



Ever Upward: December 2020

Hughes Honored by the NAA

Kathryn Hughes, M.D., M.P.H., D.Av.Med., USAF(Ret.), was a recipient of the 2020 Wesley L. McDonald Distinguished Statesman and Stateswoman of Aviation Award for "... her pioneering accomplishments in aviation and aerospace medicine, passion for advancing human systems integration, and unceasing drive to mentor future generations." The Distinguished Statesman and Stateswoman of Aviation Award was established in 1954 by the Board of Directors of the National Aeronautic Association (NAA).



The award honors "... outstanding Americans who, by their efforts over an extended period of years, have made contributions of significant value to aeronautics and have reflected credit upon America and themselves." Amy Spowart, President & CEO of the National Aviation Hall of Fame shared: "I enthusiastically nominated both Kathy Hughes and Michael Quiello for this award for the same reason – they are fighters." Spowart added, "Whether it was socioeconomic status or gender, both Michael and Kathy not only rose through the ranks of our industry, but they climbed to the top. For them there were no excuses, only hard-earned successes by two of the most remarkable leaders in aviation."

Dr. Hughes graduated from the U.S. Air Force Academy in 1988 with a B.S. in Biology and a Minor in Arabic. She attended the University of Nebraska Medical Center on a Health Professions Scholarship and earned her flight surgeon's wings at the Aerospace Medicine Primary Course just prior to graduating with her M.D. in 1999. After completing an intern year in General Surgery she was a flight surgeon at Mountain Home AFB for 2 years then was accepted into the USAF Pilot-Physician Program. She completed A-10 initial qualification at Davis-Monthan AFB, AZ, and served as a Pilot-Physician with the 190th Fighter Squadron, Idaho ANG. After acceptance to the Residency in Aerospace Medicine, she completed the Masters in Public Health in 2009, focusing on Health Management and Policy, at the University of Michigan School of Public Health. She completed the Aerospace Medicine Residency in 2010 at the USAF School of Aerospace Medicine and later completed a residency in occupational medicine with the USAF School of Aerospace Medicine, Brooks City-Base, TX.

Dr. Hughes is currently the Secretary for the Aerospace Medical Association's (AsMA's) Council and is an AsMA Fellow. She has served on a variety of AsMA committees, including the AsMA Executive Committee, the Scientific Program Committee, the Nominating Committee, and the Awards Committee. She is a member of the Aerospace Physiology Society, the Space Medicine Association, and an Emeritus Member of the Society of U.S. Air Force Flight Surgeons. She also received AsMA's 2009 Harold G. Moseley Award and the 2011 Julian E. Ward Memorial Award. Her other

awards include the Meritorious Service Medal with oak leaf cluster, the Air Force Commendation Medal with oak leaf cluster, the National Defense Service Medal with bronze star, the Humanitarian Service Medal, the Military Outstanding Volunteer Service Medal, and the NATO Medal.

Workman Receives Visionary Award

The American College of Hyperbaric Medicine presented the 2020 Ken Locklear Visionary Award to W. Tom Workman, B.S., M.S., CAsP, FAsMA, CHT-A, FUHM. This award is presented to an individual who has distinguished themselves by exhibiting dedication and passion to the field of hyperbaric medicine. It was named after Ken Locklear, an educator, innovator, leader, and entrepreneur who was a visionary in the field of hyperbaric medicine.



Mr. Workman recently retired as the Director of Quality Assurance & Regulatory Affairs for the Undersea & Hyperbaric Medical Society. He was responsible for the development and management of the Society's Clinical Hyperbaric Facility Accreditation Program. He retired from the United States Air Force (USAF) as a Colonel after more than 23 years of service devoted to aerospace and hyperbaric physiology. From 1980 to 1992, he was assigned to the USAF Hyperbaric Center, Brooks AFB, TX, USA. During his last 3 years there, he was the Chief of the USAF Hyperbaric Medicine Program. From 1992 until his retirement as a Chief Biomedical Scientist in 1995, he served as Commander, 9th Training Squadron, Beale AFB, CA, USA, where he was responsible for the worldwide physiological support for the only USAF manned high altitude reconnaissance mission. In this capacity, he managed over 150 people and assets in excess of \$47M. He also served as Deputy Commander, 9th Medical Group, Beale AFB, CA, USA. Active in many professional organizations for almost 50 years, Mr. Workman has served on the National Fire Protection Association's Technical Committee for Hyperbaric and Hypobaric Facilities since 1984 and the American Society of Mechanical Engineers Pressure Vessel for Human Occupancy Technical Committee for 30 years, among many other committee leadership positions.

Included in Mr. Workman's many awards are the Undersea & Hyperbaric Medical Society's (UHMS) Craig Hoffman Memorial Award presented in 2001 for his contributions to diving safety and the first UHMS Gulf Coast Chapter Wilbur T. Workman Award named in his honor. He is also the recipient of the Aerospace Physiologist Society's Paul Bert Award for Physiological Research, the Wiley Post for Operational Physiology, and the Fred Hitchcock Award, as well as the Baromedical Nurses Association Circle of Excellence Award. He has more than 130 publications and presentations, including editorship of "Hyperbaric Facility Safety: A Practical

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Guide," 1st & 2nd editions, and the "UHMS Guidelines for Hyperbaric Facility Operations," 1st and 2nd editions. He is board certified by the Aerospace Medical Association in Aerospace Physiology and by the National Board of Diving and Hyperbaric Medical Technology in Hyperbaric Technology and is a Fellow of the Aerospace Medical Association and Undersea & Hyperbaric Medical Society.

AsMA Members Quoted in AMA Article

Three Aerospace Medical Association (AsMA) members were quoted in an article about flying during the pandemic published by the American Medical Association (AMA). The three members are Rui Pombal, M.D., an Associate Fellow of AsMA, and Daniel Shoor, M.D., M.P.H., and Hernando Ortega, M.D., M.P.H., Fellows of AsMA. The three doctors were interviewed about how to make flying safer during the holidays if people choose to travel. They discuss how the risk of contracting COVID-19 during air travel is low as the chance of someone being both positive and contagious is quite low. There is also the fact that airplane cabins have proper ventilation which is able to reduce the number of particulates in the air by 99.9% in 6 minutes.

In addition to that, airports and airlines are all taking precautions, such as requiring face coverings to be worn and requesting that passengers remain seated. Face coverings reduce the transmission of particles while remaining seated reduces physical contact and causes less disturbance of ventilation. The backs of seats may also serve as barriers. The article can be read at <https://www.ama-assn.org/delivering-care/public-health/6-things-doctors-wish-patients-knew-about-flying-during-pandemic>.

News of Members

Arthur Kreitenberg, M.D., FACS, an Associate Fellow of the Aerospace Medical Association (AsMA), is the inventor of a machine called the GermFalcon. This machine uses the same UV disinfection systems as hospitals to sanitize airplane interiors before passengers board. Time has named this machine one of the best inventions of 2020. Dr. Kreitenberg and his son have co-founded a company, Dimer, to work on UVC research and innovation. The blurb on the GermFalcon can be found at <https://time.com/collection/best-inventions-2020/5911429/germfalcon/>.

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.

Future AsMA Annual Scientific Meetings

May 23-27, 2021; Peppermill Resort Hotel; Reno, NV
April 3-7, 2022; Sheraton Denver Downtown, Denver, CO
May 21-25, 2023; Sheraton New Orleans Hotel, LA

SMA Jeff Myers YIA Winner Announced

K. Jeffrey Myers, M.D.

The Space Medicine Association (SMA) Jeff Myers (JM) Young Investigators Award (YIA) is a competition intended for those making their first major efforts into Aerospace Medicine research. To compete for this award, contestants must be making their first presentation of a scientific paper or poster at an AsMA meeting (excluding cases presented at Grand Rounds as a student resident); they must appear as first author on the paper; and they must prepare and submit a manuscript for judging. Because of the special limitations imposed by the COVID-19 pandemic and the necessary cancellation of the 2020 AsMA meeting, the presentation portion of the competition was waived for the 2020 competition. The potential applicability of the findings to Space Medicine and the degree of involvement of the student in the project are major considerations. I would like to thank the members of the YIA committee: John Darwood, Lloyd Tripp, Cathy Dibiase, Pat McGinnis, Jeff Jones, and Steve Guyton.

The finalists in this year's competition, selected from 140 potential contestants, are richly talented and diversified (listed later in this article).

The winner of the 2020 SMA JM YIA is Michael Crowder, M.D. His paper is entitled "Perfluoroalkyl Substances Exposure and Cancer in NHANES (the National Health and Nutrition Examination Survey) 2011–2016 U.S. Population". This work is becoming more important to us as we progress toward establishing a permanent base on the Moon and eventually toward the colonization of Mars. These types of chemicals have become ubiquitous in our environment as byproducts of our military/industrial complex. Environmental protective measures along with careful monitoring will likely be important considerations as we expand the envelope of human presence during our explorations. Dr. Crowder's analysis has fortunately not found any link between the serum levels of these chemicals and any form of cancer. He completed this work as part of his residency at the U.S. Air Force School of Aerospace Medicine.

The first runner up is Rebecca Mendelsohn, M.D. Her paper is titled "Panoramic Views with Second-Generation Multifocal Intraocular Lenses". This is an important consideration in all pilots and astronauts requiring visual aids. The second runner up is David Kim, M.D., a Canadian Aerospace Medicine and Emergency Medicine Resident from Vancouver, who also recently completed the Diploma of Aviation Medicine at Kings College London. His paper is titled "The effect of Microgravity on the Human Venous System and Blood Coagulation: a Systematic Review". Honorable Mention went to Kevin Alford for his paper, entitled "A Cost-Effectiveness Analysis for Returning Military Pilots with Venous Thromboembolic Disease to Aviation Duties".

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tional Finalists include: Jennifer Stowe, O.D., an optometrist from the U.S. Army Aeromedical Research Laboratory (USAARL); Tyler Williams, also from USAARL, Fort Rucker, AL; and Alexander Mkwizu, M.D., D.Av.Med.

Although the COVID-19 pandemic has heaped obstacles and disappointments upon the year 2020, the Young Investigators of 2020 demonstrated remarkable resilience, forging ahead and laying the foundation for the legacy of a truly amazing new generation of Aerospace Medicine scientists. Undaunted, they will surely make their mark toward the challenges of space exploration. Remember, if you want to do more than just exist, you must have a dream. Dream well and make a difference.

New Members

AsMA welcomes 30 new members in December.

- Bayne, Andrew; Bethesda, MD, United States
- Bebee, Bryce; Tacoma, WA, United States
- Brooks, Collin; Lake Orion, MI, United States
- Bucknell, Emma; Larrakeyah, Northern Territory, Australia
- Campbell, Barrett; Lacey, WA, United States
- Delora, Adam; Kingwood, TX, United States
- Dunn, Jeffrey; North Bethesda, MD, United States
- Faraz, Muhammad; Canberra, Australian Capital Territory, Australia
- Gingerich, Robert; Fort Rucker, AL, United States
- Grassino, Joseph; Wentzville, MO, United States
- Guendel, Alexander; Charlottesville, VA, United States
- Hollaway, David; Houston, TX, United States
- Kerr, Lenard; Ankeny, IA, United States
- Matthews, Michael; Dayton, OH, United States
- McCandless, Martin; Ridgeland, MS, United States
- Mora Almanza, Jose; La Perla, Jalisco, Mexico
- Patrick, Matthew; Key West, FL, United States
- Peagler, Kristen; Lithonia, GA, United States
- Putnam, Rachel; Camillus, NY, United States
- Sant, Rohan; Boston, Lincolnshire, United Kingdom
- Simmons, Emily; Newton, AL, United States
- Thamer, Semran; Norwich, VT, United States
- Tobyne, Sean; Cambridge, MA, United States
- Toh, Li Shean; Beeston, Nottingham, United Kingdom
- Traverson, Christian; Daytona Beach, FL, United States
- Tsar, Shine; Bedford, Bedfordshire, United Kingdom
- Weinand, Jamie; Tucson, AZ, United States
- Winter, Amanda; Independence, KY, United States
- Wood, Daniel; Charleston, SC, United States
- Wright, Heath; APO AE, United States

AsMA welcomes back 3 members.

- Angles, Maria; Honolulu, HI, United States
- Burchett, Jason; Beaver Creek, OH, United States
- Nazaire, Sherman; Pasay City, Philippines

GLEX 2021 and GLOC 2022

The International Astronautical Federation (IAF) invites you to save the following dates:

#GLEX2021; 14–18 June 2021; St. Petersburg, Russia.

#GLOC2022; 31 May–2 June 2022; Oslo, Norway.

For more information, visit www.iafastro.org.

Award Nominations Sought

The Aerospace Medical Association is seeking nominations for all awards, especially the:

- Admiral John C. Adams Award
- David M. Clark Award
- John Ernsting Award
- Kent K. Gillingham Award
- Walter and Sylvia Goldenrath Award
- Won Chuel Kay Award
- Mary T. Klinker Award
- Sidney D. Leverett, Jr. Environmental Science Award
- Harry G. Moseley Award
- John Paul Stapp Award
- John A. Tamisiea Award

The nominee must be a current member of the Association by Feb. 1 in the year in which the award may be given, with the sole exception that the Sidney D. Leverett, Jr., Environmental Science Award is open to non-members. The nominator must also be a current member of the Association when submitting the award nomination.

All AsMA Annual Award nominations must be received by January 15, 2021. The link to the AsMA Annual Awards OpenWater website can be found in the Members Only section of the AsMA website in the left-hand column.

Blue Journal Continues in Ingenta Top 10

Ingenta has generated the full text download data for all the titles on Ingenta Connect, and the blue journal ranks in the top 100 out of more than 11,000 titles for number of full-text downloads.

For September 2020:

- *Aerospace Medicine and Human Performance* ranks 6th with 2,667 downloads.
- *Aviation, Space, and Environmental Medicine* ranks 8th with 2,533 downloads.

YTFS Columns to Return

You're the Flight Surgeon will be returning under a new name. Details will be announced in January 2021.

HFACS Workshops

ONLINE. Workshops on the The Human Factors Analysis and Classification System (HFACS) are now available online as well as in-person. Dates and locations are as follows:

- December 15-16, 2020 @ Las Vegas, NV
- February 17-18, 2021 @ Online/Virtual
- May 11-12, 2021 @ Daytona Beach, FL
- June 16-17, 2021 @ Online/Virtual
- July 13-14, 2021 @ Las Vegas, NV
- September 14-15, 2021 @ Daytona Beach, FL
- October 13-14, 2021 @ Online/Virtual

For more info, 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.

NEWS OF CORPORATE MEMBERS

AOPA Supports NCAA Act

Bipartisan legislation has been introduced in the House which would address challenges to the U.S. aviation and aerospace industries. The Aircraft Owners and Pilots Association (AOPA) joined 130 other aviation organizations in supporting the legislation. The proposed National Center for the Advancement of Aviation (NCAA) Act of 2020, H.R. 8532, would create an independent center to facilitate collaboration among commercial, general, and military aviation sectors to address the mounting workforce challenges facing the industry. H.R. 8532 was introduced in the House by Reps. André Carson (D-Ind.), Don Young (R-Alaska), and House Aviation Subcommittee Chairman Rick Larsen (D-Wash.). Carson and Young also serve on the aviation subcommittee. An identical, bipartisan bill was introduced in the Senate earlier this year by Sens. Jim Inhofe (R-Okla.) and Tammy Duckworth (D-Ill.), both pilots. The bill is co-sponsored by Sens. Marco Rubio (R-Fla.), Ron Wyden (D-Ore.), and Cindy Hyde-Smith (R-Miss.).

—Please visit <https://www.aopa.org/news-and-media/all-news/2020/december/pilot/aopa-action-december-2020> to read more about this.

NIOSH Signs MOU with NFPA

The National Institute for Occupational Safety and Health (NIOSH) has signed an updated Memorandum of Understanding (MOU) to collaborate with the National Fire Protection Association (NFPA) and the Fire Protection Research Foundation on activities related to emergency responder protective clothing and equipment (PPE), and the development of standards concerning first responder safety, deployment, operations, and the protection of emergency personnel. NIOSH is currently involved in the NFPA standards development process for emergency responder PPE so that first responders are protected from physical, chemical,

biological, radiological, nuclear, thermal, inhalation and dermal hazards. The new 10-year MOU continues NIOSH participation with NFPA Technical Committees that work on responder organization operations, deployment, training, and safety. It was established so that emergency response organizations and personnel have thorough research, testing, standards, operational strategies, and programming to ensure that personnel can safely and competently perform the all-hazards role that they play in society.

—Please see <https://www.cdc.gov/niosh/updates/upd-10-22-20.html> for the full press release.

KBR Supports Women's Rights Worldwide

KBR is proud to support women's rights with its safety and social sustainability efforts around the globe, supporting the belief that the involvement of women makes a crucial difference in achieving peace and security. After many months of engaging, training, and participating in the International Stability Operations Association (ISOA)'s Women, Peace, and Security (WPS) program, KBR recently became one of the first companies to become fully certified by ISOA, a significant achievement underscored by KBR's culture of Zero Harm. This certification is also tied to the Global Fragility Act of 2019, which requires the U.S. government, in collaboration with civil societies, to develop a 10-year strategy to enhance stability and reduce violence and fragility globally. As a company standing behind the most critical missions of the U.S. government in overseas locations, KBR is committed to bringing the WPS principles of inclusion, support, and engagement to women of the nations where it operates.

—Please visit <https://www.kbr.com/en/insights-events/stories/women-peace-and-security-how-kbr-cultivates-female-engagement-around-globe> to read more about this.

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Corporate News Bites

UTMB: The University of Texas Medical Branch (UTMB) congratulated three of its doctors for winning first place in the semifinals of the National American College of Rheumatology Convergence meeting in 2020. The three doctors came in second in the finals. *To read more, please visit <https://www.utmb.edu/internalmedicine/news-events/news-article/2020/11/12/congratulations-dr.-vijaya-murthy-dr.-jaya-sonkar-and-dr.-aparna-das>.*

ALPA: The Air Line Pilots Association (ALPA), Int'l, has issued a statement after the U.S. House of Representatives passed the bipartisan Aircraft Certification Reform and Accountability Act (H.R. 8408) expressing gratitude to Chairman Peter DeFazio for his efforts. They also expressed encouragement that airline pilots will be an integral part of the certification process, ensuring that all newly developed and certificated aircraft will be held to the highest levels of safety necessary to keep the U.S.'s aviation system the safest in the world. *Please see <http://www.alpa.org/news-and-events/news-room/2020-11-17-new-aircraft-certification-bill> for the complete statement.*

MEETINGS CALENDAR

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

Fortnightly; 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 information.

HFACS Workshops; ONLINE. Workshops on the The Human Factors Analysis and Classification System (HFACS) are now available online as well as in-person. For more info, 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.

Nov. 30-Dec. 4, 2020; SAFE Association 58th Annual Symposium; **to be held ONLINE.** For more information, please visit <https://www.safeassociation.com/index.cfm/page/SAFE-Association-58th-Symposium-2020-is-going-virtual>.

Dec. 6-10 2020; 129th AMSUS Annual Meeting; to be held **ONLINE.** For more information, please visit <https://www.amsus.org/events/annual-meeting-2/>.

Serco Celebrates NAIDOC at CLA

Clarence Correctional Centre (CLA) celebrated its inaugural National Aboriginal Islander Day Observance Celebration (NAIDOC) Week, taking an innovative approach to addressing the culturally specific needs of Aboriginal and Torres Strait Islander inmates. Creating a sense of belonging through Aboriginal and Torres Strait Islander culture is a key component of Serco's strategy to deliver positive outcomes for First Nations inmates at CLA. The NAIDOC activities were aimed at bringing together inmates from all different areas, as well as involving friends, family, and the local community in cultural celebrations. Events that were shared virtually for NAIDOC Week included an exhibition of the NAIDOC Week art competition, NAIDOC storytelling, yarning circles, and video messages sent in by members of the Aboriginal community. CLA also offered a traditional smoking ceremony, an ancient custom that involves smoldering various native plants to produce cleansing smoke.

—Please see www.serco.com/aspac/news/media-releases/2020/serco-leads-the-way-with-naidoc-week-innovations-at-clarence-correctional-centre for more on this.

Generation Space: a Virtual Forum

Singularity University Frankfurt am Main Chapter, Munich Chapter, and New York City Chapter, in collaboration with InnovaSpace, are organizing the online event "Generation Space" on December 4, 2020, to examine and discuss space exploration and education, and to promote the InnovaSpace project Kids2Mars.

The event will be divided into five 1-hour panels, delivered by well-known professionals coming from NASA, ESA, and more. Each panel will end with a debate and Q&A session moderated by an expert in the area. For more information or to register, please visit <https://thegenerationspace.com/>.

FAA AME Seminars

Jan. 29–31, 2021	Raleigh, NC	Refresher
March 22–26, 2021	Oklahoma City, OK	Basic
May 24–27, 2021	Reno, NV	AsMA

Please check the [FAA website](http://www.faa.gov) for more information. **PLEASE NOTE:** AsMA only takes registrations for the seminar held in conjunction with our annual meeting.

