



# Ever Upward: December 2016

## ECAM Honors Roland Vermeiren

On 15-18 September, the 5th European Congress of Aerospace Medicine (ECAM) took place in Oslo, hosting 412 attendees from 32 different countries. EUROCONTROL was represented by Dr. Roland Vermeiren, who was recognized for his contributions to aerospace medicine. Roland was interviewed by Despoina Tsani (DG/COM).



### **Roland, tell us more about the award you received.**

I accepted a special award for exceptional contributions to aviation

medicine from the European Society of Aerospace Medicine (ESAM), which is a great personal honor and recognition of the important role EUROCONTROL plays in aviation medicine. As one of the 21 founding fathers of the ESAM, it was a proud day to be recognised as the first (and so far only!) Chevalier of the order of ESAM, and to receive a medal (appropriately enough in aircraft aluminium alloy). ESAM was created in 2006, and since then I have been elected three times as President. During my 6-year tenure we've worked hard to build this organization, and we've now reached the level of 45 national associations, including the EUROCONTROL Medical Board as one of the associated organizations.

### **Is EUROCONTROL involved in other aviation medicine bodies?**

Besides my role in ESAM, I am currently [a] Vice President of AsMA, the global Aerospace Medical Association, which is the largest professional organization in the fields of aviation, space, and human performance medicine.... Also, I have been an Academician of the International Academy of Aviation and Space Medicine (IAASM) since 2004, as well as a member of their Scientific Committee. Additionally, I'm involved at EASA on all issues concerning the aeromedical sector, such as medical certification rules for ATCOs and aircrew.

EUROCONTROL has been involved in these medical organizations from a really early stage, and I see myself as an ambassador of the values and importance of air traffic control in aviation control safety systems, a field which is often neglected. The motivation behind my work is to make the world of aviation broadly known and increase awareness about the tasks performed at EUROCONTROL in the fields of aviation medicine and human factors.

### **How does aerospace medicine differ from standard medicine?**

Aerospace medicine was born when doctors detected certain symptoms in people while in the air which were not visible on the ground. This pioneering field concerns safety issues for the public, and it is a horizontal specialization, which means you need to work closely with all possible diagnoses

from medical and biological systems, and link them to regulatory and legal provisions concerning medical fitness for aviation safety purposes. It has both civil and military components; I, however, focus on the civil part. Our deliverables include the health of passengers, and the regulation of fitness, cabin environment, hygiene, and radiation impacts.

In the past, only a few people were aware of aerospace medicine and it was not recognized in many countries as a clinical specialty because traditional medicine is linked to treatment, whereas aerospace medicine is concerned with very specific things that do not exist in normal medicine. However, nowadays, things have changed and people increasingly understand the benefits and the nature of our profession to a greater extent. This has been achieved mostly through the establishment of these aerospace medicine organizations. And this was necessary as there are only a few of us in the world—approximately 2,500 doctors in Europe—so we need to communicate and interact.

### **What are the greatest challenges of your professional activity?**

The greatest challenge is to conduct many tasks simultaneously in a manageable way. My agenda is already fully booked for the first 6 months of 2017 and I am very enthusiastic about this work. I always try to leave ongoing activities open and to be there when needed. Another challenge is to be able to understand the different medical cultures and customs and get the best out of them. Aerospace medicine is by definition international, and I have had the chance to meet some astonishing people with great experience and expertise in several domains.

All in all, I am genuinely grateful for the recognition I have received for my work and I am happy to be able to represent EUROCONTROL and this domain of ATM. It makes me recall the day I first joined EUROCONTROL as a contractor back in 1989. We had to work really hard because then we were starting from scratch; it's great to look back and realize that these efforts have been fruitful.

## News of Members

**Dwight Holland**, former Senior Reserve Officer at the USAF Test Pilot School, has received another Meritorious Service



Medal for working across two commands and with NASA, resulting in breakthroughs in flight testing as a leader, creator, and co-manager of important first-time programs. These programs include the first complete in-flight real-time evaluation of various full coverage G-suits with physiological monitoring of major body functions and deep body and surface thermal changes while flying in a hot desert environment with special F-16 datajets that also recorded all pilot in-

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puts. Dr. Holland also developed new approaches to training test pilots/flight test engineers in the areas of Human Systems Integration and cooperated with NASA Armstrong personnel on remotely piloted vehicle (RPV) ops testing. He also envisioned and co-authored the well-known book "Breaking the Mishap Chain" (2012) with AsMA colleague Dr. Gregg Bendrick. He was selected as the Field Grade Officer of the Year in 2012 at Edwards AFB for much of this work. Recently, he has been working with Vail Resort, the largest ski resort organization in the western world, on situation awareness/spatial orientation training, the first-ever course of its type to be introduced to the novel arena of snowsports ski professional education, in order to reduce injuries among ski pros and guests while improving human performance. He has been a part-time professional ski instructor at Vail Resort in Colorado for 5 years.

## New Members

In December, AsMA welcomes 28 new members:

Abdellatif, Ahmad; Doha, Qatar  
Abercromby, Andrew; San Luis Obispo, CA  
Agrawal, Anirudh; New Delhi, India  
Anderson-Antle, Lisa; Kenosha, WI  
Beich, Jonathan; Gaithersburg, MD  
Bush, Dylan; Daytona Beach, FL  
Cairns, Mark; London, United Kingdom  
Caunan, Calvin; Hacienda Heights, CA  
Chiappone, Michael; Alexandria, VA  
Cushman, James; Oakland, CA  
Easter, Benjamin; Denver, CO  
Filler, Robert; Beaufort, SC  
Fischer, Marcus; Leverkusen, Germany  
Fleischer, Jennifer; New Hartford, NY  
Harrison, Kathryn; Anacortes, WA  
Hundal, Hardeep; Auckland, New Zealand  
Jackson, Marvin; Chicago, IL  
Lusterio, Lucky; Dayton, OH  
Maccato, Elizabeth; Houston, TX  
Malpica, Diego; Bogota, Colombia  
Muhi, Stephen; Brunswick West, Victoria, Australia  
Pocha, Nusly P.; Mumbai, India  
Porter, Ian; Pensacola, FL  
Ramirez, Marvin; Herndon, VA  
Robertson, Jeremy; Chatswood, New South Wales, Australia  
Tran, Stephanie; Green Cove Springs, FL  
Venegas, Ollin; Providence, RI  
Walton, Clare; Henlow, Bedfordshire, United Kingdom

*This list is as accurate as we can make it. Please send corrections to [Rachel Trigg](mailto:Rachel.Trigg@asma.org).*

### Read Current News Online!

The AsMA, Industry, & Member News pages are updated regularly! Go online and check them out.

### Want more info on the annual meeting?

Visit [www.asma.org/scientific-meetings/asma-annual-scientific-meeting](http://www.asma.org/scientific-meetings/asma-annual-scientific-meeting) - links are in the left-hand column.

## In Memoriam: Anita Mantri

AsMA was deeply saddened by the passing of Anita Mantri, a third year student at Texas A&M College of Medicine,



Houston. Born and raised in the Houston area, Anita attended Rice University, receiving a B.S. degree in Earth Science in 2009.

Afterwards, she worked for the NASA Ames Research Center and the NASA Johnson Space Center. She also served as a teacher for home-schooled students with kidney transplants in Houston and fifth graders at Mount St. Mary's School in Nadi, Fiji. Additionally,

she mentored high school seniors aspiring to college through the DePelchin Center.

In 2010, Anita began her studies at Texas A&M, pursuing an M.D./Ph.D., with the dream of becoming a NASA flight surgeon. She chose the Texas A&M M.D./Ph.D. program because she had a passion for space medicine and space life sciences which she had developed at an early age. She was also interested in trying to answer the questions about the human body's adaptation to spaceflight and wanted to be on the cutting edge of aerospace medicine. Early in 2016, she successfully defended her dissertation, which examined the effects of oral contraceptive pills on bone's response to exercise and spaceflight, and was awarded her Ph.D.

Because of her research, Anita had the opportunity to present to NASA officials and members of the U.S. House of Representatives. In the summer of 2016, she joined the Houston campus as a student and was on the way to completing her M.D. She was serving clinical clerkship rotations at Houston Methodist Hospital and had remained committed to becoming a NASA flight surgeon and developing solutions for clinical problems on Earth using the space environment.

Anita had been a member of AsMA since 2007 and was President of the Aerospace Medicine Residents and Students Organization (AMSRO), which she represented at AsMA's Council. She also served on the Scientific Program and the Corporate and Sustaining Membership Committees. She had also been a Space Life Science Fellow for the National Biomedical Research Institute (NSBRI).

During her time at Texas A&M, Anita touched many through her involvement with volunteer organizations, especially in her role as a student member of the College of Medicine Admissions Committee, a transcriber of life stories for Hospice Brazos Valley, an ally member of the Texas A&M LGBTQA Graduate Student group, and an organizer for on-campus events and conferences with the Texas A&M Space Life Sciences program and the Texas A&M chapter of the American Physician Scientists Association (APSA). She also enjoyed and embraced her multicultural Indian, Canadian, and Jamaican heritage through food, culture, and art.

*See 'Mantri', p. N81*

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In order to build on Anita's passion for making a difference through biomedical research, the College of Medicine will be establishing a permanent scholarship fund in her memory at the Texas A&M Foundation. The Anita Mantri Memorial Scholarship will be awarded annually to an M.D./Ph.D. student. Donations are being accepted at the Texas A&M Foundation. Please contact [Anna McCoy](#) for details.

### In Memoriam: Emerson Besch

AsMA was saddened to learn of the death of Emerson L. Besch, Ph.D., in late November. Dr. Besch earned a B.S. in



1952 and then an M.A. in 1955 from Southwest Texas State University. He entered the U.S. Navy for 5 years, serving as an aviation physiologist, after earning his M.A. and then became a Captain in the Reserves. He received his Ph.D. in animal physiology from the University of California at Davis, where he was a research assistant and NIH

trainee, in 1964. He also served as a Research Associate in Bioastronautics Office at Pt. Mugu, headquarters of the Pacific Missile Range. He then became an Assistant Research Physiologist and Lecturer in the Department of Animal Physiology at UC Davis.

Dr. Besch then joined Kansas State University as an Associate Professor and later became a Professor. During this time, he also held positions as Staff Associate in the KSU Institute for Environmental Research, College of Engineering, Head of the Department of Physiological Science and Director of the Animal Resource Facility in the KSU College of Veterinary Medicine. He then transferred to the University of Florida in Gainesville, where he served as Assistant Dean and Progressor of Physiology in the

### Scholarships to 2017 ICASM Offered

The 2017 International Congress of Aviation and Space Medicine (ICASM), will be held in Rome, Italy, in the Fall of 2017. The Italian Association of Aerospace Medicine and the National Association of Assistants and Controllers of Air Navigation have announced the VII edition of the scientific prize "I Guidoniani." The scholarship prize will be 2,000 Euro for the best original paper in the field of medicine, psychology, or engineering, regarding man in atmospheric/spatial flight, and 2,000 Euro for the best original paper in the field of medicine, psychology, or engineering concerning human factors in air traffic control. Scientists below the age of 35 with a degree in medicine, biology, psychology, or engineering are eligible.

Completed and signed applications should be submitted online to: [segreteria@aimas.it](mailto:segreteria@aimas.it) or faxed to: 06.99331577.

**The deadline for applications is the 15th of June 2017.**

The full application form can be downloaded from: [http://www.aimas.it/docs/premio\\_guidoniani\\_2017.pdf](http://www.aimas.it/docs/premio_guidoniani_2017.pdf).

College of Veterinary Medicine, Professor of Mechanical Engineering in the Department of Mechanical Engineering, and Professor of Veterinary Science in the Institute of Food and Agricultural Sciences. He also filled in as Acting Chairman of the veterinary college's Department of Metabolism and as Acting Dean of the college.

During his life, Dr. Besch worked on projects for the U.S. Air Force and NASA and enjoyed telling stories of those days. He was a Fellow of the Aerospace Medical Association, certified in Aerospace Physiology, and was a Past President of the Aerospace Physiology Society and the Life Sciences and Bioengineering Branch (LSBEB). He was a recipient of LSBEB's Professional Excellence Award in 1987, shared the Research Award of the American Association for Laboratory Animal Science in 1974, and was named Layman of the Year and Honorary Member of the Florida Veterinary Association in 1981. He held more than a dozen major national consultantships and was a member of 17 honorary and professional societies. He had published more than 50 scientific papers and earned a number of awards and honors.

### AsPS Board Certification Announcement

by NATHAN B. MAERTENS, Lt. Col., USAF, BSC, CA&P

The Executive Committee of the Aerospace Medical Association (AsMA), acting upon recommendations of the Aerospace Physiology Certification Board, grants certification in aerospace physiology. Board certification in aerospace physiology was established by the Aerospace Medical Association to encourage the study, improve the practice, and elevate the standards of excellence in aerospace physiology.

Formal Board Certification provides an avenue for professional and peer recognition in aerospace medicine, and is a worthy goal for members to attain. This year's certification examination will be offered at the 88th Annual Scientific Meeting of the Aerospace Medical Association on Sunday, 30 April 2017, in Denver, CO. Board certification is for professionals with an abiding interest and demonstrated productivity in the field of aerospace physiology.

Applicants must possess, as a minimum, a baccalaureate degree in either physiology or a closely related science (including as a minimum at least 18 hours of biological sciences). A history of significant contributions to aerospace physiology is also required. Applicants should have 5 years of active professional experience in an aeromedical field. Exceptional applicants can request a waiver of any or all of the aforementioned eligibility requirements by submitting a letter to the Admissions Committee Chair. This letter shall specify experience, knowledge, education, or other facets that alleviate the need to meet eligibility requirements.

The 5-hour exam contains questions covering various areas relevant to aerospace physiology, including but not limited to general human physiology, acceleration physiology, decompression physiology, impact, hypoxia, vibration and noise, operational aspects, space physiology, and spatial orientation.

**Applications and letters of reference are due to the Admissions Committee no later than Sunday, 19 February 2017.** Applicants should contact the Admissions Chair for an

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application form (available in English only). Applicants must also submit a suitable digital portrait photograph (5 × 7), a short professional biography of less than 300 words, two professional letters of recommendation submitted directly to the Board, and a one-time, non-refundable application fee of \$25 (U.S). A non-refundable \$75 examination fee is due prior to the exam. In addition, a \$50 certification fee is payable prior to sitting for the examination that is refundable if not certified. Make checks payable to the Aerospace Physiology Certification Board. Applicants must submit documents to the Admissions Chair in a digital format: MSWord compatible for text documents and high-resolution JPEG for graphics/photos.

Applications for Aerospace Physiology Board Certification are available from the Admissions Committee Chairman:

NATHAN B. MAERTENS, Lt. Col., USAF, BSC, CAsP  
Chief, Human Performance Branch  
2510 Fifth Street  
Wright-Patterson AFB, OH 45433-7913  
Email: [nathan.maertens@us.af.mil](mailto:nathan.maertens@us.af.mil)  
Comm: (937) 938-3073  
**Deadline for Application: 19 February 2017**

### Flight Safety Foundation Launches New Website

The Flight Safety Foundation (FSF) has launched a new, improved website that provides an unequalled repository of trustworthy information and other resources. The state-of-the-art, mobile-responsive website lets aviation industry

members access and apply the world's most comprehensive, up-to-date safety data and analysis from any device, anywhere.

As aviation safety evolves from reactive to proactive, FSF members will gain more insight through expanded online offerings, including curated external content and the Foundation's *AeroSafety World* magazine, in a new digital-first format for maximum flexibility. Members will also be able to track the progress of the Foundation's Global Safety Information Project (GSIP), which seeks ways to more effectively harness and share aviation safety data across commercial carriers, corporate operators, manufacturers and regulatory entities, as well as the Basic Aviation Risk Standard (BARS) program, which was developed to meet an identified need for a common global aviation safety assessment and audit protocol for operators flying into some of the world's harshest environments.

Moreover, FSF members will be able to interact via an exclusive online community designed to facilitate additional discussion of key safety initiatives. And in the near future, the new website will be enhanced further through the addition of committee forums and an *AeroSafety World* mobile app.

The Foundation's new website can be viewed at [flight-safety.org](http://flight-safety.org). To read the complete press release, please visit <https://flightsafety.org/fsf-launches-new-website/>.

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## NEWS OF CORPORATE MEMBERS

### NIOSH Engages Entrepreneurs in Noise Safety Challenge

In cooperation with the Occupational Safety and Health Administration (OSHA) and the Mine Safety Health Administration (MSHA), the National Institute for Occupational Safety and Health (NIOSH) challenged inventors to provide solutions to reducing hearing loss from workplace exposures. This first "Hear and Now" Noise Safety Challenge was held last week. This first-time event provided opportunities for 10 inventors, selected from 28 challenge submissions, to travel from all over the nation and Canada and present their solutions to better protect the 22 million workers exposed to hazardous noise every day. The judges awarded first place to a custom-fitted earpiece designed to provide a worker with protection, communication, and monitoring. Second place was awarded to wearable sensor technology that detects noise levels and provides warnings and other communications via color-coded lights. Third place was awarded to an interchangeable decorative attachment that attaches to silicone earplugs. The attachments are manufactured with licensed designs for sports teams, businesses, or music festivals. The other selected ideas included hearing protection devices, hardware/software combinations within the Internet of Things (IoT), audiometric measurement and tracking tools, and analysis systems.

—Please visit <http://www.cdc.gov/niosh/updates/upd-11-03-16.html> for more on this.

### Gentex Promotes Parachutist Safety

Gentex Corporation, emergency responders, and industrial personnel have partnered with The Red Devils, the official parachute display team of both The Parachute Regiment (The Paras) and the British Army, to promote soldier safety. As part of the agreement, Gentex Corporation will provide its Ops-Core FAST Carbon High Cut Helmet to each of the 12 members of The Red Devils to use during their promotional water jumps and for team training. The streamlined design and durable, lightweight carbon construction of the Ops-Core FAST Carbon High Cut Helmet provide parachutists an unobstructed field of view and industry leading blunt trauma protection. The helmet can also be customized with situational awareness and other performance enhancing accessories.

—Please see <http://www.gentexcorp.com/news-events/news/gentex-corporation-partners-with-the-red-devils-to-promote-parachutist-safety> to read more about this.

### Mayo Clinic Establishes High Altitude Clinic

Mayo Clinic is seeing patients with concerns about traveling to high altitudes at the recently established High Altitude and Harsh Environments Medical Clinic. The clinic focuses primarily on travelers concerned about ascending to climates above 8,000 feet. Additional aspects of the clinic focus on the remote nature of high-altitude austere environments, including decreased oxygen, extreme cold conditions, scarcity of safe food and water sources and limited health care resources. Dr. Jan Stepanek, chair of the Division of Preventive,

Occupational and Aerospace Medicine at Mayo Clinic, Arizona, says modern travel has accelerated the need for more attention to health concerns at high altitude. Through prescreening based on personal medical history, target elevation, and how fast a patient ascends to the altitude, the Mayo clinical team determines low-, moderate-, or high-risk individuals. Education on pre-acclimatization, recognition of symptoms, individualized testing, and prescriptions and medical kits that can prevent or treat high-altitude health problems are part of the program.

—Please visit <http://newsnetwork.mayoclinic.org/discussion/mayo-establishes-high-altitude-and-harsh-environments-medical-clinic/> for more information.

### Corporate News Bites

**Air Canada:** Air Canada has been named one of "Canada's Top 100 Employers" for the fourth consecutive year in an annual employer survey by Mediacorp Canada Inc. The national competition, which is entering its 18<sup>th</sup> year, recognizes employers with exceptional human resources programs and forward-thinking workplace policies after a detailed review of company operations and Human Resources practices, including a comparison of others in their industry and region. For more on this, please visit <http://aircanada.mediaroom.com/index.php?s=43&item=1077>.

**ALPA:** The Airline Pilots Association, International (ALPA International), released a statement regarding the National Transportation Safety Board's (NTSB's) list of most wanted safety recommendations. They applauded the NTSB's work in creating priorities for improving aerospace safety and expressed their significant concerns. To read the full statement, please visit <https://www.alpa.org/news-and-events/news-room/2016-11-14-ntsb-most-wanted-list>.

### MEETINGS CALENDAR

**March 28-30, 2017;** 3rd Annual Singapore Aviation Safety Seminar; Singapore Aviation Academy, Singapore. Jointly organized by the Flight Safety Foundation & Singapore Aviation Academy. For more info, please visit <http://flightsafety.org/aviation-safety-seminars/singapore-aviation-safety-seminar-2017>.

**April 4-6, 2017;** Arvind Chaturvedi Colloquium on Postmortem Forensic Toxicology in Aviation; Mike Monroney Aeronautical Center, CAMI, FAA, Oklahoma City, OK. Registration is due by December 16, 2016. For info, please see the [Colloquium announcement](#).

**May 19-24, 2017;** ATS International Conference; Washington, DC. For more, please visit <http://conference.thoracic.org/program/call-for-abstracts/index.php>.

**May 23-26, 2017;** Preventive Medicine 2017; Portland, OR. For more information, please visit <https://www.eventscribe.com/2017/acpm-annual/>.