



Ever Upward: January 2022

Registration for the 2022 Annual Scientific Meeting is Now Open

The Aerospace Medical Association's Annual Scientific Meeting is scheduled for May 22-27, 2022, at the Peppermill Resort Hotel in Reno, NV. Registration for this event is now open. To register, go to <https://go.members.asma.org/events/upcoming-events> or learn more about the 92nd Annual Scientific Meeting at <https://www.asma.org/scientific-meetings/asma-annual-scientific-meeting>.

This year's Annual Scientific Meeting is a joint meeting between the Aerospace Medical Association (AsMA) and the Undersea and Hyperbaric Medical Society (UHMS). This is the first joint meeting with the UHMS since our 1998 meeting in Seattle, WA. AsMA and the UHMS organizers are working closely to make this meeting a great educational opportunity for all attendees. There will be five general sessions in Reno rather than the normal three general sessions for AsMA Annual Scientific Meetings. We will offer the usual Monday Louis H. Bauer Lecture, Tuesday Eugen Reinartz Memorial Lecture, and Thursday Harry G. Armstrong Lecture. This year, we will also offer two additional UHMS general sessions. Following the Bauer Lecture on Monday morning, we will offer the UHMS Eric P. Kindwall Lecture and we will begin Wednesday morning with the UHMS Christian J. Lambertsen Lecture. These UHMS general sessions will offer our attendees insight into unique clinical and operational issues associated with operating at increased barometric pressures. Outside of the general sessions, we will offer eight breakout sessions with one of those breakout sessions dedicated to the UHMS.

Another new offering this year for AsMA attendees will be electronic posters. The UHMS has been offering electronic poster presentations with great success for several years. AsMA has considered transitioning from paper-based posters to electronic posters for a few years but were concerned about the cost, logistics, and attendee experience, so we never aggressively pursued electronic posters. The UHMS team will manage the posters for all of us this year in Reno. This is a great opportunity to learn from our UHMS colleagues and determine whether using electronic posters in all future AsMA Annual Scientific Meetings is the right way to move forward for AsMA.

AsMA will be offering three pre-conference Sunday workshops and 1 post-conference Friday workshop in Reno. The UHMS will be offering two pre-conference Sunday workshops and a 1-hour workshop at lunch time every day during the meeting week (Monday–Thursday). Continuing Medical Education will be offered for all of the pre-conference, post-conference, and daily workshops. Registration for these workshops are open for all attendees.

Finally, most ticketed social events are open to all attendees in Reno. AsMA and UHMS have agreed to end the week with a joint Honors Night Awards Banquet followed by a joint After Party with dancing and fun. I hope many of you will be able to join us in Reno this May. It would be great to see each other again and catch up.

Aerospace Physiology Certification

The Aerospace Physiology Certification Board test was held on Sunday, August 29, 2021, in the Sheraton Downtown Denver Hotel. There were four members who sat for the exam and all four passed.

Dennis Madden

LT Dennis Madden, MSC, USN, B.S., M.S., Ph.D., began his education majoring in Medical Dietetics at the Ohio State



University. He continued by earning a Master's in Exercise Physiology from St. Cloud State University and a Ph.D. in Evidence-Based Medicine from the University of Split School of Medicine in Croatia, where he studied decompression sickness in divers. After returning to the United States, he was accepted into the U.S. Navy's Aerospace and Operational Physiology program in the Medical Service

Corps and completed his initial flight and physiology training in Pensacola, FL. Upon graduation, he was assigned to the Aviation Survival Training Center in Jacksonville, FL.

In Jacksonville, LT Madden served as an instructor and training safety officer, where he qualified to instruct Navy aircrew on a complete physiological classroom syllabus as well as a variety of dynamic training devices. He helped develop curricula and participated in the testing and validation of the Navy's first normobaric hypoxia trainer and qualified as a Master Training Specialist. After leaving Jacksonville, he completed Aviation Safety Officer School and is now the Aeromedical Safety Officer for Training Air Wing One in Meridian, MS, serving T-45C instructors and educating the next generation of carrier-qualified aviators on physiological threats. He also serves as the Physiologic Event Rapid Response Team Leader, where he responds to and investigates in-flight medical emergencies.

John Harrell

John W. Harrell, BSE, M.S., Ph.D., earned his Bachelor's degree in Education and Allied Professions at the University of



Dayton in 2004. He then graduated with a Master's in Exercise Science in 2006 from the University of Tennessee. His Ph.D. in Kinesiology was earned from the University of Wisconsin-Madison in 2014. From 2014-2016, he was an Assistant Professor of Health Sciences at Drake University in Des Moines, IA, and then became Assistant Professor of Exercise Science at Carroll University, Waukesha, WI

until 2017. He spent the summer semester as an Adjunct

See 'CAsp Certification,' p. N2

Send information for publication in this newsletter to: Journal Department, AsMA; rtrigg@asma.org

From 'CAsP Certification,' p. N1

Professor at Carroll University in 2017 and then became Temporary Faculty in Exercise Science at Xavier University in Cincinnati, OH, from 2017-2018.

Dr. Harrell then took a position as Environmental Physiologist, Naval Aerospace Medical Research Laboratory, Naval Medical Research Unit – Dayton, Dayton, OH, until 2019, when he became Research Physiologist, 711th Human Performance Wing, U.S. Air Force Research Laboratory, Wright-Patterson AFB, OH, a position he holds today. He has served as a manuscript reviewer for *Aerospace Medicine and Human Performance*, the *Journal of DoD Research and Engineering*, SpringerPlus, and *Medicine & Science in Sports and Exercise*. He is a panel member of In-Progress Research Review and an Air Force Representative to Working Group, Human Performance Optimization in Extreme Environments, Joint Program Committee.

Pearle Lipinski

Pearle Lipinski, B.S., is considered an expert within the aerospace medicine community in synthesizing and harmonizing physiology and medical considerations with engineering realities, system testing, and proper risk assessment. Initially entering federal service as a human factors test engineer at Edwards AFB, she developed test plans and documented deficiencies with the F-35 oxygen system, environmental control system, pilot flight equipment, and helmet-mounted display, driving the F-35 program to address critical issues affecting pilot physiology and health.

Afterwards, Ms. Lipinski progressed to serve as the government lead for the F-35 oxygen system and its Physiological Event Team lead. While in that position, she advocated for and oversaw the redevelopment of the F-35 OBOGS control algorithm and pioneered a rigorous method for physiological event triage and disposition, which has since been recommended for adoption across other platforms. Her deliberate efforts in integrating the aerospace physiology community into her work has resulted in one of the strongest relationships between a program office and the aeromedical community in the Department of Defense. She is currently serving as a subject matter expert in life support systems and physiological event dispositioning for the F-35 program. She is a graduate of MIT and is currently pursuing her Juris Doctor at Ohio State. She is expected to join Ohio State's Risk and Reliability Lab this fall as a Nuclear Engineering Ph.D. student, studying how government agencies use quantitative assessments of risk in managing their policies.

Eric Anderson

LCDR Eric Anderson, MSC, USN, BS, MS, enlisted in the Utah Air National Guard in 2001. Later that year, he was awarded an AS degree at Snow College and then received basic military training at Lackland AFB. In 2002, he attended U.S. Air Force Vehicle Operator apprentice training at Fort Leonard Wood, MO, and was activated as a Security Forces



augment assisting in increased security efforts after the September 11, 2001, attacks. He was awarded a BS degree in Physical Education at Utah State University in 2003. He was an Information Security Officer during Operation Enduring Freedom from 2003-2005 and then again during 2006. He also earned four different pilot ratings in 2005 and was awarded certified Flight Instructor Single-Engine Landing and Multi-Engine Instructor in 2007.

From 2007-2010, LCDR Anderson was again an Information Security Officer during Operation Iraqi Freedom at Hill AFB, UT, filling in for those who had been deployed. In 2010, he earned his MS degree in Exercise Science at Utah State University. In 2011, he served in Newport, RI, and then attended the Aeromedical Officer Course at NAS Pensacola, FL, in 2012. He later became ASTC Whidbey Island Assistant Director and also attended the Aviation Safety Officer Course, both until 2015, when he became Aeromedical Safety Officer for Training Air Wing Four. In 2018, he took the position he currently holds as Commander, Strike Fighter Wing Pacific Aeromedical Safety Officer.



Aerospace Physiology Certification: The four who passed the board certification exam are shown with their certificates. From left to right: John Harrell, Eric Anderson, Dennis Maden, and Pearle Lipinski.

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Twitter: https://twitter.com/aero_med

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Read Current News Online!

The AsMA, Member, & Industry News are updated as we receive news. Visit AsMA's website to see what's new! Members: please check the Job Fair each month; new jobs are posted as we receive them.

New Members

AsMA welcomes 17 new members in January 2022.

- Becerra, Anissa; Boulder, CO, United States
- Beeman-Brown, Kevin; Kensington, MD, United States
- Bernard, Gary; Bulverde, TX, United States
- Carter, Paul; Murfreesboro, TN, United States
- Chafin, William; Mabelton, GA, United States
- De Renzis, Gabriel; Cumberland Gap, TN, United States
- Failing, Carl; Rockville, MD, United States
- Houston, Isaac; Gaithersburg, MD, United States
- Iyer, Shreyas; London, United Kingdom
- Maguire, Connor; Bethesda, MD, United States
- Mattice, Zachary; Rockville, MD, United States
- McCullough, Ian; Bethesda, MD, United States
- Prabakar, Mangai; Miami, FL, United States
- Rengel, Anthony; Nollamara, WA, United States
- Simpson, Melissa; Boulder, CO, United States
- Singh, Ganeev; Somerville, MA, United States
- Tafazoli, Martin; Herndon, VA, United States

AsMA welcomes back four members.

- Corzo Zamora, María; Bogota D.C., Colombia
- Fogarty, Jennifer; Seabrook, TX, United States
- Izumi, Ryutaro; Tsukuba, Japan
- Kennon, Caleb; Saint Joseph, MO, United States

MEETINGS CALENDAR

Due to the coronavirus, please check the websites of meetings listed here to see if they have been postponed/cancelled.

Calls for Papers - Ongoing: International Astronautical Federation (IAF) Global Networking Forum Space Conversations Series; ONLINE, 14:00 Paris time. This is a series of online, fortnightly live webinars regarding developments in space. An ongoing Call for Proposals is now open. Please visit <https://www.iafastro.org/events/iaf-gnf-space-conversations-series/> for more information.

HFACS Workshops: Workshops on the The Human Factors Analysis and Classification System (HFACS) are now available online and in-person. For more information, please visit <https://www.enrole.com/erau/jsp/course.jsp?categoryId=&courseId=HFAC> for in-person and <https://www.enrole.com/erau/jsp/course.jsp?categoryId=558570F8&courseId=OHFA> for online. Dates and locations are as follows: Feb. 22-23, 2022, and June 20-21, 2022 for online; and May 10-11, 2022, and Sept. 20-21, 2022 for in person.

May 16-20, 2022; Global Conference on Space for Emerging Countries; Quito, Ecuador. For more information, please visit <https://www.iafastro.org/events/global-series-conferences/the-global-conference-on-space-for-emerging-countries-2022/>.

NEWS OF CORPORATE MEMBERS

Mayo Clinic Reaches COVID-19 Therapy Milestone

Mayo Clinic has one of the most robust monoclonal antibody therapy programs in the country, and the program has strongly contributed to the state of Minnesota's public health and ability to confront the COVID-19 pandemic. Mid-December marked a milestone, as Mayo Clinic Health System infused its 10,000th patient with monoclonal antibodies. To date, 20,000 infusions have been performed across all Mayo Clinic locations including Arizona and Florida. Monoclonal antibodies are drugs that consist of one (mono-) neutralizing antibody copied (cloned) in a lab that helps to decrease the amount of virus circulating in the body. Earlier in 2021, Mayo Clinic researchers concluded that, based on real-world data, monoclonal antibodies help patients avoid hospitalization when administered early on before the disease progresses. Additional Mayo Clinic research has shown up to 70% reduction in hospitalization.

—Please visit <https://newsnetwork.mayoclinic.org/discussion/mayo-clinic-health-system-reaches-covid-19-therapy-milestone/> for more information.

KBR Personnel Play Key Roles at NASA

KBR flight controllers, instructors, and other experts at NASA's Johnson Space Center in Houston, Texas, provided support for a trio of recent spacewalks to install new solar arrays on the International Space Station (ISS). KBR personnel helped plan, install, and deploy the ISS Roll Out Solar Arrays (iROSA), which included training the astronauts who accom-

plished the task, choreographing their activities, and troubleshooting issues. The space station uses solar arrays to collect energy from the sun, which in turn provides electrical power for operations. The arrays were designed for a 15-year service life and have been operating continuously since the first pair was deployed in December 2000. As expected, the old arrays began showing signs of wear after continued daily use for more than 20 years. As part of the project, NASA plans to augment three of the original four solar array pairs by adding new, smaller array pairs that "roll open," resulting in a 20–30% increase in energy. To make this happen, NASA planned at least two spacewalks, or extravehicular activities (EVAs), to deploy each array pair. In the end, KBR personnel collaborated with each other and NASA to complete the installation and deployment of the first array. The crew repeated their success with deployment of the second array during the third spacewalk on June 25. Totalling 20.5 hours, the three spacewalks were designed, planned, trained, and executed by KBR employees in collaboration with NASA.

—Please see <https://www.kbr.com/en/insights-news/stories/powering-international-space-station-kbr-personnel-play-key-roles-nasas-new> to read more.

See 'Corporate News,' p. N4

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NIOSH Announces Fishing Safety Grants

The National Institute for Occupational Safety and Health (NIOSH), in partnership with the U.S. Coast Guard, announced the availability of extramural grant funding for commercial fishing safety research and training in fiscal year 2022. The grants, which are supported and administered by NIOSH, will provide funding to qualified individuals in academia, members of non-profit organizations, municipalities, and businesses involved in the fishing and maritime industries. The funding will support both research on improving the occupational safety of workers in the commercial fishing industry and critical safety training for this high-risk occupation. Commercial fishing remains one of the most dangerous occupations in the United States, but the hazards fishermen face vary widely by type of fishing vessel and fishery in which they participate. Research and training that address what works best in a specific fleet and/or region is critical to help prevent occupational injury or death among U.S. fishermen. The fishing safety research cooperative agreements and training program grants will provide up to 75% of an organization's costs with a maximum of \$975k per grant over a 3-year period in 2022.

—Please visit <https://www.cdc.gov/niosh/updates/upd-11-29-21.html> for more information.

AOPA Renews Partnership with Breitling

Since 1954, the Aircraft Owners and Pilots Association (AOPA) and Breitling have worked together, partnering at aviation events and on programs to help aspiring pilots enter the field. Now, to commemorate the upcoming 70th anniversary, these two iconic organizations are coming together once again to launch the Breitling Aviation Scholarship. The Breitling Aviation Scholarship will award \$10,000 to a young aspiring pilot in the United States to complete a full primary certification pilot training course (sport, recreational, or private pilot certificate). The Breitling Aviation Scholarship is just the first of several planned collaborations to mark the watch's seventieth anniversary in 2022.

—Please see <https://www.aopa.org/news-and-media/all-news/2021/december/16/aopa-breitling-renew-partnership-announce-new-scholarship> to read more.

UTMB Students Run Clinic

A new Congestive Heart Failure Clinic at St. Vincent's House run by medical students at the University of Texas Medical Branch (UTMB) is striving to better educate uninsured patients about heart failure, its complications and how best to manage the condition. The comprehensive care clinic at St. Vincent's House in Galveston provides post-discharge heart failure patients with bi-weekly interprofessional services such as respiratory and occupational therapy by supervised UTMB students who will also monitor vitals, discuss diet, and engage in supervised exercise. Heart disease has been the number one cause of death in Texas according to reports from the

Corporate News Bites

ETC: Environmental Tectonics Corporation's (ETC's) Sterilization Systems Group announced it was awarded a contract from an international customer. The contract includes one 12-pallet ethylene oxide sterilization chamber with automated pallet conveyance for use with the sterilization of medical devices. Please visit <https://www.etcusa.com/etc-awarded-1-8-million-contract-for-its-sterilization-systems-group/> to read more.

MedAire: MedAire recently added five new medical scenarios to its app which assists crewmembers with addressing in-flight medical incidents. The additional scenarios are in-flight syncope (fainting), severe vomiting, abdominal pain, and anaphylaxis, or allergic reactions. The app prompts crewmembers to ask questions for each scenario and communicates with MedLink doctors so they can assess, diagnose, and recommend treatment for the medical emergency. Please see <https://www.bjtonline.com/business-jet-news/medaire-enhances-tool-to-help-with-inflight-medical-emergencies> for more.

IFALPA: The International Federation of Airline Pilots Associations (IFALPA) recently released two briefing leaflets. The first is on pilots' responsibilities when accepting ATC clearances, which can be found at <https://www.ifalpa.org/publications/library/pilots-responsibilities-when-accepting-atc-clearances>—3548 and the second is on visual approach considerations in the USA, which is found at <https://www.ifalpa.org/publications/library/visual-approach-considerations-in-the-usa>—3549. Please visit <https://www.ifalpa.org/publications/> for other leaflets.

ALPA: The Air Line Pilots Association, Int'l (ALPA), issued a statement in mid-December in response to the discussion on pilot supply that took place during a Senate Commerce Committee hearing on airline industry oversight. The statement takes issue with the idea that there is a pilot shortage. To read the complete statement, please visit <http://www.alpa.org/news-and-events/news-room/2021-12-17-pilot-supply-senate-commerce-hearing>.

Texas Department of State Health Services. The Congestive Heart Failure Clinic officially opened its doors in January this year, managed and run by interprofessional students at UTMB. The clinic has since become one of the largest student run clinics in the country and recently earned the President's Cabinet awards at UTMB, joining over 170 community programs and initiatives supported by faculty, staff, community members, and alumni. The Congestive Heart Failure Clinic is free of charge and provides a 60-day program incorporating exercise, nutrition counseling, smoking cessation, cognitive behavioral therapy, and medical evaluations. Partnerships with social workers and community health workers also ensure the patients have transportation, safe housing, and a stable food supply.

—Please visit <https://www.utmb.edu/news/article/utmb-news/2021/11/11/student-run-clinic-seeks-to-combat-a-national-crisis> for more information.