



# Ever Upward: September 2019

## Flarity Succeeds to ANAHPS Presidency

Kathleen Flarity DNP, Ph.D., CEN, CFRN, FAEN, is the new President of the Aerospace Nursing and Allied Health Professionals Society (ANAHPS).



Aubrey Florom-Smith, Ph.D., RN, stepped down for personal reasons. Currently, Col. Flarity is the Deputy Director of the CU Anschutz Center for COMBAT Research. Additionally, she is the Mobilization Assistant to Command Surgeon, Air Mobility Command, Scott AFB, IL. As the Mobilization Assistant, she assists in oversight of the Air Force global aeromedical

evacuation system, a keystone of our national enroute care capabilities. She supports clinical operations capability development and research priorities for aeromedical evacuation and Air Force Critical Care Air Transport Teams. She is an experienced nurse practitioner, emergency, and critical care flight nurse with over 38 years of military service. She is an Associate Clinical Professor in Emergency Medicine at the University of Colorado College of Medicine.

Col. Flarity began as an Army combat medic in 1980 and received a commission in the U.S. Army Reserve in 1988. She deployed to Saudi Arabia in support of Operations Desert Shield and Desert Storm in 1991. In 1995, she transferred to the Air Force Reserve, 446th Aeromedical Evacuation Squadron, McChord Air Force Base, WA, and served in various capacities from 1995 until 2005. From 2005 to 2008 she served on the Air Staff as an Individual Mobilization Augmentee to the Director of Air Force Nursing Services and Consultant for Air Expeditionary/Readiness, HQ Air Force, Washington, DC. In 2008 she was selected as the first Commander of the 34th Air Evacuation Squadron at Peterson AFB, CO. In 2011 she deployed as Commander, 455th Expeditionary Aeromedical Evacuation Squadron, Bagram, Afghanistan. She then served as the 302d Aeromedical Staging Squadron Commander, Peterson AFB, CO. She served as a Mobilization Assistant at Headquarters U.S. Air Force from 2013–2017.

Col. Flarity's awards and honors include receiving the American Academy of Nurse Practitioners State Award for Excellence from Washington state, being inducted as a Fellow in the ENA's Academy of Emergency Nursing, being selected as a Distinguished Nursing Alumni for Pacific Lutheran University, the Nightingale Award for Nursing Leadership from Colorado, and receiving the Nurse Researcher Award from the Emergency Nurses Association. Her military honors include the Air Force Commendation Medal with two oak leaf clusters, the Aerial Achievement Medal, the Air Medal, the Meritorious Service Medal, and the Legion of Merit. She is a member a variety of associations, including the Society of Air Force Nursing, Association of Military Surgeons of the United States, the American Academy of Nurse Practitioners, the Air and Surface Nurses Association,

Washington State Emergency Nurses Association (ENA), where she was President in 1998, the Aerospace Nursing and Allied Health Professionals Society, where she was Vice President, and now President, and the Aerospace Medical Association. She has served on the Board of Directors for the *Journal of Emergency Nursing*, the Board of Certification for Emergency Nursing, the ENA National Board of Directors, and Chair of the Board of Directors for the Academy of Emergency Nursing. She has also served as a manuscript reviewer for four journals and on the Editorial Board for the *Advanced Emergency Nursing Journal*.

## Baraka Honored at SSDW

Ahmed Shokry Baraka, a student member of the Aerospace Medical Association, attended the Space Station Design Workshop 2019 (SSDW 2019). His team (the red team) won the competition and he also won for human factors in space station design. In addition, he is assisting in organizing speakers for orientation ("Let's talk about our future"), which will be held from September 15–28. One of the speakers, Ms. Kseniya Masterova, AMSRO President, will be providing two videos: a welcoming video and a video about how members can get involved in the aerospace medicine community. Mr. Jason David will be providing a video about advanced cardiac

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**Red team:** Baraka's team, the Red Team, won the competition at SSDW. He is standing on the far right.



**Medal winners:** Baraka is kneeling on the far left in the front wearing the medal he won for human factors in space station design.

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life support in microgravity; Ms. Emma Barratt, who is a cognitive scientist, will send a video about neuroscience in space; Eng. Miquel Bosch Bruguera, a research associate and the director of the Soyuz Simulator at the IRS, will be providing a video about human mind adaptation in space; and Mr. Markus Grass will be representing the SSDW.

## Vermeiren Honored by King of Belgium

Dr. Roland Vermeiren, Past President of the Aerospace Medical Association (AsMA), has been awarded the rank of Officer in the Order of King Leopold II by his Majesty King Filip of Belgium. The honor was bestowed for Dr. Vermeiren's many years of contributions to international aerospace medicine. The Order of King Leopold II is given for meritorious service to the sovereign of Belgium and is third in the rank of civilian awards within Belgium. It is a rare award for civil servants of a European Agency. Dr.



Vermeiren is a Fellow of AsMA and is currently serving as Chair of the EUROCONTROL Medical Board and Head of Medical Services, Principal Medical Advisor, European Organization for the Safety of Air Navigation, Brussels, Belgium. His complete biography can be found in the August 2017 newsletter (<http://www.asma.org/asma/media/AsMA/pdf-journal/pdf-news-2017/aug2017-news-final.pdf>).

## New Members

AsMA welcomes 21 new members in September.

- Balis, Konstantinos; Yardley, PA, United States
- Beadle, Sarah; Clemson, SC, United States
- Blumer, Joseph; Washington, PA, United States
- Burch, Michael; Raleigh, NC, United States
- Carvey, Matthew; Lethbridge, Alberta, Canada
- Clark, Torin; Boulder, CO, United States

### Read Current News Online!

News pages are updated as we get news. Members: check the Job Fair; new jobs are posted monthly!

### CALL FOR CONTRIBUTIONS

The editors of the Journal of Advanced Transportation are calling for contributions to the special issue "Methodologies for the Analysis and Prevention of Aviation Safety Occurrences." This particular issue offers a publication venue for researchers and industry practitioners working on developing, validating, and implementing analysis and prevention methodologies for aviation safety occurrences. The editors are interested in a broad range of topics, including safety/accident analysis methods and models, data analysis, and human factors. Please visit the [Call for Papers](#) for more information. **The submission deadline is Friday, 22 Nov. 2019;** the publication date will be April 2020.

- Dingle, Rebecca; Nightcliff, Northern Territory, Australia
- Etheridge, Claire; Bowral, New South Wales, Australia
- Harris, Michael; Dallas, TX, United States
- Hauber, John; New York, NY, United States
- Irio, Giselle; Las Cruces, NM, United States
- Irons, Thomas; North Bethesda, MD, United States
- Kearby, Gregory; APO AE, United States
- Kennedy, Nancy; Muskego, WI, United States
- MacDonald, Austin; Silver Spring, MD, United States
- McNamee, Lisa; Dublin, Ireland
- Mount, Aubrey; Fleming Island, FL, United States
- Petherbridge, Sean; Burgess Hill, West Sussex, United Kingdom
- Richardson, Alexander; Richmond, Victoria, Australia
- Shirah, Bader; Jeddah, Saudi Arabia
- Tan, Kim; Perth, Western Australia, Australia
- Warren, Andrew; Aurora, CO, United States

## Obituary Listing

AsMA was saddened to learn of the death of Richard T. Garrison, M.D., in late July. He was an Associate Fellow of the Aerospace Medical Association (AsMA). He graduated from Wright State University in 1976 and earned his M.D. at the Medical College of Ohio at Toledo in 1980. He was a Founding Member of Emergency Medicine Specialists, Inc., and served as Medical Director of Good Samaritan Hospital Emergency Department for many years. He was also an Associate Professor of Aerospace Medicine at Wright State University Boonshoft School of Medicine. Additionally, Dr. Garrison was a commercial pilot and flight instructor and served in the Ohio National Guard in the 180<sup>th</sup> Medical Group in Toledo. He was the current President of the *Commission Internationale Médico-Physiologique*, an Affiliated Organization of AsMA. To read his online obituary, please visit <http://www.routsong.com/obituaries/Richard-Thomas-Garrison?obId=5600620>.

### MEETINGS CALENDAR

Embry Riddle Aeronautical University (ERAU) Human Factors Analysis Classification System (HFACS) classes: ERAU is offering workshops on HFACS on the following dates: **Sept. 17-18, 2019** - Las Vegas, NV; **Dec. 17-18, 2019** - Las Vegas, NV. For more information, please visit <https://proed.erau.edu/courses/hfacs>.

**Sept. 1-6, 2019;** The International Society of Air Safety Investigators (ISASI) annual seminar; The Hague, the Netherlands. To register or for more information, please visit the seminar website at [www.ISASI2019.org](http://www.ISASI2019.org).

**Sept. 8-12, 2019;** 67th International Congress of Aerospace Medicine (ICASM); Derecen, Hungary. For more information, please visit <https://www.icasm2019.com/>.

**Sept. 9-13, 2019;** 24th International Symposium on Shiftwork & Working Time; Couer D'Alene, ID, USA. For more info or to register, visit [www.shiftwork2019.com](http://www.shiftwork2019.com).

**Oct. 21-25, 2019;** 70th International Astronautical Congress - IAC 2019; Washington, DC, USA. For more info, please visit <http://www.iafastro.org/events/iac/iac-2019/>.

**Oct. 28-Nov. 1, 2019;** HFES 63rd International Annual Meeting; Seattle, WA, USA. For more information on the meeting, please visit <http://www.hfes2019.org/>.

# NEWS OF CORPORATE MEMBERS

## HRi Is Newest Corporate

Human Resources, Inc. (HRi), is the newest Corporate and Sustaining Member of the Aerospace Medical Association. The company specializes in custom human resource services. It offers management of payroll and taxes, benefits, human resource solutions, workers compensation, and time and labor. They develop human resource packages specific to each company that hires them as they recognize that each company is unique and companies' support needs are diverse. One of the services they offer is a media library with training videos for the software they use. They also offer a monthly newsletter. HRi has managed the Aerospace Medical Association's human resources needs since 2012.

—Please visit <https://www.hri-online.com/> to read more about the company.

## Martin-Baker to Receive Spirit of Flight Award

The Board of Trustees of the National Aviation Hall of Fame (NAHF) has announced that its 2019 Spirit of Flight Award will be presented to Martin-Baker Aircraft Company Limited (MBA) during the 57th Annual Enshrinement Dinner & Ceremony to be held in Denver, CO, at Wings Over The Rockies Air & Space Museum in late September. The Spirit of Flight Award qualifications include organizations that serve a special need of the nation and set high standards for excellence in the utilization of aerospace assets. Martin-Baker will be presented the award for setting the standard for ejection and crashworthy seats. MBA's seats have saved over 7500 people around the world. Of those, over 2,500 American Airmen were saved during Vietnam using MBA ejection seats, and since that time another 1,000 Americans have ejected in a variety of aircraft and have been safely returned to their families.

—Please visit <http://martin-baker.com/2019/08/12/national-aviation-hall-fames-2019-spirit-flight-award-presented-martin-baker/> to read more.

## ALPA Urges Better Fatigue Rules for Cargo Pilots

The Air Line Pilots Association, Int'l (ALPA), partnered with the Coalition of Airline Pilots Associations (CAPA), including the Independent Pilots Association (IPA), and the International Brotherhood of Teamsters Local 1224 to renew efforts to achieve one level of safety for all-cargo pilots and issued collective support for legislation that would close this dangerous loophole and ensure that all airline pilots fly under the same safety standards. The Safe Skies Act, introduced by Senators Amy Klobuchar (D-MN), Maria Cantwell (D-WA), Richard Blumenthal (D-CT), Ed Markey (D-MA), and Tammy Duckworth (D-IL), would apply the same flight, duty, and rest rules to cargo flights as commercial airlines to

prevent dangers posed by fatigued pilots. While many of the same regulations are used for both commercial passenger and cargo airlines, lesser requirements are in force on all-cargo operations in several crucial areas, which results in unnecessary safety risks. For example, updated science-based flight- and duty-time regulations for passenger operations apply only to pilots at passenger airlines and do not include all-cargo pilots. ALPA, along with the others named above, is urging this be changed.

—Please visit <http://www.alpa.org/news-and-events/news-room/2019-07-23-airline-pilots-urge-capitol-hill-enhance-fatigue-rules-all-cargo-operations> to read more about this.

## APA Endorses Safe Landings Act

The Allied Pilots Association (APA), representing the 15,000 pilots of American Airlines, endorsed the Safe Landings Act, a bill that would make the U.S. commercial aviation industry even safer. Rep. Mark DeSaulnier introduced the Safe Landings Act in early August at San Francisco International Airport, which was the site of a crash in 2013 (Asiana Airlines Flight 214) as well as a near-miss in 2017 (Air Canada Flight 759). The legislation calls for: developing technology that would alert pilots and air traffic controllers when a plane is not aligned with its intended runway; modernizing the "notices to airmen" (NOTAM) system so that the notices are more effective and user-friendly; and establishing an FAA Task Force on Human Factors in Aviation Safety that would research best practices and issue recommendations.

—Please see <https://www.alliedpilots.org/News/ID/7116/Allied-Pilots-Association-Endorses-Safe-Landings-Act> for more.

## NIOSH Releases Software to Improve Mine Blasting

Mines can now reduce the risk of post-blast ground falls with the DRIFT software, which helps engineers to create more effective blast designs. DRIFT was developed by the National Institute for Occupational Safety and Health (NIOSH) Mining Program to help reduce the risk of ground falls, which remain a serious threat to the safety of miners. Poor blast design can lead to loose or damaged rocks in the roof and at the ribs of drifts when the force of a blast extends beyond the target area. Scaling, excessive overbreak, and damage to supported ground all pose a risk of disabling injuries and fatalities to miners after blasting is completed. Engineers rely on good design practices to limit damage to areas surrounding the blast zone. Current controls address this problem through perimeter blasting, but these controls lack precision. DRIFT, an acronym for Design method to Reduce risk of Injury from ground Falls Technique, combines perimeter

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blast designs with a buffer row to further reduce ground falls that occur from perimeter damage. DRIFT enables engineers to create a conceptual blast design by coordinating perimeter and buffer rows for blasting.

—Please visit <https://www.cdc.gov/niosh/updates/upd-07-31-19.html> to read more.

## KBR Participates in Race of Autonomous Vehicles

KBR collaborated with NASA and Amazon Web Services (AWS) to successfully stage the “DeepRacer” event where racers operated fully autonomous vehicles using an advanced machine learning technique called ‘reinforcement learning’. NASA and KBR interns faced off in this race at NASA’s Goddard Space Flight Center for the first time ever this August. These interns and other employees competed to see whose machine-learning models could propel an AWS DeepRacer vehicle around a track the fastest. Their models rewarded vehicles for speed and accuracy for staying on the course, allowing each vehicle to autonomously make short-term decisions to achieve long-term goals. At one-eighteenth the size of a normal car, the AWS DeepRacer allows reinforcement learning models built in virtual environments to be tested in the real world, providing a hands-on way to explore artificial intelligence (AI) and machine learning. This event allowed NASA to experiment with autonomous systems for future exploration missions and showed how the private and public sector can collaborate to advance technology.

—Please see <https://www.kbr.com/en/insights-events/stories/kbr-drives-future-artificial-intelligence> for more.

## Mayo Clinic Finds Method That May Improve Colorectal Cancer Outcomes

According to new Mayo Clinic research, colorectal cancer outcomes may improve by genetically altering an immune-regulatory protein in cancer cells, making the cells more vulnerable to chemotherapy. The findings, published in August in *Oncogene*, indicate that increasing the expression of the PD-L1 protein in colorectal cancer cells can improve the effectiveness of chemotherapy. PD-L1 is an immune checkpoint protein that interacts with another protein, PD-1, to negatively affect cell functions and enable tumor cells to evade the body’s immune system. Research has shown that interrupting the PD-L1/PD-1 interaction can enhance attacks on anti-tumor immunity. However, the Mayo Clinic study describes another function of PD-L1: its effect on proteins that regulate tumor cell death. Deleting the PD-L1 gene suppressed two proteins that are associated with increased chemotherapy-induced cell death. In contrast, restoring PD-L1 expression reversed the suppression of these proteins. The study found that increased tumor cell PD-L1 expression was associated with better survival among patients expected to have received chemotherapy, which is the standard of care for patients with stage 3 and stage 4 cancers.

—Please see <https://newsnetwork.mayoclinic.org/discussion/genetically-manipulating-protein-level-in-colon-cancer-cells-can-improve-effectiveness-of-chemotherapy-mayo-clinic-study-finds/> for more.

## Corporate News Bites

**NKI:** NeuroKinetics, Inc. (NKI), was named one of the Pittsburgh Business Times “Fast 50” companies for 2019. This list recognizes locally owned, for-profit corporations in western Pennsylvania. NKI were honored in a special section of the Pittsburgh Business Times and at a ceremony at the end of August. *To read more on this, please visit <https://neuro-kinetics.com/project/nki-named-a-2019-fast-50-company/>.*

**MedAire:** MedAire’s founder, Joan Sullivan Garrett, will be inducted into the International Air & Space Hall of Fame at the San Diego Air & Space Museum in November. Her name is listed in an article on Jeff Bezos also becoming an honoree. *To see the full article, please visit <https://timesofsandiego.com/tech/2019/08/07/richest-man-jeff-bezos-due-in-san-diego-as-air-space-museum-honoree/>.*

**Monash:** Monash’s Prof. David Newman and the Aviation Medicine Unit recently ran the second Australian Certificate of Civil Aviation Medicine course for 2019. Students visited Avia Aviation at Moorabbin Airport for their flight simulator experience. Two students were awarded the Dux for their performance in the course. *For more, visit <https://www.monash.edu/medicine/sphpm/units/avmed/news>.*

**SAA:** South African Airlines (SAA) has announced codeshare and frequent flyer agreements with Gol Linhas Aéreas (GOL), a Brazilian airline. This will allow SAA to add its codes on GOL flights and allow customers easy connections on flights from both carriers. *For more, please see <https://www.flysaa.com/about-us/leading-carrier/media-center/media-releases/newsroom>.*

## Serco Selected to Provide Training for the RNZN

Serco Defence has been selected by the New Zealand Defence Force (NZDF) to provide specialist training services to the Royal New Zealand Navy (RNZN). Serco will provide a team of highly qualified and dedicated specialists to support RNZN Bridge Warfare Officer training. This contract is similar to Serco’s Training Support Services contract which has provided these services for the Royal Australian Navy (RAN) at HMAS Watson in Sydney since 2012. RNZN officers have previously travelled to Sydney to take part in this training, but it will now be undertaken by local New Zealanders. The contract will require Serco to work in partnership with the RNZN over the next 5 years in developing training systems, solutions, and courseware that enable officers to learn both theoretical and practical skills critical to their specialization as Bridge Warfare Officers. This includes navigation (including astronomical navigation), ship driving, leadership and bridge resource management, using simulator training.

—Please visit <https://www.serco.com/aspac/news/media-releases/2019/serco-to-develop-bridge-warfare-officer-training-in-new-zealand> to read more.