

# Ever Upward: October 2020

## Ellingson Award Winner Announced

The Associate Fellows Group is pleased to announce the winner of the 2020 Ellingson Award for scholarly articles pub-



lished during 2019 in *Aerospace Medicine and Human Performance* (AMHP). The Ellingson is awarded to Dr. Douglas D. Boyd for his research article "Occupant Injury Severity in General Aviation Accidents Involving Excessive Landing Airspeed," published in the April 2019 edition of AMHP [Aerosp Med Hum Perform. 2019; 90(4): 355–361]. The award will be presented during the AFG Breakfast at

the 2021 AsMA Annual Scientific Meeting in Reno, NV.

Dr. Boyd earned a B.Sc., in Pharmacology at Leeds University, Leeds, UK, in 1982 and then his Ph.D. at Edinburgh University, Edinburgh, Scotland, in 1985. He was Assistant Professor at the University of Texas in Houston from 1991 to 1996, then became Associate Professor. In 2001, he was made a full Professor, which is his current position. He has reviewed for 30+ journals, including AMHP, and several funding agencies, including the NIH. He has mentored 29 graduate students/fellows, including a resident in aerospace medicine. He serves on both the Aerospace Medical Association's Safety Committee as a member, the Resolution Committee as Chair, and on the Scientific Program Committee as a member. He is also a FAA Safety Team representative co-organizing (and presenting) safety seminars for Houston-area general aviation pilots. Additionally, he received the Arnold D. Tuttle Award in 2018 from the Aerospace Medical Association for his role as author of "In-flight decision-making by general aviation pilots operating in areas of extreme thunderstorms" [Aerosp Med Hum Perform. 2017; 88(12):1066-1072].

The runners-up for the Ellingson were the research article by Dr. William D. Porter (co-authors: Nicole Powell-Dunford; Grant D. Wilde; Alaistair J. R. Bushby) for "Asthma and Rotary-Wing Military Aircrew Selection," which appeared in the July 2019 edition [Aerosp Med Hum Perform. 2019; 90(7):606–612], and the technical note by Dr. David L. Lerner

## Space Health Symposium

To celebrate World Space Week 2020, the ad astra vita project and Mars Society Australia have joined forces to present an inaugural Australian virtual Space Health Symposium (including Human Rights in the Space Environment) to be held **via Zoom** (free registration). The symposium, entitled "How to thrive, not just survive," will be held **Oct. 5-6, 2020**. The program will run 12 hours a day in order to cover all major time zones. Please visit <u>https://adastravita.com/space-health-symposium/</u> for more information, or contact <u>Dr. Rowena Christiansen</u>.

(co-authors: Ranjit S. Chima; Kirang Patel; Allen J. Parmet), "Ultrasound Guided Lumbar Puncture and Remote Guidance for Potential In-Flight Evaluation of VIIP/SANS," published in the January 2019 edition [Aerosp Med Hum Perform. 2019; 90(1):58–62]. The AFG congratulations all of these authors for their scholarly achievements.

The Ellingson Award was created in the memory of the late Colonel Harold V. Ellingson, who served as a military flight surgeon between 1942 and 1966 with the U.S. Army and Air *Force, and who was recognized for his outstanding accomplish*ments with numerous awards, including the Army Commendation Medal, Air Force Commendation Medal, the Legion of Merit with Oak Leaf Cluster and the Air Medal. During his tenure as Commander of the USAF School of Aerospace Medicine at Brooks Air Force Base between 1963 and 1966, he provided academic training in all aspects of specialized aeromedical practice for physicians and nurses of the Air Force, Army, Navy and allied nations. He also oversaw training in bioastronautics for aerospace research pilots. Following his USAF retirement, he held the position of chairman in the Department of Preventive Medicine at Ohio State University. Dr. Ellingson also served in the roles of president of the American College of Preventive Medicine and chairman of preventive medicine section for the American Medical Association (AMA).

The Ellingson is a prestigious award given annually by the AsMA Associate Fellows Group (AFG) in recognition of the scientific achievements of an AFG member who has had an article published in AMHP during the previous year. The recipient is competitively selected from among AFG member first authors published during the prior year via a peer-review process.

## AMHP Continues in Top 20 for Ingenta

Ingenta has generated the full text download data for all the titles on Ingenta Connect, and AsMA's publications rank in the top 20 out of more than 11,000 titles for number of full-text downloads.

For the period August 1-31, 2020:

• Aerospace Medicine and Human Performance ranks 8th with 2,479 downloads; and

• *Aviation, Space, and Environmental Medicine* ranks 16th with 1,625 downloads.

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## **Read Current News Online!**

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

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

#### **New Members**

AsMA welcomes 27 new members in October.

Bailey, Valentino; Miami, FL, United States Berg, Geir Ingvar; Hafrsfjord, Norway Bevelacqua, Joseph; Richland, WA, United States Campbell, Zachery; Indianapolis, IN, United States Clemente Fuentes, Roselyn; Niceville, FL, United States Field, Robert; San Diego, CA, United States Hicks, Aaron; Pensacola, FL, United States Juby, Michael; Norfolk, VA, United States Kelts, Eric; Broomfield, CO, United States Khan, Ursel; Fort Smith, AR, United States Kumar, Ajay; Bangalore, India Lugo Ranal, Joezer; San Juan, Puerto Rico, United States Maruska, Anna; Centerville, GA, United States Nagpurkar, Ashish; Amravati, India Petrelli, Michael; Portsmouth, VA, United States Pietila, Diane; Iwakuni, AP, United States Rajput, Siddharth; North Sydney, New South Wales, Australia Rispens, Jared; Mobile, AL, United States

Rouse, Christopher; Auburn, NH, United States Samelson, Daniel; Castle Rock, CO, United States Shirur, Akshay; Bangaluru, India Sindkar, Anushka; Lawrenceville, NJ, United States Skipper, Andrew; Charlottesville, VA, United States Smith, Sean; Durham, NC, United States Smith, Ford; Victoria, British Columbia, Canada Szulman, Silvina; Ciudad Autónoma de Buenos Aires, Argentina

Thakur, Yujvender; Bengaluru, India

AsMA welcomes back the following members:

Curtin, Richard; Anniston, AL, United States Hyatt, Andrew; Cape Girardeau, MO, United States McBride, Dennis; Falls Church, VA, United States Mohapatra, Sudhanshu; Bangalore, India

## SAVE THE DATES: GLEX 2021 and GLOC 2022

The International Astronautical Federation (IAF) has announced the IAF Global Conferences for the years 2021 and 2022. You are invited to save the following dates:

**#GLEX2021**; 14–18 June 2021; St. Petersburg, Russia. The third Global Space Exploration Conference (GLEX), co-organized by the IAF and ROSCOSMOS, will bring together leaders and decision-makers within the science and human exploration community discuss recent results, current challenges, and innovative solutions.

**#GLOC2022**; 31 May–2 June 2022; Oslo, Norway. The IAF and its member the Norwegian Space Agency are pleased to announce GLOC 2022, which will contribute to understanding and battling climate change and will address topics in relation to space and climate change.

For more information, visit <u>www.iafastro.org</u>.

# Medicine in Challenging Environments

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The purpose of this app is to impart practical, evidence based, multi-specialty medical knowledge to both medical professionals and interested individuals who desire to enter adventure activities or believe that they may need to know about these topics for their travels. Our focus is to provide useful information in a dynamic, affordable, hand-held App format. This App may also be useful for the sophisticated adventurer both for planning and while en route. This work is a product of the tireless contributions by many practitioners in their respective areas of expertise. All of us on the editorial team are profoundly grateful for their willingness to share their passion, enthusiasm, and wisdom with our readers, who will appreciate the practical guidance provided. As editors we are grateful for the support of our colleagues, friends and most importantly the patience of our families, who have been supportive as we worked on this project over many weekends and evenings.

The advent of devices and systems that allow for effective presentation of video, text, and image content in a highly portable electronic form has been the incentive to embark on the project to assemble the wide breadth of this work. The work before you encompasses areas of Wilderness Medicine, Aerospace Medicine, Emergency Medicine, Pediatrics, Internal Medicine, key concepts of Survival, Psychology and many other clinical specialty areas of expertise in the civilian and military realm. We hope this reference will serve the provider and interested public as a resource at the point of need in challenging environments.

This reference application will be updated on a regular basis and content will be added in future releases of the App as user need dictates. The app is organized into three main sections, comprised of standard chapters and a keyword search capability for retrieval of pertinent information. We are very interested to hear from our users, so we can continually improve the content to best serve the needs of our readers.

www.medicineinchallengingenvironments.com



# **News of Corporate Members**

## **AOPA Supports You Can Fly Program**

Nearly 4,400 individual Aircraft Owners and Pilots Association (AOPA) Foundation donors gave more than 2.7 million to support You Can Fly initiatives. They also secured a matching grant from the Ray Foundation. The You Can Fly program is funded by these donations to the AOPA Foundation and is directly growing aviation through its four initiatives: High School, Flight Training, Flying Clubs, and Rusty Pilots. The donors this year have helped AOPA and You Can Fly progress toward the long-term goals of reaching 10,000 high school students a year with the High School Aviation STEM Curriculum, reducing the student pilot dropout rate, and reaching 10,000 flight training students through the AOPA Flight Training Advantage app, growing the number of pilots in the AOPA Flying Club Network to more than 10,000, and getting 15,000 lapsed pilots back in the air. With the second half of the year in full swing, those involved in and passionate about General Aviation are encouraged to keep the AOPA Foundation and You Can Fly in mind.

—Please visit <u>https://www.aopa.org/news-and-media/all-news/2020/september/03/rising-to-the-challenge-with-flying-colors</u> to read more.

#### ALPA Launches Public Awareness Campaign

The Air Line Pilots Association, Int'l (ALPA), demonstrated its investment in the airline industry by launching a new public awareness campaign to reassure passengers that when they are ready to take to the skies, airline pilots are ready for takeoff. ALPA's "Ready for Takeoff" paid advertising campaign is the Association's latest effort aimed at reminding the flying public that pilots are on the job, ready to fly, and taking precautions for COVID-19 in order to get them safely to their destinations. ALPA's initiative builds on work the union has accomplished since the start of the current public health crisis—reassuring the flying public, advocating for payroll support for aviation workers, and calling for mandatory compliance with Centers for Disease Control and Prevention guidelines. "Ready for Takeoff" will use a mix of print, digital, and social ads to drive home the message that when travelers are ready to take to the skies again, they can feel confident knowing pilots are ready to get them there safely.

—Please see <u>http://www.alpa.org/news-and-events/news-</u> room/2020-09-17-ready-for-takeoff for more.

#### **Corporate News Bites**

**Martin-Baker:** Last year Martin-Baker was awarded a contract by the Bangladesh Air Force (BAF) for the supply and retrofit of ejection seats into the F-7/FT-7 and K-8W aircraft. One reason for this was a commitment to construct a new Centre of Excellence for Aircrew safety, which will carry out the MRO for the new seats and the seats from future programs like the new primary trainer and fighter aircraft competitions. *Please visit <u>https://martin-baker.com/2020/09/04/martin-baker-constructs-newbangladeshi-centre-of-excellence-for-aircrew-safety/ for photos and to learn more.*</u>

#### **KBR and Partners Win Top Global Award**

The U.S.-based Engineering News Record (ENR) Global Best Projects Awards focus on the challenges, risks, and rewards of designing and constructing around the world and recognize the project teams behind outstanding design and construction efforts each year. The KBR, Mott MacDonald, and SMEC design joint venture (JV) team's contribution to the Sydney Metro Northwest project has earned the 2020 ENR Global Best Rail Project award. The JV delivered the detailed design for eight new metro stations which included three underground stations, three new open-cut suburban stations, and two new elevated stations. It was also responsible for train stabling maintenance facilities, 36 km of new metro track, overhead power systems, and precinct civil works and car parks. Building information modelling (BIM) was successfully applied to this major transport infrastructure project and, by adopting BIM, the JV minimized cost and schedule risk and enhanced constructability. The innovative design developed by the JV reduced the use of raw construction material. Reducing the use of raw construction materials and labor on-site in favor of prefabricated elements increased the efficiency and sustainability of the project both in construction and in future maintenance operations. The JV were among the winners of ENR's Global Best Project Awards who were celebrated at a virtual ceremony in September.

—Please visit <u>https://www.kbr.com/en/insights-events/stories/</u> <u>kbr-mott-macdonald-and-smec-jv-wins-top-global-award-</u> <u>sydney-metro-northwest</u> to read more.

#### **NIOSH Releases Updated MFIRE Software**

Researchers at the Pittsburgh Mining Research Division (PMRD) of the National Institute for Occupational Safety and Health (NIOSH) are offering a more accessible program (MFIRE) to simulate fires underground, giving mining engineers a valuable tool to conduct fire emergency planning and to test if ventilation controls can contain a fire. Using the MFIRE computer modeling program, users can perform normal ventilation network planning and dynamic underground mine fire and contaminant spread simulation. The program is used for mine fire emergency training and planning and fire risk assessment. Originally released in 1977 as a DOS-based program by the U.S. Bureau of Mines, the software has been completely rewritten in the C++ operating language and packaged into a dynamic link library-meaning it contains code and data that can be used by other programs, making it easy for all mining engineers to adopt. Using MFIRE, engineers can understand where in a mine that smoke and toxic gases could spread, whether designated mine escapeways could be compromised by smoke and toxic gases from the fire, and what ventilation control methods could be used to reduce the fire damage in the event of a mine fire. To access the simulation portion of the software, users can construct See 'Corporate News,' p. N60

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#### From 'Corporate News,' p. N59

the ventilation network (layout of the airways), then enter ventilation parameters (such as resistances, fan curves, and elevations), and thermal properties for heat transfer. The user can then specify any size of fire at any location of the mine to simulate spread and contamination.

*—Please visit https://www.cdc.gov/niosh/updates/upd-09-21-20.html to read more.* 

#### ETC Announces Acceptance by USAF of 4 Altitude Chambers

ETC announced the final acceptance by the U.S. Air Force of a suite of four research altitude chambers delivered to the 711th Human Performance Wing at Wright-Patterson Air Force Base in Dayton, OH, USA. The suite of research altitude chambers will allow maximum flexibility in the configuration of unique test scenarios under a wide range of environmental conditions. Three of the four chambers are "manrated," allowing human occupancy for future initiatives. The fourth chamber can be used for equipment and various research testing scenarios. ETC's suite of chambers will support activities for the U.S. Government's aeromedical research mission, which include: human performance assessment in moderate and high altitude conditions; aircrew equipment development, qualification and man rating; operationally focused aeromedical research; and non-medical engineering test work for aircraft/weapons programs. Among other things, the final contract resolution incorporated into the contract the technical provisions of an engineering change

#### **MEETINGS CALENDAR**

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

**Oct. 5-6, 2020**; Space Health Symposium: "How to thrive, not just survive." The ad astra vita project and Mars Society Australia present an inaugural Australian virtual symposium **to be held via Zoom** (free registration). The program will run 12 hours a day in order to cover all major time zones. For more, please see <u>https://adastravita.com/space-health-symposium/</u>.

**Oct. 12-14, 2020**; CyberSpace IAC 2020 (71st International Astronautical Congress); **to be held ONLINE**. For more info, please visit http://www.iafastro.org/.

**Oct.-Nov. 2020**; 73rd Annual International Air Safety Summit (IASS 2020); **to be held ONLINE**. For more information, please visit <u>https://flightsafety.org/flight-safety-</u> foundation-virtual-iass-2020/.

**Nov. 11-15, 2020**; International Congress on Hyperbaric Medicine; Rio de Janeiro, Brazil. **MEETING POSTPONED**. For more info, contact <u>angela.mesquita@ amsbn.com.br</u> or <u>ichm@ichm2020.rio.br</u>.

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

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

proposal that made minor modifications to the device specification to conform it to the as-delivered suite of research altitude chambers, provided for the U.S. Air Force's final acceptance, resulted in an addition to the contract base price, and resolved all potential claims regarding contract changes and program delay.

—Please see <u>https://www.etcusa.com/etc-announces-the-</u> final-acceptance-by-the-u-s-air-force-of-a-suite-of-fourresearch-altitude-chambers/ for more.

## Mayo Clinic Completes Deidentification of Dataset

Mayo Clinic announced a significant achievement of the newly formed Clinical Data Analytics Platform: completion of the deidentification of structured portions of 10 million Mayo Clinic patient records, along with 2.5 million unstructured portions. Structured portions of data include laboratory values, diagnosis codes, vital signs, and medications, while unstructured portions of data contain clinical notes. Without the data leaving Mayo Clinic's possession or providing patient-identifying information, the Clinical Data Analytics Platform enables researchers and clinicians to extract the knowledge and insights within the deidentified dataset to advance medical research and clinical outcomes. The Clinical Data Analytics Platform is a venture under the Mayo Clinic Platform, a strategic initiative to improve health care through insights and knowledge derived from data. The Clinical Data Analytics Platform applies advanced data analytics on deidentified data from Mayo Clinic and other organizations, as well as vast information in scientific literature, to advance medicine and improve patient health, like identifying targets and biomarkers for new drugs and matching patients with therapies.

—Please see <u>https://newsnetwork.mayoclinic.org/discussion/</u> mayo-clinic-completes-deidentification-of-expansive-medical-<u>dataset/</u> for more.

#### Save the Date!

The Academy of the European Society of Aerospace Medicine is presenting an online workshop on the effects of the COVID-19 pandemic on the aviation community and on aircrew in particular to be held via Zoom on 15 Oct. 2020 from 17:00-19:30 Central European time. Presentations will cover: COVID-19 consequences for aviation; long-term effects on pilots and cabin crew; and the mental health impact on aviation personnel. For more info, see <u>https://www.esam.aero/esam-activities/press-</u> releases/esam-academy-webinar-save-the-date/261.

## **IAF GNF Space Conversations Series**

The International Astronautical Federation (IAF) presents the IAF Global Networking Forum (GNF) Space Conversations Series, fortnightly, free-of-charge registration, live online webinars. **An ongoing Call for Proposals is now open.** The series will take place on a bi-weekly basis every Wednesday prior and following the IAC 2020–The CyberSpace Edition, will start at 14:00 Paris time, and will not exceed the 60-minute timeframe. For more information, please visit <u>https://www.iafastro.org/events/iaf-gnf-</u> space-conversations-series.html.