Synergy: The Power of Multidisciplinary Problem Solving

Aerospace Medical Association 89th Annual Scientific Meeting
Hilton Anatole Hotel • Dallas, TX • May 6–10, 2018
synergy ˌsɪnərˈdʒi/ ˈsɪnərˈdʒi/noun mid 19th century: from Greek sunergos ‘working together,’ from sun- ‘together’ + ergon ‘work.’ The interaction or cooperation of two or more organizations, substances, or other agents to produce a combined effect greater than the sum of their separate effects.

Synergy: The Power of Multidisciplinary Problem Solving

In “Synergy: The Power of Multidisciplinary Problem Solving,” our objective is to highlight the diverse nature of aerospace medicine and human performance. Issues associated with living and working in the aerospace environment are unique, and solutions rarely come from a single discipline. Only when we harness the collective power of thought and innovation from medicine, engineering, physiology, psychology, and social sciences do we obtain robust, sustainable solutions that protect and enhance human performance. As such, we have encouraged contributions from individuals and groups new to aerospace medicine who may realize that issues and their solutions addressed in support of space or military operations can be successfully leveraged for civilian and commercial applications. We invite everyone engaged in innovative and multidisciplinary research to join us at our annual scientific meeting where you will have the chance to interact with hundreds of aerospace specialists with a fresh perspective.

Aerospace medicine is truly multi-disciplinary and international. Our presentations come from diverse experts who will enhance the world’s knowledge and understanding of the current challenges in Aerospace Medicine and demonstrate an impact on improving the health, safety, and human performance of those involved in aviation, space, and extreme environments. Our annual scientific meeting presents an opportunity to learn about the work of our colleagues from around the world, to share the knowledge and wisdom which we gain in our day-to-day work and practice, and is a great way to expand the overall community of aerospace medicine.

The Program Committee, chaired by Barry Shender, Ph.D., has organized the program with a balance of sessions on human performance, aerospace medicine, travel medicine, space medicine, civil and military aviation medicine, and safety.

Educational Objectives
Based upon responses to a survey provided at the end of the 88th Annual Scientific Meeting in Denver, CO, the top 6 categories our members indicated a need for more information in were: 1) Human Performance/ Human Factors; 2) Aerospace Medicine; 3) Travel Medicine; 4) Space Medicine; 5) Operational Medicine; and 6) Accident Investigation. The 89th Annual Scientific Meeting program will be focused on these six 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 participants will:
- Learn about evolving trends and best practices in aerospace medicine;
- Apply principles of evidence-based medicine, operational risk management, and aeromedical decision-making in aircrew selection and clinical aerospace medicine practice;
- 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-disciplinary professional environment.

Key Topics
- Aeromedical risk analysis and mishap reduction
- Aerospace Medicine Board Review, Aeromedical Grand Rounds, and “RAM Bowl”
- Aviation medicine case studies
- Aerospace mental health
- Aviation safety in civil and military settings
- Crashworthy systems
- Environmental stressors
- Fatigue and sleep issues
- Human systems integration
- Hypoxia and physiological episodes
- In-flight medical events
- Injury and pain mitigation
- Patient safety and air transport medicine issues
- Translating space lessons-learned to improve human health on Earth
- Spanish and German language aeromedical panels
- 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 ACCME to provide continuing medical education for physicians.
- This live activity is designated for a maximum of 22.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
- 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.
- The Aerospace Medicine Board Review series will review core topics in Aerospace Medicine and is designed to prepare Aerospace Medicine specialists for the ABPM re-certification exam. Topics are presented in three sessions each year by specialists in the field and adhere to the ABPM Study Guide outline, which will be covered in its entirety over the course of three consecutive years. Combined with the annual RAM Bowl and Aerospace Medicine Grand Rounds sessions, these board review sessions will address the preventive medicine core topic areas and the four required knowledge areas of Human Factors, Egress, and Disaster; Epidemiology and Biostatistics, Review of Respiratory and Metabolic Diseases; Pilot Selection and Retention, Evaluation and Risk Assessment; and Civil Aviation Regulations.

Register Online now at https://www.asma.org/ScientificMeetings/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. The ‘early bird’ discount is good through January 31.
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! This year two special sessions on Monday and Wednesday are 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 Organizations
- Constituent and Affiliate Organization Luncheons and Awards
- Spouses Program

Special Sunday Workshops

1. Introduction to Epidemiology
Sunday 9:00 A.M. – 5:00 P.M.
8 AMA PRA Category 1 Credits™
This course is oriented to professionals in aerospace medicine, mishap analysis, aerospace psychology, aerospace physiology, flight medicine, aviation 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 by IAFMSP members, and 2 h of guided practice with problems taken from real life analyses.

2. Aircrew Fatigue: Causes, Consequences, and Countermeasures
Sunday 9:00 A.M. – 4:00 P.M.
6 AMA PRA Category 1 Credits™
This workshop will outline the importance of addressing fatigue as a danger in aviation, the basic physiological mechanism underlying fatigue, and the most common causes of fatigue in air transport and other settings. Ways to recognize fatigue in operational environments and information about the efficacy of various countermeasures, including specific information about countermeasure techniques such as proper work/rest schedules, adequate sleep, napping strategies, rest breaks, circadian entrainment, stimulants, and others, will be provided. Presented by Drs. John Caldwell and Lynn Caldwell.

3. Aerospace Medicine Faculty Development Workshop
Sunday, 12:00 – 3:00 P.M.
3 AMA PRA Category 1 Credits™
This workshop, chaired by Drs. Mark Coakwell and Richard Allnutt of the USAF School of Aerospace Medicine, will provide presentations on current topics of interest to the international faculty of aerospace medicine residencies and fellowships. These presentations may also be of interest to faculty of other preventive medicine residencies, including general preventive medicine and occupational medicine. The presenters are current faculty of aerospace medicine programs within and outside of the United States. They will present topics aimed at improving teaching skills and providing proven methods for evaluating residents and will address international considerations in aerospace medicine residency training. Current and future faculty members may benefit from these presentations and are invited to attend. Continuing Medical Education and Maintenance of Certification credit will be available for completion of this workshop.

Three ways to Synergize in Dallas:
Education—the primary objective of the Aerospace Medical Association’s Annual Scientific Meeting. Designed from meeting evaluation forms, periodic surveys, and abstracts submitted, our meeting provides the latest results in sessions designed for aerospace medicine professionals under one roof. 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 are available for participants.

Opportunities—to 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; to socialize through the spouses’ program, which is open to all spouses and friends of AsMA members.

Networking—perhaps the greatest benefit of our meeting, 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 multidisciplinary 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!
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 7, and a Bruncheon on Wednesday, May 9.

Two tours are planned this year. On Tuesday, May 8, there will be a tour of the Fort Worth Stockyards National Historic District, where the Old West comes to life. The tour will include a quick stop at AT&T Stadium for a photo and short commentary, guided bus tour of downtown Fort Worth, Fort Worth Water Gardens, and the Fort Worth Stockyards, where we will observe the infamous longhorn cattle drive. Thursday’s tour will explore the beautiful Dallas Arboretum and Botanical Gardens. Nestled on 66 acres overlooking White Rock Lake, it is one of the top attractions in Dallas.

The Richard B. “Dick” Trumbo Preventive Medicine 5K Fun Run will be held on Monday, May 6. The start time is 6 a.m. The fee is $10 and tickets must be purchased in advance. Details to follow!

Climate for May in Dallas
Highs in the low 80s and Lows in the low 60s (°F) make Dallas a very pleasant place to visit. There is a chance of rain and the humidity is a bit high, so bring a light rain jacket or umbrella.

Transportation
There are several ways to get from the area airports to the Hilton Anatole. The Super Shuttle https://www.supershuttle.com/locations/dallas-dfw-dal/ and the GO Airport Shuttle https://goairportshuttle.com/dallas_fort_worth_international_dfw_airport_shuttle are approximately $15.00 each way. Uber and Lyft also operate in Dallas.

Hilton Anatole Hotel
This 27-story hotel features 1,606 non-smoking rooms that all feature flat-panel cable TVs, work desks, minibars and a complimentary newspaper delivered daily. Get some fresh air at the seven-acre Sculpture Park, where you’ll find a jogging trail, fish pond and tennis courts. Head to the 27th floor for American cuisine and incredible views of the Dallas skyline at Nana Restaurant.

The Hilton Anatole Hotel will serve as the headquarters hotel for the AsMA 89th Annual Scientific Meeting, May 6 – 10, 2018. The room rate for the Hilton Anatole Hotel is $155.00+taxes/night (US government per diem rate). Internet service in the sleeping rooms is complimentary.

Charges and Fees
An optional Resort Fee of $25.00+taxes/day is available and provides self-parking, health club access, 15% off spa services, 2 kids dinners in the Media Restaurant, 2 Starbucks coffees, local/toll-free calls, and pool recreation access.

Parking Fees: Self-Parking is $22.00/day (included in optional Resort Fee); Valet Parking is $29.00/day

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

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

89th Annual Scientific Meeting

May 6 – May 10, 2018

**Name:**

**Degree/Credentials:**

Early Bird Registration runs January 1 – 31. (Mail registrations must be postmarked with a January date). Advance Registration runs February 1 - April 30.

No cancellations or refunds after April 28. A $50 administrative fee is applied to all cancellations.

We strongly encourage online registration:

https://www.asma.org/scientific-meetings/asma-annual-scientific-meeting/registration

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) 739-9632.

**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

## REGISTRATION FEE

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<td>$250†</td>
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Add CME and MOC Credits

| Add Member CME Credits | $150 | $150 | $150 |
| Add Member CME and MOC Credits | $200 | $200 | $200 |
| Add Non-Member CME Credits | $200 | $200 | $200 |
| Add Non-Member CME and MOC Credits | $250 | $250 | $250 |

Registration Fee Subtotal ➤

*Go to 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.

†Early Bird Registration must be paid in full (including all events and meal functions) at the time of registration.

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

(See reverse for workshops & events)
# Advance Registration Form
## 89th Annual Scientific Meeting
May 6 – May 10, 2018

**Note:** Workshops are Limited • Only One per Attendee • Register Early

## Date and Time
- **Sunday, May 6**
  - 8:00 a.m. – 5:00 p.m.
  - Workshop #1 “Introduction to Epidemiology” (MAX 75)
  - Fee: $200
- **Sunday, May 6**
  - 9:00 a.m. – 4:00 p.m.
  - Workshop #2 “Aircrew Fatigue” (MAX 75)
  - Fee: $150
- **Sunday, May 6**
  - 12:00 p.m. – 3:00 p.m.
  - Workshop #3 “Aerospace Medicine Faculty Development” (MAX 50)
  - Fee: $75

## Events

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<tr>
<th>Date</th>
<th>Event Description</th>
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<tr>
<td>Sunday, May 6</td>
<td>Additional Meeting Program (ONLY for AsMA Members who receive their journal by mail)</td>
<td>$10</td>
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<tr>
<td>Monday, May 7</td>
<td>Richard B. “Dick” Trumbo Preventive Medicine 5K Fun Run/Walk (advance purchase only)</td>
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<td>Monday, May 7</td>
<td>Civil Aviation Medical Association Luncheon (advance purchase only)</td>
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<td>Monday, May 7</td>
<td>Society of USAF Flight Surgeons Luncheon (advance purchase only)</td>
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<td>Monday, May 7</td>
<td>U.S. Navy Luncheon (advance purchase only)</td>
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<tr>
<td>Monday, May 7</td>
<td>U.S. Army Aviation Medical Association Luncheon (advance purchase only)</td>
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<tr>
<td>Monday, May 7</td>
<td>Aerospace Human Factors Association Luncheon (advance purchase only)</td>
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| Monday, May 7 | Corporate Forum Luncheon (Advance purchase only) 
  (MUST BE A CORPORATE MEMBER, EXHIBITOR, OR CORPORATE SPONSOR) | $0    |
| Monday, May 7 | Fellows Dinner (advance purchase only) 
  (MUST BE A FELLOW OR GUEST OF AsMA FELLOW)                                      | $85   |
| Tuesday, May 8| AsMA Annual Business Meeting (advance purchase only) 
  (Free Attendance; Ticket required for meal)                                     | $45   |
| Tuesday, May 8| 100th Anniversary Celebration of Aerospace Medicine                              | $10   |
| Wednesday, May 9 | Associate Fellows Breakfast                                                       | $45   |
| Wednesday, May 9 | Aerospace Physiology Society Luncheon                                            | $45   |
| Wednesday, May 9 | Society of NASA Flight Surgeons Luncheon                                         | $45   |
| Wednesday, May 9 | Aerospace Nursing and Allied Health Professionals Society Luncheon               | $45   |
| Wednesday, May 9 | Iberoamerican Association of Aerospace Medicine Luncheon                          | $45   |
| Thursday, May 10 | Space Medicine Association Luncheon                                               | $45   |
| Thursday, May 10 | AsMA Honors Night Banquet (Black Tie Optional)                                   | $85   |

## Subtotal of Events

**TOTAL AMOUNT DUE (Registration Fee Subtotal + Workshop + Subtotal of Events)**

## Payment Method

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**Payment must accompany form. All payments are in U.S. funds. Registrants submitting via fax must include credit card information.**

**Please remember to include both sides when faxing. Use only one method to register.**
### Schedule of Events

**Sunday, May 6**

8:00 A.M. – 5:00 P.M. | Intro to Epidemiology, Governors Room
3:00 P.M. – 5:00 P.M. | Aircrft Fatigue: Causes, Consequences, and Countermeasures, Sapphire Room

**Monday, May 7**

8:00 A.M. – 9:30 A.M. | Opening Ceremonies and 4th Louis H. Bauer Lecture—Morgan Sandler, S-019 Panel

**Tuesday, May 8**

8:30 A.M. – 10:00 A.M. | 5th Memorial Reinartz Lecture—Ronald Przygodski, M.D.

**Wednesday, May 9**

8:30 A.M. – 10:00 A.M. | Chantilly East

**Thursday, May 10**


**Friday, May 11**

10:00 A.M. – 11:30 A.M. | Chantilly West

**Saturday, May 12**

11:30 A.M. – 1:30 P.M. | Special Luncheons—Space Medicine Association

3:30 P.M. – 5:30 P.M. | Special Luncheons—Space Medicine Association

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**Meeting Schedule**

98th Annual Scientific Meeting
May 6 – May 10, 2018

**Sunday Workshops, May 6**

8:00 A.M. – 12:00 noon | S-004 Panel Aircrft Neck Pain (RTG232): Pt. 1

**Monday, May 7**

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**Color Code**

1. **Human Performance (HP)**
2. **Clinical Medicine**
3. **Travel & Air Transport Medicine (ATM)**
4. **Space Medicine**
5. **Safety**
6. **Other/History**
Synergy: The Power of Multidisciplinary Problem Solving

Aerospace Medical Association
89th Annual Scientific Meeting
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Early Bird Registration Until January 31
Huge Savings! Huge!
Register by April 30, 2018, for Advance Registration Discount
Online registration will remain open until the meeting date, but higher rates may apply.