



The American Society of Mechanical Engineers

Dear members,

I hope that everyone had an enjoyable summer.

So far this year a truly dedicated executive committee has met three times in order to lay out the groundwork for the upcoming year. Here are some of my goals for the section as we move forward, please remember this is your section and any ideas, comments, constructive criticism is not only welcome but truly appreciated.

Continuing local section meetings - These meetings cover a wide variety of topics and are both enjoyable and informative. In addition they provide a great opportunity to network with professionals from local industries. Please feel free to suggest topics that you would like to see in the future.

Support local ASME student sections – On September 29th we met with student representatives from Drexel, Penn, Rowan, Swarthmore, Temple, Widener & Villanova to discuss projects, competitions, tours, field trips and various other activities the students would participate in. Last year the students participated in the Indoor Flying Robot Competition, Miniature Pumpkin Chunk'in Competition and the Beetle Bots Competition. These and many other exciting ideas were presented at our meeting.

Continue support of local youth math and sciences – Yearly the ASME Philadelphia section provides support and volunteer as judges for the Future Cities Competition (www.futurecityphilly.org). This is a terrific opportunity to energize young minds. We also actively participate in the Delaware Valley Engineers week.

Reverse ASME International Restructuring – Volunteers staff the executive committee. As you can see from above our goals are to provide a local ASME presence, support youth engineering in the Delaware Valley and continue to be a conduit from the multinational organization down to the individual member. ASME is cutting local section funding by 25% this year and 100% next year. That's correct 0% of our dues will be used to support local engineering. This will force the local chapters to be managed like a business, I personally do not wish to scrap an interesting meeting topic or turn my back to a student section because it did meet our return on investment.

I look forward to this year and encourage everyone to get out and get involved.

Kevin Keenan, PE
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Philadelphia Section Newsletter

www.sections.asme.org/philadelphia November 2005

Upcoming Section Meetings

Tuesday, November 3
Pension Plans in the 21st Century
Speaker: Keith R. Black
Villanova University, Villanova, PA

Tuesday, January 31, 2006
SR71 Blackbird - An Engineering Marvel
Speaker: Colonel Richard Graham
Villanova University, Villanova, PA

See below and 6 for directions and information

Directions to Villanova University, CEER Building

Villanova University is in Villanova on Lancaster Avenue. Exit the Blue Route (I-476) at Exit 13 to Villanova. Cross Route 320 and at the next traffic light turn into the main parking lot across from the twin spires of the Villanova chapel. Cross Lancaster Avenue and walk toward the chapel. At the top of the steps, turn left and continue for about 500 feet to the CEER building. The meeting is in Room 1 on the lower level

November Meeting

Pension Plans in the 21st Century – Many Companies are posting large losses and abandoning their pension plans to stay afloat. Government backed benefit guarantee corporations are being proposed.

Keith Black will discuss the financial and social implications of the developing situation. Mr. Black is an attorney with the firm of Powell Trachtman Logan Carrle and Lombardo in King of Prussia. He has concentrated his practice in the area of management-side labor and employment law. Mr. Black is a member of the state bars of California and Pennsylvania. He is a 1991 graduate of Villanova University School of Law, and a 1988 graduate of the Pennsylvania State University, where he majored in Labor and Industrial Relations.



January Meeting

The SR71, the world's fastest and highest flying aircraft was first proposed by Kelley Johnson at the Lockheed Skunk Works in 1958. Flying at Mach 3 and 85,000 feet the SR71 could survey over 100,000

square miles every hour. Cruising at over 2,100 mph,

Philadelphia Section Officers 2005/06

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Please send letters and comments to the Editor. Letters will be published unless otherwise requested depending on space limitations.

the plane's skin temperature reached over 600 °F

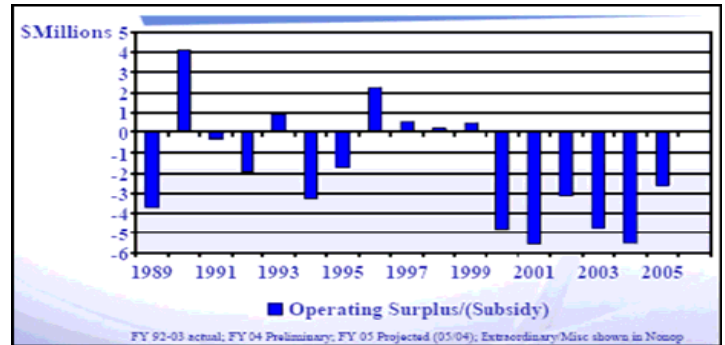
Col. (Ret) Richard Graham flew the Blackbirds for over seven years on operational reconnaissance missions, amassing 765 hours in the SR-71. Retiring after 25 years in the Air Force, Col. Graham flew for American Airlines. He retired in August 2002, after 13 years as a Captain on the MD-80 aircraft. He has accumulated over 12,000 flying hours. He now keeps busy as an author, speaker, aviation consultant, and flight instructor. Col. Graham has written two books, *SR-71 Revealed, The Inside Story* and *SR-71 Blackbird: Stories, Tales, and Legends*. He donates the royalties from his books to the National Air & Space Museum in Washington, D.C. Colonel Graham was the 1999 recipient of the University of Nebraska's William F. Shea Award for his distinguished contribution to aviation. He was recently selected to the AIAA Distinguished Lecturer's Program.

ASME Reorganization

The following article is reprinted from the September Newsletter of the ASME Delaware Section. We are reprinting the article to give our members some background information on the recent changes which the national ASME organization is implementing for the societies management.

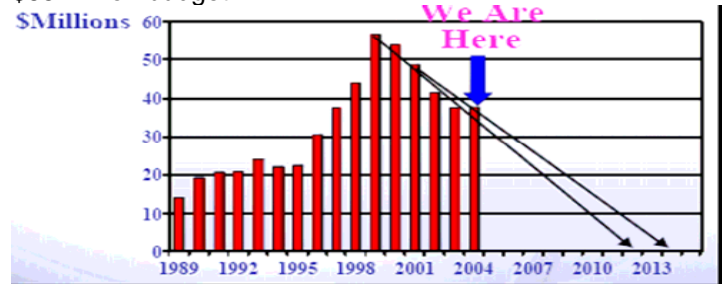
Major Changes in ASME have been Announced

ASME has to change to remain solvent and many programs, including Sections, are affected



Background on the reasons for change (from a presentation given to ASME leadership):

•ASME's operating budget is based on a three-year Code subscription cycle •As part this cycle, it is normal to expect some good years and some not-so-good years •From 1989 to 1999, operations were close to self-sustaining, but starting in FY 2000, we have had unsustainable annual operating subsidies, which lately average about \$5 million per year on a \$65 million budget.



•There were unintended consequences of ASME's financial model: we plan to spend all that we take in • As investment income went rapidly up, so did spending plans; even for programs that had little financial viability • This increased annual operating costs, which are difficult to eliminate as rapidly as investment income has come down •Starting in 1996, the Fund Balance started to increase due to investment returns and the sale of the UEC building • But starting in 2000, the fund balance has been in steady decline as we have used investment income to ramp up operating subsidies to an unsustainable level •As investment income came back to realistic levels, it was not enough to support the higher operating subsidies, so ASME had to dip into the fund balance to sustain operations •The trend is quite clear: if we don't do something to reverse this, ASME will deplete its entire fund balance and cease to exist •We may not be sure when (two different trend lines are shown), but we can see it will happen unless we act •The good news is that we still have a significant fund balance and we are still operating from strength – for now •But the longer we wait, the more difficult it will be to reverse the trend.

Delaware Newsletter Editor's Note: The trends shown above are a doom and gloom scenario assuming no changes. ASME is taking steps to ensure this scenario never happens and the Society remains healthy. With that said, there is a lot of work to do at the International level as well as within our Section!

What's the Plan:

The various sections of ASME were told to go back and look at programs and ways to cut almost \$7.5MM from the various budgets. This edict impacted all parts of ASME. In addition, investment income was removed from the budget planning process to prevent the same scale-up of spending from happening again. Recommendations have been coming in to the Board of Governors from various communities and technical divisions with pretty deep cuts. Remember that \$7.5MM is almost a 12% spending cut across all of ASME.

Impact to the Sections and Members in General:

- Delaware Section was just informed that their allocation would be cut an additional 25% for the 2005-2006 program year and would be eliminated after that. The Section, if to remain functional, needs to eliminate all costs or develop ways to become self-funding. Student sections will continue to be funded.
- The Regional Office in Washington, D.C that supports DE Section, as well as others, was closed. The ASME employees there were terminated.
- Travel reimbursements for Society activities by volunteers are severely cut. Travel by ASME employees is severely restricted.
- Technical Division paper newsletters are to be cut and converted to email communication only
- ASME Distinguished Lecturer travel funding eliminated – (Delaware impacted because we have had speakers without charging attendees to cover the costs)

Where does the Delaware Section of ASME go from here?

- We have one year of funding left so we have some time to transition to a new model. The model we've used for years is to offer training and networking opportunities for free or very low costs to our membership. We have also supported the next generation of engineers by using our allocations to fund contest participation and awards for winners at the Elementary, Middle, High School and collegiate levels.
- We will be working to move to a new model. The Executive Board is working towards two or three major events for the year that will serve the membership in various ways as well as help us generate the funds to continue supporting the next generation of engineers.
- We envision one or two dinner meetings with a relevant technical topic. We've done this in the past successfully and the members in attendance have thoroughly enjoyed them. We are also looking into professional development opportunities that we can bring to the Section.
- The section needs your participation with the generation of ideas as well as attending the events. If you have a professional event or topic that you are interested in, please let us know!!!

ASME Reorganization Continued

The following article was written by William Coleman, a longtime member of the Philadelphia section. The article expresses Mr. Coleman's opinion on the ASME reorganization and is based on his years of service to ASME.

What I am about to tell you about the current in-process ASME reorganization is so shocking that I must first tell you who I am and what my involvement in ASME was and is. I joined ASME as a member of the Drexel Institute of Technology (now University) Student Section -- Circa 1950s when I was working on my BSME. Subsequently I accepted a position as Mechanical Design Engineer at the Westinghouse Electric Corporation's Steam Divisions at Lester, Pa in the Large Steam Turbine Department. I remained in their employ for 31 years as I progressed from junior engineer to fellow grade (highest rank outside of management status) and worked on various assignments and projects as I matured in that organization and as I continued my studies in local evening colleges, e.g. - MSME at Drexel '56, various postgrad courses at U of P and an MBA at Wharton (U of P) in '65. In a matrix management organization I was able to work simultaneously as original contributor on some projects while I functioned as project director on others. I studied for and successfully passed the examination for Pa Engineering License in '57. I became active in ASME when my boss assigned me to actively participate in Applied Mechanics meetings and activities, as well as monitoring the technical papers published in our area of design practice. At local and national meetings I was able to participate in discussions of papers being presented, I was overwhelmed by the giants in my fields, the geniuses and near geniuses who were extending the state-of -the-art. Professors like Timoshenko, Goodier, Hodge, Hetenyi, Drucker, et al; the authors of many of the text books I used both as an undergrad and in grad school. Now all of this activity was covered by company expense account because my management was sufficiently visionary to see the very real impact on our designs.

So it was somewhat natural for me to become active simultaneously in the Philadelphia Section of ASME, especially as several of the officers were either my managers or managers and senior engineers in adjacent groups. After a number of years working in the "trenches" I started to take an active part in the administration of the section and rose through "the chairs" to the position of Section Chairman in 1975. I was invited to participate on several Region III committees over the years and finally was nominated to participate on the National Nominating Committee, where I was subsequently elected to be its chairman. I also was active in the creation of a national public affairs committee, which grew to a national council with its own Vice President. I became a trustee of the Philadelphia Section, which was advisory in nature and didn't require a great amount of my time, thus freeing me to pursue a more active role in Region III affairs which led eventually to my election as Vice President in 1982-84. After that I remained on the Region III Operating Board actively handling specific assignments for succeeding Vice Presidents and acting as their advisor.

When my original employer relocated to Orlando, Fla. I severed my relationship with them and went on the staff of the Villanova Mechanical Engineering Department as Industry Professor involved in teaching third year students. Subsequently I became director of the laboratories and directed a major renovation of facilities and specific experiments. Following that experience, I accepted a position with the Department of Defense (DoD) in Philadelphia as

Quality Assurance Engineer. In that capacity I was responsible for the training of my inspectors as well as industrial surveillance of a number of government contractors. This activity continued until my retirement in 1998. Of course, all through this time I remained active in ASME. After retirement, I spent a couple of years as adjunct mathematics professor at the local community college.

I was always in awe of my great good luck in pursuing a career in the state of the art of the growth and improvement of steam turbines, a mainstay of the electric power industry. I watched the average unit size grow from standardized units of 80,000 to 100,000 kilowatts in 1953 to over 1000 Megawatts before I left the field. I was early-on cast in the role of training and applying the brightest and the best new young engineers on my projects, so from the very beginning I was cast in the role of teacher. I was responsible for the evolution of many of our analysis algorithms. I was and am still thankful to ASME, which taught me the leadership skills that enabled me to advance in my career. I have always been acutely aware of this continuing debt to my professional society and have always tried to conduct myself in a manner to work off that debt although I am aware that I will never be able to do so.

So now I offer you an explanation of what has been happening to ASME. With the terrible events of 9/11 and the subsequent market collapse --and continuing down market, ASME investments were devastated. Also, in the same time period ASME's prime breadwinner --the income from sales of our Codes & Standards, (C&S) on pressure vessels, boilers, piping, etc. went into decline as did the A&E (architect engineer firms) business. The foreign sales of C & S likewise declined as a number of countries that used to use our C & S in a wave of nationalistic fervor wrote their own. And as the codes became available electronically --- the income drastically declined. Our leaders were pursuing ever increasing international activity, which also had a premium price tag. The cost of maintaining our prestigious NY offices at 3 Park Avenue continued to escalate even though some of the activity (we are a major publishing house) was relocated across the river to Rutherford, NJ. Many of our operations had gotten more expensive as corporate support in the form of expense accounts for many of our volunteer participants and activists began to dry up as these commercial enterprises were feeling the heat of global competition. So we slid into a downward financial spiral and began operating in the red. It got more serious as the red ink approached \$4 million annually and continued deeper and deeper. Clearly, something had to be done before we exhausted our financial resources. And that was when and how reorganization got into our agendas. But we still had some time because ASME resources were still comfortably sizeable. The initial action taken was to do away with the national agenda system which had delegates from all of the regions on a national committee that met at both the SAMs (Summer Annual Meetings) and WAMs (Winter Annual Meetings which became known as IMECE). Some eyebrows were raised as this impacted our ability to train future leaders in the operations of ASME. I was peripherally involved in some of the information sessions at

RACs (Regional Administrative Conferences) where we gathered across a Spring weekend to compare the effectiveness of our years operations, IRACs (Interim Regional Administrative Conferences) where we gathered in a Fall weekend to train our new officers. Frequently Faculty Advisers (to student sections) met concurrently as well as Mechanical Engineering Department Heads, and Regional Student Conferences. Somewhere the initial planning collapsed into a stampede of implementation, i.e. the regions were eliminated, the RACs and IRACs eliminated, faculty advisors meetings eliminated, the field service offices were eliminated and their dedicated staff laid off. This was followed closely by a 25% cut in financial support to the sections this year and 100% cut in financial support next year.

Now all the while, myself and a number of other past VPs of regions were asking to see the financial planning that required these draconian cuts in member service activities. We were told by the planners/implementers, BOG, (Board of Governors), senior volunteers (Presidents and senior VPs and senior staff) that they would share the financial analysis with us and that any reorganization plans would be worked out complete and approved by the membership before anything was done. Well, they LIED to us and proceeded with the reorganization. An ad hoc committee convened by the BOG was chartered to work out a plan whereby the regions would be replaced by approximately half as many districts and the district borders would be approximately determined. Well this committee did as it was instructed and presented their results to the BOG at the SAM of Jun05 in Phila. The result of this was that the BOG rejected their work and summarily dismissed the committee. So the very life blood of our operations was drained in favor of the planners' dreams of a virtual society, operating electronically and at no cost!

At a recent Philadelphia Section Executive meeting, I suggested the formation of a new organization: The Philadelphia Society of Mechanical Engineers! Further, that we should cut our ties to ASME National Headquarters in NY and operate totally independent of them, that we should not participate in the current national election of officers, but should mark our ballots rejecting the entire slate as our last official act in the old organization. That we should stop paying our dues to national and instead pay about 30% of that amount to the Phila Society to support local activities of the senior section and our various local student sections. Also, we have heard rumblings across the breadth and depth of what used to be Region III that they would like to form some kind of a regional organization, again independent of National which has abandoned us. So, while we have taken no action, as yet, I feel that the clock is running and that if we do nothing but talk and complain--that we are dead in the water. Finally, what we are looking for is a reaction from you the members. We would like you to consider all of the above and let us know what if any action(s) to take in your name. So, please respond to any of the officers listed in this newsletter ASAP. Thanking you for your consideration and action, I am William H. Coleman, PE. I would offer my phone number, but my answering machine couldn't handle the volume, so I offer my email address-- colemanwh@msn.com. Or if you would

prefer, we could convene a town meeting to allow group discussion on these matters.

GREATER PHILADELPHIA AIAA / ASME
2nd Annual AEROSPACE / MECHANICAL ENGINEERING MINI-SYMPOSIUM

THE ENGINEERING INNOVATION SHOWCASE OF PHILADELPHIA

Saturday February 11, 2006 – DoubleTree Hotel, Plymouth Meeting, PA

Call for Abstracts

- See the latest developments in local Aerospace & Mechanical Engineering technology
 - Abstracts solicited for oral presentations and poster session

SUGGESTED SESSION TOPICS (but not limited to):

- Energy & Propulsion Systems – fuel cells, hydrogen technologies, advanced cycles, thermal-fluids, heat transfer
 - Modeling and Simulation – CFD, finite element analysis, trajectory modeling
 - Vehicle Design and R& D – Manned and UAV, ground, sea, air, space
- Micro & Macro Materials – Nano-technology, MEMS, ceramics, composites, polymers, smart materials, manufacturing techniques
 - Sensors & Controls – smart sensors, control methodologies, non-destructive methods, laser-based techniques
 - Vibrations & Dynamics – rotor and machinery dynamics, acoustics, passive & active damping, noise control

Abstract Format & Submission – Abstracts to be submitted in PDF format and should not exceed 150 words and should be double spaced.

The body of the abstract should be preceded by an author/title block. The title should appear in capital letters. Authors' names, organizations and e-mail should follow the title. The author's organization, phone numbers and e-mail address should appear after each name if the organizations are different. If they are the same, the organization name need only appear once after the author's last name and phone number. Presenter's name and mailing address **MUST** follow the body of the abstract. Please note if abstract is for oral presentation or poster session.

Submit abstracts (PDF format) by e-mail to: AIAA-ASME@villanova.edu

DEADLINE FOR ABRACTS – January 20, 2006

NOTIFICATION OF ACCEPTANCE – January 27, 2006

Registration Form

We are pleased to offer web registration this year in addition to mail-in registration. Attendees preferring to pay with credit card must register on-line at: www.acteva.com/go/aiaa

You may also register by sending a check along with the completed registration form to:

Mrs. Lana Vernati
Mechanical Engineering Department,
Villanova University
800 Lancaster Avenue,
Villanova, Pennsylvania 19085

Make Check Payable to: AIAA Greater Philadelphia Section

Name: _____

Organization: _____

Address: _____

Phone: _____

Email: _____

For more information on technical sessions contact conference co-chairs:

Jerry Jones - gerard.jones@villanova.edu 610-519-4980

Kamran Fouladi - fouladi@infomec.cc 610-291-6642

Peter Cavallo - cavallo@craft-tech.com 215-766-1520

Registration prior to January 20, 2006	Professionals: \$75.00	Students: \$25.00	
Registration on or after January 20, 2006	Professionals: \$80.00	Students: \$25.00	

The registration fee provides for attendance at the technical sessions, a copy of the Mini-Symposium booklet containing abstracts of all presentations, breakfast, luncheon, and a guest speaker.

American Society of Mechanical Engineers
c/o 223 West Summit Avenue
Haddonfield, NJ 08033

Philadelphia Section September Meeting
Thursday, November 3
Pension Plan's in the 21st Century
Speaker – Keith Black
Villanova University, Villanova, Pa.

Location: Villanova University, CEER Building, Room 001

Times: **Registration and light dinner** – 5:45 PM, (Sandwiches and salads), \$10 for members, no charge for students
Presentation - 6:30 PM

Speaker: Keith Black, Powell Trachtman Logan Carrle and Lombardo, King of Prussia.

Mr. Black will discuss the status of corporate pension plans and proposals to improve the viability of these plans.

Call Lana Vernati at Villanova University (610 519 4980) by October 31 to make reservations.

The SR-71 An Engineering Marvel
January 31, 2006
Speaker – Colonel Richard Graham
Villanova University, Villanova, Pa.

Location: Villanova University, CEER Building, Room 001

Times: **Registration and light dinner** – 5:45 PM, (Sandwiches and salads), \$10 for members, no charge for students
Presentation 6:30 PM

Speaker: Colonel Richard Graham, Retired

Colonel Graham will discuss the operation and performance of the SR71 Blackbird, one of the most remarkable aircraft ever flown.

Call Lana Vernati at Villanova University (610 519 4980) by January 27 to make reservations.

See page 2 for more information on these presentations.