



Ever Upward: September 2020

2020 Award Winners of the Aerospace Medical Association

Twenty awards for outstanding contributions in aerospace medicine and human performance have been conferred to noteworthy members of AsMA (the Sidney D. Leverett Environmental Science Award will not be presented). Due to concerns over COVID-19, the in-person presentations will be made by Dr. Hernando Ortega, 2019–2020 President of the Aerospace Medical Association, at the 2021 Scientific Meeting in Reno, NV. The winners were recommended by the Awards Committee and approved by the Executive Committee of the Aerospace Medical Association.

LOUIS H. BAUER FOUNDERS AWARD

Royce Moser, Jr., M.D., M.P.H.

This award was established to honor Louis H. Bauer, M.D., founder of the Aerospace Medical Association. It is given annually for the most significant contribution in aerospace medicine. It is sponsored by the Mayo Clinic.

Royce Moser, Jr., M.D., M.P.H., Past President of the Aerospace Medical Association, was honored with the Louis H.



Bauer Founders Award for his significant contributions to aerospace medicine education and research. Through his efforts, significant advances were made in the training of U.S. Air Force (USAF) flight surgeons and in the management of military aviation research, particularly spatial disorientation, oxygen generation, acceleration, and radiation protection. For over four decades, Dr. Moser dedicated himself

to aerospace medicine, serving as a leader in USAF operations, research, and education. He oversaw a research and development budget for critical areas of aviation medicine, and researched G loss of consciousness, the molecular sieve, radiation and chemical warfare protection, and hyperbaric medicine. He also published a seminal article in 1969 in *Aerospace Medicine* on spatial disorientation as a factor in accidents [*Aerosp Med.* 1969; 40(2):174–176]. This article, which showed that spatial disorientation was a significant factor in 9% of aircraft accidents, drew the attention of USAF leadership, which led to the Secretary of Defense approving production of the Automatic Ground Collision Avoidance System. Dr. Moser also founded a training course on spatial disorientation for flight surgeons and aircrew. He has lectured extensively and has published 19 journal articles.

Dr. Moser is a graduate of Harvard College's Medical School, and School of Public Health. He served 23 years in the U.S. Air Force, with assignments as hospital commander; Chief, Aerospace Medicine, Office of the Command Surgeon, Aerospace Defense Command; Medical Officer, Special Weapons Defense, NORAD; Director, Base Medical Services, Phan Rang, Republic of Vietnam; and Chief, Clinical Sciences Division and Education Division--both at the USAF School of Aerospace Medicine. As a flight surgeon he accumulated over 2,000 hours of flight time, including 144 combat hours, in over 30 different types of aircraft. His final Air Force assignment was Commander, USAF School of Aero-

space Medicine, at the time the School was a 900-member organization with over 80% of its \$60 million budget (excluding military salaries) devoted to research and development.

On retirement from the Air Force, Dr. Moser became a Professor at the University of Utah School of Medicine. In addition to serving as Deputy Director of the Department of Family and Preventive Medicine, he served as Director of the Department's Rocky Mountain Center for Occupational and Environmental Health. During his time at the University, Dr. Moser also developed graduate courses in health and safety management and in aerospace medicine. He authored the textbook "Effective Management of Health and Safety Programs—A Practical Guide", now in its 3rd edition. He continued to teach in the management and aerospace medicine courses, the latter for U.S. Air Force Residents in Aerospace Medicine at the University as a Professor Emeritus.

Dr. Moser has been a member of the Aerospace Medical Association (AsMA) since 1965, and served as president and later as parliamentarian of AsMA, is a past president of the Harvard School of Public Health Alumni Association, was Selector of the International Academy of Aviation and Space Medicine, is past Vice President for Medical Affairs of the American College of Occupational and Environmental Medicine (ACOEM), and was Regent of the American College of Preventive Medicine (ACPM). He is a Fellow of AsMA, ACOEM, and ACPM.

Dr. Moser has received numerous awards throughout his distinguished career including: AsMA's Moseley Award in 1981, Lyster Award in 1988, Liljencrantz Award in 2001, the Society of USAF Flight Surgeons Schafer Award, New England College of Occupational and Environmental Medicine's Harriet Award, the Western Occupational and Environmental Medicine Association's Rutherford P. Johnstone Award for Outstanding Service to Occupational Medicine. He holds two Legions of Merit, the Bronze Star, Meritorious Service Medal, three Air Medals, and the Air Force Commendation Medal.

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

ADMIRAL JOHN C. ADAMS AWARD

Susan E. Northrup, M.D., M.P.H.

This award was established by the Society of US Naval Flight Surgeons in honor of Admiral John C. Adams. The award is given annually for the most significant contributions to operational Aerospace Medicine, either during a single defined period (e.g., deployment), or over a career.

Susan E. Northrup, M.D., M.P.H., FAsMA, was the 2020 recipient of the Admiral John C. Adams Award in recognition of her contributions to operational aerospace medicine for over 30 years. She is responsible for all aerospace medicine programs in the U.S. Southern Region and is very active in the Aerospace Medical Association, including having served as Vice President, Scientific Program Committee Chair, Registration Committee Chair, and President of the American Society of Aerospace Medicine Specialists (ASAMS). She has been involved with airman certification, aviation medical examiner (AME) designation and performance surveillance, air traffic control specialist program oversight, and emergency response planning. Her dedication to aerospace medicine operations and aviation safety throughout her career has been exemplary.

Dr. Northrup graduated from the Ohio State University with a B.A. in Chemistry in 1985 and received her M.D. degree in 1989. She served a Family Practice internship at the Ohio State University Hospitals from 1989–1990 and then earned an M.P.H. in 1994 from the University of Texas Health Science Center in Houston, after which she served a Residency in Aerospace Medicine from 1994–1995 and a Residency in Occupational Medicine from 1995 to 1996 at the USAF School of Aerospace Medicine. She graduated from the Air War College Jump Start Program in 2003. She served in the U.S. Air Force from 1990–2010 as a Flight Surgeon at Moody AFB, GA; Chief of Aeromedical Services at Prince Sultan Air Base at Al Kharij, and Dhahran Air Base, Saudi Arabia; Chief of Aerospace Medicine at Pope AFB, NC; and Chief of Operational Medicine at Bolling AFB, DC.

During this time, Dr. Northrup deployed as part of Desert Storm and Desert Shield and was the U.S. Head of Delegation at the NATO Aeromedical Working Group, U.S. Coordinating Member at the Air Standardization Coordinating Committee, Working Party 61, and a member of the Repatriated Prisoner of War Study Group Scientific Advisory Board at the Robert Mitchell Center, NAS Pensacola, FL. From 2001 to 2005, she also served as Regional Medical Director of Air Crew and Passenger Health Services at Delta Air Lines, Inc. In 2005, she became a Medical Consultant for the National Pilots Association and in 2009, she became Commander of the 94th Aeromedical Staging Squadron at Dobbins AFB, GA. She was appointed as FAA Regional Flight Surgeon for



the Southern Region in 2007, a position she still holds.

Dr. Northrup's awards and honors include FAA Flight Surgeon of the Year, TAC Flight Surgeon of the Year, the Air Force Meritorious Service Medal with two oak leaf clusters, the Air Force Achievement Medal with a single oak leaf cluster, and the Air Force Outstanding Unit Award with Valor and a single oak leaf cluster. AsMA presented her with the John A. Tamisiea Award in 2015. She is a member of the Red River Valley Fighter Pilots Association, the Society of USAF Flight Surgeons, the International Airline Medical Association, the Civil Aviation Medical Association, the American Society of Aerospace Medicine Specialists, and the American Board of Preventive Medicine. She is also a Selector for the International Academy of Aviation and Space Medicine and was Chair of the Air Transportation Association Medical Committee. She is a Fellow of the Aerospace Medical Association, where she has served in various capacities for over 30 years.

BOOTHBY-EDWARDS AWARD

Michael A. Berry, M.D., M.S.

Established in memory of Walter M. Boothby, M.D., pioneer aviation medicine researcher, and Howard K. Edwards, M.D., clinical practitioner of aviation medicine, this award is presented annually for outstanding research and/or clinical practice directed at the promotion of health and prevention of disease in professional airline pilots. (The separate Boothby and Edwards Awards were given annually 1961–73, and then alternately until 1985.) Sponsored by Harvey W. Watt and Company.

Michael A. Berry, M.D., M.S., FAsMA, was the recipient of the 2020 Boothby-Edwards Award for his exceptional service



in the field of aerospace medicine provided to commercial airline pilots. He continues to support the Human Intervention Motivation Study (HIMS) program for treating commercial pilots for alcohol and substance addiction. As Manager of the Medical Specialties Division at Federal Aviation Administration (FAA) headquarters, he was responsible for aerospace medicine policy and procedures. As Federal Air Surgeon, he has continued to advocate for the HIMS program and dedicate significant FAA educational resources and personnel to continue the program.

Dr. Berry received his M.D. degree from the University of Texas Southwestern Medical School in Dallas in 1971. After a general surgery internship in the United States Air Force, he spent 4 years as a fighter squadron flight surgeon in Spain and England. As the Commander of the 401st Air Transportable Hospital in 1975, during deployment to Sardinia, he coordinated hospital functions with the local Italian medical authorities during the NATO Operation Flaming Lance.

In 1976, Dr. Berry entered his residency in Aerospace Medicine at Ohio State University in Columbus, OH, and received his master's degree in Preventive Medicine in 1977. In 1978, he was certified by the American Board of Preventive

See 'Berry,' p. N42

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Members: check the Job Fair each month.

From 'Berry,' p. N41

Medicine in Aerospace Medicine. Following his residency, he became the Chief of the Flight Medicine Clinic at the NASA Johnson Space Center in Houston, TX. During his career, Dr. Berry was responsible for the screening and selection of new astronauts and participated in the certification and training of astronauts for spaceflight. He also served as a member of the Flight Control Team for the first two flights of the Shuttle Columbia.

On leaving NASA in 1981, Dr. Berry entered the private practice of Aerospace Medicine with Preventive & Aerospace Medicine Consultants in Houston, TX, where he was a consultant and FAA Aviation Medical Examiner for 25 years. During this time, he also served as an FAA HIMS-trained AME monitoring many airline and corporate pilots during their recovery from substance use disorders. In 2006, Dr. Berry accepted a Senior Executive position with the Federal Aviation Administration in Washington, D.C., as the Manager, Medical Specialties Division at FAA Headquarters. In March 2014, Dr. Berry was selected as the FAA Deputy Federal Air Surgeon and became the Federal Air Surgeon in 2017. He has been a Senior Aviation Medical Examiner for the FAA since 1979 and was an Aviation Medical Examiner for Transport Canada from 1999–2008.

Dr. Berry was elected an Academician of the International Academy of Aviation and Space Medicine in 1978 and is currently an Emeritus Member. He has presented numerous papers at international meetings and was a member of the ICAO Medical Problems Working Group. As manager of the FAA HIMS he actively participated in educational outreach efforts to the Australian CASA in 2009 and 2015, presenting the unique regulatory aspects of this program. He was the U.S. representative at the European Panel on Pilots and ATCOs with Insulin Treated Diabetes in 2014, presenting the U.S. FAA medical standards and position on the important subject of insulin treatment for diabetes in commercial airline pilots.

A Fellow and Past President of the Aerospace Medical Association, Dr. Berry is also a Fellow of the American College of Preventive Medicine. He is a past Vice-President of the Civil Aviation Medical Association. He served as a Board Member and Trustee of the American Board of Preventive Medicine and as the Vice-Chair for Aerospace Medicine from 1990–1998. He is the recipient of numerous national awards, including AsMA's Won Chuel Kay, John A. Tamiseia, Kent K. Gillingham, and Louis H. Bauer Founders Awards; the AMA Physician's Recognition Award; the USAF National Defense Service and Outstanding Unit Medals; and numerous NASA service and group achievement awards, including a First Shuttle Flight Achievement Award presented in appreciation of the contributions to the success of the First Manned Orbital Flight of the Space Shuttle. He has several academic appointments, has authored many scientific papers and book chapters, and delivered the 4th Annual Reinartz Lecture at AsMA's 88th Annual Scientific Meeting in 2017.

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

DAVID M. CLARK AWARD

Medaire, Inc.

Joan Sullivan Garrett, RN, Founder

This award was established by the Aerospace Medical Association to honor an AsMA corporate member who has made significant contributions to the advancement of aerospace medicine. The award is given for contributions in a single year or over a defined period.

MedAire, an Aerospace Medical Association Corporate Member, founded by Joan S. Garrett, then a flight nurse, received the David M. Clark Award



for their efforts to keep passengers and crew safe while travelling in the air or on duty. Their activities include remote medical advice and assistance, onboard medical kits, and crew training for commercial and business aviation. Their systematic data collection and reporting of in-flight medical events and crew medical care provides invaluable evidence to identify best practices, support research and policy development benefiting the aviation industry and travelling public.

MedAire is a most frequent participant in the scientific sessions of the Aerospace Medical Association's meetings. Presentations by MedAire have covered virtually every aspect of passenger and crew health, including: cardiac arrest management, preflight passenger screening, onboard emergency medical kits, pediatric events, management of chest pain, quality of ECGs obtained by flight attendants, in-flight childbirth, pilot impairment, to name a few.

They were also involved in testifying before the U.S. House of Representatives on recommended improvements to airplane emergency medical kits (EMKs) and the need for in-flight AEDs and co-authored a paper with the Federal Aviation Administration (FAA) supporting these recommendations. They have also participated in further FAA joint research and publications on in-flight medical events.

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JOHN ERNSTING AWARD

Stacey Zinke-McKee, B.S.

Established and sponsored by Environmental Tectonics Corporation in memory of Professor Ernsting. It is given for outstanding research in altitude physiology, and/or long-standing exceptional performance in the education, development, and administration of Aerospace Medicine and related specialties.

Stacey Zinke-McKee, B.S., was honored with the 2020 John Ernsting Award for her accomplishments in aerospace medical research as the Manager of the Protection & Survival Research Branch at the Aerospace Medical Research Division of the Federal Aviation Administration's (FAA's) Civil Aerospace Medical Institute (CAMI). She has been outstanding as an administrator of aerospace medicine related specialties research and is responsible for the conduct of

See 'Zinke-McKee,' p. N43



crash testing of aircraft seat structures and associated protective systems, cabin safety research in aircraft simulators in normobaric/hypobaric environments, and epidemiology studies conducted by physicians, physicists, and mathematicians. She inspires her team to excel and resolve issues in a positive manner. Her leadership efforts in 2018 resulted in many accomplishments, including book chapters, manuscripts, technical reports, abstracts and presentations, development of a software tool, processing of 84 aeromedical cases, and delivery of materials and lectures to specialists and the public. Due to her remarkable leadership, her branch was outstanding in its performance in spite of vacancies and potential budget reductions.

Ms. Zinke-McKee received her undergraduate education from the University of Oklahoma, where she received her Bachelor's Degree in Computer Science from their College of Engineering. Her graduate education was at the University of Texas at Dallas, and the University of Oklahoma, where her studies focused on Signal Processing. She has over 33 years of engineering experience, of which, over 28 years have been working for the FAA. Her time at the FAA has been as an Electronics Engineer and as an FAA Supervisor. She has worked as an Instructor and a Supervisor at the FAA Academy, teaching technicians and engineers to develop and maintain infrastructure for over 15 years. She worked on implementation research for flight operations and procedures, while working at the Flight Systems Laboratory for over 11 years, where she incorporated Next Generation Surveillance concepts and technologies into the infrastructure of the National Airspace System of the United States of America, and assisted in designing more efficient flight operations and procedures. She has been working at CAMI since 2016, as the AAM-630 Manager.

KENT K. GILLINGHAM AWARD

Alaistair Bushby, M.A, M.B., B.Chir.

This award was established and sponsored by the AMST Group of Companies in Austria and the United Kingdom to honor the memory of Kent K. Gillingham, M.D., Ph.D. The award is presented annually to an individual who has made a significant contribution in the field of spatial disorientation and situational awareness related to flight.

Alaistair Bushby, M.A., M.B., B.Chir, MRCGP, MFOM, D.Av.Med, received the 2020 Kent K. Gillingham Award for bringing a change in the effectiveness of spatial disorientation (SD) training for military helicopter crews by developing and championing the introduction of scenario-based training in full mission simulators. His introduction of operationally relevant simulator SD training will facilitate recognition of hazardous flight circumstances by crews and will save lives. Lt. Col. Bushby has also made major enhancements to the teaching, demonstration, and study of aircrew SD training programs. Additionally, he has influenced commanders and se-



nior operators to enable regulatory change and mandatory uptake of his simulator SD training modality. He has also sought and been granted permission to broaden the simulator scenario training to other platforms and to introduce the in-flight demonstration sorties to all helicopter aircrew trainees with UK military flying training.

Lt. Col. Alaistair Bushby was commissioned into the Royal Army Medical Corps in 1987 as a medical cadet after attaining his BA in Medical Sciences, but he did not attend The Royal Military Academy at Sandhurst until 1991 pending completion of initial medical training. He initially trained as a General Practitioner before transferring to Army Aviation Medicine in 1998. He attended the Army Flying course at Barkston Heath, Shawbury, and Middle Wallop, gaining advanced insight and knowledge of the flight environment to advise, teach, and manage aviators in the safe conduct of their specialized employment. He was awarded Pilot Wings in 1999 before undertaking a 1-year operational tour flying Gazelle helicopters in Northern Ireland; he has just under 1000 hours flying, almost exclusively on rotary wing platforms. He received a Diploma in Aviation Medicine, garnering the Stewart Memorial Prize from Kings College London in 2001. He received his certificate of Occupational Health from the University of Aberdeen Department of Environmental & Occupational Medicine in 2002 and was qualified as a Consultant in Occupational Medicine in 2005 with a sub-specialist interest in Aviation Medicine.

Lt. Col. Bushby has served with the Army Air Corps almost continuously for the past 22 years having undertaken Regimental duty and a variety of staff and research positions including Joint Helicopter Command and the U.S. Army Aeromedical Research Laboratory in Alabama. He has a specific interest in spatial disorientation and has served on two NATO Research and Technology Organization panels furthering the collective understanding and protection against disorientation accidents. He has been author or co-author on many publications related to spatial disorientation and presented at numerous AsMA meetings as well as other aerospace medicine summits. More recently, he has worked with advanced simulators to introduce synthetic spatial disorientation scenario training on a full mission simulator to improve aviator awareness and recognition of SD in-flight. He is currently employed as an aviation medicine specialist at the RAF Centre of Aviation Medicine for the integration of aircrew life support and survival equipment onto UK aircraft.

FAA AME Seminars

Sept. 11-13, 2020	Denver, CO	Refresher
Sept. 24-26, 2020	Albuquerque, NM	CAMA
Oct. 19-23, 2020	Oklahoma City, OK	Basic
Nov. 20-22, 2020	Oklahoma City, OK	Refresher
Jan. 29-31, 2021	Raleigh, NC	Refresher

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

WALTER AND SYLVIA GOLDENRATH AWARD Col. Brian Musselman, USAF

Established in memory of CAPT Walter L. Goldenrath, MSC, USN(Ret.), this award is presented for the most significant contribution in the field of aerospace physiology. It was created at the bequest of CAPT Goldenrath and is funded by the Walter and Sylvia Goldenrath Endowed Fund.

Brian Musselman, CAsP, FAsMA, was honored with the 2020 Walter and Sylvia Goldenrath Award for his recognized expertise in aerospace physiology.



He led U-2 full pressure suit operations, investigated Class A mishaps, and developed a physiological event checklist. He also directed physiology, spatial disorientation, and fatigue research, and commissioned two U.S. Air Force School of Aerospace Medicine research projects to analyze U-2 pilot fatigue and rapid decompression risks. Additionally, he analyzed the physiological effects of oxygen consumption and toxicity under the new cockpit pressure. He implemented hypoxia training at two bases, ensuring training capability for 2500 aircrew. He has made a positive impact on every aspect of aerospace physiology.

Col. Musselman served as air mobility command aerospace physiologist and high-altitude airdrop mission support (HAAMS) program manager and led the transition of HAAMS from Little Rock AFB to Charleston AFB where he currently serves as the 628th Medical Group Commander. He was previously the Deputy Chief of the U.S. Air Force Human Factors Safety Division at the U.S. Air Force Safety Center, Kirtland AFB, NM. He has also served as an Aircraft Maintenance and Munitions Officer; an Air Force Reserve Officer Training Corps instructor; an Aerospace Physiology flight commander; a human factors specialist and mishap investigator at the Air Force Safety Center; a Pentagon staff officer; Executive Officer to the USAF Chief of Safety and Executive Secretary for a DoD Task Force; and Air Mobility Command Aerospace Physiology Training Program Manager, and human performance consultant to the Operations Risk Assessment and Management System. He was the 9th Physiological Support Squadron Commander, where he was responsible for specialized support and training for U-2 aviators, the USAF Full Pressure Suit Depot, and mission-specific physiological training for DoD and NASA. In 2007, he served as an advisor to the Iraqi Air Force and established the new Iraqi Air Force Technical Training School.

Col. Musselman earned a B.S. in Biology in 1994 from the U.S. Air Force Academy in Colorado Springs, CO, and an M.S. in Aerospace Sciences (Aviation Safety) from Embry-Riddle Aeronautical University, Daytona Beach, FL, in 2004. He completed Squadron Officers School in 1999 at Maxwell AFB, AL, and Air Command and Staff College in 2006 by correspondence. He earned a Certificate in Advanced Graduate Studies (Industrial/Organizational Psychology) at Northcentral University, Prescott, AZ, in 2010, and completed Air War College by correspondence in 2012 and in residence in 2016.

Col. Musselman's awards and decorations include the Defense Meritorious Service Medal; the USAF Meritorious

Service Medal with five oak leaf clusters; the USAF Commendation Medal with two oak leaf clusters; the USAF Achievement Medal with two oak leaf clusters; the Air Force Recognition Ribbon; the National Defense Service Medal; the Iraq Campaign Medal; the Global War on Terrorism Medal; the Humanitarian Service Medal; and the Nuclear Deterrence Operations Service Medal. He has also been a recipient of the AsMA's Harry G. Mosely Award in 2015 and the Kent K. Gillingham Award in 2018, the Aerospace Physiology Society's Paul Bert Award, and the Life Sciences and Biomedical Engineering Board Professional Excellence Award in 2014. He is a Fellow of the Aerospace Medical Association, the Royal Aeronautical Society, and the Aerospace Human Factors Association, a member of the U.S. Air Force Safety Human Factors Fellowship, and AFROTC Commandant of Cadets of the Year. He is the incoming President of the Aerospace Human Factors Association.

WON CHUEL KAY AWARD

Robert Orford, M.D., M.S., M.P.H.

Established and sponsored by the Korean Aerospace Medical Association in honor of Won Chuel Kay, M.D., the former Surgeon General of the Korean Air Force, founder and first Medical Director of Korean Airlines and first President of the Korean Aerospace Medical Association. This Award is presented annually to a member who has made outstanding contributions to international aerospace medicine.

Robert Orford, M.D., CM, M.S., M.P.H., is the 2020 recipient of the Won Chuel Kay Award for his superlative contributions to international aerospace medicine spanning decades, including his leadership at the Mayo Clinic. He is versatile and well-educated in aerospace and occupational medicine, holding multiple certifications. He has served as a faculty member or clinical professor in three countries. His clinical, academic, and administrative work and other activities in support of aerospace and preventive medicine have directly contributed to enhancing international aerospace medicine. His work with the International Academy of Aviation and Space Medicine led to his selection as a member of that international group's Council for 6 years. He has also served at the highest levels on the International Commission on Occupational Health as a Board Member, the National Secretary for the United States, and Conference Chair twice. Additionally, he has been the Chair of the Global Health Committee for the American College of Preventive Medicine.



Dr. Orford earned a B.Sc. at McGill University in Montreal, Quebec, Canada, in 1968. He was awarded his M.D. degree, also from McGill University, in 1971. He received his M.S. in Medicine from the University of Minnesota, Mayo Graduate School of Medicine in Rochester, MN, in 1975, and his M.P.H. from the University of Washington in Seattle in 1976. He served an internship from 1971 to 1972 at St. Joseph's Hospital in London, Ontario, Canada, held a

See 'Orford,' p. N45

Fellowship in Internal Medicine at the Mayo Graduate School of Medicine from 1972–1975, and served a residency in Preventive Medicine at the University of Washington from 1975–1976.

In 1976, Dr. Orford accepted a position as Medical Officer at the Sarnia Division of Dow Chemical of Canada in Ontario. He left that position in 1977 to become Senior Medical Consultant at the Medical Service Branch of the Occupational Health and Safety Division of Alberta Labour in Edmonton, where he served until 1979. He then took a position as Director of the Medical Services Branch of Alberta Workers' Health, Safety and Compensation, also in Edmonton, where he served as Executive Director of Occupational Health Services from 1980–1984. In 1985, he became Deputy Minister of the Community Health Division of Alberta Social Services and Community Health, and then in 1986 the Deputy Minister of Community and Occupational Health. In 1988, he served as Director of Occupational Health Services for the University of Alberta Hospitals in Edmonton, and then, in 1989, became Special Clinical Fellow at the Mayo Clinic in Rochester, MN. He is currently Consultant Physician, Mayo Clinic, Scottsdale, Arizona and Mayo Clinic Healthcare in Partnership with Oxford University Clinic, London, UK, an Assistant Professor at the Mayo Clinic of Medicine, an FAA Aviation Medical Examiner, and an Associate Professor at the University of Texas Medical Branch in Galveston.

Dr. Orford is a Fellow of the Royal College of Physicians and Surgeons of Canada, a Fellow and past Director of the Alberta Occupational Health Society, and a member of the Canadian Occupational Health Society, the American Occupational Health Society, the Occupational Medical Association of Alberta, the Occupational Medical Association of Canada, the Canadian Public Health Association, the American Public Health Association, the Canadian Society of Aviation Medicine, and the Canadian Medical Association. He was awarded a National Health Fellowship from Canada from 1975–1976 and is licensed by the state of Minnesota, the State of Washington, and the province of Alberta. He is a Diplomate of the National Board of Medical Examiners. He is a member of and was President of the Airline Medical Directors Association. He is also a Fellow of the Aerospace Medical Association, serves on its Scientific Program Committee, and has been Parliamentarian since 2011. He was a recipient of the AsMA 2008 Boothby-Edwards Award.

IAF GNF Space Conversations Series

The International Astronautical Federation (IAF) GNF Space Conversations Series is a free-of-charge, live webinar series that touches upon recent developments in space, organized by the IAF Global Networking Forum (IAF GNF). **An ongoing Call for Proposals is now open.** The IAF GNF Space Conversation Series will start 16 Sept. 2020 and will take place fortnightly every Wednesday prior and following IAC 2020–The CyberSpace Edition. The sessions will start at 14:00 Paris time and will not exceed 60 minutes. For more, please visit <http://www.iafastro.org/activities/iaf-gnf-space-conversations-series/>.

JOE KERWIN AWARD

Jeffrey R. Davis, M.D., M.S.

Established and sponsored by KBR in honor of Joseph P. Kerwin, the first physician/astronaut. It is presented for advances in the understanding of human physiology during spaceflight and innovation in the practice of space medicine to support optimal human health and performance in space.

Jeffrey R. Davis, M.D., M.S., received the 2020 Joe Kerwin Award. He is recognized as one of the foremost leaders and



innovators in aerospace medicine. His entire career has been dedicated to advancing the space medicine knowledge base, implementing systems to assure crew health and safety, and optimizing astronaut performance in space. His leadership includes an emphasis on educating the next generation through aerospace medicine residency programs and his endowment of scholarship funds. While serving at

NASA, he was responsible for the science and health care leadership for space exploration. He is a recognized international leader and consultant in strategic innovation, human system risk management in health care systems, and space and aviation medicine. Significant advancements in space medicine have been realized because of Dr. Davis' efforts, including the development of a comprehensive set of in-flight medical and environment standards and a comprehensive risk management system for the human risks of spaceflight.

Dr. Davis earned a B.S. from Stanford University, Stanford, CA, in 1976 and then an M.D. from the University of California at San Diego's School of Medicine in 1980. He served an internship in internal medicine at the University of California at Davis in Sacramento, CA, from 1980–1981, and then a residency in aerospace medicine from 1981–1982. From 1982–1984, he served a residency in aerospace medicine at Wright State University in Dayton, OH, and earned an M.S. in 1983.

Dr. Davis is the Founder and CEO of Exploring 4 Solutions, LLC, an Executive-in-Residence at the Laboratory for Innovation Science at Harvard (LISH), and a fellow at Open Assembly. He serves as an advisor for the Game Changer Innovation Network, an advisor to the Ignite HealthCare Network, a member of the advisory council for Medical Bridges, a board member of the Technology Collaboration Center, and as an advisor to the Grayline Group in Innovation and Health Technology. He also served as a board member for Girlstart, a STEM non-profit from 2017 to 2019. He provides consulting expertise and experience in strategic innovation through keynote lectures, collaborative and open innovation projects, organizational change management, and project management. Prior to Exploring 4 Solutions, he served as the Director, Human Health and Performance, and the Chief Medical Officer for the NASA Johnson Space Center. He also helped develop and served as the deputy director for the NASA Center of Excellence for Collaborative Innovation (CoECI).

Dr. Davis is certified by the American Board of Preventive Medicine and is a Diplomate of the National Board of Medi-

See 'Davis,' p. N46

cal Examiners. He was President and Secretary-Treasurer and is a lifetime member of the Space Medicine Association (nee Branch), was President of the Society of NASA Flight Surgeons, and is a Fellow of the American College of Preventive Medicine and of the Aerospace Medical Association (AsMA). A past President of AsMA, he has served on the Executive Committee and Council, has been chair of the Scientific Program Committee, chair of the ad hoc Strategic Planning Committee, a member of the Air Transport Committee, and Chair of the Associate Fellows Group. His honors include an award for Most Outstanding Paper by a Young Investigators from the Space Medicine Association, the Julian E. Ward Memorial Award from AsMA, a Suggestion Award from the NASA Johnson Space Center for revising medical debriefings for Shuttle crews, an Exceptional Service Medal from NASA, the Harold B. Ellingson Literary Award from the AsMA Associate Fellows Group, the Silver Snoopy Award from NASA's Astronaut Office, and the Louis H. Bauer Founders Award from AsMA.

MARY T. KLINKER AWARD Kathleen Flarity, DNP, Ph.D.

Established by the Flight Nurse Section in 1968, this award became an official AsMA award in 1972. In 1978 it was renamed in memory of Mary T. Klinker, who was killed in a C-5A crash while performing a humanitarian mission. The award is given annually to recognize significant contributions to, or achievements in, the field of aeromedical evacuation. Sponsored by ZOLL Medical Corporation.

Kathleen Flarity, DNP, Ph.D., CEN, CFRN, FAEN, was honored with the Mary T. Klinker Award for her internationally



recognized aeromedical evacuation (AE) expertise and leadership. She has had numerous deployments, among them the command of the Bagram AE squadron, a critical AE hub. She is devoted to improving AE and has directed clinical and research priorities for AE and Critical Care Air Transport Teams (CCATs). She is an experienced nurse practitioner, research scientist, and emergency and critical care

flight nurse with 38 years of military service and 24 years in AE direct care and leadership. She has also flown 44 combat sorties. Her care and leadership were a vital part of a 98% survival rate. As an advisor to the Chief of the U.S. Air Force (USAF) Nurse Corp, she has directed medical policy and force development and addressed challenges in high-intensity conflicts. She was instrumental in the revision of USAF medical operations and currently directs clinical oversight of the USAF global AE system, assisting with clinical operations capability development and supporting research priorities for AE and CCATs.

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. She supports clinical operations capability development and research priorities for aeromedical evacuation and Air Force Critical Care Air Transport Teams. 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 of 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.

SAVE THE DATES: GLEX 2021 and GLOC 2022

#GLEX2021; 14–18 June 2021; St. Petersburg, Russia. The conference will discuss recent results, current challenges, and innovative solutions in space exploration.

#GLOC2022; 31 May–2 June 2022; Oslo, Norway. GLOC 2022 will address topics of interest in relation to space and climate change.

For more information, visit www.iafastro.org.

ERIC LILJENCRANTZ AWARD

Stephen Veronneau, M.D., M.S.

The Eric Liljencrantz award was established in memory of CDR Eric Liljencrantz, MC, USN, whose brilliant career in aviation medicine was cut short by his death in an airplane accident in 1942. It is given annually to honor excellence as an educator in aerospace medicine, or basic research into the problems of acceleration, altitude, or weightlessness. Sponsored by Aerospace Medical PLC.

Stephen Véronneau, M.D., M.S. LMCC, FAsMA, was the 2020 recipient of the Eric Liljencrantz Award for his contributions as a teacher, mentor, and one of the foremost educators in aerospace medicine. He has advanced the understanding of the principles of aerospace medicine and made the skies safer. His efforts to educate physicians are internationally recognized as the gold standard for learning. As the manager of the Aerospace Medical Education Division at the Civil Aviation Medical Institute (CAMI), he has



been involved with the education of both civilian and military residents in aerospace medicine (RAMs) and has educated thousands of pilots and aviation medical examiners (AMEs). He has authored three textbook chapters, written 92 publications, and made well over 300 presentations. For 25 years, he has taught accident investigation to Federal Aviation Administration (FAA) accident investigators, AMEs, and visiting scientists and manages the CAMI Advanced Aerospace Medicine Course for International Medical Officers (AAMIMO) that is coordinated with the U.S. Air Force. He has personally taught all military RAMs from the U.S. Air Force, Navy, and Army, and has been involved with the training of over 6500 AMEs.

Dr. Véronneau received his B.S. in 1979 and his M.D. in 1983 from University of Manitoba, Winnipeg, Manitoba, Canada. He became Board Certified in Aerospace Medicine by the American Board of Preventive Medicine in January 1990 and completed his Aerospace Medicine Residency, as well as receiving his M.S. from Wright State University later that year.

Dr. Véronneau became Regional Flight Surgeon for the Northwest Mountain Region, Des Moines, WA, in 2019. Prior to that he served as Manager of the Aerospace Medicine Education Division at the Civil Aerospace Medical Institute from 2015–2019, and before that he was a Research Medical Officer with FAA-CAMI from 1990–2014. He was also a Clinical Assistant Professor of Community Health at Wright State University, Dayton, OH, as well as Clinical Assistant Professor, Department of Preventive Medicine and Community Health, University of Texas Medical Branch, and a Member of the Residency Advisory Committee, Mayo Clinic. He has been a Senior AME since 1990 and held a Private Pilot license since 1988. Dr. Véronneau is qualified in Federal court as an expert witness in aeromedical certification, aerospace medicine, and spatial disorientation in General Aviation operations.

Dr. Véronneau is a Fellow of the Aerospace Medical Association (AsMA) and a recipient of its 2017 Kent K.

Gillingham Award. He is an Honorary Member of the Colombian Society of Aerospace Medicine, received the FAA Flight Safety ACE Award, won a Safety Award from the Mayor and Government of Thessaloniki, Greece, and the Southern Africa Society of Aviation and Environmental Medicine's Award for Aviation Safety Efforts, and two Achievement Awards for Superior Accomplishment from CAMI for physician support of CAMI clinical operations. He has also received Special Group Awards and Group Special Act Awards, Division of the Year Award, and Superior Accomplishment and Superior Contribution Awards. His memberships include the Designee Steering Group, the FAA AAM AVS arcGIS Working Group, the AVS Safety Resource Management Working Group, and the AAM Safety Management Working Group, and he was Chairman of the Aerospace Human Performance Committee of AsMA, Treasurer of the American Society of Aerospace Medicine Specialists, a member of the Executive Committee of the Aerospace Human Factors Association, and a member of the Awards Committee of AsMA.

RAYMOND F. LONGACRE AWARD

Gary E. Beven, M.D.

Established to honor the memory of MAJ Raymond F. Longacre, MC, USA. It is given annually for outstanding accomplishment in the psychological and psychiatric aspects of aerospace medicine. Sponsored by the Aerospace Human Factors Association.

Gary E. Beven, M.D., was honored with the Raymond F. Longacre Award for helping to establish NASA's Behavioral



Health and Performance Team as world leaders in space psychology and psychiatry. He has made numerous contributions to the U.S. astronaut program for almost two decades. Dr. Beven has served as Chief of Aerospace Psychiatry at the NASA Johnson Space Center since 2005 and has the longest tenure as an aerospace psychiatrist in the U.S. human spaceflight program. To date, Dr. Beven has served as behavioral health and performance lead for 32 long-duration astronaut crewmembers spanning 43 International Space Station (ISS) expeditions including astronaut Scott Kelly's one-year ISS mission. He also volunteers as the manager of the space medicine operations branch in addition to his other duties as chief psychiatrist.

Dr. Beven provides behavioral medicine training, monitoring, evaluation, and countermeasures to U.S. astronauts training for, serving aboard, and undergoing reconditioning following long duration ISS missions. This service includes annual, preflight, in-flight Private Psychological Conferences, and postlanding behavioral assessment of ISS crewmembers.

Dr. Beven served as Lead, Behavioral Health and Performance Operations Group until 2018 and was responsible for providing and managing operational aerospace psychiatry, psychology and behavioral health services to the U.S. human spaceflight program and the NASA Johnson Space Center. Dr. Beven supervised the psychiatric screening component of

See 'Beven,' p. N48

NASA astronaut selection for three selection cycles (astronaut candidate classes 2009, 2013, 2017) and served as consultant aerospace psychiatrist to the Canadian Space Agency for Canadian astronaut selection campaigns in Toronto in 2009 and 2017.

An instructor in aerospace psychiatry for UTMB aerospace medicine residents rotating through the Behavioral Health and Performance Operations Group at the Johnson Space Center, Dr. Beven is a mentor to those with interest in the psychological aspects of long-duration spaceflight. He has introduced many residents to astronauts on the ISS during private conferences at the Mission Control Center—usually their very first interaction with an astronaut living and working in space.

As a uniformed service member, Lt. Colonel (retired) Beven served as a USAF flight surgeon in the Ohio Air National Guard for 22 years, 1997–2019. In this capacity, Lt. Colonel Beven provided comprehensive military aerospace medicine services to pilots and aircrew of the 121st Air Refueling Wing comprised of KC-135R Stratotankers and 1800 military personnel. He served as the Squadron Medical Element flight surgeon for both the 145th and 166th Air Refueling Squadrons.

Currently the Acting Chief, Space and Occupational Medicine Branch, Health and Human Performance Directorate, Dr. Beven is the supervisory physician responsible for leading a team of NASA flight surgeons, physicians, and medical personnel who provide comprehensive aerospace and occupational medicine services to the NASA Astronaut Corps and the Johnson Space Center.

Dr. Beven graduated from the Case Western Reserve University School of Medicine, interned at the Cleveland Clinic, performed psychiatry residency training at the University of Colorado School of Medicine, and fellowship training in forensic psychiatry at the University of Florida College of Medicine. He is board certified in general and forensic psychiatry.

Dr. Beven's awards include the Armed Forces Medal with 1 M device and 2 oak leaf clusters, the Nuclear Deterrence Operations Service Medal, the Global War on Terrorism Expeditionary Medal, the National Defense Service Medal, the Air Reserve Forces Meritorious Service Medal with 5 oak leaf clusters, the Air Force Achievement Medal, the Air Medal, and the Meritorious Service Medal with oak leaf cluster. He is a Fellow of the American Psychiatric Association, a life member of the Space Medicine Association and the Society of NASA Flight Surgeons, a member of the Society of USAF Flight Surgeons, and an Associate Fellow of the Aerospace Medical Association.



the 2020 Theodore C. Lyster Award for being a driving force in both military and civilian aerospace medicine in Australia for more than 20 years. His achievements span teaching and training, clinical medicine, research, professional organizations, and management of aerospace medicine. Many of his contributions have arisen through his leadership and service to the Australasian Society of Aerospace

Medicine. He is a highly distinguished specialist whose focus on training has led to worldclass teaching initiatives, with particularly distinguished work on combined altitude depleted oxygen (CADO). He was involved in setting up the Australasian College of Aero-space Medicine and chaired its Assessments Subcommittee. He was also instrumental in bringing the International Congress of Aviation and Space Medicine to Australia twice, once as President and once as Convenor. He is now leading efforts to unify the space life sciences field and engage with the new Australian Space Agency. Additionally, he was responsible for establishing a 'Humans in Space' training course in 2016 alongside a formal unit of study in space medicine; both are unique in Australia.

Dr. Cable received an M.B.B.S. at the University of Sydney in Sydney, New South Wales, in 1988. He then earned a Postgraduate Diploma in Aviation Medicine from the University of Otago, New Zealand, in 1996. He received his Graduate Diploma in Occupational Health and Safety Management in 2008 from the University of Adelaide in South Australia.

From 1996–2007, Dr. Cable served as an Aviation Training Medical Officer in the Royal Australian Air Force (RAAF) at the RAAF Institute of Aviation Medicine in Edinburgh, South Australia. In 2009, he became a Specialist in Aviation Medical Officer, also at the RAAF Institute of Aviation Medicine. In 2018 he was promoted to Head of Training. Additionally, he is a Clinical Associate Professor in the School of Medicine at the University of Adelaide, and a Senior Lecturer in Aerospace Medicine for the Tasmanian School of Medicine. He is a member of the National Committee for Space and Radio Science, for whom he chairs the Space Health and Life Sciences Working Group.

Dr. Cable is a Fellow of the Australasian College of Aerospace Medicine, the Royal Aeronautical Society, the International Academy of Aviation and Space Medicine, and the Aerospace Medical Association. He is an Honorary Life Member of the Australasian Society of Aerospace Medicine and a member the Royal Australian College of General Practitioners, the Space Industry Society, and the Space Medicine Association. In 2015 he was appointed a Member of the Order of Australia for contributions to aerospace medicine. Other honors and awards include the Ellingson Award, the Arnold D. Tuttle Award as a co-author, a Commanding Officer's Commendation, and the Eric Stephenson Award.

THEODORE C. LYSTER AWARD Gordon Cable, M.B.B.S., ACCAM

This award was established to honor the memory of Brig. Gen. Theodore C. Lyster, the first Chief Surgeon, Aviation Section, United States Signal Corps. It is given annually for outstanding achievement in the general field of aerospace medicine. Sponsored by the Army Aviation Medical Association.

Gordon Cable, M.B.B.S. (Hons.), ACCAM (Monash), P.G.Dip.Av.Med. (Otago), GDOHSM (Adelaide), received

National Aviation Hall of Fame
Enshrinement & Dinner: September 26, 2020,
7:00 PM--midnight. Visit <https://www.nationalaviation.org/> for more information.

MARIE MARVINGT AWARD

Michael Schmidt, Ph.D.

Established and sponsored by the French Society of Aerospace Medicine in memory of Marie Marvingt (1875–1963), a pioneer French pilot and surgical nurse who, for more than 50 years, actively and untiringly involved herself in the conception and development of air ambulance services and in the education of the general public regarding their use and benefits. The award is presented annually to honor excellence and innovation in aerospace medicine.

Michael Schmidt, Ph.D., is the 2020 recipient of the Marie Marvingt Award for his high level of leadership and for advancing the frontiers of aerospace medicine and human performance. He is an innovator in the advancement of multiscale “omics” applied to long-duration spaceflight, the translation of data into clinical methods, and the advancement of pharmacogenomics for safer use of drugs in space. He has also promoted a systems engineering approach to the application of personalized medicine in human spaceflight for two decades.



Dr. Schmidt is currently CEO and Chief Science Officer of Sovaris Aerospace, LLC, in Boulder, CO. He is also a consultant for the NASA Twins Study of One Year in Space, a Project Director and Principal Investigator for the FAA Center of Excellence for Commercial Space Transportation at the University of Colorado and a consultant in human performance and advanced molecular profiling for a number of organizations. His clinical and research work is focused on multiscale analytics, including the NASA Twins Study and its post-mission analytics. He has been developing methods to reduce complexity from high dimensional molecular data for the purpose of translating these findings into personalized countermeasures. He has also taught and tested these methods in real-world environments. He and his team have advanced a model of personalized medicine rooted in artificial neural networks to reduce complexity and provide precision spaceflight countermeasures.

Dr. Schmidt directs the U.S. Military Special Forces Track of the Nutritional Genomics Certification Program developed by the American College of Nutrition. As a leader in the Precision Medicine and Pharmacometabolomics Task Group of the Metabolomics Society, he has been developing experimental design methods for high dimensional molecular data in small cohorts operating in extreme environments.

Dr. Schmidt earned a B.Sc. in 1987 from the University of the State of New York. He served two Fellowships at NASA Ames Research Center between 2001 and 2003, and then earned a Ph.D. in Molecular Medicine and Biochemistry in 2003 from the Union Institute, NASA Ames Research Center. In 2007, he received an M.Phil. from Lancaster University in the United Kingdom. He earned his second Ph.D., in Neuroscience, in 2016 at Lancaster University. The following year he received certification as a Wilderness First Responder from the Wilderness Medical Association, International.

Dr. Schmidt is the incoming president of the Life Sciences and Biomedical Engineering Branch (LSBEB). He is a mem-

ber of the Special Operations Medical Association, the Metabolomics Society, the Commercial Spaceflight Federation, the Society for Neuroscience, the American College of Nutrition, the Metabolomics Society of North America, the European Society for Translational Medicine, and the Epigenetics Society.

A prolific author, researcher, and lecturer, Dr. Schmidt's awards include Most Influential Papers of 2013/2014 from Springer Science Media, Best Review Paper in Metabolomics Award, the PROSE Award for Excellence in Clinical Medicine, and the Research and Development Innovation Award from the LSBEB.

HARRY G. MOSELEY AWARD

Jochen Hinkelbein, Prof., M.D.

Established in memory of Col. Harry G. Moseley, USAF, MC, in recognition of his material contributions to flight safety. It is given annually for the most outstanding contribution to flight safety. Sponsored by the International Association of Military Flight Surgeon Pilots.

Jochen Hinkelbein, Prof., M.D., FAsMA, received the 2020 Harry G. Moseley Award for his outstanding contributions to aerospace medicine and flight safety from his research activities which resulted in many high-quality publications. His fields of research include aviation safety in both Helicopter Emergency Medical Services (HEMS) and general aviation and aviation safety for commercial airline passengers. His extensive research is unique as it describes topics in these fields associated with accidents and provides concepts to improve safety for crew and passengers. He has also developed and analyzed factors and concepts for in-flight medical emergencies. His contributions to the fields of aerospace medicine and aviation safety are of utmost importance and provide a basis for future research activities.



In 2001, Dr. Hinkelbein passed the state examination in medicine at Ruprecht-Karls-University, Heidelberg, Germany. He became a Professor in Anaesthesiology in the Medical Faculty Mannheim, University of Heidelberg in 2010 and joined the Medical Faculty, Cologne, Germany, in 2015. He has been Chair of the Aviation Medicine Working Group, the Emergency Medicine and Air Rescue Working Group, and the Guidelines, Standards and Recommendations Working Group of the German Society of Aviation and Space Medicine (DGLRM); and Chair of ESA Subcommittee 13, Resuscitation and Emergency Medicine, of the European Society of Anaesthesiology. He served as Secretary, Vice President, and President of the German Society of Aviation and Space Medicine, and as Treasurer of the European Society of Aerospace Medicine and Chair of its Space Medicine Group.

Dr. Hinkelbein is certified in Space, Travel, and Diving Medicine, holds a European Diploma of Intensive Care Medicine and a Diploma of the European Society of Anaesthesiology, and is board certified in intensive care medicine, anesthesiology, and emergency medicine. He is a

See 'Hinkelbein,' p. N50

Fellow of the Aerospace Medical Association. He has won the first poster prize of the DGLRM multiple times, a Young Investigator Award from the American Heart Association, and research grants from the Emergency Medicine and Air Rescue Working Group and the German Academy of Aviation Medicine.

JOHN PAUL STAPP AWARD Chris Albery, B.S.

This award was established and sponsored by Environmental Tectonics Corporation to honor Col. John Paul Stapp, USAF (Ret.). The award is given annually to recognize outstanding contributions in the field of aerospace biomechanics and to promote progress in protection from injury resulting from ejection, vibration, or impact.

Chris Albery, B.S., was honored with the John Paul Stapp Award for his outstanding research and technical contributions to biomechanics and promoting aircrew protection from injury associated with ejection and impact. He has had a career spanning more than three decades and is the U.S. Air Force (USAF) subject matter expert (SME) for mass properties regarding helmet systems and head-supported mass. He has served as Principal Investigator for research on anthropomorphic, physical, biological, physiological, cognitive, and

psychological research on thousands of human and Anthropometric Test Device subjects using the U.S. Air Force Research Laboratory's human-rated biodynamic facilities. The results of this research have been used to develop and apply multi-axial spine injury risk criteria in order to assess and reduce risk while increasing occupant safety and protection for aircrew. He has also evaluated USAF helmet systems, quantifying their contribution to cognitive and physical performance, acute and chronic pain, and fatigue.

Mr. Albery has served as an investigator for several NASA and commercial space impact and acceleration programs. These programs focused on the response of the occupant, seat, restraint and astronaut flight gear to multi-axial impacts of crew modules. This research has been critical to the recent commercial successes paving the way for future human spaceflight.

Mr. Albery has managed numerous mass properties RDT&E efforts on head supported systems including helmets, night vision goggles, helmet mounted displays, oxygen breathing systems and masks, optical and magnetic trackers, chemical defense gear, thermal flash blindness protection, laser eye protection, and has quantified their contribution to cognitive and physical performance, acute and chronic pain, and fatigue. He was the lead investigator of a program that resulted in one of the largest known human cadaveric segmental mass properties data sets (over 400 segments) including weight, center of gravity and principal moments of inertia.

Mr. Albery has led canopy test programs for bird strike, fragment capture, severance, fragilization and risk of noise



induced hearing loss. He was part of the F-35 Joint Strike Fighter Hearing Protection Survey Team that surveyed over 300 U.S. Navy flight deck personnel aboard six Atlantic and Pacific Fleet aircraft carriers and amphibious ships while at sea leading to the development and delivery of improved flight deck hearing protection. Currently (April 2020), he and colleagues are conducting impact and acceleration testing in response to critical mission operational utility impact and acceleration evaluations for USAF aircraft medical seating and equipment related to the ongoing COVID-19 pandemic.

Mr. Albery earned his B.S. in Biomedical Human Factors Psychology at Wright State University in 1995. From 1987–2008, he was Principal Scientist for Advanced Information Systems, General Dynamics. In 2008, he became Principal Scientist, Branch Level Manager – Biodynamics, Biodynamics CRADA Manager, for Infoscitex Corp. He has more than 50 publications in peer-reviewed journals conference proceedings, and USAF Technical Reports. He is a member of the SAFE Association, Wright Brothers Chapter (Life Member), the Life Sciences and Biomedical Engineering Branch of the Aerospace Medical Association (AsMA), and AsMA. He has received the Wright Brothers Chapter President's Award, Outstanding Program Team, and Outstanding Senior Engineer; and the Molly Pitcher Award, Best Journal Article Award, and an Award for Team Achievement from the SAFE Association. He has also received the Veridian Medal Paper Award, and the A. Howard Hasbrook and Professional Excellence Awards from AsMA's Life Sciences and Engineering Branch.

JOHN A. TAMISIEA AWARD Farhad Sahiar, M.D., M.S.

This award was established and sponsored by the Civil Aviation Medical Association in memory of John A. Tamisiea, M.D. The award is given annually to an aviation medical examiner or other individual who has made an outstanding contribution to the art and science of aviation medicine in its application to the general aviation field.

Farhad Sahiar, M.D., M.S., FAsMA, received the 2020 John A. Tamisiea Award for his dedication to the advancement of aerospace medicine. His career has spanned many years and many facets of aerospace medicine and his contributions to this field have been substantial. Since 2015, Dr. Sahiar has been the Manager of the Medical Officers' Branch at the FAA, Civil Aerospace Medical Institute in Oklahoma City where he supervises a team of Medical Officers processing tens of thousands of Special Issuances annually. He is responsible for administration and review of cases at the Federal Air Surgeon's (FAS) Cardiology Panel. Since 2014, he has directed the FAS Neurology Panel reviewing hundreds of complex neurology cases. In 2015, he received the FAA-Soaring Eagles award for his contributions to the Neurology Panel and in 2016, he received the FAA, Civil Aerospace Medical Institute's Leader of the Year award.



See 'Sahiar,' p. N51

From 'Sahiar,' p. N50

Dr. Sahiar earned his medical degree from the Armed Forces Medical College (AFMC) S-batch, Pune, India in 1985. During his 5 years' service in the Indian Air Force, he completed additional training at the Institute of Aerospace Medicine, Bangalore. He served as a flight surgeon and his responsibilities included providing medical care to flight crews operating in remote and unforgiving environment of the Himalayas. He returned to AFMC for residency training in Anatomic and Clinical Pathology.

In 1993, Dr. Sahiar completed aerospace medicine residency training from Wright State University (WSU), Dayton, OH, as well as earning his Master of Science degree. He received the Antoine St. Pierre award from the International Academy of Aviation and Space Medicine and the Graduate Student Excellence award from WSU.

Dr. Sahiar served as the Director, Division of Aerospace Medicine; Program Director, Aerospace Medicine residency program; and Director, Aerospace Medicine Master of Science program at WSU, Boonshoft School of Medicine where for more than 20 years he trained residents and graduate students from more than 35 different nations. Dr. Sahiar continues to teach residents from the United States Air Force, Army, Navy, and other international military and civilian residents during their rotation at the FAA.

Dr. Sahiar is a Fellow of the Aerospace Medical Association, Fellow of the Civil Aviation Medical Association, and an Honorary Life Member of the Brazilian Society of Aerospace Medicine. He has written several scientific publications and presented at national and international meetings. He is a Life Member of the Space Medicine Association and the Indian Society of Aerospace Medicine. Dr. Sahiar is board certified in Aerospace Medicine. He holds a private pilot certificate with instrument rating and enjoys collaborating and flying with fellow pilots.

THOMAS J. AND MARGARET D. TREDICI AWARD: Douglas Ivan, M.D.

This award was established by Thomas J. Tredici and sponsored by an endowment fund managed by the Aerospace Medical Association Foundation. It is given for the most significant contribution to aerospace ophthalmology and vision science.

Douglas Ivan, M.D., FAsMA, FRAeS, is the 2020 recipient of the Thomas J. and Margaret D. Tredici Award. He received the award for his 40+ years of devotion to aerospace ophthalmology. His impact on ophthalmology standards, research, and education is unparalleled. It was through Dr. Ivan's efforts that U.S. Air Force (USAF) aviators were allowed to wear contact lenses in flight, fly after corneal refractive surgery, fly with numerous previously disqualifying vision issues and ophthalmic medications, and able to get state-of-the-art vision therapies. He is responsible for many of the advances in aviation ophthalmology standards and vision assistance devices used throughout the world today. Programs he initiated include the USAF Operational Based Vision Assessment Program, USAF Soft contact lens program, the USAF Research Optical Fabrication Laboratory, the USAF Photorefractive Keratectomy study, the LASIK Altitude study, and the Simulated Night Vision Goggle test.



Dr. Ivan graduated from Rensselaer Polytechnic Institute (RPI) in 1969 with a B.S. degree in chemistry and biology, as well as being a Distinguished Graduate from AFROTC. He graduated with honors from the USAF Aerospace Primary Course and received his M.D. degree from Albany Medical College in 1973. He completed an internship at Wilford Hall USAF Medical Center (WHMC) in San

Antonio, TX, and went on to serve as an operational flight surgeon at Nellis Air Force Base in Las Vegas, NV, for the Tactical Air Command (TAC) 64th Fighter Weapons Squadron and the U.S. Air Force Thunderbirds. After completing his Ophthalmology Residency at WHMC in 1978, he was assigned to the Aerospace Ophthalmology Branch of the Clinical Sciences Division of the U.S. Air Force School of Aerospace Medicine (USAFSAM) at Brooks AFB, TX. He was Board Certified in Ophthalmology in 1979, specializing in Aerospace Ophthalmology and laser bioeffects.

Dr. Ivan entered private ophthalmology practice in San Antonio in 1984 but remained active in research and teaching at Brooks in the Air Force Reserves. He returned to active duty in 1988 and served as the Aerospace Ophthalmology Branch Chief from 1992–2006. In 1994, he was selected Project Custodian of the Air Standardization Coordinating Committee (ASCC) Working Party 61 Project Group (PG) 113 to develop and formulate ASCC multinational standardization efforts in vision and visual displays. In 1997, he was selected Chief of the Clinical Sciences Division at Brooks and served in that capacity, as well as a Branch Chief, for 2 years, electing to return to full time ophthalmology in 1999.

In 1995, Dr. Ivan was selected as a U.S. Aerospace Medical Panel (AMP) Member for NATO's Advisory Group on Aeromedical Research and Development (AGARD). From 1994–2000, he served as co-chairman of NATO's Working Group 24 on Operational Colour Vision in the Modern Aviation Environment. Also in 1995, he was selected to chair NATO's first classified workshop on lasers and laser bioeffects. He was awarded the NATO Research and Technology Organization Human Factors and Medicine "Panel Excellence Award" in 2001. In 1999, he was designated AsMA representative to the International Civil Aviation Organization (ICAO) Laser Emitter and Flying Safety Study Group (LEFSSG). He retired from active USAF military service in 2006 as a Colonel and Chief Flight Surgeon. Following military retirement, however, he remained at Brooks as a USAFSAM contractor until Brooks' final demise under the BRAC process in 2011. He continues to provide independent consultative services to several civilian and governmental agencies.

In addition to being a longtime AsMA Fellow, Dr. Ivan is a Fellow of the Royal Aeronautical Society (RAeS) and an Academician of the International Academy of Aviation and Space Medicine (IAASM). His numerous honors include the John Lane Guest Speaker for the Aviation Medical Society of Australia and New Zealand in 1997; the USAFSAM Physician/Ph.D. Clinical Specialist of the Year Award in 2000; the Society of USAF Flight Surgeons 2001 George E. Schaffer Award; the RAeS 2006 Stewart Memorial Lecturer; and the 2012 Theodore C. Lyster Award from AsMA.

ARNOLD D. TUTTLE AWARD

Lonnie G. Petersen

Established in memory of Col. Arnold D. Tuttle, USAF, MC. Awarded annually for original research that has made the most significant contribution toward the solution of a challenging problem in aerospace medicine and which was published in Aerospace Medicine and Human Performance. Sponsored by KBR.

Lonnie G. Petersen is the winner of the 2020 Arnold D. Tuttle Award. She was recognized for her role as the lead author of



“Mobile lower body negative pressure suite as an integrative countermeasure for spaceflight” [Aerosp Med Hum Perform. 2019; 90(12): 993–999]. She and her co-authors, Alan Hargens, Elizabeth M. Bird, Neeki Ashari, Jordan Saalfeld, and Johan C. G. Petersen, designed and built a wearable lower body negative pressure (LBNP) device consisting of trousers and shoes and a thoracic vest to help reintroduce footward

fluid shift and mechanical loading during spaceflight. They tested the device on eight subjects, recording ground reaction forces (GRF) under the feet and over the shoulders and assessed cardiovascular response and footward fluid shift from internal jugular venous cross-sectional area. They found that the GravitySuit induced mechanical loading and desired fluid displacement while maintaining comfort and mobility of the hips and knee joints. They concluded that the suit could provide a feasible method of applying low-level long-term LBNP without interfering with daily activity to provide an integrative countermeasure to spaceflight.

Dr. Petersen earned her B.A. from Fredericksberg Gymnasium in 2000, and her B.S. in Medicine, University of Copenhagen in 2003. In 2007 she received her M.D. from University of Copenhagen; and in 2016, her Ph.D. in Gravitational Physiology/Space Medicine, also from the University of Copenhagen, Denmark. She did a short postdoc fellowship at Toyo University, Tokyo, Japan, in gravitational physiology and cerebral blood flow before moving to California for a postdoc fellowship at the University of California, San Diego. In 2019 she became an Assistant Professor at University of California, San Diego in Gravitational Physiology/Space Medicine.

As a physician Dr. Petersen's clinical work has focused on emergency and intensive care. She has worked as Regional Attending Physician in Greenland and is passionate about remote-area and extreme environment medical care. She completed her Ph.D. in Gravitational Physiology/Space Medicine in the NeuroICU, Department of Anesthesiology. Her research is rooted in cardiovascular and integrative physiology and more recently including cerebral health. Understanding the (patho)physiology associated with long-term spaceflight is key to develop affective countermeasure devices and strategies of use and her combined clinical and research background provides a good basis for this work.

Dr. Petersen has authored 23 original peer-reviewed articles and 3 book chapters. Her honors and awards, often based on her publications, include the AsMA Fellows Scholarship and the AMSRO Scientific Paper Award in 2019; a NASA Human Research Program, Investigators Workshop Post-doctoral

Researcher Award in 2018; and the 2017 American Physiology Society Environmental & Exercise Physiology Section National Space Biomedical Research Institute's Gravitational Physiology Postdoctoral Research Award.

JULIAN E. WARD MEMORIAL AWARD

Michael Harrison, M.D., Ph.D., M.P.H.

Established and sponsored by the Society of U.S. Air Force Flight Surgeons in memory of its first member to lose his life in an aircraft accident, and to honor all flight surgeons whose lives are lost in the pursuit of flying activities related to the practice of aerospace medicine. The award is given annually for superior performance and/or outstanding achievement in the art and science of aerospace medicine during residency training.

Michael Harrison, M.D., Ph.D., M.P.H., received the 2020 Julian E. Ward Memorial Award. He was recognized for his



preparation, dedication, and enthusiasm toward the operational flight environment. His research has included analyzing the risk of decompression sickness for pilots of unpressurized aircraft using publicly available data combined with U.S. Air Force data to find the airframes and regions most at risk in order to improve the safety of these flights. This is consistent with Dr. Harrison's work all throughout his career.

His thesis in 2009 defined a problem and developed interventions, as he did during his fellowship and while earning his Master's degree. While working for NASA, he focused on describing spinal changes in astronauts who flew long-duration spaceflights. He has also contributed to crew and ground personnel safety by designing the emergency response plan for the launch and recovery facilities of SpaceX. Additionally, while flying with crews of evacuation aircraft, he brought his expertise in emergency and critical care medicine to real-time operations. In 2009, he participated as a Nitrox-certified diver in the successful rescue of a sinking fishing boat.

Dr. Harrison received a B.S. in Kinesiology in 2002 from the University of New Brunswick, Fredericton, New Brunswick, Canada. He went on to graduate with an M.S. in Sport and Exercise Science in 2005, also from the University of New Brunswick, and an M.S. in Hyperbaric Oxygen Therapy in 2009 from Saba University School of Medicine in Saba, Netherlands Antilles. In the same year, he graduated from the University of Regina, Saskatchewan, Canada, with a multi-disciplinary Ph.D. He received his M.D. in 2012 from Saba University School of Medicine and served an Internal Medicine/Emergency Medicine/Critical Care Medicine residency at Henry Ford Hospital, Detroit, MI, from 2012–2018. He also served a post-doctoral fellowship at the Mayo Clinic in Rochester, MN, in 2012. From 2016–2017, he additionally served a Davidson Fellowship in Digital Health Innovations at the Innovation Institute, Henry Ford Hospital, Detroit, MI. From 2018–2020, he trained in Aerospace Medicine at the Mayo Clinic in Rochester. In 2020, he earned an M.P.H. from the University of Minnesota School of Public Health, Minneapolis-St. Paul, MN.

See 'Harrison,' p. N53

Dr. Harrison was a Stipend Instructor and Teaching Assistant in the Faculty of Kinesiology, University of New Brunswick, from May 2004 through April 2008. From 2007–2010, he was a commissioned officer and infantry soldier in the Royal New Brunswick Regiment, Canadian Forces (Primary Reserve). In 2012, he became a Research Associate at the Mayo Clinic Rochester until 2018, when he became a Contracted Physician in Emergency Medicine and Critical Care Medicine, also at Mayo Clinic.

Dr. Harrison received the 2006 Ross MacFarland Student Research Award from the Life Sciences and Biomedical Engineering Branch of AsMA. He won a Resident Academic Achievement Award from the Council of Residency Directors in Emergency Medicine as well as a Best Resident Researcher Award from the Society for Academic Emergency Medicine in 2017. He also received the AsMA Fellows Scholarship in 2017. In 2018, he received the Roger F. Smith M.D. Outstanding Fellow Award from the Henry Ford Health System. He is a three-time winner of the Ellingson Award from AsMA's Associate Fellows Group (2016, 2017, and 2019) and also received the Space Medicine Association's Journal Publication Award in 2019.

Nominate a Colleague for an AsMA Award!

The form & rules are at: www.asma.org/members-only/award-nominations. For more, you can contact the Chair, at: awards@asma.org. Deadline is Jan. 15.

MEETINGS CALENDAR

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

Sept. 17-20, 2020; Australasian Society of Aerospace Medicine Conference, Hobart Grand Chancellor, Tasmania. **CANCELLED.** Visit <https://event.icebergevents.com.au/asam2020> for more info.

Sept. 24-26, 2020; 1st International Conference of Aerospace Medicine (ICAM 2020); Paris, France. **POSTPONED.** For more, visit <https://www.icam2020.com/>.

Sept. 28-29, 2020 (Rescheduled); 18th EuroSciCon Conference on Immunology; Stockholm, Sweden. For more, please visit <https://immunology.euroscicon.com/>.

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. 27-29, 2020; SAFE Association 58th Annual Symposium; Virginia Beach Convention Center, Virginia Beach, VA. **To be held ONLINE.** For more information, please visit <https://www.safeassociation.com>.

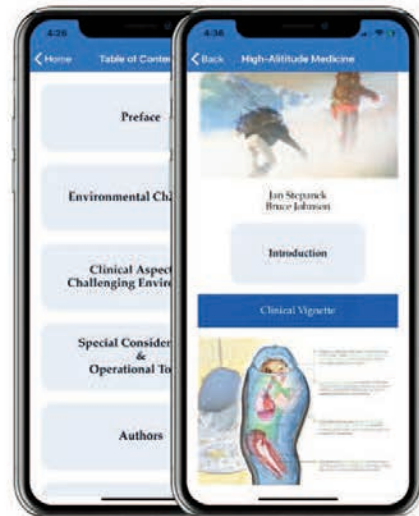
Oct.-Nov. 2020; 73rd Annual International Air Safety Summit (IASS 2020); **to be held ONLINE.** For more information, please visit <https://flightsafety.org/flight-safety-foundation-virtual-iass-2020/>.

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

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New Members

AsMA welcomes 33 new members in September.

- Arquilla, Katya; Superior, CO, United States
- Blain, Brendan; Alexandria, VA, United States
- Bobo, Daniel; St. Lucia, Queensland, Australia
- Branche, Robert; Phoenix, AZ, United States
- Bray, Michelle; Bishopville, SC, United States
- Cistone, James; Hanover, PA, United States
- deCampos-Stairiker, Mallory; Aurora, OR, United States
- Dillon, William; Houston, TX, United States
- Dronkers, Wouter; The Hague, Netherlands
- Eboka, Richard; Scottsdale, AZ, United States
- Feeley, Matthew; Baltimore, MD, United States
- Frieden, Marshall; New Orleans, LA, United States
- Haroun, Khadar; Lilburn, GA, United States
- Hu, Yiyuan; Lebanon, NH, United States
- Jacoby, Simone; Lees Summit, MO, United States
- Jenkins, Jasmin; El Paso, TX, United States
- K, Suryakiran; Bengaluru, Karnataka, India
- Klenovits, Elodie; Albuquerque, NM, United States
- Kurrle, Thaynara; São Paulo, Brazil
- Mange, Ami; Philadelphia, PA, United States
- Noh, Heung; Fort Carson, CO, United States
- Ofori, Edward; Phoenix, AZ, United States
- Omidvar, Ava; Kensington, MD, United States
- Pantalos, George; Louisville, KY, United States
- Patel, Roshan; Norristown, PA, United States
- Perez, Maria; Orange, CA, United States
- Poppe, Michael; San Diego, CA, United States
- Pugged, Tyler; Placentia, CA, United States
- Swanson, Benjamin; Reston, VA, United States
- Verissimo, Anselmo; Hong Kong
- Vinod, B.; Bengaluru, Karnataka, India
- Wiseman, James; Oro Valley, AZ, United States
- Zellmer, Erich; Gainesville, FL, United States

AsMA welcomes back a returning member:

- Lynch, James; Santa Barbara, CA, United States

In Memoriam: Irene Duhart Long

Irene Duhart Long, M.D., a former Fellow of AsMA, died in August at the age of 69. A native of Cleveland OH, she received her Bachelor of Science degree in Biology from Northwestern University in 1973. In 1977 she received her medical degree from the Saint Louis University School of Medicine. She did her residencies at the Cleveland Clinic, Mt. Sinai Hospital in Cleveland, OH, and Wright State University in Dayton, OH, where she received her Master of Science degree in Aerospace Medicine. She was only the second



civilian to enter the Wright State University School of Medicine's aerospace medicine program. In 1982, she began her career with NASA as a physician. In 1994 she was appointed Director of the Biomedical Operations and Research Office at the Kennedy Space Center, and in 2000 she was appointed Chief Medical Officer and Associate Director of Spaceport Services. She retired from NASA in 2010 after a 31-year ca-

reer. Among her many honors and awards are: Kennedy Space Center Federal Woman of the Year Award for 1986; Society of NASA Flight Surgeons Presidential Award in 1995; Women in Aerospace Outstanding Achievement Award; Ohio Women's Hall of Fame; Lifetime Achievement Award, 2005 Women of Color Technology Awards Conference; and the Strughold Award from the Space Medicine Association in 2010.

AMHP Still Highly Rated on Ingenta

Ingenta has examined data for all the titles on Ingenta Connect, and the Blue Journal still ranks in the top 20 out of more than 11,000 titles for number of full-text downloads.

For July 2020:

- *Aerospace Medicine and Human Performance* ranks 7th with 2,334 downloads; and
- *Aviation, Space, and Environmental Medicine* ranks 17th with 1,490 downloads.

Upcoming Events - Save the Dates

Sept. 11-13, 2020; Working SAFELY in the COVID-19 Era: Case Studies and Lessons Learned -- Virtual Symposium. This 3-day, 3-hour per day symposium is available for Eligible for up to 11.25 AMA PRA Category 1 Credits™ or AAFP Credit. As states continue to reopen following the lockdown in response to the COVID-19 pandemic, ACOEM's Working Safely in the COVID-19 Era: Case Studies and Lessons Learned Virtual Symposium will provide critical information and tools for occupational and environmental medicine (OEM) professionals, their multidisciplinary teams, and employers to continue the safe return to work (RTW) of employees. For more info, contact: [Janet Fyock](mailto:Janet.Fyock@acoem.org) or visit <https://acoem.org/COVID-19-Resource-Center/Virtual-Symposia>.

May 2-5, 2021; 105th American Occupational Health Conference (AOHC 2021); JW Marriott, Austin, TX, USA. The American Occupational Health Conference (AOHC) is the meeting for physicians and other health professionals who are in the fields of occupational and environmental medicine. It is also the annual membership meeting for ACOEM. People from around the globe convene to learn from each other, share knowledge, and connect through shared experience. ACOEM also hosts pre- and post-conference courses for those looking to obtain the most CME credit in one place. Visit [https://acoem.org/Learning/American-Occupational-Health-Conference-\(AOHC\)](https://acoem.org/Learning/American-Occupational-Health-Conference-(AOHC)) for more information. Details will be posted closer to the event.

NEWS OF CORPORATE MEMBERS

KBR Engineers Trek to South Pole

For the first time in their careers, two KBR seismic field engineers recently journeyed to the South Pole to maintain the U.S. Geological Survey's (USGS) portion of the Global Seismographic Network (GSN), a high-quality, permanent digital network of seismological and geophysical sensors connected by a telecommunications system throughout nearly 80 countries with more than 150 seismograph stations around the globe. KBR has supported USGS seismic networks for more than 35 years through periodic government contracts at the USGS Albuquerque Seismological Laboratory (ASL). KBR personnel working on GSN operations are responsible for installation, maintenance, repair, modification, and supply of all foreign and a few domestic seismograph stations supported by the ASL. During their visit, the pair of engineers worked to perform typical routine maintenance, which included ensuring station equipment was functioning well, and firmware and configurations were up to date. The engineers also installed new equipment and surveyed the station to forecast problems that may disrupt data collection or data flow. Despite the frigid weather, the engineers successfully completed their tasks, which played an invaluable role in KBR's quest to help USGS decipher Earth's natural hazards, prepare for weather disasters, and protect its inhabitants.

—Please visit <https://www.kbr.com/en/insights-events/stories/surveying-seismic-shifts-kbr-engineers-trek-south-pole> to read more about this.

Corporate News Bites

Martin-Baker: Martin-Baker's Mk.16 ejection seats will be installed in basic trainer aircraft recently approved by the Indian Ministry of Defense. India's Air Force also recently ordered Tejas aircraft, which will also be fitted with Martin-Baker's ejection seats. When these aircraft are delivered, India's Air Force and Navy will be operating over 1300 Martin-Baker seats in more than 750 aircraft. Visit <https://martin-baker.com/2020/08/12/indian-air-force-orders-106-htt-40-basic-trainer-aircraft/> to read more.

AOPA: The President of the Aircraft Owners and Pilots Association (AOPA) was recently on Social Flight, a website and app that provides pilots with relevant aviation content and serves as a guide to events, to talk about the health of general aviation (GA). The conversation covered several topics related to the state of GA, how it has held up well in a challenging year, and what AOPA has been doing to help preserve its health. For more on this, please see <https://www.aopa.org/news-and-media/all-news/2020/august/20/baker-joins-socialflight-to-discuss-health-of-ga>.

UTMB: The University of Texas Medical Branch (UTMB) and i45NOW have presented the first episode of 'Health Care Unmasked.' In the premier episode, Drs. Lauren Raimer-Goodman and Justin Seashore discuss the consequences of COVID-19 and the ongoing medical issues for those affected. Please visit <https://www.utmb.edu/internalmedicine/news-events/news-article/2020/08/19/i45now-and-utmb-health-present-health-care-unmasked-post-covid-19-care-and-clinics> to watch the video.

Mayo Clinic Collaborates with Children's Minnesota

Mayo Clinic and Children's Minnesota, one of the largest freestanding pediatric health systems in the United States, are expanding on their existing collaboration of providing cardiovascular surgical care to children with congenital heart disease to now offer cardiology care. The collaboration, referred to as the Mayo Clinic-Children's Minnesota Cardiovascular Collaborative, began in January, building on each organization's shared culture and passion for children, as well as the complementary strengths of both cardiovascular programs. By collaborating, Mayo Clinic and Children's Minnesota can share their expertise and resources, develop and support new programs, and provide an integrated approach to pediatric research and education. As part of the collaboration, physicians from each organization will cover for each other in Minneapolis and Rochester. Mayo Clinic and Children's Minnesota will continue to explore further collaborations to benefit children, adolescents, and adults with congenital heart disease.

—Please see <https://newsnetwork.mayoclinic.org/discussion/mayo-clinic-childrens-minnesota-announce-cardiovascular-collaboration/> for more on this.

NIOSH Study Shows Hearing Loss in Service Sector Workers

New research from the National Institute for Occupational Safety and Health (NIOSH) estimates that many noise-exposed workers within the Services industry sector, the largest sector in U.S. industry, have an elevated risk of hearing loss. The new study was recently published in the International Journal of Audiology. Workers who are exposed to hazardous noise or chemicals that damage hearing can experience occupational hearing loss. The Mining, Construction, and Manufacturing sectors are recognized as having high percentages of workers exposed to hazardous noise, and therefore at higher risk of hearing loss. However, researchers identified sub-sectors within the Services sector that were also at higher risk for hearing loss. Researchers examined audiograms for 1.9 million noise-exposed workers across all industries, including audiograms for 158,436 Services workers. The main findings included: the prevalence of hearing loss within Services was 17%; many sub-sectors greatly exceeded the overall prevalence by large percentages (10–33% higher); workers in Administration of Urban Planning and Community and Rural Development had the highest prevalence (50%), and workers in Solid Waste Combustors and Incinerators had more than double the risk; and some sub-sectors traditionally viewed as 'low-risk' also had higher than expected prevalences and/or risks, such as professional and technical services and schools.

—Please see <https://www.cdc.gov/niosh/updates/upd-08-04-20.html> for more on this.

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Serco Marks 2 Years of Positive Outcomes at Correctional Center

Two years ago, Southern Queensland Correctional Centre (SQCC) transitioned to a female facility and Serco has been driving positive outcomes for the women there ever since. SQCC Director Nick Rowe said this important milestone provided a great opportunity to recognize the efforts of all staff who have gone above and beyond to deliver positive outcomes for the women in their care. As part of the rehabilitation and reintegration strategy at SQCC, Serco's team have delivered more than 127,000 hours of industry employment, more than 77,000 hours of education, and more than 75,000 hours of vocational training, seeing more than 270 qualifications gained by the women. In a letter to SQCC Director Nick Rowe, a prisoner said their life had been enriched by her experience at SQCC and thanked Serco for making the transition to a new facility so easy. Serco has developed and implemented a holistic rehabilitation and reintegration strategy with a focus on preparing prisoners for release. This is aimed at equipping the women at the center to reintegrate back into the community afterwards.

—Please visit <https://www.serco.com/aspac/news/media-releases/2020/two-years-driving-positive-outcomes-for-women-in-custody-at-sqcc> to read more about this.

IATA Report on Aviation & the Pandemic

The International Air Transport Association (IATA) Medical Advisory Group published an updated document titled "Restoring Aviation During COVID-19 - Medical Evidence for Possible Strategies." The latest update to this important guidance document was published on August 6, 2020. The report was prepared by IATA's Medical Advisor along with the Medical Advisory Group of 10 airline medical directors on the basis of an extensive review of available literature, advice, and expertise during the pandemic thus far.

This report covers the following important medical topics: In-Flight Transmission; Vaccination; Multi-Layered Approach to Providing Protection; Temperature Screening; Symptom Screening; Use of Masks and PPE; Physical Distancing; Cleaning and Disinfection; COVID-19 Testing; Antibody Testing; Immunity Passports; Quarantine; Measures to Assist Contact Tracing; Measures Related to Crew Members; and Treatment. The IATA report provides a robust list of references for additional information on medical issues related to safe aviation operations during the COVID-19 pandemic. [Access the International Air Transport Association \(IATA\) Medical Advisory Group report here](#) (pdf file).