264.7500 | 800.639.2422 *toll-free*

aiaa.org













