



# Washington DC Section Newsletter November 2014



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[https://community.asme.org/washington\\_dc\\_section/default.aspx](https://community.asme.org/washington_dc_section/default.aspx)

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## Local Section News

Have any ideas for events or volunteer opportunities that you would like to do? Feel free to offer up your suggestions at anytime! The ASME Board is always looking for additional events throughout the year. Please submit any ideas to Bethany Springer at [bspringer@asme.org](mailto:bspringer@asme.org).

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## Local Section News

### ASME OCTOBER EVENTS



#### RECEPTION AT THE EMBASSY OF ITALY

**Date:** Tuesday, October 21, 2014

The Washington Section had a talk and reception at the Embassy of Italy on the evening of Tuesday, October 21. The Embassy is located at 3000 Whitehaven Street NW, near the US Naval Observatory in Washington, D.C.

We were joined at this event by the D.C. Society of Professional Engineers, the Washington Alumni Chapter of Tau Beta Pi, the Association for the Advancement of Cost Engineering – National Capital Section, and SAVE, the Society of Value Engineers.

At the meeting, we learned about technology in Italy from Maria Fabrizia Buongiorno, Director of Technology Research and Head of Space Observations Infrastructures at the Italian National Institute of Geophysics and Volcanology. She is an expert in geophysics and remote sensing, having done her doctoral dissertation on using LANSAT images for studying structural geology. She told us about her program in earthquake and disaster management and protection of elements of cultural heritage. The program has set up 300 stations for sensing seismic effects. This program will be helpful in preparing for earthquakes that could threaten the population as well as affecting sites of Italy's cultural heritage.

#### BRIAN PELLETIER – ADVANCED UNDERSEA SYSTEMS PROGRAM – NAVAL SEA SYSTEMS COMMAND (NAVSEA)

**Date:** Thursday, October 23, 2014

At the October 23<sup>rd</sup> ASME Dinner meeting, guests were provided an overview of the recently completed overhaul of the nation's deepest diving research submersible, DSV ALVIN. Mr. Brian Pelletier, the Principle Assistant Program Manager for Systems Acquisition within the Advanced Undersea Systems Program Office at Naval Sea Systems Command, presented the design changes and the challenges that had to be overcome to re-certify the vehicle and resume manned operations. The primary purposes of the redesign was to complete design modifications that will allow the vehicles operating depth to be increased from 4500 meters to 6500 meters in the future, increase the field of vision from 180 degrees to 245 degrees, and increase reachable workspace from 60 ft<sup>2</sup> to 114 ft<sup>2</sup>. The redesign of the hull resulted in a significant increase in weight, from 7,140 lbs to 11,158 lbs.

## Local Section News

### ASME OCTOBER EVENTS, CONTINUED

#### BRIAN PELLETIER – ADVANCED UNDERSEA SYSTEMS PROGRAM – NAVAL SEA SYSTEMS COMMAND (NAVSEA)

This necessitated changes to the amount of syntactic foam required for buoyancy and the support ship handling system for weight handling capacity. Mr. Pelletier summarized the effort and fielded questions from the members in attendance. He noted that one of the most significant contributors to the success of the project was the use of modern finite element analysis (FEA) tools, which were not available 50 years ago when ALVIN was originally designed and put into service.



#### CAREER PANEL EVENT – UNIVERSITY OF MARYLAND

**Date:** Wednesday, October 29, 2014

In conjunction with the University of Maryland, College Park ASME Student Section, a Career Panel Event was held on October 29<sup>th</sup> to provide students with the opportunity learn from and network with industry leaders. In a casual atmosphere, J. Dan Simpson (BAE Systems), Steve Unikewicz (Alion Science & Technology), Andrea Johnson (Nuclear Regulator Commission), and Barney Gorin (GoVentures, Inc) provided career advice and words of wisdom based on their personal experiences. The diverse background of the panelists and the energy they brought to the event allowed for engaging conversation through interesting perspectives. In this setting, students were permitted to freely ask questions about overcoming challenges, technical skillsets, and career paths. Before and after the event, panelists and students networked with one another in one-on-one conversations allowing for more specific questions and more personal exchanges.

Panelists left this event feeling proud to have connected with the next generation of engineers, and to give back to a local university. For some, the University of Maryland was their alma mater and felt a wave of nostalgia from coming back to the engineering department for this event. The students, who also brought a great deal of energy, learned much from the panelists. However, the most emphasized takeaway was that their college education provides only a foundation for them as engineers and it is up to each student to continue learning throughout their careers no matter what field or industry they enter.



## Upcoming ASME Conference



This year's ASME International Mechanical Engineering Congress and Exposition in Montreal, Canada will include a new addition to its program of special events – the Invited Industry Presentations. The three new sessions, which will take place Nov. 18-20, will feature executives from three Montreal-area industry powerhouses: Rolls-Royce, Pratt & Whitney, and Bombardier.

The 2014 Congress will be held from Nov. 14-20 at the Palais des Congres convention center in downtown Montreal.

This new speaker program was spearheaded by George Kardomateas, PhD, the technical chair for the 2014 Congress who sees the initiative as a way to encourage more engineers from industry to attend and participate in the conference.

For more information, please see: <http://www.asme.org/about-asme/news/asme-news/three-leaders-industry-speak-2014-congress>

## Careers:



### **Mechanical Engineer/Mechanical Technician**

Must be experienced with HVAC, Plumbing, and Building Systems. Must be able to assist Engineers/Coordinators in the supervision of engineering, budgeting, and scheduling for a Value Engineering (VE) workshop. License and previous VE workshop experience are a plus, but not hard requirements for the position. Cost estimating skills will be needed.

### **Job Qualifications**

- B.S. in Mechanical engineering from an accredited college or university is preferred.
- Registration as a Professional Engineer is preferred
- Twelve years' experience directly related to the position, eight years of which is subsequent to the completion of the minimum educational requirements
- Six years must have been spent in significant engineering or project supervisory assignments involving independent decisions and comparative responsibility. Experience must have included accountability for project or project area engineering activities.

### **Additional Requirements**

- Evidence of good potential as shown by satisfactory growth in responsibility and a good record of achievements and accomplishments in previous positions.
- Proficiency in applying advanced engineering techniques and/or the ability to plan, organize, and supervise the work of one or more projects.
- Ability to lead a team effort, get the job done, and foster interest and enthusiasm on a project
- Effective oral and written communication skills.

### **Additional assignments anticipated**

- EOE

For more information, please see their website [www.belconinc.net](http://www.belconinc.net).

## Visit the ASME Public Policy Education Center for the Latest News & Developments!

For the latest news and developments on how the 2014 election will impact ASME and our members for the next two years, please be sure to visit the ASME Public Policy Education Center (PPEC) at <http://ppec.asme.org/>. Announcements about the 2015-2016 Federal Government Fellowships and WISE Internship are posted to each of the issues' webpages as well.

Please feel free to circulate this link to colleagues to inform members and non-members of this new resource!

With the Republican take-over of the Senate, more action is anticipated to take place on the Senate Energy & Natural Resources Committee and votes in the Senate on energy-related issues in general. There will be many more opportunities for engagement in the new year as legislation is revamped / re-introduced.

## Program Lineup For This Year

The Executive Committee met in July 2014 to formulate this year's program and continues to finalize and organize events to serve the Washington, DC Section:

<b>Date</b>	<b>Event</b>
October 21 <sup>st</sup>	Reception at the Embassy of Italy
October 23 <sup>rd</sup>	Submarine Safety Event
October 29 <sup>th</sup>	Career Panel: University of Maryland, College Park
November/December	Library of Congress Tour
TBD	Joint Event Tour with the Baltimore Section
January	Smithsonian Air & Space Museum Tour
February 25 <sup>th</sup>	DCCEAS Proclamation Luncheon
February 28 <sup>th</sup>	Discover Engineering Day
February 28 <sup>th</sup>	DCCEAS Awards Banquet
March	ASME Washington Fellows Dinner
April	ASME DC Awards Dinner
May	Young Engineers Event
June	Family Event

## Social Media: Washington, DC Section

Make the ASME Washington, DC Section part of your social media life! Feel free to connect with us through Facebook and Twitter for updates on events and to post suggestions.

### Like us at:

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## Newsletter Available Online!

The Washington, DC Section Newsletter is available online at:  
[https://community.asme.org/washington\\_dc\\_section/default.aspx](https://community.asme.org/washington_dc_section/default.aspx)

For comments or questions, please contact our Newsletter Editor, Bethany Springer at [bspringer@asme.org](mailto:bspringer@asme.org).



## Engineering Corner



### Go Fly a Trike

**By Eric Butterman**  
**October 22, 2014**

Some call them "ultralights," others "trikes," depending on weight and passengers. But most who watched *Fly Away Home* with Jeff Daniels and Anna Paquin just saw how exciting this type of flying can be. Abid Farooqui, who had been co-owner of Evolution Trikes for years and has since started SilverLight Aviation, says his full-time crew, which includes two mechanical engineers, believes the challenges to designing are still there.

View Full Article at: <https://www.asme.org/engineering-topics/articles/aerospace-defense/go-fly-a-trike>

### Construction Materials Made from 'Shrooms'

**By Michael Abrams**  
**October 22, 2014**

Architect David Benjamin walked into the offices of Arup, a structural engineering firm, with a brick in hand. It wasn't your typical rust red, burnt clay brick. Instead, it was made largely of mushroom mycelium, grown on agricultural waste, produced by a company call Ecovative. Benjamin wanted to discuss what might be done with such a brick.

View Full Article at: <https://www.asme.org/engineering-topics/articles/construction-and-building/construction-materials-made-from-shrooms>

### Getting the Salt Out

**By David Chandler**  
**October 21, 2014**

The boom in oil and gas produced through hydraulic fracturing, or fracking, is seen as a boon for meeting U.S. energy needs. But one byproduct of the process is millions of gallons of water that's much saltier than seawater, after leaching salts from rocks deep below the surface.

The method they propose for treating the "produced water" that flows from oil and gas wells throughout their operation is one that has been known for decades, but had not been considered a viable candidate for extremely high-salinity water, such as that produced from oil and gas wells. The technology, electrodialysis, "has been around for at least 50 years," says Lienhard, the Abdul Latif Jameel Professor of Water and Food as well as director of the Center for Clean Water and Clean Energy at MIT and King Fahd University of Petroleum and Minerals (KFUPM).

View Full Article at: <http://newsoffice.mit.edu/2014/remove-salt-fracking-water-1021>

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A. JAMES CLARK  
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The [Engineering for Change Webinar Series](#) provides the opportunity to learn from and interact with creative thinkers and leaders who are developing new technologies and initiatives that contribute to solving humanitarian engineering problems. This live, interactive, monthly series promotes emerging ideas and connects a community of passionate engineers who want to improve quality of life around the world. Attending is easy and free: register at least one hour before each webinar and you'll receive a participant link prior to the event. Can't attend? View previously recorded webinars online and on E4C's YouTube channel. Visit [www.engineeringforchange-webinars.org](http://www.engineeringforchange-webinars.org) to learn more and register for the next live event.



## ASME Mentoring Program

**Get valuable career advice from a mechanical engineering professional!**

The **ASME Mentoring Program** is designed to provide rewarding experiences that both mentor and mentee can learn and grow from. This is a unique opportunity for you to get career-guiding advice from an engineering professional with broader experience or more advanced skills. Benefit and learn from their real-life expertise, while sharing your own valuable insight and perspective!

Participating in the program is easy with our Web-based platform, made available through a partnership with WisdomShare™. Our targeted matching system will pair you with someone who can provide anything from general advice and a fresh point-of-view, to help identifying the right training or niche in mechanical engineering, or even assistance with finding a non-traditional career path.

The valuable insight you can gain by participating in the **ASME Mentoring Program** can have a positive impact on your career for years to come!

If you are ready for a most rewarding experience, please go to: <http://go.asme.org/mentoring> to become an **ASME Mentor or Mentee**.



The annual ASME International Mechanical Engineering Congress and Exposition is a premier global conference that focuses on today's technical challenges, research updates and breakthrough innovations that are shaping the future of engineering.

"Engineering for Global Development" Chosen as Theme for the ASME 2014 Congress  
Engineers have long contributed to human progress by solving complex challenges on a global scale. Many of these challenges are found in developing and emerging markets, particularly as they relate to critical infrastructures, such as access to energy, clean water, effective sanitation and healthcare. Rapid population growth and the global pursuit of sustainability are creating new demands for engineers who can design products, services and infrastructure to improve the quality of life for the billions living in poverty. Engineering for Global Development (EGD), a program area within ASME, enhances the multidisciplinary research and collaboration needed to establish the delivery mechanisms for emerging and appropriate technologies. IMECE 2014 will present a platform that focuses on the critical research being conducted in global development and the positive impact it is making around the world.

Registration is now available: <http://www.asmeconferences.org/Congress2014/ConfRegistration.cfm>



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