



## Conferences, Workshops & Symposia

### AIR FORCE OFFICE OF SCIENTIFIC RESEARCH PUBLIC AFFAIRS (OCT. 20, 2006) ROCKET SCIENTISTS GATHER AT SPACE PROPULSION PROGRAM REVIEW

Erin Crawley

**A**RLINGTON, Va.—The Air Force Office of Scientific Research here recently completed a program review on space propulsion and power in Annapolis, Md.

About 150 rocket scientists from leading universities and small businesses throughout the nation gathered to share recent results from their AFOSR-funded research and to hear about related Air Force initiatives.

“This event was very successful,” said Dr. Mitat Birkan, program manager and conference host. “It is important to provide a forum where the principal investigators we fund can communicate with each other in an effective way. This venue also prompts attendees to ask provocative questions about space propulsion.”

Birkan, who manages the space power and propulsion basic research investment portfolio at AFOSR, explained why continued funding toward this research is so important.

“We have to be able to continue superiority in space,” Birkan said. “If we don’t, then someone else will take over.”

The keynote address was given by Dr. Mark Lewis, chief scientist of the Air Force. Lewis discussed Air Force initiatives in aerospace technology within the space propulsion arena, specifically high speed hypersonic flight, space access, and space technologies.

Other featured speakers included Jacques Gansler, vice president of research, University of Maryland and Roger Lipitz chair in public policy and private enterprise, and former under secretary of defense for acquisition, technology and logistics; and Dr. Thomas Russell, director, AFOSR Aerospace and Material Sciences Directorate.

“As I started researching basic research investments in this area, I discovered that Dr. Mitat’s program is probably the strongest and the largest program in space propulsion and power in the United States,” Russell said. “If it were not for Dr. Mitat’s program, I’m not sure we’d

actually have a sustained effort at this point in time across the DoD.”

Many of the scientists at the event are conducting basic research aligned with the Air Force’s long-term objectives in aerospace technology. These areas include hypersonics, harnessing energy systems, multifunctional materials, and micro-propulsion. Some scientists also presented futuristic theories.

For example, Dr. Mark Cappelli, a professor at Stanford University, presented, “Toward Reduced Wall-Effect Hall Plasma Accelerators.” Cappelli’s team is charged with the task of understanding the way hall thrusters work. A hall thruster is a type of plasma-based propulsion system for space vehicles.

“During my presentation I proposed the question, what if you could build a propulsion device that was free of any physical surface so you wouldn’t have to worry about the degradation of the surface or engine because there isn’t anything there. If you could do that, essentially you’d have a device that has a limitless life,” Cappelli explained.

Many other topics were also presented at the program review. Major subject areas included plume dynamics, chemical propulsion, combustion stability innovations for liquid rocket engines, microchemical propulsion, electric propulsion, hall thrusters, and electrospray propulsion.

Additionally several workshops were conducted to brainstorm new areas of research. Workshop topics included multi-functionality in the design and operation of space propulsion systems, and advances in combustion stability for liquid rocket engines. These workshops are one way Dr. Birkan collected funding ideas for AFOSR’s Aerospace and Materials Sciences Directorate.

The AFOSR aerospace and materials sciences directorate is responsible for research activities in aerospace, engineering, and materials. At present, its program managers oversee more than 350 basic research projects. The four major projects in the directorate are solid mechanics and structures, structural materials, fluid dynamics, and propulsion.

*Crawley is with Air Force Office of Scientific Research Public Affairs.*



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### 23RD ANNUAL TEST AND EVALUATION CONFERENCE

**T**he 23rd Annual Test and Evaluation Conference will take place March 12–15, 2007, at the Westin Resort Hilton Head Island, Hilton Head Island, S.C. This national conference is invaluable to those tasked with directing and executing system development programs for the Department of Defense, Department of Homeland Security, Department of Energy, and other government departments tasked with various elements of our nation's security. Test planners, modeling and simulation users and developers, range operators, program managers, military personnel charged with system acquisition responsibilities, industrial professionals, and others under contract with the government to provide support to our nation's defenses will also benefit. For registration or more information on this year's event, consult <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>.

### 23RD ANNUAL NATIONAL LOGISTICS CONFERENCE AND EXHIBITION

**T**he 23rd Annual National Logistics Conference and Exhibition will be held March 19–22, 2007, at the Hyatt Regency Miami, Miami Convention Center, in Miami, Fla. Share insights with senior DoD leadership, top industry executives, project directors and program managers, information technology providers and developers, government policy makers and regulators, defense contractors and design professionals, third party logistics providers, and equipment suppliers and manufacturers. For more information on this year's event, contact Meredith Geary, meeting planner, at [mgeary@ndia.org](mailto:mgeary@ndia.org) or call (703) 247-9476. For details on registration, watch the conference Web site at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>.

### 5TH ANNUAL U.S. MISSILE DEFENSE CONFERENCE

**T**he 5th Annual U.S. Missile Defense Conference will be held March 19–23, 2007, at the Ronald Reagan Building and International Trade Center, Washington, D.C. A key objective of the 2007 conference is to continue building the Ballistic Missile Defense System (BMDS) team relationships that will in turn make development of a global missile defense system a successful reality. The BMDS Team includes members of the Missile Defense Agency (MDA), Department of Defense, military service staffs, and industry.

The conference—hosted by the American Institute of Aeronautics and Astronautics (AIAA), in cooperation with Northrop Grumman Corporation and supported by MDA—will expose the BMDS to the entire missile defense community, educate conference participants on the system-level approach to BMDS development, and serve as an exchange of ideas on BMDS evolution. Discussions will focus on the evolutionary development of a global, layered, integrated BMDS; the integration and testing of BMDS capability; the status of fielding BMDS elements; and the current political/policy environment, including the merits of extending BMDS capabilities to allies. Consistent with this focus is the theme of the conference, Global Ballistic Missile Defense—A Layered Defense. Register for the 2007 conference at <http://www.aiaa.org/content.cfm?pageid=230&lumeetingid=1475&viewcon=overview>.

### 5TH ANNUAL AFCEA-BELVOIR/PEO EIS INDUSTRY DAY

**T**he Armed Forces Communications and Electronics Association—Fort Belvoir Chapter hosts the 5th Annual AFCEA-Belvoir/PEO EIS Industry Day to inform the IT community about the recent successes and the forward-thinking opportunities that the Department of Defense and the Department of the Army have asked PEO EIS to develop. The 5th Annual AFCEA-Belvoir/PEO EIS Industry Day will be held March 28–30, 2007, at the Marriott Bethesda North Hotel & Conference Center in Maryland.



This will be the 20th year that the PEO has been in the acquisition business. PEO STAMIS (Standard Army Management Information Systems) began in April 1987 with five programs. Now, PEO EIS boasts an organization with more than 40 programs. The PEO, Deputy PEOs, and PMs will talk about the year ahead and the milestones they face. Industry Day 2007 promises to be bigger and better than ever.

For information on government participation at Industry Day, call Dean Sprague at (703) 806-4557 and for industry participation, contact Mark Gable at (800) 878-2940 x235. For information on AFCEA-Belvoir visit their Web site at <http://belvoir.afceachapter.org> or contact David Livingstone at (301) 399-4231.



### **GUNS AND MISSILE SYSTEMS CONFERENCE AND EXHIBITION**

**T**he 42nd Annual Armament Systems: Guns and Missile Systems Conference and Exhibition will be held April 23-26, 2007, in Charlotte, N.C. The 2007 conference will present topics that demonstrate how our nation's current gun, munition, and missile system technologies can be adapted and evolved to meet tomorrow's missions and operations. For more information on the conference, contact Heather Horan, meeting planner at [hhoran@ndia.org](mailto:hhoran@ndia.org) or call (703)247-2570. Watch for registration details at <http://eweb.ndia.org/eweb/DynamicPage.aspx?Site=ndia&Webcode=EventList>.

### **DEFENSE ACQUISITION UNIVERSITY ACQUISITION COMMUNITY CONFERENCE/SYMPOSIUM 2007**

**M**ark your calendar and plan ahead to attend the April 17, 2007, Defense Acquisition University Community Conference/Symposium, sponsored by the Defense Acquisition University Alumni Association. Watch the association Web site at <http://www.dauaa.org> for future announcements, updates, and registration information.

### **25TH DARPA SYSTEMS AND TECHNOLOGY SYMPOSIUM**

**T**he 25th Defense Advanced Research Projects Agency (DARPA) Systems and Technology Symposium (DARPA Tech) is scheduled for the week of August 6, 2007, at the Anaheim Marriott in Anaheim, Calif. Registration for DARPA Tech 2007 is expected to open in April 2007. Watch the DARPA Web site at <http://www.darpa.mil> for details on the 2007 event.

### **JOINT SERVICES ENVIRONMENTAL MANAGEMENT (JSEM) CONFERENCE**

**T**he Joint Services Environmental Management (JSEM) Conference will be held May 21-24, 2007, at the Greater Columbus Convention Center in Columbus, Ohio. JSEM 2007 is a comprehensive summit on the evolving world of environment, energy, and geospatial information within DoD. JSEM 2007 will highlight the many new and innovative ways the Department of Defense, other federal agencies, states, and the defense industry are meeting mission needs while protecting the environment. The conference affords the opportunity to share ways to integrate environment, energy, and geospatial information management into Defense operations. It also will address a wide range of perspec-

tives, including policy, implementation, best management practices, data management, and technology.

The JSEM 2007 Conference and Exhibition is evolving, just as Defense business practices are evolving. Conference organizers are merging Energy and Geospatial Information Management into the 2007 event, which is now recognized as the most significant event for environmental policy makers, practitioners, and professionals. Future registration details will be posted to the conference Web site at <http://www.jsemconference.com/2007/registration.htm>.

### **DARPA ANNOUNCES THIRD GRAND CHALLENGE**

**T**he Defense Advanced Research Projects Agency (DARPA) has announced plans to hold its third Grand Challenge competition on Nov. 3, 2007. The DARPA Urban Challenge will feature autonomous ground vehicles executing simulated military supply missions safely and effectively in a mock urban area. Safe operation in traffic is essential to U.S. military plans to use autonomous ground vehicles to conduct important missions. DARPA will award prizes for the top three autonomous ground vehicles that compete in a final event where they must safely complete a 60-mile urban area course in fewer than six hours. First prize is \$2 million, second prize is \$500,000, and third prize is \$250,000. To succeed, vehicles must autonomously obey traffic laws while merging into moving traffic, navigating traffic circles, negotiating busy intersections, and avoiding obstacles. The DARPA Grand Challenge Web site <http://www.darpa.mil/grandchallenge> is the primary resource for information about the Urban Challenge event.

### **FEDERAL ACQUISITION CONFERENCE AND EXPOSITION (FACE) POSTPONED TO 2007**

**T**he Federal Acquisition Institute (FAI), based upon recommendations of the Federal Acquisition Conference and Exposition (FACE) Steering Committee, composed of the FACE sponsors, determined not to hold FACE in 2006. The next FACE will be in 2007. It will continue to be sponsored by the Chief Acquisition Officers Council, Federal Acquisition Institute, U.S. General Services Administration, and Department of Defense. For more information on 2006 FAI scheduled events, visit the FAI Web site at <http://www.fai.gov/resource/face2006.htm>.