

Space Medicine Association

2012 Executive Committee Ballot

Candidates

President Elect (1 vote):

1. Michelle Frieling
2. Scott Parazynski

Secretary (1 vote):

1. Alex Garbino
2. Steve Vander Ark

Members at Large (2 votes):

1. Raffi Kuyumjian
2. Chuck Mathers
3. Casey Pruett
4. Rick Scheuring
5. Patrik Sundblad

Please see the short biographies on the next pages. To cast your vote, please reply to this email or send an email to: sma-2012@space-medicine.net with the names of your selected candidates.

Space Medicine Association

2012 Executive Committee Ballot

Biographies

President Elect

Michelle Frieling

Michelle Frieling is the Space Medicine Group Manager for Wyle Science, Technology, and Engineering. An alumna of Vanderbilt University, Michelle holds her Bachelor of Science in Molecular Biology. She began her career as a researcher at University of Virginia and M.D. Anderson Cancer Center focusing on developing treatments for anaplastic thyroid carcinoma.

Hired by Wyle in 1999, Michelle has held positions of increasing levels of responsibility, starting as a flight controller focusing on medical operations for both the space shuttle and International Space Station programs. From there she moved into overseeing Space Medicine training operations where she helped design and identify innovative training techniques for astronauts and ground crew. Michelle utilized her expertise in human spaceflight operations to concentrate on the emerging commercial human spaceflight market. During that time, she co-chaired the Commercial Space Transportation Advisory Council (COMSTAC) Reusable Launch Vehicle (RLV) working group Task Force on Training. As a part of this task force, Michelle helped author the Commercial Human Space Operations Training Standards.

Michelle has actively participated in professional organizations such as the National Management Association where she served as the local chapter vice-president for two years as well as the president. In addition, she has completed the Kepner-Tregoe project management leadership development institute and is a certified project management instructor. Michelle teaches project management courses throughout the year to other Wyle employees. For the past year she has held one of the member-at-large positions within the Space Medicine Association and has enjoyed being part of the organization.

Space Medicine Association

2012 Executive Committee Ballot

Scott Parazynski

Dr. Scott Parazynski has lived and traveled all over the world, spending many of his grade school and high school years in places such as Dakar, Senegal; Beirut, Lebanon; Tehran, Iran; and Athens, Greece. A graduate of Stanford University and Stanford Medical School, he went on to train at Harvard and in Denver in preparation for a career in emergency medicine and trauma. Dr. Parazynski is also physiologist with expertise in human adaptation to stressful environments.

In 1992 he was selected to join NASA's Astronaut Corps and eventually flew 5 Space Shuttle Missions and conducted 7 spacewalks (EVAs). In his 17 years as an Astronaut, he served in numerous senior leadership roles, including EVA Branch Chief and the Lead Astronaut for Space Shuttle Thermal Protection System Inspection & Repair (in the aftermath of the Space Shuttle Columbia tragedy). Mission highlights include a global ozone mapping mission on STS-66; leading the first joint US-Russian spacewalk during STS-86 while docked to the Russian space station Mir; serving as Senator John Glenn's crewmate and "personal physician" during STS-95; and conducting EVA assembly of the Canadian-built space station arm during STS-100.

In October 2007, Dr. Parazynski led the EVA team on STS-120, a highly complex space station assembly flight, during which he performed 4 EVAs. The fourth and final EVA is regarded by many as one of the most challenging and dangerous ever performed. During the EVA he was positioned by a 90-foot robotic boom farther than any orbiting astronaut had ever ventured from the safety of their airlock. During this EVA he had to repair a fully energized solar array wing. The tremendous coordinated effort in orbit and on the ground by Mission Control and other engineering experts has been likened to the Space Shuttle and Space Station era's "Apollo 13 moment."

All told, Dr. Parazynski has spent over 8 weeks in space with more than 47 hours outside on spacewalks. While he has traveled over 23 million miles in orbit he has yet to earn a single frequent flyer mile!

In addition to being a life-long SCUBA diver and accomplished mountaineer, Scott is also a commercial, instrument, multiengine and seaplane-rated pilot with over 2,500 flight hours. He began climbing in his teens, and has climbed in the Alaska Range, the Cascades, the Rockies, the Alps, the Andes and the Himalayas. On his second attempt to scale Mt. Everest, on May 20, 2009, he became the first astronaut to stand on top of the world. Additionally, as part of a NASA-sponsored expedition to the high Andes, he conducted a scientific dive in the summit caldera lake of 19,700-foot Licancabur volcano, the world's

Space Medicine Association

2012 Executive Committee Ballot

highest lake.

He currently serves as Chief Technology Officer and Chief Medical Officer at The Methodist Hospital Research Institute in Houston, Texas, where he is helping a world class team of scientists and clinicians develop technologies that will one day reshape medical care around the world. He serves on the Boards of Directors of several organizations and companies, as well as on the visiting or adjunct faculty at several universities around the world.

Dr. Parazynski has numerous publications in the field of space physiology, and has a particular expertise in human adaptation to stressful environments.

He is the recipient of a number of prestigious awards, including: five NASA Spaceflight Medals, two NASA Distinguished Service Medals, two NASA Exceptional Service Medals, two Vladimir Komarov Diplomas from the Fédération Aéronautique Internationale, two Flight Achievement Awards from the American Astronomical Association, the Aviation Week Laureate Award, the Ellis Island Family Heritage Award, Gold Medal from the American Institute of Polish Culture, and the Lowell Thomas Award from the Explorers Club. Additionally, he is a member of the Arkansas Aviation Hall of Fame.

Secretary

Alex Garbino, Ph.D.

Alex Garbino is training in emergency medicine at Baylor College of Medicine (BCM) in Houston, TX, from 2012-2015. He is also a member of the Center for Space Medicine at BCM, and is president of the Aerospace Medicine Student and Resident Organization (AMSRO).

After moving from Geneva, Switzerland, Dr. Garbino completed a BS in Physics at the University of Houston Honors College. He started his MD/PhD training at Baylor College of Medicine in 2005, and obtained his PhD in Translational Biology and Molecular Medicine in 2010. He was elected president of AMSRO in 2008, and has since worked to bring students and residents into AsMA, with a primary goal to increase membership and develop mentoring relationships. He has represented the interests of young members in the AsMA Council, and was a member of the SMA Finance Committee since 2010.

Dr. Garbino's interests include physiologic monitoring, telemedicine, and educational outreach to new students. At BCM, he helped in the development of the Space Medicine Track for medical students.

Space Medicine Association

2012 Executive Committee Ballot

Steve Vander Ark

Steve Vander Ark is currently Wyle, Science, Technology & Engineering Groups's Behavioral Health and Performance (BHP) Section Manager within the Space Medicine Group. The Section directly supports the Operations of NASA's Space Medicine Division and the BHP Research Element of NASA's Human Research Program. He received a Master of Science degree in Industrial/Organizational psychology from the University of Wisconsin. He began work at Krug/Wyle and NASA Johnson Space Center in 1990 with the Behavior and Performance Laboratory, conducting investigations into psychological impacts of crews operating in isolated and confined environments for long periods. In 1994 he transitioned to Medical Operations to begin developing and implementing Behavioral Health and Performance countermeasures and monitoring strategies for US astronauts flying on the Russian Mir Space Station as part of the joint NASA-Mir Program. He continued developing this operational BHP program for the NASA's International Space Station astronauts. In 2004 he began assisting in NASA's effort to add a BHP Research component to focus on identifying the behavioral risks for sending humans on exploration missions. His accomplishments include developing an ever-expanding list of in-flight countermeasures for ISS astronauts and families, initiating preflight training classes to prepare crews for long-duration space missions, preparing with ISS international partners a comprehensive set of Behavior and Performance Competencies, developing a cognitive assessment tool for onorbit monitoring, standing up an international working group for ISS operations, and assisting the international effort to address Fatigue Management for ISS crews and ground controllers. During his time with BHP he has supported implementation of seven astronaut selection cycles, including the modifications to psychological screening as it shifted from short-duration Shuttle missions to selecting astronauts for long-duration, ISS missions.

Members at Large

Raffi Kuyumjian

Raffi Kuyumjian currently serves as the acting chief of Operational Space Medicine at the Canadian Space Agency (CSA). He has an engineering degree from the École Polytechnique de Montréal and a medical degree from Université Laval. During his medical studies, he participated in Aerospace Medicine training programs at NASA's KSC and JSC. He is an International Space University alumnus, having attended the ISU Summer Session Program in 2000 in Chile. He worked as an emergency physician in the remote eastern Quebec community of Blanc-Sablon from 1999 to 2002. He then moved to Ottawa to

Space Medicine Association

2012 Executive Committee Ballot

work in a family medicine private practice and continued in parallel to do emergency medicine locums in various remote and isolated communities in northern and eastern Quebec. From 2005 to 2010, he served as a flight surgeon for the European Space Agency's (ESA) Crew Medical Support Office (CMSO) in Cologne, Germany. In addition to being involved in various projects undertaken by the CMSO, he was the lead ESA flight surgeon for two short duration shuttle missions, STS-116 and STS-120, and one long-duration ISS mission, E2. He was a deputy flight surgeon for STS-122, Astrolab and E1 missions.

He is currently the CSA crew surgeon for C2, the next Canadian ISS long-duration mission scheduled to launch in Dec. 2012; he also serves as the CSA representative on the Multilateral Medical Operations Panel, the ISS Exploration Working Group Team 5 and the ISS In-flight Clinical Medicine Working Group.

Chuck Mathers

Dr. Mathers joined the Aerospace Medical Association in 2001. After graduating from Rice University in 2002, he joined the Space & Life Sciences Directorate at NASA Johnson Space Center, working in Education & Public Outreach. Dr. Mathers attended medical school at the University of Texas Medical Branch, graduating in 2007 with Honors, and was accepted to the UTMB/NASA Aerospace/Internal Medicine Residency Program. He served as Chief Resident in Internal Medicine from 2010 - 2011 and worked as a faculty physician for the Division of General Medicine at UTMB.

During his residency, Dr. Mathers conducted research with NASA Flight Surgeon Rick Scheuring on in-flight musculoskeletal injuries among U.S. astronauts. Their manuscript was named the ASEM Paper of the Year in 2010 by the Space Medicine Association. He also studied head acceleration in rough stock riders, for which his presentation was selected as 2nd-Runner Up for the Space Medicine Association Young Investigator Award in 2010. Dr. Mathers is currently working with UTMB and the FAA Center of Excellence for Commercial Space Transportation to draft medical guidelines for the commercial spaceflight industry.

Dr. Mathers recently joined the Division of Preventive, Occupational, and Aerospace Medicine at Mayo Clinic in Scottsdale, Arizona. His duties involve both clinical care with the Executive Health Program and research with the Aerospace Medicine & Vestibular Research Laboratory. Dr. Mathers was selected as an Associate Fellow by the Aerospace Medical Association in 2012.

Space Medicine Association

2012 Executive Committee Ballot

Casey Pruett

Casey Pruett earned his Bachelor of Science degree (Magna Cum Laude) in Kinesiology at Kansas State University in 1992. He focused on motor control topics, assisting Dr. Charles Layne with his projects investigating the effects of exposure to microgravity on postural control in astronauts. After graduation, Mr. Pruett began working as a research scientist in the Neurosciences Laboratory at the NASA Johnson Space Center for Wyle (formerly Krug Life Sciences) investigating the effect of exposure to microgravity on postural control and locomotion in astronauts. He was part of a team that conducted in-flight experiments on the MIR Space Station and several Space Shuttle flights, as well as pre- and post-flight experiments immediately after landing. During this time Mr. Pruett also earned his Master of Science degree in Exercise Science from the University of Houston in 1997. His thesis was titled, "The Effect of Target Distance on Neuromuscular Activation Patterns During Treadmill Locomotion". He earned his MBA degree from University of Houston - Clear Lake in December 2011.

In 1997, Mr. Pruett began working for Human Solutions (formerly TecMath) supplying ergonomic human modeling software for seated workspace designs to the automotive industry and 3-D full body laser scanners for apparel and research industries. He eventually became the General Manager in charge of the North American operations for this German-based company. He led a research project to develop an improved seated-posture prediction model and coordinated anthropometric research projects to develop new human anthropometry databases.

In 2002, Mr. Pruett returned to Wyle and began duties as the Managing Director for their business operations in Cologne, Germany. Mr. Pruett runs an office that provides medical support services to the European Astronaut Center. This office employs engineers, nurses, scientists, information technology and fitness experts, and consultants to optimize the health of European astronauts before a mission, support them during a mission, and help return them to optimal health after a mission. This office supports European life sciences research in microgravity analogues (e.g. Bed Rest Studies), developing aerospace medicine curricula in Europe, and countermeasure projects to help combat the deleterious effects of long term exposure to microgravity on human systems. Mr. Pruett was the deputy project manager for all medical and psychological elements of the recent ESA Astronaut Selection campaign.

He has participated in the support to the SMA luncheon for the past 9 years doing a variety of tasks to make the SMA meeting a success.

He has been the SMA Executive Secretary for the last 2 years.

Space Medicine Association

2012 Executive Committee Ballot

Rick Scheuring

Team Lead, Musculoskeletal/Sports Medicine and Rehabilitation- NASA Johnson Space Center Flight Surgeon, LTC, US Army

Eastern Illinois University, Charleston, IL	BA	1987	Psychology
Chicago College of Osteopathic Medicine, Chicago, IL	DO	1993	Medicine
Presbyterian/St. Luke's Medical Center, Denver, CO	Resident	1996	Family Medicine
Wright State University, Dayton, OH	Resident	2004	Aerospace Medicine
Wright State University, Dayton, OH	MS	2005	Aerospace Medicine

Position and Honors

Professional Experience:

2010- NASA-Johnson Space Center Musculoskeletal Medicine and Rehabilitation Lead Surgeon
2009- STS-132 Deputy Flight Surgeon
2007- Launch and landing DoD flight surgeon for STS-119, 124, 126, 127, 128, 129 and 131
2007- NASA-Johnson Space Center Constellation Cross Integration Lead for Medical Operations
2007- NASA-Johnson Space Center Flight Medicine Clinic- Flight Surgeon
2007- US Army Aeromedical Research Laboratory, Ft. Rucker- Flight Surgeon
2007- Wright State University, Dayton, OH- Assistant Professor: Aerospace Medicine
2004- University of Texas Medical Branch, Galveston, TX- Clinical Professor: PMCH, Family Medicine
2004-2007 University of Texas Medical Branch/Wyle Laboratories- Advanced Projects Flight surgeon
1996-2002 Medical Associates Clinic/Galena Health Clinic, Galena, IL- Family Practice, Sports Medicine, AME

Other Experience and Professional Memberships:

2011- American Medical Society for Sports Medicine
2010-2012 Society of NASA Flight Surgeons- 1st Vice President
2009- Society of US Army Flight Surgeons- Board of Governors
2008- National Space Biomedical Research Institute (NSBRI) User Panel
2008-2010 Society of NASA Flight Surgeons- Secretary-Treasurer
2006-2008 Aerospace Medical Association Resolutions Committee- Chairman
2007- United Martial Arts Society- 1st Degree Black Belt, Tae Kwon Do
2005- American College of Surgeons- ATLS Instructor
2005- American Academy of Family Physicians- Fellow
2003- Aerospace Medical Association- Associate Fellow
1995-2003 American College of Sports Medicine
1997-2001 Clarke College, Dubuque, IA- Clinical Professor, Medical Sciences

Honors (Military):

2011 Iraq Campaign Medal with Bronze Star

Space Medicine Association

2012 Executive Committee Ballot

2011	Army Commendation Medal (3)
2008	German Armed Forces Fitness Proficiency Badge
2007	Army Commendation Medal
2005	Army Achievement Medal (2)
2005	Armed Forces Reserve Medal w/ M Device
2005	Global War on Terrorism Service Medal
2005	Army Reserve Components Achievement Medal
2003	Army Flight Surgeon Badge
2003	National Defense Service Medal
2003	Army Service Ribbon

Honors (Civilian):

2011	Fellow, Aerospace Medical Association
2010	Space Medicine Association's 2009 Most Outstanding Journal Article Published in the Aviation, Space, and Environmental Medicine Journal
2007	Ridgewood High School Alumni Hall of Fame Inductee
2006	NASA-JSC Space Group Achievement Award
2004	NASA-JSC Lifesaver Award
2002-2004	NASA Scholarship for Aerospace Medicine Residents
2002	Donnell Scholarship for Aerospace Medicine Residents
2002	Brown Scholarship for Aerospace Medicine Residents
2001	Finley Hospital Illuminator Award for Outstanding Educator
1993	National Institutes of Health Clinical Elective Program Fellow in Pediatric Oncology

Patrik Sundblad

Patrik Sundblad, MD, PhD, is currently the Head of the Human Research Unit at ESTEC, ESA. In this capacity he is overall responsible for ESA managed human research on the International Station, and in other research platforms like parabolic flight, bedrest, Antarctic station and isolation studies like Mars500. His research has concerned cardiovascular regulation with a focus on effects of exercise and gravity.