



# AIAA Baltimore Section

<http://www.aiaa-baltimore.org/>



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## Related Links

AIAA  
[www.aiaa.org](http://www.aiaa.org)

## Newsletter, Spring 2007

### >> Chair's Corner: **Surya Raghu**

We have begun scheduling our 2007-08 programs and it looks like we will have a busy and exciting year. Several joint programs with the National Capital section are being planned. A detailed calendar of events will be posted soon on our website.

The planning for [YPSE-07](#), scheduled for 2 November 2007 is going on well, thanks to Ms. Carolyn Slivinski, the Program Chair. Your suggestions and offers of help in organizing this program will be greatly appreciated. Ms. Slivinski can be reached at [carolyn.slivinski@aiaa-baltimore.org](mailto:carolyn.slivinski@aiaa-baltimore.org).

I look forward to receiving suggestions from all the section members regarding our programs for the coming year and also to increased participation from our Baltimore Section Members.

With regards,

Surya Raghu

### >> From the Editor

Congratulations to the new Section Officers! After two years of extremely able (and exhausting) effort, Dr. Pramud Rawat has completed his post as Section Chair. The depth and range of the many programs he initiated, and connections he made, will serve the Section well into the future. We will miss his regular presence and guidance at Council Meetings, but hope to continue to rely on his expertise.

Taking up the mantle as Chair is Dr. Surya Raghu (he commonly goes by just "Raghu", which, yes, is pronounced like the pasta sauce). We look forward to another great year with our new Chair!

As Editor, I am always looking for input from Section members. If you have news about our industry, especially if it's not found on the front page of the newspaper, or if you or a colleague has received a promotion or award, please let me know.

*Carolyn Slivinski*

### >> From the Awards Chair

On May 24, 2007, the Baltimore Section of the American Institute of Aeronautics and Astronautics held its annual Awards Banquet. It is during the banquet that attendees have an opportunity to honor the Sections' Anniversary Celebrants and the Baltimore Section Engineer of the Year, as well as reflect on the programs and successes over the past year.

Membership is at the heart of the Baltimore Section, and that is why the Anniversary Celebrants are honored each year at the Awards Banquet. This year, the Anniversary Celebrants included **Robert Kraemer** and **Howard Zwemer**, both celebrating 60 years, **Jesse Schneider**, **Eddie Lucero**, **Frank Proctor** and **Harlow Miner** celebrating 50 years, **James Windham** celebrating 40 years and **Christopher Yates**, **James Garner**, **David Speer**, **Georges Chahine**, **Chengshong Hsieh**, **Raymond LeVesque**, **Daryl Boden** and **Bohdan Cybyk** celebrating 25 years of membership.

AIAA National Capital Section:  
<http://www.aiaa.org/portal/index.cfm?GetComm=181>

AIAA Delaware Section:  
<http://mywebpages.comcast.net/blackre2/index.htm>

AIAA New England Section  
<http://www.aiaa.org/sections/nd/>

AIAA Hampton Roads Section  
<http://www.seva.net/~aiaa/>

SNAME Chesapeake Section:  
[http://www.sname.org/hq\\_sections/chesapeake/](http://www.sname.org/hq_sections/chesapeake/)

Glenn L. Martin Maryland Aviation Museum  
<http://www.marylandaviationmuseum.org>

Those in attendance, Robert Kraemer, Howard Zwemer and Jesse Schneider were asked two key questions: What was your most memorable moment during your career? What piece of advice would you give to the engineers starting their careers? Each of the three men had very interesting memories of their early days in aerospace, which left the audience amazed. Unanimously, the advice was to enjoy what you do... and a little bit of luck always helps! We want to thank the attendees for their candid responses!



Robert Kraemer, Howard Zwemer  
and Jesse Schneider



Mary Ellen Shook enjoys  
her parting gifts, as Sonja  
Moore looks on

The Section also thanked **Mary Ellen Shook** for her efforts over the many years that she worked as the Section's liaison with AIAA headquarters. Although she will be missed, we wish her well in her retirement in Texas.

Lastly, the Baltimore Section honors the Baltimore Section Engineer of the Year at the Awards Banquet. The following is from the Call for Nominations,

*The American Institute of Aeronautics and Astronautics wishes to recognize and honor those in the aerospace community who have made significant contributions during calendar year 2006. To accomplish this we will present an "Engineer of the Year" award for outstanding aerospace engineering accomplishment... The award is presented "To an individual member of AIAA who has made a recent significant contribution that is worthy of national recognition".*

**Dr. Sidra Silton** of the Army Research Laboratory, Aberdeen Proving Ground, is the 2007 Baltimore Section Engineer of the Year. Dr. Silton independently addresses complex technical problems and is making significant contributions to major Army mission and customer programs such as the Extended Area Protection System (EAPS) ATO, the PM-MAS Small Arms System Accuracy Program, the U.S. Army Armament Research Development and Engineering Center and General Dynamics "ARDEC/GD" Advanced Crew Served Weapons Program DARPA Hit to Kill, and international programs such as the Tripartite Technical Cooperation Program. She is the lead researcher in the aerodynamics area, and a technical expert on non-linear flow technology.



**Dr. Sidra Silton,**  
2007 Baltimore  
Section Engineer  
of the Year

In EAPS she has demonstrated the breadth and extent of her talents by contributing to the program both in the High Performance Computing (HPC) Computational Fluid Dynamics (CFD) arena and in the experimental area. Dr. Silton used HPC/CFD to predict complex non-linear Magnus and then proceeded to measure it in the Aerodynamics Experimental Facility. Her contributions were such that the contractor used her recommendation on their new round design and requested her participation on the Integrated Product Team. The end result, based on Dr. Silton's recommendations, was requirement compliance for the new round.

It was with great pleasure that the Baltimore Section of AIAA presented Dr. Silton with the Baltimore Section Engineer of the Year Award. On behalf of the council, we wish the best for Dr. Silton as she competes on the Regional level for an opportunity to represent Region I in the National Engineer of the Year competition. It is clear that she will represent the Section well!



Dr. Klaus Dannenberg

**Dr. Klaus Dannenberg**, the invited speaker for the evening, closed the evening with a presentation on AIAA's Strategic vision and planning. Dr. Klaus Dannenberg is the Chief Strategy and Information Officer of AIAA, having responsibility for the Institute's external affairs with the public, the government, corporate membership, alliances with other associations worldwide, and the Strategic Planning process.

*Barbara Leary*

### >> From the Public Policy Chair

**Congressional Visits Day** is an event that brings to the Capitol AIAA members from across the country, designed to allow aerospace engineers and scientists to communicate directly with people in Congress and their staffs. People in Congress gain insight into the workings of the aerospace industry and how their decisions affect progress in the field. In return, AIAA members learn how politics works, especially at the national level, and how better to lead the industry toward a better future.

AIAA members begin preparing for Congressional Visits Day months before the actual April event in Washington, DC. The Public Policy committee meets multiple times during the course of the year to discuss issues of importance to the industry.



Congressional Visits Day starts with a training session the day before in a Washington, DC hotel. Team members meet each other and meet AIAA members from other states. One of the most interesting encounters I had was with Phil Smith of California. Since I'm involved with workforce issues in Maryland through the Governor's Workforce Investment Board, I asked him what California was doing in this regard. He told me they were looking to Maryland since we seemed to be leaders in this area.



This year the Maryland team had appointments with staff members of Senator Cardin and Representatives Cummings, Gilchrist and Van Hollen. Because of another commitment, I was not able to attend the meeting in Cummings' office. Meetings with Senator Cardin's staff as well as staffs of Representatives Gilchrist and Van Hollen went extremely well.

The meeting with Senator Cardin's staffer Gray Maxwell began at 10:30 and lasted nearly an hour. We not only covered most of the topics mentioned in our briefing package, we had extensive discussions with Mr. Maxwell about aerospace topics in general. While he was glad to see a team of working scientists and engineers coming to Congress, he told us Congress really needed to have people like us working on staff in Congress because Congress needs a better understanding of the kind of issues we were bringing to it in our visit. Several of us took note of that. While meeting with Mr. Maxwell, we mentioned that there were many events in the Washington area put on by AIAA and other, similar organizations that could help people in politics better understand science and engineering. We did commit to keeping Mr. Maxwell and other staff informed about these events.



Our next meeting was with Congressman Gilchrist's staffer Lisa Iwahara, who began our meeting by telling us that aerospace was a new area for her. She told us she was eager to learn from experienced aerospace professionals what the field needed from government to succeed in meeting the challenges of the 21<sup>st</sup> century. We discussed the topics in our briefing package. Ms. Iwahara followed our items with significant interest. We also asked her if she would be interested in learning about

other AIAA and other aerospace related events in the Washington area. She also said she would be quite interested in staying so informed. We promised to keep her apprised of any events that we learned about that she could attend. After we had been there about half an hour, Congressman Gilchrist came into the office. One of our members asked for photos with the congressman. He was happy to oblige. During this part of the meeting we were able to discuss our briefing points with the congressman himself. He showed himself as a thoughtful, strong supporter of our work.

After lunch we had a very brief meeting with Congressman Chris Van Hollen's staffer Ken Cummings. Ken and the congressman, who stopped to talk briefly, were very interested in our positions. One member of our group, Gus McLeod, an accomplished African American pilot who has flown to the North Pole, fascinated the congressman. There was brief talk about honoring his upcoming round the world flight that would cross both the North and South Poles.



The day ended with a lovely reception put on by AIAA headquarters (AIAA Executive Director Bob Dickman at podium, to the left is AIAA President Dr. Roger Simpson).

*Charles J. Divine*

## >> Upcoming Events

### **08/30/07 Council Meeting**

Join us in the JHU/APL cafeteria at 6:00. All Baltimore Section members welcome – find out what your Section has in store for the coming year!

### **10/11/07 SolidWorks One Day Seminar**

The Baltimore Section of AIAA will host a SolidWorks course for Young Professionals on 11 October 2007. Because SolidWorks is used extensively in the aerospace industry, it is important to expose the young professional community to its capabilities. TriMech Solutions, a company that represents SolidWorks in our region, will present a day-long program on the state of the art in analyses that range from graphics to finite-element analysis, heat flow, fluid dynamics, and kinematics. They will describe how these analyses are carried out using examples from SolidWorks users. Please join us for an informative and educational session that will expand your technical knowledge base and help you get ahead in your field! 8 am – 4 pm, Kossiakoff Center, JHU/APL, Laurel MD. Keep an eye out for more details...

### **11/02/07 REGION I YPSE-07**

Make plans now to attend or present at the AIAA Region I **Young Professional, Student and Education Conference**, a growing regional event. Check the conference website regularly for updates, at <http://www.aiaa-baltimore.org/YPSE-07>. Dr. Mark Lewis, Chief Scientist of the U.S. Air Force, will speak on "Future Aerospace Challenges for the USAF" as our Honorary Chair. We are also pleased to announce that Dr. James Garvin, NASA Goddard's Chief Scientist, is our Keynote Speaker. In order to encourage topical presentations, abstracts are required; papers are not. Plan to be there, and keep your knowledge current! Check out the August issue of Aerospace America for an article on last year's conference. You'll find it on page B6 in the Bulletin.



>> **Pre-College Activities: Thomas D. Milnes**

**2/23-24/07 Howard County Mathematics, Science and Technology Fair**

Precollege Programs members Tom Milnes and Carolyn Slivinski assisted with judging at Howard County's annual showcase of the school system's middle- and high-school math and science programs.

**3/14/07 Maryland MESA Advisory Board Meeting**

**3/20/07 MESA National Competition TELECON**

Outgoing Chair Tom Milnes serves on the Advisory Board of Maryland Mathematics, Engineering, and Science Achievement (MESA) which encourages children from underrepresented populations to pursue STEM careers. Tom has been heavily involved as Judging and Competition Setup Chair. Please visit <http://www.jhuapl.edu/mesa/content.htm> for more information on the MESA program.

**3/19/07 Governor's Workforce Investment Board for Aerospace K-12 Pipeline**

Council Members Tom Milnes and Chuck Divine both serve on the Governor's Workforce Investment Board for Aerospace.

**3/31/07 Historic Aircraft Competition**

**5/19/07 Electric Cargo Competition**

Tom Milnes assists student competitors with the Maryland Engineering Challenges Middle School Historic Aircraft and High School Electric Cargo competitions at the Baltimore Museum of Industry. These annual event draws middle- and high-school students from around the state. Tom is also a member of the Maryland Engineering Challenges Planning Committee which meets monthly. For more information on the Maryland Engineering Challenges visit: <http://www.thebmi.org>.



**4/27/07 Maryland MESA Statewide Competition**

Tom Milnes sets up Electric Cargo Competition and serves as head judge for the Trebuchet Competition.

**5/11/07 MESE National Competition Meeting**

Judging and Competition Chair Tom Milnes tours the University of Maryland with Center of Minorities in Engineering and Science Director Rosemary Parker.

**05/12/07 Baltimore County Waterfront Festival**

Young Professional Chair Kelly Fields gets a little expert help with her Alka Seltzer rocket, while seaplanes land a stone's throw away on Middle River. Many more photos of this regional event can be found at the Maryland Aviation Museum's website: [www.marylandaviationmuseum.org/waterfest/p.htm](http://www.marylandaviationmuseum.org/waterfest/p.htm)





**05/12/07 Space Day at the Maryland Science Center**

Incoming Pre-College Chair Kerri Beisser instructs young visitors to the Maryland Science Center on the fine art and science of paper plane construction. For the more adventurous, paper rockets were also on hand for demonstrations of high-velocity flights! A radio-controlled helicopter helped draw the interest of kids and parents alike. Kerri is also Education Outreach Director for the APL Space Department.



**6/21-24/07 MESA National Competition University of Maryland**

Outgoing Precollege Chair Tom Milnes served as Head Judge and Competition Setup Chair for the MESA National Competition held at the University of Maryland from Thursday June 21<sup>st</sup> to Sunday June 24<sup>th</sup>. This year featured a Multi-Task Trebuchet competition. Student Designed Trebuchets competed for longest throw, most accurate throws to two targets, and greatest weight thrown through a standing circular target. High School and Middle School teams representing all states with MESA programs - Arizona, California, Colorado, Maryland, New Mexico, Utah, and Washington - competed. Technical Papers were judged before the competition. A display competition was held Friday evening followed by oral presentations Saturday morning and device competition Saturday afternoon. The award breakfast was held Sunday morning and each MESA school shared trinkets emblematic of their school and state. The 2008 MESA competition will also be sponsored by Maryland MESA with Tom reprising his roles as Head Judge and Setup Chair.

**>> Recent Events:**

**03/29/07 New Horizons Lecture**

Alice Bowman, New Horizons Mission Operations Manager, and Debi Rose, New Horizons Science Instrument Sequence Engineer, both of Johns Hopkins University's Applied Physics Lab, describe the intricate dance the New Horizons spacecraft and instruments performed as it swung around Jupiter and its satellites on its way to Pluto. It was fascinating to hear the inner workings of a program with so much scientific information to offer so early in its mission.

(See more photos at <http://www.aiaa-baltimore.org/photos/2007/NewHorizons/> )



**04/06/07 Distinguished Lecturer – Capt. Thomas Morgenfeld – X-35 Test Pilot**

The Johns Hopkins University Student Chapter and JHU's Mechanical Engineering Department hosted Capt. Thomas A. Morgenfeld, USN Retd. Capt. Morgenfeld provided an exceptionally succinct and informative description of the key design features and test results of all three versions of the X-35 Joint Strike Fighter. The lecture was greatly appreciated by JHU faculty, R&D staff, and students. X-35's ingenious design, allowing for three very different takeoff and landing systems, within the same hull, was of enormous interest to all, especially the young engineers. (Photo: AIAA Iowa Section)





**04/12/07 Space and Aeronautics: A Perspective from the Office of Science and Technology Policy**

The Johns Hopkins University Student Chapter invited Dr. Robie I. Samanta Roy, the OSTP Assistant Director for Space and Aeronautics, to speak. He discussed the activities at Office of Science and Technology Policy related to space and aeronautics, as well as the new National Aeronautics R&D Policy. He described the Congressionally established mandate under which OSTP develops and implements sound science and technology policies and budgets and works with the private sector, state and local governments, the science and higher education communities, and other nations toward this end. (Photo: Will Kirk, JHU)



**04/19/07 Distinguished Lecturer – Dr. John Anderson**

Dr. Anderson, Curator for Aerodynamics, National Air and Space Museum, spoke on "***Breaking the Sound Barrier: The Aerodynamic Breakthroughs that Made it Possible***". A riveting speaker, Dr. Anderson gave a full account of 260 years of research that led to the proper intellectual understanding of the nature of high-speed aerodynamics around and above Mach one. This presentation told the exciting story of the evolution of this intellectual understanding, making the design of the Bell X-1 possible. (Photo: C. Slivinski)



**05/07/07 Distinguished Lecturer – Dr. Roger D. Launius**

***"Perspectives on the Past, Present, and Future of Human Spaceflight"*** This presentation explored the history of Spaceflight during the past fifty years. Dr. Launius also provided great insight into the core challenges for future exploration. Those challenges include: political will; cheap, reliable access to space; smart robotics; protecting this planet and this species; and exploration of the Moon and Mars. As part of this talk, Dr. Launius covered some turning points in the history of the space age such as Sputnik, the U.S. Apollo program, the U.S.-Soviet space competition, the loss of Challenger and Columbia, and China's entry into human space flight. The lecture was held at the Glenn L. Martin Maryland Aviation Museum. (Photo: ISNPS)



**>> Of Interest**

- Robin Vaughan, Baltimore Section Secretary and an engineer at JHU/APL, recently volunteered at the Maryland Science Center for a new program, SciGirls, developed there to interest middle school girls in science. Read the article in the Baltimore Sun: <http://www.baltimoresun.com/news/health/bal-md.hs.girls13jul13.0.5433857.story>



(Photo by Barbara Haddock Taylor, Baltimore Sun)

<http://www.aiaa-baltimore.org/>

- Tri-Rinse Inc. disposed of more than old tires or recyclable plastic – its job in this case was to “shred” F-14 fighter jets. The Defense Department wanted to make sure none of the jet’s parts made their way to buyers for Iran, China and other countries which have exploited gaps in surplus-sale security to acquire sensitive U.S. military gear, including F-14 parts.

<http://sfgate.com/cgi-bin/article.cgi?f=/n/a/2007/07/02/national/w093608D17.DTL&hw=iran&sn=006&sc=757>



AP Photo

- Northrop Grumman buys Scaled Composites LLC, which built SpaceShipOne, the first privately funded craft to reach space.

<http://www.msnbc.msn.com/id/19877344/>



Reuters file

- MINNEAPOLIS, July 10 /PRNewswire-FirstCall/ -- Alliant Techsystems received a \$62.5 million contract from Orbital Sciences Corporation for the main abort motor of the NASA Orion crew exploration vehicle Launch Abort System. NASA's Orion will succeed the Space Shuttle in transporting humans to and from the ISS, as well as carrying crews to the Moon and eventually Mars.

[http://atk.mediaroom.com/index.php?s=press\\_releases&item=726](http://atk.mediaroom.com/index.php?s=press_releases&item=726)



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