

# **INTERNATIONAL ACADEMY OF ASTRONAUTICS**

## **ANNUAL REPORT 2025**

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**President**

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Available on the IAA Website  
<https://iaaspace.org/about/structure/#Structure-AnnualReport>

2025 has been a year of significant accomplishment for the International Academy of Astronautics. We celebrated the 70<sup>th</sup> year of our professional journal, *Acta Astronautica*; made fundamental changes to our membership structure that will allow expansive growth in participation in the activities of our Academy; and broadened our spectrum of endeavor to advance the understanding and use of Space for the benefit of humankind.

The IAA brings the world's preeminent Spacefaring experts together to provide awareness, solutions and opportunities to the global community as we push further into the unexplored domains of a new Space age. Through a wide range of activities, the Academy explores the unlimited possibilities of Space, widens our knowledge of the universe and most importantly, works to expand the use of Space to improve the quality of life for people all over the world.

The members of our Academy have decided to make the first fundamental changes to our membership structure in decades. These changes will be implemented in 2026. They will significantly increase and broaden the number of recognized contributors and distinguished members from a broad spectrum of disciplines and countries across the globe that participate in the Academy's work. Our new membership structure includes:

- **Honorary Members:** Esteemed leaders who have made significant contributions to astronautics and international cooperation in the peaceful uses of outer space.
- **Academicians:** Authorities recognized for their substantial contributions to astronautics and international cooperation in aerospace sciences.
- **Associate Members:** Professionals who have made notable contributions in their respective fields.
- **Corporate Members:** Organizations that have significantly supported astronautics and international cooperation through donations and other means.
- **Affiliate Contributors:** Emerging professionals advancing the Academy's work through various activities.

Our new category of Affiliate Contributors will allow the International Academy of Astronautics to for the first time recognize the many professionals who assist in the work of the Academy and place them in the pipeline for consideration to be selected as a member of the IAA.

Over the past year we have had a steady increase in the number of workshops, conferences and symposia organized by our Academy. These build on prior areas of interest and have expanded to address new areas such as Interstellar Space Exploration, Space Traffic Management, Space Situational Awareness and Artificial Intelligence.

The Academy also took significant steps to broaden access and use of our publications. Particularly noteworthy is the global reach of the Academy's professional journal, *Acta Astronautica*, which is in its 70<sup>th</sup> year of publication. *Acta Astronautica* is a top-tier, globally used scientific and technology journal, ranked 2<sup>nd</sup> among 93 journals worldwide, and ranked number 1<sup>st</sup> among Space journals.

2025 has been a year of great accomplishment in advancing the goals of the Academy for the benefit of people around the world.

### **Cooperation with National Academies**

The International Academy of Astronautics continues the tradition of the great classical scientific academies of the 17th century in Rome, London and Paris, which fostered scientific inquiry and the exchange of ideas and new information in the earliest days of modern science. The IAA restimulate cooperation with national academies to foster a spirit of cooperation and progress that permeates national boundaries, cultures, and institutions.

## Awards

To promote excellence and recognize the achievements of our members, the Academy has an active program of awards.

The Von Karman Award for 2025 is given to Sreedhara Panicker Somanath, India, Member of the Engineering Sciences Section. The citation read: *"In recognition of his unparalleled contributions in advancing the system engineering of launch vehicles and Space technology, and his extraordinary leadership of India's Space Program, inspiring engineering excellence and fostering global partnerships that are expanding the exploration and peaceful uses of Space for the betterment of all humanity."*

The 2025 Laurels for Team Achievements are given to the Jet Propulsion Laboratory's Ingenuity Mars Helicopter Team Mission in recognition for delivering humanity's Wright Brothers' moment at Mars, proving that flight is possible on other planets.

The Laurels for Team Achievement are presented to:

Bob Balaram, Mimi Aung, Theodore Tzanetos, Håvard Grip, Joshua Anderson, Robert Hogg, Harel Dor, Jaakko Karras, Joseph Melko, Travis Brown

The 2025 Section Awards and their recipients are:

- Basic Sciences Award to Gerhard Schwehm (Germany) and Sorin Zgura (Romania)
- Engineering Sciences Award to Klaus Schilling (Germany)
- Life Sciences Award to Charles R. Doarn (USA)
- Social Science Award to Joseph N. Pelton, (USA)

## Book Awards

The 2025 Basic Sciences Book Award is given to:

A Traveler's Guide to the stars by Les Johnson, Princeton University Press, NJ, USA, 2024. With known exoplanets now numbering in the thousands and initiatives like 100 Year Starship and Breakthrough Starshot advancing the idea of interstellar travel, the age-old dream of venturing forth into the cosmos and perhaps even colonizing distant worlds may one day become a reality. A Traveler's Guide to the Stars reveals how. A Traveler's Guide to the Stars is your passport to the next great frontier of human discovery, providing a rare inside look at the remarkable breakthroughs in science and technology that will help tomorrow's space travelers chart a course for the stars.

The 2025 Engineering Sciences Book Award is given to:

Theory, Approach and Application of Planetary Microwave Remote Sensing by Jin Yaqiu (M1), Fa Wenzhe, China Science Publishing & Media Ltd. (CSPM), Beijing, China, 2019. This book is the first book-publication on both passive/active and microwave (MW) remote sensing of planetary science, which summarizes the authors' research on microwave scattering and radiative transfer, theoretical modelling, simulation and inversion, data validation and many applications in planetary remote sensing during decades.

The 2025 Social Sciences Book Award is given to:

Norm Formation in Space Law by Kimitake Nakamura, Brill, Leiden, Netherland, 2024. What kind of document should be created to solve the problem of space activities? This book uses case studies to illustrate how normative approaches in space law differ from those in other fields, delving into the history of norms and treaties in space law, contemporary issues concerning space activities, and issues surrounding debris removal and mitigation. Its analytical approach will be useful for readers who study how the basic theory of public international law can apply to new frontiers in space law.

## IAA Acta Astronautica Journal Certificate of Appreciation

Vladislav Dushin, Darren McKnight, Keying Yang  
Recognized among the Top 3 Reviewers of 2024 for the IAA journal Acta Astronautica

### Membership

Dr. Chrysoula Kourtidou-Papadelli, Greece, has led our members' selection program in a successful year. The four Peer Review Committees under the direction of the section chairs have continued to improve the quality of the candidates. We have a regular increase in nominations from the major space countries, and in addition, we have the effect of new conferences such as in Asia and Latin America that generated many nominations from newly represented countries. The statistics by Section are as follows:

IAA 2025

M1	183	Section 1	223
CM1	40		
M2	466	Section 2	552
CM2	86		
M3	141	Section 3	163
CM3	22		
M4	264	Section 4	302
CM4	38		

Ratio	
CM1/M1	0.22
CM2/M2	0.18
CM3/M3	0.15
CM4/M4	0.14
CM/M	0.17

Total M	1042
Total CM	186
Total M+CM	1228
Total HM	12
Total	1240

Inactive Pb Address	10
Inactive	6
Out	1095
Resign	261
Deceased after 1960	721

Number Active <70	710
Number members >70	488
Average age	67
Nationalities	89

And we remember our members deceased:

Members deceased in 2023: Jean-Jacques Favier, France, M2, Dale A. Fester, USA, M2, Lu Yuanjiu, China, M2, Charles Ordahl, USA, M4, Rolf Skaar, Norway, M2.

Members deceased in 2024: George S. James, USA, M4, Manfred Kuebler, Germany, M2, Petr Lala, Czech Republic, M4, Thomas P. Stafford, USA, M3, Edward C. Stone, USA, M1, Vladen Vereshchetin, Russia, M4, Wang Yongzhi, China, M2, Wu Meirong, China, M4, George W.S. Abbey, USA, CM2, Berrien Moore, USA, M1.

Members deceased in 2025: Ivan Bekey, USA, M2, Krishnaswamy Kasturirangan, India, HM, Richard L. Kline, USA, M2, Claudio Maccone, Italy, M1.

## **Publications**

The dissemination of current information on developments in astronautics and related science and technology has been a primary function of the IAA since its establishment. The Academy has produced about 100 cosmic studies and position papers along with the proceedings of symposia, technical reports and press releases. The journal *Acta Astronautica* first appeared in 1955, and we are pleased to celebrate this year the 70<sup>th</sup> anniversary of the journal. *Acta Astronautica* is one of the most prestigious and widely recognized journals in the field of astronautics worldwide. Its breadth of coverage and diversity of published research remain unmatched in the discipline. It is published monthly under the auspices of the IAA Publications Committee, by Elsevier Sciences Ltd.

IAA vice-President Marius Piso (Romania) has been leading the IAA publication activities. *Acta Astronautica* IAA journal is now second among 89 journals and the first rank in the world for space journals. The impact factor of *Acta Astronautica* for 2024-2025 is 3.4 with an increase of 9.7%. The number of downloads of *Acta Astronautica* has tripled between 2010 and 2022 with 1.75 million downloads. There is a thirty-year-old priority agreement to publish the best papers from the IAC and now from the 30 IAA standalone conferences. The number of pages published is about 8266. The success is reached with a large IAA editorial board composed of the new Editor in Chief Zheng-Hong George Zhu (Canada), Rock Jeng-Shing Chern (China Taiwan) Editor in Chief Emeritus, and co-Editors Elisabeth Potelat (France), Steve Croft (USA), Radhika Ramachandran (India), Nikolay N. Smirnov (Russia), Vishal Gajjar (USA), Antonio Viviani (Italy), Olivier Contant (France), Antonios Kyparos (Greece), Riccardo Bevilacqua (M2, USA), Christophe Bonnal (France), Jie Chen (China), Binfeng Pan (China), Mauro Pontani (Italy), Jiawen Qiu (China), Jianjun Wu (China) Krishna Dev Kumar (Canada), K.S. Bijukumar (India), Anna D. Guerman (Portugal), Zhengyu Song (China), Robert G. Melton (USA), Arun K. Misra (Canada), Maria Antonietta Perino (Italy), Yury N. Razoumny (Russia), Corinne M. Jorgenson (USA), Leslie I. Tennen (USA), Yi-Wei (Eva) Chang (China Taiwan), Ake Ingemar Skoog (Sweden), Moriba Jah (USA), Danielle Wood (USA), Jean-Michel Contant (France), and Jean-Pierre Marec (France). The Managing Editors are Yi-Wei Eva Chang (China Taiwan), Dickson Wong (Canada), Charlie Wang (Canada), and Frank Yao (Canada).

## **Scientific Activities**

Under the leadership of Dr. Ralph McNutt, USA, the IAA has continued significant acceleration in conference activity. The Academy traditionally generates one third of the sessions and papers presented at the International Astronautical Congress each year amounting to 13 IAA Symposia, each one having multiple sessions. In addition, the Academy is now conducting each year more than 20 standalone conferences in all continents.

### **2024 IAA Standalone conferences**

10th Space Traffic Management Conference, Austin, TX, USA, 27-28 February 2024  
1st IAA Symposium on Moon Farside Protection, Turin, Italy, 21-22 March, 2024  
4th IAA Conference on Space Situational Awareness (ICSSA), Daytona Beach, FL, USA, 08-10 May 2024  
IAA Academy Day, Busan, South Korea (COSPAR Congress), 13 July 2024  
1st IAA Symposium on Artificial Intelligence Technologies for Space, Xi'an, China 08-09 September 2024,  
1st ESA-IAA SPAICE AI in and for Space, Didcot, UK, 17-19 September 2024  
IAA Academy Day, Milan, Italy, 13 October 2024  
1st IAA Latin American Conference on Space Technology and Applications, November 05-09, 2024, Salta, Argentina  
IAA Academy Day Beijing, China, 17 November 2024  
Space Debris and Sustainability Conference, Hong Kong, China, 02-04 December 2024

IAA Regional Meeting Washington, Washington DC, USA, 08 December 2024  
International Symposium on the Peaceful Use of Space Technology – Health (IPSPACE 2024), Haikou, China, 10-13 December 2024 with the following symposia led by IAA:

- Spatial IT for a shared sustainable future
- Commercial space and investment
- Space power and terrestrial energy
- Green space propulsion
- Space elevators for green space activity
- Innovative space education
- Search for extra-terrestrial intelligence
- Exploration, development and protection of Earth's Moon
- Space debris, situational awareness and green space
- Space technology and human health
- Space law, space traffic management and green space

#### **74<sup>th</sup> IAC Milan, Italy**

IAA-IAF Symposium on Space Life Sciences,  
52<sup>nd</sup> IAA symposium on Search for Extraterrestrial Intelligence (SETI) Science and Technology,  
26<sup>th</sup> IAA Symposium on Human Exploration of Solar System,  
21<sup>st</sup> IAA Symposium on Space Debris,  
30<sup>th</sup> IAA Symposium on Small Satellite Missions,  
17<sup>th</sup> IAA Symposium on Strategies & Architectures as the Framework for the Future  
21<sup>st</sup> IAA Symposium on Visions and Strategies for the Future,  
56<sup>th</sup> IAA Symposium on Safety & Quality in Space Activities,  
34<sup>th</sup> IAA Symposium Space Policy, Regulations, Economics,  
57<sup>th</sup> IAA Symposium on History of Astronautics,  
34<sup>th</sup> IAA Symposium on Space Activity and Society,  
IAA Symposium on Multilingual Astronautical Terminology,  
23<sup>rd</sup> IAA/UN Workshop on Small Satellite Programs at the Service of Developing Countries

#### **Finance**

Shigeki Kinai, Japan, Vice-President Finance, leads financial activities for the IAA with the contribution of Dr. Jean-Michel Contant, Secretary General, to maintain our treasury.

The Academy is funded by annual contributions of its members as well as contributions from corporate donors and space agencies worldwide. The Academy devotes a small budget to supporting Space-related research in developing countries and help with participation to IAA conferences in Africa and Latin America.

#### **Section Activities**

All four sections have been assuming a proactive role in promoting interaction between, and participation of their members in the affairs of the Academy: Basic Sciences: this section under the leadership of Dr. Athena Coustenis (France) has 183 Members and 40 Corresponding Members. It is the home of space scientists of international renown with all the scientific specialties represented. Engineering Sciences: this section under the leadership of Dr. Weimin Bao (China) has 466 Members and 86 Corresponding Members. It has members from a broad range of engineering disciplines coming from industry, academia and government laboratories. Life Sciences: this section under the leadership of Dr. Elena Fomina (Russia) has 141 Members and 22 Corresponding Members. It includes prestigious space medicine specialists and biologists as well as many astronauts and cosmonauts. Social Sciences: this section under the leadership of Prof. Filippo Graziani, (Italy) has 264 Members and 38 Corresponding Members. It includes leaders in management, law, economics history and other societal disciplines related to astronautics.

## **Conclusion**

The members of our Academy are committed to advancing the understanding and use of Space for the benefit of all humankind, both individually and through their associated institutions. This commitment is the cornerstone of our collective efforts to drive progress in astronautics and international cooperation. We continue to make the Academy's endeavors more expansive; broaden and diversify its global membership of preeminent Space experts; and continue to focus on expanding the resilience and resources of the Academy to carry out its important work.

Achieving the globally impactful work of the Academy in 2025 would not be possible without the idealism, commitment and dedicated efforts of our Academicians and those we will begin to recognize in 2026 as Affiliate Contributors. We owe tremendous thanks to those serving as our Vice Presidents, Board of Trustees, Commissions, Committees, Conference organizers and other working bodies. We are also deeply grateful for the important leadership role our Secretary General continues to carry out in orchestrating the activities of the Academy. My deep gratitude goes to all those serving in these leadership roles, and as well as to all our Academicians, who continue to make our Academy's successes and achievements possible.

John David Schumacher  
President