

# Optimizing Human Performance via Selection and Training



**91st AsMA Annual  
Scientific Meeting**

**Hyatt Regency Atlanta,  
Atlanta, GA, USA  
May 17-22, 2020**



# Aerospace Medical Association 91<sup>st</sup> Annual Scientific Meeting Optimizing Human Performance via Selection and Training

This year's theme is "Optimizing Human Performance via Selection & Training." Aerospace Medicine rests on a foundation of traditional clinical medicine, but goes well beyond. Selection standards are largely based on threats and risks to operational tasks at hand. Training for operators and controllers on physiological limitations and countermeasures has been a mainstay of optimizing performance. Protective equipment (technology) and Rules of Engagement (policy) add extra rigor in further enhancing human performance. But selection and training are "before the bang," that is, prior to the actual need for maximum performance. This year, we plan to present unique or novel combinations of medicine, engineering, physiology, psychology, nursing, and social sciences that better select and train individuals for maximum performance, both within the aerospace world and from other "operations" that have high performance demands. Individuals and groups outside of aerospace medicine may offer successful solutions, approaches, or perspectives that could be leveraged by aviation or space operations for optimizing performance. You may learn a novel way to optimize your specific operations. Please join us in Atlanta.

The AsMA Annual Scientific Meeting is the premier international forum to learn and discuss evolving trends and multidisciplinary best practices in research, clinical applications, human performance, and flight safety. The Program Committee, chaired by Nicholas Green, MBBS, PhD, DAvMed, MRAeS, has organized the program with a balance of sessions related to Aerospace Medicine, including Aircrew Selection, Clinical and Operational Aerospace Medicine, Human Performance, Space Medicine, Safety and Survivability, Travel and Transport Medicine, History, and many other related topics.

Register Online now at <https://www.asma.org/scientific-meetings/asma-annual-scientific-meeting/registration> to learn about current trends in the aerospace medicine and human performance arena and meet with your colleagues. We hope to see you there.

## Educational Objectives

Based upon responses to a survey provided at the end of the 90th Annual Scientific Meeting in Las Vegas, NV, the top 6 categories our members indicated a need for more information in were: Aerospace Medicine (58.95%); Aerospace Physiology (39.58%); Human Factors (38.95%); Human Performance (38.74%); Space Medicine (38.54%); and Accident Investigation (35.58%).

The 91st Annual Scientific Meeting program will be focused on these 6 major categories. Sessions will cover the latest findings in the fields of aviation and space medicine, human performance, and related fields such as aerospace nursing, aerospace physiology, and human systems integration.

Abstracts are centered on the meeting objectives, which are aligned with the theme. The participant will:

- Apply principles of evidence-based medicine, operational risk management, and aeromedical decision-making in aircrew selection and clinical aerospace medicine practice;
- Learn about evolving trends and best practices in aerospace medicine;
- Analyze mechanical, human performance, and systems integration factors in aviation mishaps and safety programs;
- Identify mechanical, biological, social, cognitive, environmental stress, and systems factors that impact on optimal human performance and decision making in the full spectrum of aerospace operations;
- Apply ethical principles to aerospace medicine decision-making and foster competency in professionalism and systems-based practice in the application of aerospace medicine skills, teamwork, and interoperability in a multi-discipline professional environment.

## Key Topics

- Personnel selection
- Human Performance
- Physiological and Survival Training
- Hypoxia and High Altitude
- Acceleration and Impact
- Vision and Hearing
- Human Systems Integration
- Space Medicine
- Clinical Cases and Grand Rounds
- Air Transport Medicine
- FAA Seminars for AMEs

## Educational Benefits\*

- CME credits—AsMA is accredited through the Undersea and Hyperbaric Medical Society to provide continuing medical education for physicians. The Undersea and Hyperbaric Medical Society is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.
- This live activity is designated for a maximum of 22.5 *AMA PRA Category 1 Credits*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
- This activity has been submitted to the Montana Nurses Association for approval to award Nurse Contact Hours. The Montana Nurses Association is an accredited approver with distinction of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.
- MOC Available! Maintenance of Certification modules: Workshops, Panels, Slide, and Poster Sessions have all been designated for MOC. At least 20 non-concurrent hours of MOC training will be available.

## Professional Development

Several sessions highlight professional development, one of the core competencies for maintenance of certification, including the Epidemiology Workshop, the MOC sessions, and the panel on Aeromedical Ethics.

## Speed Mentoring

Back by popular demand! At least two special sessions will be set up for Speed Mentoring. Students and residents will have a chance to interview seasoned professionals in Aerospace Medicine and Human Performance during 10-min bursts. It's fun, it's fast, and it's fascinating!

## Other Benefits

- Networking with Peers
- Scientific and Technical Exhibits
- Special Poster Session for Committees and Constituent
- Constituent and Affiliate Organization Luncheons and Awards
- Spouses Program

\*Accreditation Statement: This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Undersea and Hyperbaric Medical Society and the Aerospace Medical Association. The Undersea and Hyperbaric Medical Society is accredited by the ACCME to provide continuing medical education for physicians.

Designation Statement: The Undersea and Hyperbaric Medical Society designates this live activity for a maximum of 22.5 *AMA PRA Category 1 Credits*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Full Disclosure Statement: All faculty members and planners participating in continuing medical education activities sponsored by the Aerospace Medical Association are expected to disclose to the participants any relevant financial relationships with commercial interests.

Full disclosure of faculty and planner relevant financial relationships will be made at the activity.

UHMS Disclaimer: The information provided at this CME activity is for Continuing Medical Education purposes only. The lecture content, statements or opinions expressed however, do not necessarily represent those of the Undersea and Hyperbaric Medical Society (UHMS), its affiliates or its employees.



## Special Sunday Workshops

### Introduction to Epidemiology

Sunday 8:00 a.m. – 5:00 p.m.

8 AMA PRA Category 1 Credits™

(Designation Statement: The Undersea and Hyperbaric Medical Society designates this live activity for a maximum of 8.0 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity)

This course is oriented to professionals in aerospace medicine, mishap analysis, aerospace psychology, aerospace physiology, flight medicine, aviation safety analyses, aerospace engineering, human factors engineering, and anyone else involved in the analyses of aviation mishaps or rare events. It will be taught from an aerospace mishap analyses perspective. There will be 6 h of classroom lecture and 2 h of guided practice with problems taken from real life analyses. All participants should bring a fully charged PC computer loaded with the appropriate version of EpilInfo™ loaded onto it. Please note that EpilInfo™ does not have a Macintosh compatible option. The EpilInfo™ program can be downloaded from the CDCP website for free. Of particular interest will be the STAT CALC™ subroutines. Chaired by Dr. Peter Mapes.

### Aircrew Fatigue: Causes, Consequences, and Countermeasures

Sunday 9:00 a.m. – 4:00 p.m.

6 AMA PRA Category 1 Credits™

(Designation Statement: The Undersea and Hyperbaric Medical Society designates this live activity for a maximum of 6.0 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity)

Effective fatigue management is an important key to optimizing operational performance and safety within aerospace contexts. Up-to-date, evidence-based information on this topic is of broad interest to professionals who are in a position to safeguard and augment human performance in today's demanding operational environments. This workshop will provide a fully-updated, science-based overview of fatigue factors and relevant countermeasures and will emphasize the importance of implementing educational, preventative, monitoring, and mitigation strategies within the context of a fully-integrated fatigue risk management system. Chaired by Drs. Jo Lynn Caldwell and John Caldwell.

## Select Aerospace Medicine!

**SELECT EDUCATION**—The primary objective of the Aerospace Medical Association's Annual Scientific Meeting is Education. Designed from meeting evaluation forms, periodic surveys, and abstracts submitted, our meeting provides the latest results in sessions designed for aerospace medicine professionals. In addition, the scientific program will benefit residents, medical and graduate students, and advanced undergraduates who have an interest in aerospace medicine. Professional development and the other core competencies as outlined by the American Board of Preventive Medicine will be highlighted throughout the meeting. Continuing education credits AND Maintenance of Certification are provided for all participants.

### FAM Flight: An Introduction to Aircrew Selection Test Development, Instrument Validation, Legal Issues, and Aeromedical Standards

Sunday 9:00 a.m. – 4:30 p.m.

6 AMA PRA Category 1 Credits™

(Designation Statement: The Undersea and Hyperbaric Medical Society designates this live activity for a maximum of 6.0 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity)

This workshop will discuss the steps, processes, best practices, and lessons learned in development and validation of personnel selection systems, including aeromedical standards for mental health evaluation. Steps in the development process to be explored include the necessity of using job-task analysis as a foundation, identifying or developing the right selection tests and tools for incorporation, practical considerations for battery development and evaluation, test validation and psychometric evaluation processes, test fairness, and product development guidelines. Criteria for mental health evaluations and standards for select-in and select-out decisions will be discussed. Additional topics covered will include applicable laws and standards, including Institutional Review Board governance, necessary skillsets and educational requirements for selection practitioners, and the role of program management in selection system development and delivery. Attendees will leave with an understanding of the questions that must be considered in development and fielding of these tools, the processes, skillsets, and timelines involved, and the typical scope of personnel selection development and validation efforts. Chaired by Drs. Henry Phillips and Ray King.

### Aerospace Medicine Faculty Development Workshop

Sunday, 12:00 – 3:00 p.m.

3 AMA PRA Category 1 Credits™

(Designation Statement: The Undersea and Hyperbaric Medical Society designates this live activity for a maximum of 3.0 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity)

This workshop will present current information on various topics of interest to Aerospace Medicine faculty members. The Accreditation Council for

Graduate Medical Education (ACGME) requires, as part of its residency program accreditation process, that faculty members participate in regular faculty development. This may include not only CME-type activities directed toward acquisition of clinical knowledge and skills, but also activities directed toward developing teaching abilities, professionalism, and abilities for incorporating Practice-based Learning & Improvement, Systems-based Practice, and Interpersonal and Communication Skills into medical practice and teaching. This conference-based workshop is presented toward the fulfillment of this requirement. Chaired by Dr. Edgar Rodriguez.

### Introduction To Diving and Marine Medicine

Friday, May 22, 8:00 a.m. – 5:00 p.m. OFFSITE

(details to follow)

8 AMA PRA Category 1 Credits™

(Designation Statement: The Undersea and Hyperbaric Medical Society designates this live activity for a maximum of 8.0 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity)

This is an introductory workshop focused on diving medicine, treatment and prevention of common aquatic diseases and injuries, ocean survival, and providing expedition support in a marine environment. It will consist of didactics as well as practical hands-on sessions with water survival techniques and diving equipment familiarization. Lectures will describe common illnesses and injuries in an aquatic environment and will be reinforced by viewing marine organisms most likely to injure humans. Lectures will discuss injury prevention and survival at sea, followed by hands-on familiarization and use of marine safety and life-saving equipment. Workshop lectures will review diving physiology, common diving injuries and medical concerns, as well as expedition participant screening and support considerations. Chaired by Drs. Brian Pinkston and Cheryl Lowry.

**SELECT OPPORTUNITIES**—Learn about the latest products and services from our many technical and scientific exhibitors; experience three plenary lectures; govern during the business luncheon, where you have the opportunity to help guide our association; honor the best and the brightest among your fellow professionals during awards luncheons and the Honors Night banquet; socialize at receptions and through the spouses' program, which is open to all spouses and friends of AsMA members.

**SELECT NETWORKING**—Perhaps the greatest benefit of our meeting is the opportunity to network because we bring together the international experts from all aspects of the aerospace community in one place. Ideas for research, careers, projects, and presentations are forged during our meeting. And the friendships made will last a lifetime.

The AsMA is international in both membership and scope of interest, providing opportunities to connect and exchange ideas with some of the world's foremost medical specialists and internationally renowned scientists in the field of Aerospace Medicine and Human Performance. If you are interested in the multi-disciplinary approach to working with humans in flight and challenging environments, whether as a physician, physiologist, researcher, engineer, technician, nurse, student, or pilot—you should attend!





## Key Speakers

66th Bauer Lecturer  
**Monday, May 18 (KBR, sponsor)**  
**Lecturer: TBD**  
 Topic: TBD



7th Reinartz Lecturer  
**Tuesday, May 19 (Reinartz Fund, sponsor)**  
**Lecturer: James McEachen, MD, ME, MPH**  
 Topic: The Flight Path Toward Precision-Based Aeromedical Decision Making

55th Armstrong Lecturer  
**Thursday, May 21 (Environmental Tectonics Corporation, sponsor)**  
**Lecturer: TBD**  
 Topic: TBD



## Spouses Program

The WING of AsMA, a volunteer spouse organization, sponsors a program to share the cultural and educational experiences of the host city with old and new friends. There is a Hospitality Room, a Welcoming Reception on Monday, May 18, and a Luncheon on Wednesday, May 20. Two tours are planned this year. On Tuesday, May 19, there is a tour of the Georgia Aquarium, one of the largest aquariums in the western hemisphere. It has mesmerizing jellyfish, adorable penguins, and gigantic whale sharks among the vast display in six themed sections. As a special feature, you will have a behind the scenes tour. On Thursday, May 21, there will be a visit to the Atlanta Botanical Gardens. An hour-long guided tour in small groups will provide an overview of the history and take you through the Conservatory and Orchid Center. You are then free to explore the meandering path into the multiple smaller themed gardens.

The Richard B. “Dick” Trumbo Preventive Medicine 5K Fun Run will be held on Monday, May 18. The start time is 6 a.m. The fee is \$15, and tickets must be purchased in advance. Details to follow!

Climate for May in Atlanta is great. Warm days (average high about 81°F), cool evenings (average low 62°F). There is a 33% chance of rain, so a light jacket is advised.



## Hyatt Regency Atlanta Hotel

**265 Peachtree St., NE**  
**Atlanta, GA 30303**  
**404-577-1234**

<https://www.hyatt.com/en-US/hotel/georgia/hyatt-regency-atlanta/atla>

Please use the hotel reservation link found on the AsMA Registration webpage to make your reservation. Book early to ensure a room.

The Hotel offers free Wifi, a Business Center, Fitness Center, Pool, and Restaurants

Their StayFit Fitness Center includes everything you need to maintain your routine or change it up—Peloton® fitness equipment, cardio and strength training, free weights, refreshment stations, and more (including towels).

Open 24 hours daily. Their Executive Chef Thomas McKeown and his culinary team tend a rooftop garden (with their own bee hives) and partner with 70 local farms and purveyors to serve the freshest ingredients in each of their acclaimed restaurants and bars: Sway, downtown’s signature Southern destination; Polaris, famous rotating rooftop restaurant and lounge; Twenty-Two Storys, lobby Gastropub with 17 TVs; and Market, 24-hour Starbucks and quick meal stop for guests on the go.

**Attention AsMA Members!** If you receive a paper copy of the journal in your mailbox each month, PLEASE bring your MARCH PROGRAM ISSUE with you to the meeting this year. If you don’t want to bring the Program issue, that’s okay! You can pay \$10 to pick up a copy with your registration. The program will be available for free online and through the mobile app at the meeting. Note: Nonmembers and those who receive only the electronic version of the journal will be entitled to one copy of the program without charge.

**PLEASE NOTE:** Event tickets must be purchased in advance. The hotel requires us to cut off tickets sales 72 hours before each event.

**Advance Registration Form**  
**91st AsMA Annual Scientific Meeting**  
**May 17-22, 2020**



Name:		Degree/Credentials:		Advance Registration runs February 1-May 16. No cancellations or refunds after May 12. A \$50 administrative fee is applied to all cancellations.  We strongly encourage online registration: <a href="https://www.asma.org/scientific-meetings/asma-annual-scientific-meeting/registration">https://www.asma.org/scientific-meetings/asma-annual-scientific-meeting/registration</a>  You must be an active member of AsMA in order to register at the member fee. Registration fee does not include membership dues.  Fax registration form with credit card information to: (703) 739-9652.
Organization:		Title:		
Street Address:				
City:		State/Country:	Zip Code:	
E-mail:		Telephone Number:		
Cell Phone Number:		Fax Number:		

Please indicate if this is an address change to your AsMA Membership Record

First time attendee, or new member? YES  NO  Special dietary requirement: \_\_\_\_\_

If you are being funded by the U.S. DoD please indicate Branch:  Army  Navy  Air Force  Coast Guard

By registering to attend an Aerospace Medical Association (AsMA) conference, you grant permission to AsMA to take and use your photo in AsMA marketing and promotional pieces for an indefinite period of time. Marketing and promotional pieces include, but are not limited to, printed brochures, reports, postcards, flyers, and materials, as well as online uses such as postings on the AsMA website, online newsletters, and e-mail blasts. AsMA shall own all rights, including copyrights in and to the photos.

You also grant permission to AsMA to use, encode, digitize, transmit, and display the video/audio of your session, presentation, or workshop given at the AsMA conference, singularly or in conjunction with other recordings, as well as to use your name, photograph, biographic information, and ancillary material in connection with such video/audio for commercial, promotional, advertising, and other business purposes. AsMA and its employees are released from any liability arising out of the use of your name, video, photographs, and/or organization name and location.

REGISTRATION FEE	ADVANCE 2/1 – 5/16	AT-THE-DOOR 5/5-5/9	REGISTRATION FEE REMITTED
<input type="checkbox"/> MEMBER	\$525	\$625	
<input type="checkbox"/> NON-MEMBER	\$800*	\$900*	
<input type="checkbox"/> NON-MEMBER PRESENTER	\$700*	\$800*	
<input type="checkbox"/> RESIDENTS	\$375	\$375	
<input type="checkbox"/> STUDENTS	\$125	\$125	
<input type="checkbox"/> ALLIED MEMBER/INTERNATIONAL STUDENT	NA	NA	NA COMPLIMENTARY REGISTRATION
<input type="checkbox"/> FAA-AME SEMINAR <sup>§</sup>	\$350	\$350	
Registration Fee Subtotal ▶			

(See reverse for workshops & events)

\*Go to [www.asma.org](http://www.asma.org) to become a member and take advantage of the reduced registration rates, receive the official Aerospace Medical Association journal, and other membership benefits.

<sup>§</sup>Fee covers AsMA overhead costs. CME Credit for the FAA Seminar and AsMA Sessions attended is included.

**Fax to (703) 739-9652. Please remember to include both sides when faxing. Use only one method to register.**

**Advance Registration Form**  
**91st AsMA Annual Scientific Meeting**  
**May 17-22, 2020**



Note: Workshops are Limited • Register Early

WORKSHOP DATE/NAME		FEE	TOTAL FEE	
Sunday, May 17, 8:00 am – 5:00 pm	Workshop: "Introduction to Epidemiology" (MAX 75)	\$200		
Sunday, May 17, 9:00 am – 4:00 pm	Workshop: "Aircrew Fatigue" (MAX 75)	\$150		
Sunday, May 17, 9:00 am – 4:30 pm	Workshop: "Effective Aircrew Selection Methods" (MAX 75)	\$150		
Sunday, May 17, 12:00 pm – 3:00 pm	Workshop: "Aerospace Medicine Faculty Development" (MAX 50)	\$75		
Friday, May 22, 8:00 pm – 5:00 pm	Offsite Workshop: "Introduction to Diving and Marine Medicine" (MAX 50)	\$200		
EVENTS		# OF TICKETS	FEE PER TICKET	TOTAL FEE
	Additional Meeting Program (ONLY for AsMA Members who receive their journal by mail)		\$10	
Sunday, May 17	AsMA Welcome to Las Vegas (NOTE: All Attending Event Must Have Tickets)		\$15	
Monday, May 18, 6:00 a.m	Richard B. "Dick" Trumbo 5K Fun Run/Walk (advance purchase only)		\$15	
Monday, May 18	Civil Aviation Medical Association Luncheon (advance purchase only)		\$50	
Monday, May 18	Society of USAF Flight Surgeons Luncheon (advance purchase only)		\$50	
Monday, May 18	U.S. Navy Luncheon (advance purchase only)		\$50	
Monday, May 18	U.S. Army Aviation Medical Association Luncheon (advance purchase only)		\$50	
Monday, May 6	Aerospace Human Factors Association Luncheon (advance purchase only)		\$50	
Monday, May 18	Corporate Forum Luncheon (Advance purchase only) (MUST BE A CORPORATE MEMBER, EXHIBITOR, OR CORPORATE SPONSOR)		\$0	
Monday, May 18	Fellows Dinner (advance purchase only) (MUST BE A FELLOW OR GUEST OF ASMA FELLOW)		\$90	
Tuesday, May 19	Associate Fellows Breakfast (advance purchase only)		\$50	
Tuesday, May 19	AsMA Annual Business Meeting (advance purchase only) (Free Attendance; Ticket required for meal)		\$50	
Tuesday, May 19	Reception to Honor International Members Reception		\$25	
Wednesday, May 20	Aerospace Physiology Society Luncheon		\$50	
Wednesday, May 20	Society of NASA Flight Surgeons Luncheon		\$50	
Wednesday, May 20	Aerospace Nursing & Allied Health Professionals Society Luncheon		\$50	
Wednesday, May 20	Iberoamerican Association of Aerospace Medicine Luncheon		\$50	
Thursday, May 21	Space Medicine Association Luncheon		\$50	
Thursday, May 21	AsMA Honors Night Banquet (Black Tie Optional)		\$90	
			SUBTOTAL OF EVENTS ▶	
			TOTAL AMOUNT DUE (Registration Fee Subtotal + Workshop + Subtotal of Events) ▶	

PAYMENT METHOD						
Check Number	<input type="checkbox"/> CHECK <input type="checkbox"/> AMEX <input type="checkbox"/> DISCOVER <input type="checkbox"/> MASTERCARD <input type="checkbox"/> VISA <input type="checkbox"/> DINERS				Fax with credit card information to: (703) 739-9652	
Name as it appears on card: (PLEASE PRINT)					Or mail with payment to: Aerospace Medical Association 320 S Henry Street Alexandria, VA 22314-3579	
Credit Card #		Exp. Date:		Security Code:		
Street	City	State:		Zip/Mail Code:		
Signature					Country	

Payment must accompany form. All payments are in U.S. funds. Registrants submitting via fax must include credit card information. Fax to (703) 739-9652. Please remember to include both sides when faxing. Use only one method to register.



# Meeting Schedule

## 91st AsMA Annual Scientific Meeting

### May 17-22, 2020



Sunday, May 17							
Pre-and Post-Meeting Workshops—See Brochure text and registration form.							
Plenary Sessions will be held in the Centennial Ballroom II/III/IV.							
FAA will be in Hanover C/D/E all week.							
Monday, May 18							
	Centennial I	Centennial II	Centennial III	Centennial IV	Regency 6	Regency 8	Regency 5
8:00-9:30 A.M.	OPENING CEREMONIES AND 66TH LOUIS H. BAUER LECTURE						
10:30 A.M.-12:00 NOON	S-05-HP PANEL: Optimizing Personnel Selection in the Aviation Environment	S-06-HP SLIDE: Vision Spectrum	S-07-SPACE PANEL: Innovation in Aerospace Medical Education	S-08-CLINICAL SLIDE: Extremes in Cardiovascular Decision Making	S-09-TRAVEL PANEL: No Kidding, There I Was: Lessons from the Field	S-10-SPACE SLIDE: Going for the Jugular: Venous Physiology in Spaceflight	S-11-HP PANEL: Mh-60s NexGen Gunner Seat Program
12:00 NOON-2:00 P.M.	SPECIAL LUNCHEONS—CAMA, Navy, Air Force, Army, Aerospace Human Factors, Corporate Forum						
2:00 P.M.-3:30 P.M.	S-12-CLINICAL PANEL: Complex Problems and Novel Solutions from the Jr Flight Surgeons: Part I	S-13-HP PANEL: Making Sense of Special Senses	S-14-SPACE SLIDE: Astronaut Screening and Surveillance	S-14-CLINICAL PANEL: Neurologic Selection Issues	S-16- TRAVEL PANEL: All I Need is the Air that I Breathe	S-17-SPACE SLIDE: Topics in Space Medicine Practice	S-18-HP SLIDE: Acceleration, Impact and Orthostatic Stress
4:00 P.M. - 5:30 P.M.	S-19-CLINICAL PANEL: Complex Problems and Novel Solutions from the Jr Flight Surgeons: Part II	S-20-HP SLIDE: Noise & Hearing	S-21-SPACE SLIDE: Space Environmental Issues	S-22-CLINICAL PANEL: Optimizing Aircrew Screening and Selection Through Invasive Methods of Cardiac Screening	S-23-OTHER PANEL: Dilemmas of an Ethical Nature in Aerospace Medicine	S-24-SPACE PANEL: Women's Health Considerations for Exploration Spaceflight	S-25-HP PANEL: Perspectives on Safety Culture & Training Interventions
Tuesday, May 19							
8:30 A.M.-10:00 A.M.	7th MEMORIAL REINARTZ LECTURE— James McEachen, MD, ME, MPH "The Flight Path Toward Precision-Based Aeromedical Decision Making"						
10:30 A.M.-12:00 NOON	S-26-CLINICAL PANEL: FAA Aeromedical Risk Assessment of Neurocognitive Implications of HIV+	S-27-HP PANEL: Lessons Learned & Innovations for Enhancing Human Systems Integration	S-28-SPACE SLIDE: Physiology for Spaceflight	S-29-CLINICAL PANEL: Navy RAM Grand Rounds	S-30-TRAVEL PANEL: Pre-Clinical Research & Effects of Hypobaric During Aeromedical Evacuation	S-31- HP SLIDE: Perception is Everything	S-32-CLINICAL PANEL: Aviation Dentistry
12:00 NOON-2:00 P.M.	AEROPACE MEDICAL ASSOCIATION LUNCH AND BUSINESS MEETING						POSTERS: AsMA Committees, Constituents, and Affiliates
2:00 P.M.-3:30 P.M.	S-33-CLINICAL PANEL: Resident Research and QI/PI Presentations	S-34-HP SLIDE: Well Being	S-35-SPACE PANEL: Operational Considerations for Death in Space: Part I	S-36-HP SLIDE: Aircrew Sleep & Fatigue	S-37-TRAVEL PANEL: Practical Aeromedical Evacuation: What we Know, What we Don't Know, and What to do About it	S-38-HP PANEL: Degraded Vision in the Aerospace Environment	S-39-CLINICAL PANEL: Advances in Aerospace Medicine in Iberoamerica
4:00 P.M.-5:30 P.M.	S-40-CLINICAL PANEL: Unusual Situations in Clinical Aviation Medicine	S-41-HP PANEL: Automation in Aerospace & Healthcare	S-42-SPACE PANEL: Operational Considerations for Death in Space: Part II	S-43-CLINICAL PANEL: Fatigue & Sleep Deprivation Associated with Excessive Use of Personal Entertainment Tech Devices	S-44- SAFETY PANEL: Aerospace Safety Centers Year in Review	S-45-HP PANEL: Blind Flight: A Visual Vestibular Conundrum	S-46-CLINICAL PANEL: Impacts of Diversity in Astronauts and Aerospace Medicine
Wednesday, May 20							
8:30 A.M.-10:00 A.M.	S-47-CLINICAL PANEL: Specific Aspects of Civilian & Military Aviation Medicine in Germany	S-48-HP PANEL: Short-Haul, Multi-Segment Flight Operations	S-49-SPACE PANEL: Developing an Extreme Environment Medical System: Lessons from Orion	S-50-CLINICAL PANEL: Aerospace Medicine Resident Grand Rounds I	S-51-SAFETY SLIDE: Human Safety from Sea to Air	S-52-HP PANEL: Cognitive Performance Testing for Aerospace Environment	
10:00 A.M.-10:30 A.M.							EXHIBIT HALL 10:00-12:00
10:30 A.M.-12:00 NOON	S-54-CLINICAL PANEL: Hypoxic Pulmonary Vasoconstriction Reflex: Aeromedical Implications	S-55-HP PANEL: Optimizing Human Performance via Neuromodulation & Personalized Health	S-56-SPACE PANEL: Emergency Critical and Peri-procedural Care during Long Space Missions	S-57-CLINICAL PANEL: Aerospace Medicine Resident Grand Rounds II	S-58-SAFETY SLIDE: Spinal Pain & Injury	S-59-HP PANEL: Historical Need and Current Trajectory of Hypoxia Training	S-53-POSTERS: Clinical Medicine
12:00 NOON-2:00 P.M.							
2:00 P.M.-3:30 P.M.	S-60-HP PANEL: USAF Distributed Common Ground System Intelligence	S-61-OTHER SLIDE: Selection of US Uniformed Services & Special Duty	S-62-SPACE SLIDE: Space Neuro-ocular Conundrum	S-63-CLINICAL PANEL: Aerospace Medicine Resident Grand Rounds III & AAMIMO	S-64-SAFETY SLIDE: Aviation Accident & Injury Mitigation	S-65-HP SLIDE: Hypoxia & Cognition	EXHIBIT HALL 2:00-4:00 S-66-POSTERS: Space Medicine
3:30 P.M.-4:00 P.M.							
4:00 P.M.-5:30 P.M.	S-67 PANEL: CLINICAL Centennial Ballroom II/III/IV 12th Annual RAM Bowl (P7) Al Parmet, Rebecca Blue, Jan Stepanek, Robert Johnson						
Thursday, May 21							
8:15 A.M.-9:15 A.M.	55th HARRY G. ARMSTRONG LECTURE—						
9:30 A.M.-10:00 A.M.							EXHIBIT HALL 9:30-11:30 S-74-POSTERS Physiology
10:00 A.M.-11:30 A.M.	S-68-CLINICAL PANEL: Aeromedical Risk Analysis Practice Updates	S-69-HP PANEL: Naval Aviation Survival Training: Identifying and Implementing Enhancements	S-70-SPACE PANEL: Past, Present & Future of NASA's Biomedical Flight Controllers	S-71-CLINICAL SLIDE: Pilot Assessment & Selection Conundrums	S-72-TRAVEL SLIDE: Global Continuum of Care	S-73-CLINICAL SLIDE: Sugar & Stones	
11:30 A.M.-1:30 P.M.	SPECIAL LUNCHEONS—Space Medicine Association						
1:30 P.M.-3:00 P.M.	S-75-CLINICAL PANEL: Challenging Cases and Aeromedical Dispositions at NAMI	S-76-HP SLIDE: Physiological Training: Back to the Future	S-77-SPACE PANEL: Current State of Knowledge: Spaceflight Associated Neuro-Ocular Syndrome	S-78-CLINICAL PANEL: Garrison Comprehensive Medical Readiness Program for Flight Surgeons	S-79-TRAVEL SLIDE: Infectious Disease Implications in Global Travel	S-80-CLINICAL SLIDE: Heads Up Neurology	EXHIBIT HALL 1:30-3:30 S-81-POSTERS: Safety & Environmental Medicine
3:00 P.M.-3:30 P.M.							
3:30 P.M.-5:00 P.M.	S-82-CLINICAL PANEL: Career Options after Residency in Aerospace Medicine	S-83-HP SLIDE: Human Systems Integration & Performance	S-84-SPACE PANEL: Recent Spaceflight Life Support Research Updates from AIAA	S-85-CLINICAL PANEL: Global Reach Comprehensive Medical Readiness Program for Flight Surgeons	S-86-CLINICAL SLIDE: Green Lighting Color Vision		
COLOR CODE							
	1. HUMAN PERFORMANCE (HP)	2. CLINICAL MEDICINE	3. TRAVEL & AIR TRANSPORT MEDICINE (ATM)	4. SPACE MEDICINE	5. SAFETY	6. OTHER/HISTORY	



Aerospace Medical Association  
320 South Henry Street  
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