



Washington DC Section Newsletter December 2009



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MULTIFUNCTIONAL DESIGN STRATEGIES FOR BODY ARMOR – DR. AMIT BAGCHI 6:30 – 9:00pm, Thursday, January 14, 2010

Place: SAIC
4001 North Fairfax Drive, Suite 175
Arlington, VA 22203

Pizza & soda will be served. Front door is locked after 5pm. 24-hr security guard will admit attendees to conference room. Free street parking after 6pm.

Body armor design has gone through a number of iterations in the last 50 years, from protection against blunt impact and ballistics to protection against blasts and IED explosions. The presentation will outline US Naval Research Laboratory's (NRL) recent work on developing design methods and generating computational supporting data to meet performance objectives for body armor.

Recent techniques developed in NRL can be used to address thermal management in body armor design and the NRL instrumented surrogates are useful for blast dynamic response characterization. NRL has also been exploring new ways of designing personal protective equipment by combining comfort and protection for the war-fighter.

About the Speaker

Dr. Bagchi has been leading research in personal protective equipment at US Naval Research Laboratory as Staff Scientist in the Multifunctional Materials Branch, developing new materials and systems for body armors, and test methods and simulation models for characterizing personal protective equipment. Prior to NRL, Dr. Amit Bagchi was a faculty member at The Ohio State University and Clemson University, a lead R&D staff in automotive industry, and most recently a Program Manager at the National Institute of Standards and Technology. **(Continued on Page 2)**

ASME Salutes Space Exploration at 2009 IMECE



T.K. Mattingly addresses audience at 2009 IMECE Keynote Address

With a lineup of notables in the field of Space Exploration in attendance, ASME officially launched the 2009 International Mechanical Engineering Congress & Exposition under the theme "Space Exploration: Commemorating the Past, Envisioning the Future" in Orlando, Fla.

This year's Keynote Address was delivered by veteran Apollo and Space Shuttle astronaut T.K. Mattingly. Mattingly, who was originally scheduled to fly on the Apollo 13 until he was exposed to the measles, was one of ground personnel who helped guide the astronauts on that troubled moon mission to safety.

"Technical competence, technology, all those things are important," Mattingly said. "But it's the systems engineering part of this, the discipline that lets us do complex, challenging things — and actually make them work — that was the human endeavor. We use fancy computers, and software and analysis and all kinds of stuff. And that won't lead you anywhere unless you have that human connection where people work together and actually communicate and accurately exchange information."

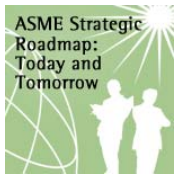
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Dr. Bagchi received his undergraduate degree from Indian Institute of Technology, MScE from University of New Brunswick, Canada, and PhD from Carnegie Mellon University, all in Mechanical Engineering. He has over 35 peer reviewed publications and two US patents. He is a member of Sigma Xi Honor Society, senior member of SME and NAMRI, and Fellow of ASME.

REGISTRATION: To register for this event, call the ASME Washington Section Executive Secretary, Andrea Gironda, at (703) 489-9503 or email her at agironda@verizon.net by January 8, 2010.

Strategic Roadmap on the Web



Over the course of the past year, ASME’s Board of Governors has identified three critical areas where the organization is poised to leverage the expertise of its members—as well as its rich and diverse products, services, and programs—to play a leadership role on matters of global impact.

The three priorities are energy, global impact, and engineering workforce development. To keep up-to-date on projects related to each of these initiative areas, a Web page that will serve as a repository of up-to-date information on activities in each of the areas has been created. It also includes related articles and position statements.

The web page can be accessed directly at <http://strategy.asme.org>, or through asme.org, memagazine.org, or asmenews.org.

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Before Mattingly took the stage, ASME President Amos Holt presented the ASME President’s Award – created in 1998 to recognize significant contributions to the engineering profession – to the crew of the famed Apollo 11 lunar mission. The presentation recognized the 40th anniversary of the mission and lunar walk.

Apollo Astronaut Buzz Aldrin, who was on hand to accept the award credited previous lunar programs, acknowledged the important of the Mercury and Gemini programs, which preceded the Apollo landing.

“We can’t disregard the first two flights that didn’t land, that paved the way for Apollo 11 to be able to land,” said Aldrin.

Later in the session, Executive Director Tom Loughlin introduced a video featuring ASME member and Mission Specialist John “Danny Olivias, who flew aboard the Space Shuttle Discovery in September with a commemorative ASME patch.

Accepting Nominations for the ASME Old Guard Early Career Award \$5000 Cash up for Grabs!

The Old Guard Committee honors ASME members that have made great strides in the engineering profession, community and the work of the Society by sponsoring the Early Career Engineer Award.

Eligibility

To first be eligible, you must be a current ASME member and have earned a baccalaureate degree in mechanical engineering or MET between years Feb. 1, 2004 – Feb. 1, 2006.

Prize

A Grand Prize of \$5000 CASH will be awarded to one recipient, including a prepaid life ASME membership (valued at \$3000).

Nominate an Early Career Engineer

Learn more about the selection criteria and how to nominate a friend or colleague today at <http://files.asme.org/asmeorg/Communities/EarlyCareer/8026.pdf>.

All nominations must be received by Monday, Feb. 1, 2010 - *Act Now!*

Learn more, Go further. It's That Simple!

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ONLINE DEGREES:

- Energetic Concepts
- Fire Protection Engineering
- Nuclear Engineering (New in 2009)
- Project Management
- Reliability Engineering
- Sustainable Energy Engineering (New in 2009)

CORE COURSES:

- Renewable Energy Applications
- Energy Conversion I: Stationary Power
- Energy Conversion II: Mobile Power
- Environmental Risk Analysis
- Advanced Fuel Cells and Batteries
- Photovoltaics: Solar Energy

ELECTIVE TRACKS:

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- Energy Systems
- Reliability Engineering

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From the ASME President



At this mid-way point through our program year, I'd like to ask you to measure ASME's success on its vision: to be the essential resource for mechanical engineers and other technical professional throughout the world, for solutions that benefit humankind. As part of that measure, consider ASME's impact on the high-end technical knowledge base, as it is demonstrated through its service to industry, so that industry can do what it does best while remaining at the forefront of technological innovation.

ASME is asking its volunteers to create and nurture an engineering culture that is open to breakthrough technologies and new business models. To process these ideas efficiently, we have just launched an interactive ASME IdeaPort online, which was developed through the efforts of the Strategic Management sector and the Breakthrough Innovation Committee. This IdeaPort will help ASME process new-growth programs, from their exploration stages through incubation and implementation, and through to their assessment phases. New growth programs are generally high-risk initiatives that take 3 to 6 years. The ideas come from you the members. Learn how you can participate online at <http://submissions.asme.org/ideaport/>

Examples of this year's projects include the Base of Pyramid workshop that explores potential engineering development in the areas that represent the needs of more than 4 billion people who live in acute poverty. A report released this past June provides an overview of the Base of Pyramid market, the economic value it generates and its dynamics and driving forces.

To be "open" means to be able to approach our conversations as equals in a highly diverse community of engineers. It means we must listen well, give ourselves space to explore our disagreements, and find alternatives and common ground so that we can move forward together. It's a challenging, ongoing effort to bridge the gaps we find, as we strive to find common ground with our collaborative partnerships and to participate fully in growth markets. We are trying to make a good fit between what is profitable for ASME and what the world needs.

ASME's legacy serves us well. We've been celebrating the 125th anniversary of ASME standards, this year, which has ASME recognized worldwide for engineering excellence, reliability and safety. We have a history of education, research and advocacy that places ASME's reputation in the forefront of technological advancement and knowledge sharing. And it is technical knowledge that enables ASME's current projects and strategies to resonate throughout the world.

Last month at the 2009 ASME Congress, I mentioned that I often offer engineers a story about a horse and its rider as a metaphor for the organization and its leadership. And if ASME is the horse, then the rider is you, the volunteer.

ASME is working the horse this year with a strong commitment to its strategies, and with renewed efforts at operational efficiency, such as improved reporting structures and assessments on how it aligns resources to strategic goals.

It is a pleasure to see how far we've come to achieving our goals, and I look forward to my remaining months as president. Thank you for all your support. I'd like to thank the Board of Governors and others whose efforts over the years continues to work this horse into excellent condition.

Best holiday wishes,

Amos E. Holt,
President



Member Savvy

The Value of ASME Membership



This Month's Spotlight: ASME Membership New Year's Resolutions

Dear Members,

Many of us use this time to make our New Year's resolutions. I confess to not always keeping mine, but I respect the process of reflecting on the previous year and on the power of setting goals for the upcoming one. As we bid *adieu* to 2009, I'd like to share my musings on the last 12 months at ASME, and give you a preview of some of the things ASME has planned for 2010.

Here at ASME, 2009 was an exciting year:

- We celebrated the 125th Anniversary of ASME Codes & Standards, recognizing the role that ASME plays in technological progress, safety and service to the industry and government
- Significant progress was made on our three strategic priorities -- Energy Grand Challenge, Engineering Workforce Development and Global Impact. We will continue these efforts in 2010.
- Improvements were made to some of the membership benefits you've come to enjoy, including new content within the online career center and for the popular, members-only e-Library, we are making it easier than ever to access and use the 75 technical books and interactive tools
- Celebrating our 50-year partnership with Marsh and New York Life, ASME continued to offer members like you the best suite of personal and professional insurance products at some of the lowest premium rates available on the market today.

I truly believe that 2010 will be a banner year for ASME and specifically for our members. During the coming year, one of my personal goals is to improve the way members engage with ASME and ASME engages with you. A few highlights of what we have planned include:

- www.asme.org, our society web site, will begin to undergo a complete transformation. When launched, the new [asme.org](http://www.asme.org) will be a significantly more useful and engaging site to better meet your technical information, networking and career needs.
- Engineering for Change (engineeringforchange.org) is being designed as a technically advanced online environment that enables engineers from all disciplines to work virtually with non-profit organizations and other experts. The goal of engineeringforchange.org is to create solutions for fundamental quality of life challenges such as access to clean water, electricity and safe sanitary conditions that plague underserved communities throughout the world.
- We are excited to have strengthened our partnership with Engineers Without Borders (EWB-USA). In the coming months, you will have more opportunities to get involved, participate on projects that are making the world safer, cleaner and better. We are planning some dedicated Membership activities that I know you'll want to know about!

ASME continually strives to improve the value you receive in exchange for your Membership dues. We are working hard to ensure your complete satisfaction and will send out a Member survey in the spring. My goal is for ASME to achieve the highest satisfaction scores (9's and 10's) from you. If you ever feel we don't deserve those scores, please let me know why.

As always, **thank you** for your continued loyalty to ASME and for your support of the engineering profession. Please feel free to drop me a line at membership@asme.org and let me know how we can enhance your experience.

Happy New Year!

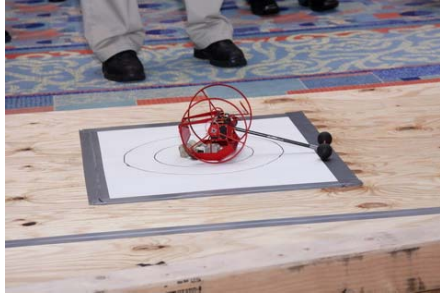
Mike

Michael Kreisberg

Director, ASME Membership Development

Texas Tech University Student Victorious in Design Competition at 2009 Congress

Adam Doyle, representing Texas Tech, took top honors over sixteen other teams at this year's Student Design Competition "Mars Rocks" at the International Mechanical Engineering Congress & Exposition in Orlando, Fla.



Influenced by the success of the Phoenix Mars Lander's space exploration and soil sample retrieval, this year's participants were charged with the task of designing a vehicle that would retrieve rocks and bring them to a designated spot.

Doyle designed a radio-controlled rock collector that best completed the tasks with a lightweight design.

Student teams from Minnesota State at Mankato and the University of Toronto finished second and third, respectively.



Don't Miss Your Opportunity!

Looking for a new adventure at ASME? Need a volunteer to help your group get on track? If you answered "yes" to either of these questions, the Volunteer Opportunity Bulletin Board (VOBB) could help. The VOBB is the one-stop online resource for those interested in finding open volunteer positions and groups needing enthusiastic volunteers for their ASME local, District and/or international level committees. As a tool designed to help ASME leaders promote and fill volunteer positions throughout the society, the VOBB opens the door to new opportunities.

To learn more about the VOBB, posting an online position or filling a posted position, go to <http://volunteer.asme.org/vobb/> or contact Ty Booker at booket@asme.org.

22nd Annual Bioprocess Technology Seminars and Exhibition Focus on New Insights and Real World Applications

The 22nd Annual Bioprocess Technology Seminars and Exhibition, to be held June 14-16, 2010 in Montreal, will feature seven seminars and a special new workshop – all exploring the theme of "New Insights and Real World Applications." The event is intended to provide attendees with the chance to learn practical strategies and techniques from more than 30 leading industry experts who will discuss the latest topics related to the design and operations of today's bioprocessing facilities.

The event will comprise seven two-day seminars, *Design and Operation of Clean Utilities for the Bioprocessing Industry*, *Process Modeling and Simulation in the BioPharmaceutical Industry*, *Bioprocess Equipment Design and Facility Layout*, *Bioprocess Fermentation & Cell Culture Scaleup and Design*, *Bioprocess Technology Implementation*, *Bioreactor and Fermenter Design*, and *Bioprocess Purification Process Development*. Attendees are eligible for PDHs upon completion of the seminar.

This year, the 22nd Annual Bioprocess Technology Seminars and Exhibition will include a new feature, the *Applications of ASME BPE (Bioprocessing Equipment) Standard Workshop*. Led by ASME BPE experts, this session will acquaint attendees with current trends happening in the biopharm industry and show them how the ASME BPE standard is used to address these trends. The workshop, which will be held on June 16, also will include hands-on training to demonstrate the applications of the BPE standard in the development, design and operation of bioprocessing facilities.

For more information, contact Jennifer Delda, program manager, by e-mail at DeldaJ@asme.org, or visit www.asmeconferences.org/bioprocess09

PPC Online – Make the Jump from Engineering Graduate to Business Professional!

Gain Knowledge that will help you succeed as a professional in the engineering workplace with this comprehensive online series of 49 self-learning modules.

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Global Engineering Management Conference (GEMC) Provides Hands-on Experiential Learning Opportunities for Engineering Managers

The challenges facing mid-career engineers today require a balanced portfolio of technical and soft skills. In response to this need for specialized training, the ASME Management Division has developed the Global Engineering Management Conference (GEMC) in conjunction with an Advisory Board of industry leaders. With a focus on knowledge transfer from best-in-class organizations and an emphasis on hands-on experiential learning, the GEMC will provide unique insights into what engineering managers need to compete in an increasingly demanding global market place. Attendees will benefit from technical panels discussing critical subjects including, but not limited to:

- Global Manufacturing & Management Challenges
- Crisis Management & Business Recovery
- Design & Development of Sustainable Energy
- Managing & Developing Engineers in Large Corporations

The GEMC includes a host of activities, such as an exclusive tour of the Texas Instruments LEED Manufacturing Facility and a behind the scenes engineering tour of the new Dallas Cowboys stadium. Furthermore, attendees will be able to earn continuing education unit (CEU) accreditation through tutorials led by Dr. Jerry Westbrook, past president and executive director of the American Society for Engineering Management (ASEM).

The GEMC will be held on April 11-14, 2010 at the Fairmont in the heart of downtown Dallas, Texas. Visit our website for further information and to check out the new GEMC Interview Series which includes an insightful interview with Dr. Westbrook at <http://www.asmeconferences.org/gemc10/>

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