



Ever Upward: January 2024

69th ICASM—An Excellent Event

Joseph Dervay, M.D., M.P.H., MMS, FACEP, FAsMA, FUHM Abu Dhabi, in the United Arab Emirates (UAE), was the site of the 69th International Congress of Aviation and Space



The convention center in Abu Dhabi, United Arab Emirates.

Medicine (ICASM) held October 27–29, 2023, under the auspices of the International Academy of Aviation and Space Medicine (IAASM).

There were over 300 attendees representing 50 nations. The Congress sought to “bring together leading experts in the field of aviation medicine and aerospace from around the world to share knowledge, discuss the latest research and developments, and explore new opportunities for collaboration.”

Dr. David Gradwell, President of IAASM and a former AsMA President, and Dr. Sally Evans, IAASM Secretary General, provided great leadership in helping to create a wonderful Congress. Prof. Erik Hohmann (UAE) served as President of the Organizing Committee and did a stellar job in bringing the event to fruition. The UAE Scientific Planning Committee chaired by Dr. Reino Pieterse (UAE) and the IAASM Scientific Committee chaired by Dr. Robert Orford ensured an excellent range of presentations.

As AsMA President, I had the distinct privilege of being asked to present the keynote Andre Allard Lecture, a great honor indeed. My talk was entitled “Spaceflight & Operational Aerospace Medicine, Historic Past, Current Advancements, Future Challenges.” I sought to create a mosaic journey highlighting aeromedical considerations throughout the phases of space exploration that have been witnessed over the past 65 plus years, as well as providing perspective on what lies ahead.

The hospitality and professionalism of the ICASM 2023 team and UAE hosts were outstanding. There were many international speakers, including a significant number of current



Attendees at the Congress.



Left: The slide introducing Dr. Dervay as the Allard lecturer. Right: Dr. Dervay giving the lecture.



AsMA members. Truly a collegial and interactive Congress for sharing scientific knowledge with colleagues from around the globe.

As Dr. Gradwell noted, “...the holding of this Congress in Abu Dhabi was breaking new ground within the region and I hope leads not only to future events in that part of the world but also encourages those who were delegates to think more about joining the wider international aeromedical community, including supporting the scientific meetings of AsMA and other IAASM Congresses in the future.”

Our AsMA Executive Director Jeff Sventek and wife Deb hosted the AsMA information table onsite at the Congress. They engaged attendees about the nature and scope of AsMA and secured double digit new AsMA memberships to our ranks. Several attendees expressed great interest in potentially attending our Annual Scientific Meeting in Chicago next May. Being the first such Congress held in the Middle East, the UAE enthusiasm to be hosting the event in Abu Dhabi was palpable. This was enhanced by the recent successful six-month long-duration International Space Station mission by UAE Astronaut Sultan Al Neyadi. Sultan was also the first Arab to complete a spacewalk, on April 28, 2023, of 7 hrs. and 1 min. along with US Astronaut Stephen Bowen, captivating the UAE and region and inspiring youth regarding STEM and space exploration.

IAASM sponsors an international Congress on an annual basis, with the location rotating to various countries around the world that have the interest and willingness to be the host.



Jeff Sventek hosts the AsMA information table as Dr. Dervay takes a photo of them both.

The International Congress of Aviation and Space Medicine (ICASM) is typically held on odd-numbered years and is usually slated outside of Europe (as was done in the UAE). During alternate (even-numbered) years, IAASM collaborates with the European Society of Aerospace Medicine (ESAM), with AsMA, and with the local aerospace medical association at the

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Congress venue to hold the International Congress of Aerospace Medicine (ICAM). This was last held in Paris as the International Conference of Aerospace Medicine in 2022, or ICAM 2022.

The next International Congress of Aerospace Medicine, in Lisbon, Portugal, will be held from October 3-5, 2024. ICAM 2024 is a joint effort by IAASM, ESAM, AsMA, and the Portuguese Society of Aerospace Medicine. Perhaps your schedule will allow you to participate next year in Lisbon!

All the best.

Keep 'em Flying...and Full Steam Ahead.

You can visit <https://www.dropbox.com/scl/fi/i9kxu-6a11ranu1fomg1t/69th-international-congress-of-aviation-and-space-medicine.mp4?rlkey=jj65v46eka11fow1i3p-fq1lmy&dl=0> watch an excellent video summary of the ICASM 2023 in Abu Dhabi.

New Members

AsMA welcomed 26 new members in the past month.

- Anderson, Sierra; Prescott Valley, AZ, United States
- Carmichael, Bria; Chapel Hill, NC, United States
- Day, Carly; Norfolk, VA, United States
- Escobedo, Roberto; Booklyn, NY, United States
- Flanagan, Aidan; Morgantown, WV, United States
- Friberg, Braden; Green Bay, WI, United States
- Golia, Saahil; Glen Allen, VA, United States
- Hammer, Patricia; APO AE, United States
- Hickox, Tucker; Clayton, GA, United States
- Iankovitch, Anna; Brooklyn, NY, United States
- Jahromi, Shahzad; Fresno, CA, United States
- Makler, Theodore; Palo Alto, CA, United States
- Massaro, Louis; Tampa, FL, United States
- McCaffery, Eleni; Brooklyn, NY, United States
- Miller, Jacob; New Haven, CT, United States
- Mkwizu, Alexander; Nairobi, Kenya
- Olson, Brendan; Bryan, TX, United States
- Palma, Raul; Mexico City, Mexico
- Ranniger, Claudia; Washington, DC, United States
- Regan, Cailyn; West Hartford, CT, United States
- Sharma, Manav; Bengaluru, Karnataka, India
- Sigmon, Jason; Oklahoma City, OK, United States
- Towe, Sydney; Savoy, IL, United States
- Trammel, Jacob; Springfield, IL, United States
- Venegas, Carolina; Pembroke Pines, FL, United States
- Zhivotovskiy, Yevgeniy; Joshua, TX, United States

Read Current News Online!

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AMA Surveys Physicians About Health Care AI

Physicians are enthusiastic about augmented intelligence (AI)—often called artificial intelligence—and its assistive role in health care that enhances human intelligence rather than replaces it, according to a new physician survey by the American Medical Association (AMA). However, the survey findings show we are at a critical juncture with an equal number of physicians excited and concerned about the potential for AI. The survey provides deep insight into physician sentiment towards health care AI, including motivations, opportunities, concerns, requirements, and current uses of health care AI.

The AMA's Augmented Intelligence Research surveyed 1,081 physicians in August 2023 to investigate the sentiment of practicing physicians regarding the increase usage of AI in health care. The physician sentiments identified in the AMA survey provide insider knowledge to build AI tools around meeting the current needs and requirements of clinicians.

Among the key findings, the physician survey showed:

- The potential for health care AI has 41% of physicians equally excited and concerned.
- Enthusiasm was highest for AI tools that help reduce administrative burdens, including documentation (54%) and prior authorization (48%).
- AI tools were most helpful for enhancing diagnostic ability (72%), workflow efficiency (69%) and clinical outcomes (61%).
- Concern was highest for AI tools that impact the patient-physicians relationship (39%) and patient privacy (41%).
- The top attributes required to advance physician adoption of AI tools were data privacy assurances (87%) and not being held liable for AI model errors (87%).
- AI tools were in use by 38% of physicians with the most common uses including: creation of discharge instructions, care plans, or progress notes (14%), documentation of billing codes, medical charts or visit notes (13%), translation services (11%), and assistive diagnosis (11%).
- Transparency is key for AI tools with about 80% of physicians indicated they want clear information about key characteristics and features regarding the design, development, and deployment of AI tools.

The AMA's work continues to support the development of high-quality, clinically validated AI that is deployed in a responsible, ethical, and transparent manner with patient safety being the first and foremost concern. The AMA is dedicated to shaping a future that ensures only safe, high-quality, and unbiased AI products are brought to market and has issued a new set of AI principles to guide the responsible development and deployment and use of AI, ensuring that these technologies contribute positively to the future of health care.

Please visit <https://www.ama-assn.org/press-center/press-releases/ama-physicians-enthusiastic-cautious-about-health-care-ai>. For more AMA news, visit <https://www.ama-assn.org/press-center/press-releases>.

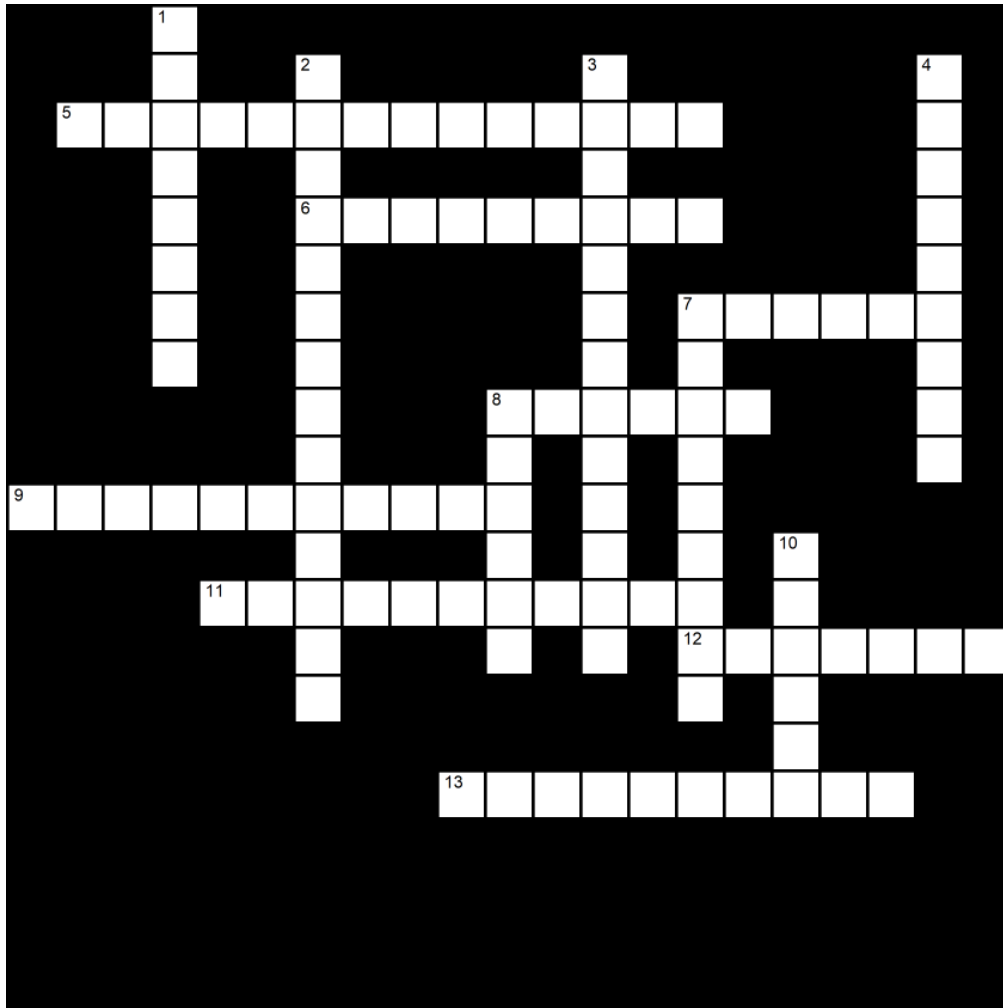
Upcoming Annual Scientific Meetings

May 5-9, 2024; Hyatt Regency, Chicago, IL

June 1-6, 2025; Hyatt Regency, Atlanta, GA

May 17-21, 2026; Sheraton Denver Downtown, Denver, CO

January Crossword Puzzle



ACROSS

5. An alternative for urine and wastewater recovery is the _____ Integrated Membrane Evaporation System (TIMES). (14)
6. GI transit time (Mouth to cecum) of foods is _____ in -6° head tilt as compared to ambulation. (9)
7. Skylab was the only U.S. space program that included _____ foods. (6)
8. Water quality is maintained by addition of iodine (U.S. Systems) or _____ ions (Russian Systems) in combination with heat sterilization. (6)
9. _____ is an applied sub-discipline of botany that is the study of plants in space environments. (11)
11. The Urine Recycling System uses a process of distillation, filtration, ionization, and _____. (11)
12. The level of protein consumption of astronauts needs to be monitored as increased protein intake leads to increased urinary excretion of _____. (7)
13. _____ drinks have been tried in space but are not favored due to changes in belching caused by microgravity. Without gravity to separate the liquid and gas in the stomach, burping results in a kind of vomiting called “wet burping”. (10)

The solution is on p. N5.

DOWN

1. Large doses of _____ Vitamin C can decrease pH and promote tooth erosion. (8)
2. _____ tablets are to be taken by astronauts 0.5–2 hours before re-entry into the earth’s atmosphere as per NASA’s protocol. (6,8)
3. Decreased _____ secretion has also been implicated in the loss of muscle tissue during spaceflight due to decrease in mechanical stress on muscles in weightlessness. (13)
4. All rehydratable and bite-sized food in the ISS is over-wrapped with an _____ foil laminate and vacuum sealed to increase shelf life. (9)
7. Food _____ Questionnaire (FFQ) in the ISS is used to obtain a near-real-time estimates of intakes of energy, protein water, sodium, etc. use and comments of astronauts. (9)
8. _____ was the first mission where in the astronauts had access to a refrigerator and hot water dispenser. (6)
10. _____ 6 was the first space station to have a water reclamation process. (6)

By Lt. Col. Srihari Iyer K, Flight Surgeon, Indian Army and Dr. Sahana Srihari, Assistant Professor, Dept. of Dermatology, Adesh Institute of Medical Sciences and Research, Punjab.

News of Corporate Members

Leidos Delivers First Set of Launchers

Leidos announced the successful Risk Reduction Flight Demonstration (RRFD) of its Enduring Shield Weapon System. Enduring Shield is a ground-based, mobile system that aims to combat cruise missiles and unmanned aircraft systems. The system is a key part of the solution to protect and defend critical civilian and military infrastructure. It also bridges the gap between tactical short range air defense and strategic systems, Terminal High Altitude Area Defense, and Patriot forces. The RRFD demonstrated the ability of Enduring Shield to launch a test AIM-9X interceptor from a simulated Integrated Battle Command System interface. The event validated the end-to-end launch functionality of the weapon system. With the successful execution of the RRFD, Enduring Shield's first shipment of launchers is set to move to its next phase in the Department of Defense's layered defense strategy. The U.S. Army IFPC Inc 2 will begin its Developmental Test program in January 2024. Data collected from the RRFD and 2024 testing will be used to improve the next set of launchers Leidos is contracted to produce.

—Please see <https://www.leidos.com/insights/leidos-enduring-shield-aces-risk-reduction-flight-demo> for more.

Mayo Clinic Highlights 2023 Research Advancements

In 2023, Mayo Clinic researchers made new discoveries, developed first-of-its-kind tools and technologies, and continued to improve upon existing tools. These advances ranged from harnessing artificial intelligence (AI) to detect disease sooner to improving treatments for rare and complex diseases. One advance involved scientists at Mayo Clinic teaming up to develop high-resolution ultrasound imaging software to improve detail and quality of images in order to better be able to visualize microvessels, a sign of cancer. Other research discovered a new brain area involved in movement. With a diagnostic procedure called electromyography, Mayo Clinic scientists and their international collaborators used electrodes to record the electrical response of muscles during each movement. The tests showed that an area deep in the central sulcus was active during all types of movement, challenging the long-held understanding that tissue in this part of the brain is tuned to specific regions of the body. Another study found menopause symptoms are linked to adverse outcomes for women at work. These symptoms, such as hot flashes, night sweats, mood changes, sleep disturbances, joint aches and cognitive difficulties damage the quality of life for millions of women. A Mayo Clinic study puts numbers on that cost and highlighted the need to address the issue for women in the workplace.

—Please visit <https://newsnetwork.mayoclinic.org/discussion/highlights-of-mayo-clinic-research-advancements-in-2023/> to read about all 10 advancements.

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Axiom Space Partners with Kepler Space and Skyloom

Axiom Space has entered agreements with Kepler Communications US Inc. and Skyloom Global Corp. to integrate and demonstrate high data rate Optical Intersatellite Links (OISLs) on the first module of Axiom Space's commercial space station. In parallel, the Axiom Space team is building the world's first scalable, cloud technology-enabled, commercial orbital data center to be hosted on Axiom Station. The development of this first tranche of orbital data center capability (ODC T1) will support the transformation of low-Earth orbit (LEO) into a global space marketplace by maturing the necessary technologies and infrastructure for large-scale and secure space-based data processing. The effort with Kepler and Skyloom will enable demonstration of OISLs to allow for data to be transmitted to and from the orbital data center via the Kepler and Skyloom relay constellations. The OISLs will allow for up to 10 gigabits-per-second data throughput and meet Space Development Agency (SDA) interoperability standards. In preparation for the ODC T1 deployment, Axiom Space plans to install a smaller data processing prototype aboard the International Space Station to conduct testing and demonstrate initial capabilities.

—Please visit <https://www.axiomspace.com/news/orbital-data-center> to read more.

ADDMAN Company Distinguished by HP

Dinsmore, an ADDMAN Group company, has been promoted to be an HP Digital Manufacturing Partner, cementing its commitment to innovation in 3D printing. This distinction highlights Dinsmore's dedication to providing state-of-the-art solutions, with a focus on growth in the medical sector. In this endeavor, the company is set to leverage its new HP Jet Fusion 5420W solution, equipped with medical-grade nylon 12, to further expand its presence in this segment. The catalyst for this collaboration was Dinsmore's early adoption and participation in HP's 18-month beta program for the HP Jet Fusion 5420W solution. Previously a member of the HP Digital Manufacturing Network (DMN), this invitation-only certification positions Dinsmore globally as one of the premier providers of best-in-class Multi Jet Fusion part quality and manufacturing expertise. HP DMN members awarded with the HP Digital Manufacturing Partner distinction are certified by HP with a rigorous evaluation and onsite assessment.

—Please see <https://www.addmangroup.com/dinsmore-hp-digital-manufacturing-partner/> for more information.

KBR's Team Gives Back to Communities

KBR recently celebrated their volunteers with an article about their various activities. KBR gave back to communities in a variety of ways, from beach cleanups to food banks, tree planting, and donating supplies. For example, KBR was the presenting sponsor of the St. Jude Walk/Run and team members volunteered in the kids' area while their race team raised thousands

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of dollars for St. Jude. Team members also organized two food drives – one before Thanksgiving to support a local food bank, and another during the Mid-Autumn Festival in the United Kingdom to benefit the Trussell Trust Food Bank. KBR employees in Abu Dhabi planted trees in a joint effort with the Abu Dhabi Municipality and the Abu Dhabi IMPACT team to celebrate environmental stewardship. In Virginia, United States, KBR employees took part in a Rebuilding Together initiative to make a difference in an elderly homeowner's life. They installed and replaced doors, patched concrete, caulked windows, cleared out brush, and made improvements to a bathroom. KBR team members were also involved in a beach cleanup, putting together hygiene packs, and a breast cancer awareness marathon.

—Please visit <https://www.kbr.com/en/insights-news/stories/kbr-powering-communities-passion-and-purpose> to read more.

Meetings Calendar

Feb. 27-28, 2024; National Training Aircraft Symposium; Mori Hosseini Student Union Events Center on the Daytona Beach campus of Embry-Riddle Aeronautical University. Please visit <https://commons.erau.edu/ntas/about.html> for more info.

May 19-22, 2024; 108th American Occupational Health Conference (AOHC), Loews Royal Pacific Hotel, Orlando, FL, United States. For more info, visit [https://acoem.org/American-Occupational-Health-Conference-\(AOHC\)](https://acoem.org/American-Occupational-Health-Conference-(AOHC)).

Calls for Papers

Ongoing: International Astronautical Federation (IAF) Global Networking Forum Space Conversations Series; ONLINE, 14:00 Paris time. Please visit <https://www.iafastro.org/events/iaf-gnf-space-conversations-series/> for more info.

FAA AME Seminars

These are offered by the FAA AME Program Office.

January 26-28	San Diego, CA	Refresher
March 4-8	Oklahoma City, OK	Basic
April 12-14	VIRTUAL	Refresher
May 6-9	Chicago, IL	AsMA

AsMA only takes registrations for the seminar held in conjunction with our annual scientific meeting. For more info on these seminars, please visit the [FAA website](#).

Corporate News Bites

IFALPA: The International Federation of Airline Pilots (IFALPA) has issued a statement on the use of social media by pilots. They are concerned with the potential risks taken by pilots who may unknowingly put their flying career and that of their colleagues in jeopardy. *To download and read the statement, please visit <https://www.ifalpa.org/publications/library/use-of-social-media-by-pilots--2790>.*

AOPA: The Aircraft Pilots and Owners Association's (AOPA's) scholarship program is open for applications. These are open to AOPA members and can be used for flight training, advanced ratings/certificates, aviation maintenance, and more. The deadline for applying is February 9, 2024 at 11:59 PM Eastern. *For more information, please see <https://www.aopa.org/news-and-media/all-news/2023/december/pilot/you-can-fly-1-million-for-students>.*

Crossword Solution

