



# INCOSE Chesapeake Chapter

International Council on Systems Engineering

October 2014

## E-Newsletter

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### President's Point of View

#### Stand up and be heard



Mr. Erik DeVito - INCOSE  
CC President  
[erik.devito@incose.org](mailto:erik.devito@incose.org)

On September 26th we sent out two extremely important surveys via email. The first one, the “2014 INCOSE Chesapeake Chapter Member Survey” will allow you with just a few clicks of your mouse (ok, more than a few) to provide us with valuable insight into the makeup of our membership and assist us in determining what’s working and what’s not working with regard to chapter activities. The second, the “INCOSE Chesapeake Chapter’s Programs Survey” is our effort to capture the ideas and opinions of our membership in an

attempt to offer a programs schedule that continues to be compelling and informative. We’ll be exploring new topics for both our monthly dinner lectures as well as the Saturday workshops that we offer.

I cannot stress enough the importance of these two surveys. These will be invaluable resources to help us maintain and further our status as one of the top chapters in the world. Please take the time to answer both and provide us any comments to help us serve you better. Both surveys will close out on October 6th. If you haven’t received one or either of them then the e-mail could have gone into your spam folder. Check it out and make sure it’s not there. If you still can’t find them please send an email to [communications@incose-cc.org](mailto:communications@incose-cc.org)

As I discussed last month we’re in the midst of our election cycle. The Chesapeake Chapter 2015 Elections will start on October 17th and conclude on October 31st. We’ll be sending these ballots to your email but until then please take a moment and check [here](#) to meet the candidates. We have a really strong slate this year filled with extremely

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This is the monthly newsletter for INCOSE Chesapeake, a local chapter of INCOSE International. We are a not-for-profit organization dedicated to providing a forum for professionals practicing the art and science of Systems Engineering in the Northern & Central Maryland & Southern Pennsylvania area.



The Chesapeake Chapter is always looking for volunteers to speak at our upcoming meetings! Please contact our 2014 Programs Director, [Dr. Alex Pavlak](#), if you would like the opportunity to speak or can recommend someone.

qualified and competent candidates. The positions up for election this year are President-Elect, Treasurer, Programs Director, and Communications Director. As always besides the candidates we've offered there will be the opportunity to provide a write-in candidate of your choice. Like the surveys please take a few moments and fill out a ballot. This is your chance to stand up and be heard.

With that aside, I think you'll enjoy our dinner lecture this month. Kathy Straub, Bill Fitzpatrick, and Amy Bayes of JHUAPL will provide us with insight into one of JHU's newest area of concentration in Systems Engineering education. Human systems engineering is a comprehensive program for considering the requirements and constraints of humans as part of an overall system solution. As always our lecture will take place on the 3rd Wednesday which falls on October 15th in the Parsons Auditorium at JHUAPL. Find out more [here](#)

One more additional note, we'll be starting to advertise our 2014 Chesapeake Chapter Holiday and Awards Dinner. The event will take place on December 10th at the Engineer's Club. Mark it down on your calendars and get ready for a festive event that will allow all us to take a break and celebrate our accomplishments.

I'm always interested to hear from our membership so please feel free to contact me by email [erik.devito@incose.org](mailto:erik.devito@incose.org)

Regards.

*Erik DeVito - INCOSE Chesapeake Chapter President*

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## [15 Oct \(6:00pm to 8:00pm\): The Johns Hopkins University Human Systems Engineering Program](#)



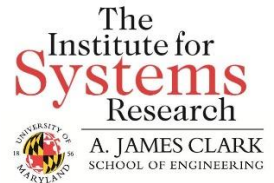
*Kathy Straub, Bill Fitzpatrick, and Amy Bayes of JHUAPL*

**Presentation:** This lecture addresses the three major components of a system: hardware, software, and humans. A total systems approach that considers all three components and the complex interactions among them has been recognized as essential by government and industry organizations responsible for system development and operation. Human systems engineering is a comprehensive program for considering the

requirements and constraints of humans as part of an overall system solution. The Johns Hopkins University Engineering for Professionals (EP) Human Systems Engineering concentration trains students in the

The Chesapeake Chapter of INCOSE is proud to recognize the following organizations for sponsoring our endeavors to expanding the understanding and appreciation of Systems Engineering in the local area:

Booz | Allen | Hamilton



human systems integration domains and their interdependencies as well as provides additional material related to general human systems engineering. Students gain a deeper understanding of how the appropriate application of human systems engineering adds value to systems.

### Biographies:

**Kathy Straub**, a Senior Human Factors Scientist at JHUAPL and an instructor at JHU Whiting School, splits her time between researching gamification strategies to enhance cyber warrior performance and training at JHAPL and running a private sector, consumer research and interaction design consultancy. She holds a PhD in Brain and Cognitive Sciences from the University of Rochester.

**Bill Fitzpatrick**, a Senior Human Factors Scientist at JHUAPL, has extensive experience combining his knowledge of human capabilities/limitations with human factors tools and techniques in the design and development of human machine interfaces. He holds a MS in Systems Engineering from Embry Riddle Aeronautical University.

**Amy Baves**, a Human Systems Engineer at JHUAPL, specializes in training systems and developing tools and visualizations to enhance learning. She holds a MA in Education from University of Maryland Baltimore County.

[>>>Check out the Event Flyer Here<<](#)

Go to [www.incose-cc.org/registration/](http://www.incose-cc.org/registration/) to register

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## 19 Nov, (6:00 to 8:00): The Intersection of Neural Prosthetics and Advanced Robotics



*Mike McLoughlin, Chief Engineer for the Research & Exploratory Development Department*

**Presentation:** Until recently, options for those who have suffered upper limb loss, through amputation or neurodegenerative disease have been very limited. For example, upper extremity amputees frequently decline to wear a conventional prosthetic due to the very limited functionality. Recent integration of advances in neuroscience, robotics and autonomy are now opening new options for neurally controlled prosthetics and assistive robots. Beyond prosthetics, the intersection of advances across multiple technical disciplines will provide the



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This Newsletter is to serve our members and is open to all for contributions. Do you have an interesting idea for an article? A review of a new book related to engineering? [Let us know](#). We'd love to hear about. It may wind up in a future issue of our Newsletter.

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ability to intuitively control and interact with complex robotic systems, fundamentally changing our interactions with the machines around us. In this talk we will discuss some of these advances, show some examples of recent advances and discuss some of the challenges to the systems engineer and technical manager.

**Biography:** Mike McLoughlin is the Chief Engineer for the Research & Exploratory Development Department. He leads world-class teams with a broad range of disciplines to develop, integrate, and transition innovative systems using advanced biomedical technologies to meet the needs of the military. In 2009, Mike assumed leadership responsibilities for Defense Advanced Research Projects Agency's (DARPA) Revolutionizing Prosthetics Program (RP) at JHU/APL and is leading efforts to transition use of RP technologies to human subjects. His technical experience includes development of rapidly emerging technologies and sensor systems, technology transfer, program management, signal processing, applied engineering and technology development, aerosol science research, and microbiological laboratory analysis.

[>>>Check www.incose-cc.org for details<<](http://www.incose-cc.org)

Go to [www.incose-cc.org/registration/](http://www.incose-cc.org/registration/) to register

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## Welcome to the INCOSE BoD 2015 Election.

This is your opportunity to cast your electronic vote to elect four new members to the Board of Directors. Your vote must be submitted by 31 October. The candidates are:

- President-elect (John Boccio or write-in),
- Treasurer (Kent de Jong or write-in),
- Programs Director (Jeffery Banks, Bob Berkowits, or write-in),  
and
- Communications Director (Patrick Williams or write-in).

Together with the incumbents on the BoD, these four people will form the new INCOSE Chesapeake Chapter Board of Directors. They will make the choices that differentiate our chapter from all of the others. A list of primary roles and responsibilities can be found in the [2014 INCOSE-CC Operating Plan](#).

**Ballots will be sent out on 17 October, 2014**

If you haven't received the ballot e-mail by then, there may be many reasons:

1. The e-mail could have gone into your spam folder. Check it out and make sure it's not there. Subject: Official Election Ballot for 2015 Chesapeake Chapter Board of Directors
2. Some e-mails are being returned because of "Non-existent address". This will happen when the INCOSE records don't show you've changed companies and do not have that e-mail address any longer.
3. Some e-mail are being "Blocked". Most likely because of a work firewall.

If you haven't received the e-mail with the Official Election Ballot for the 2015 Chesapeake Chapter Board of Directors then please contact the head of the Election Committee Chair, [Dr. William Ewald](#). Provide an accurate e-mail address and we'll send you a ballot.

It's very important that every Chesapeake Chapter member vote for the candidate of their choice.

The timetable for the election process is:

<i>Schedule</i>	<i>Activity</i>
17 October 2014	Ballot's e-mailed to INCOSE-CC members
31 October 2014	Ballot Submission Deadline
19 November 2014	New officers and director announced
21 January 2015	New officers and director sworn in and installed

*Dr. William Ewald,*  
*Chair, 2015 INCOSE-CC Elections Committee*  
Questions? Contact [Dr. William Ewald](#)

## Meet the Candidates running for the 2015 Board of Directors.

### ***Running for President Elect***

**Candidate: John Boccio**



**John Boccio's Bio:** John is a Systems Engineering Sr. Manager with Vencore. He has 28 years of proven experience supporting the US Intelligence Community, Department of Defense and Federal/Civilian Agencies. John holds a bachelor's degree in mathematical sciences from the State University of New York at Binghamton and a master's degree in computer systems management from the

University of Maryland. John is an INCOSE ESEP, a lean six sigma certified black belt, and a basis of estimate subject matter expert. He has worked across the full spectrum of systems engineering including program and project management, architecture, design, implementation, quality management and engineering, measurement, and testing. He has twenty years of leadership experience. John has worked with the INCOSE Chesapeake Chapter Board of Directors since 2013. He currently works with the Treasurer regarding financial activities. John also works work the Communications Committee in terms of community outreach and poster management.

**John Boccio's Vision Statement:** As President Elect, I will enthusiastically assist our President and Past President in providing leadership serving our great and vibrant chapter. I will continue and expand the outstanding work of our current leadership in making our chapter a forum across academia, industry, and government for the presentation and exchange of forward thinking topics and ideas in the field of systems engineering. I will work to prepare our systems engineers for the many challenges facing our society that our integrated disciplines can work to resolve. I will also support our President and Past President to enable and enhance the liaison with other local INCOSE chapters and sister engineering organizations strengthening our united community.

### ***Running for Treasurer***

**Candidate: Kent de Jong**



**Kent de Jong's Bio:** Kent de Jong spends time working with students studying Systems Engineering at the University of Maryland. As a Lecturer in the Masters of Science in System Engineering program he enjoys conveying knowledge gained in 25 years of professional experience in Software and Systems Engineering prior to retiring from Sandia National Laboratories in Albuquerque, New Mexico.

In his career at Sandia, Kent worked on satellites, weapons, security systems, simulations, and information systems supporting several government and commercial customers. Departments of Energy, Navy, and Air Force customer as well as the National Center for Manufacturing Sciences afforded opportunities to build cool software, hangout with fun electronics, do exciting analyses, and learn project management from really great people.

Collaborations with these customers guided Kent toward research of requirements creation, elicitation, and management ... areas he found compelling and strangely attractive. During this study of requirements and their association with systems, Kent discovered INCOSE, where he found kindred spirits who believed a holistic approach to engineering of systems yields better results for customers and the public.

Before joining Sandia, Kent earned a Bachelor of Science in Electrical Engineering and a Master's Degree in Electrical Engineering from the University of Nebraska-Lincoln. To better serve his customers, Kent augmented his education with a Master's Degree in Finance from the University of New Mexico.

As a member of New Mexico's Enchantment Chapter of INCOSE, Kent earned his Certified System Engineering Professional credential prior to transferring to the Chesapeake Chapter.

**Kent de Jong's Vision Statement:** I am a strong believer in the mission of INCOSE and its efforts to be an international advocate for systems engineering principles and related disciplines. During my association with INCOSE, I've seen the organization significantly improve the practice of Systems Engineering and the public perception of the profession. Much of that improvement comes through membership growth, programs and influence of the individual chapters and their members.

Serving as Treasurer of the Chesapeake Chapter for nearly a year, I see my complementing the by maintaining an underlying foundation for that work which comes from sustaining the Chapter's financial strength. Through prudent fiscal management and systematizing the Chapter's financial activities, I assist other board members as we contribute to members' professional development and the Chapter's collaboration with industry, professional, and governmental organizations.

## ***Running for Programs Director***

### **Candidate 1: Jeffery Banks**



**Jeffery Banks' Bio:**Mr. Jeffrey Banks, CSEP is a Senior Systems Engineer at OPS Consulting, LLC, serving as Systems Engineering Technical Advisor (SETA) contractor for Department of Defense in Fort Meade, Md. His current role involves functioning as a lead systems architect for a Major System Acquisition (MSA) program within a department agency. His primary responsibilities include managing the design

development and sustainment of DoDAF compliant architecture products to support a variety system acquisition effort across the MSA program. Mr. Banks holds a Master's Degree in Systems Engineering from the University of Maryland Baltimore County (UMBC) and a Bachelors of Science degree in Electrical Engineering from and Capitol College. Mr. Banks interests include mentoring undergraduate engineering students at his alma-mater, reading, biking and traveling.

Mr. Banks has been a member of INCOSE for over 9 years. He's also been a member of the Modeling and Simulation Interoperability (MSI) and the SoS and Enterprise Modeling challenge teams within the INCOSE Model Based Systems Engineering (MBSE) working group for past 3 years. Mr. Banks is also a member of the Chesapeake Chapter's Programs Committee where he provided a wide range of assistance to the Programs Chair with the planning and implementation of several chapter events over past 2 years.

Mr. Banks also took on the lead role in establishing a SEP certification teaming agreement between INCOSE and his employer and is currently serving as the SEP coordinator with his organization. Additionally, Mr. Banks volunteered to be an exam reviewer for the INCOSE ASEP/CSEP exam update project currently in progress.

### **Jeffery Banks' Vision Statement:**

Mr. Banks vision for the INCOSE Chesapeake Chapter Programs Chair is to continue with the long standing tradition of delivering quality chapter programs such as the monthly dinners and speaker events, training workshops, the SEP Gala and Holiday Party. Mr. Banks intends to expand beyond these great programs by adding a new programs that would encourage more members participation. A few of these new programs include:

- Speaker panel series on systems engineering related topics of interest to the membership
- A quarterly "SE Networking (SENet)" social gathering at various establishments around the Baltimore Metropolitan Area

**Candidate 2: Robert Berkovits**





**Robert Berkovits' Bio:** Robert Berkovits retired from Northrop Grumman Electronic Systems in 2010. His expertise was in Electromagnetic Environmental Effects Engineer (E3) and avionics systems engineering, test and integration. His project responsibilities included systems requirements analysis, hardware design and test of land, sea, and airborne radar and ESM systems. At

Baltimore Electronic Systems division he worked on avionics for airborne platforms such as AWACS, E-2D, B-1B, P-8A and Apache. His prior Northrop Grumman experience was at Grumman Bethpage Integrated Systems division performing antenna coupled EMC analyses and the design of safety-of-flight tests on the A-10, EA-6B, A6, EF-111 and F14-D aircraft.

Prior to Northrop Grumman, his aerospace experience was with GTE Sylvania, IIT Research Institute, GE, and contractors to the USAF ES Div. at Hanscom AFB, Mass. His specialization was in: EM emission and susceptibility of equipment and systems, EMP, propagation link analysis, frequency management, mathematical modeling, MIL-STD-461 and 464, radiation hazards, lightning, grounding and shielding.

### **Robert Berkovits' Vision Statement:**

There are many unexplored topics in Systems Engineering that may be of interest to the INCOSE Chesapeake Chapter. As program chair I would expand the chapters exposure to the Systems Engineering aspects of:

1. Spectrum Engineering with regards to radar and communications systems from concept to experimental, developmental, test, deployment and logistics and upgrades.
2. All aspects of UAVs, military and commercial,
3. Environment, power generation, pollution and climate change.
4. Systems engineering of waste management.
5. Health systems and biomedical engineering developments.
6. Selected topics relating to systems safety and risk management.
7. Supportability disciplines and relationships between the disciplines such as: reliability, maintenance, logistics, human factors, systems and product safety and electromagnetic compatibility.

The chapter could also poll its members to see how many are interested in the various INCOSE working groups. The chapter could

also design a brief voluntary survey to get feedback from the members on each monthly meeting.

The chapter could explore more joint meeting invitations to other societies such as Systems Safety and IEEE

## ***Running for Communications Director***

### **Candidate: Patrick Williams**



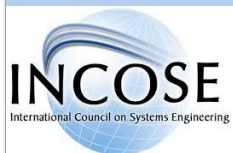
**Patrick Williams' Bio:** Mr. Williams has over 30 years of professional experience including 20 years of analytical and technical management experience supporting government programs. Mr. Williams has a BS in Engineering from the United States Military Academy at West Point, an MS in Operations Research from The George Washington University, and an ME in Environmental Engineering from the University of Maryland. He is a licensed Professional Engineer and holds CSEP and PMP certifications.

Mr. Williams started his career as an Engineer Officer in the US Army serving as a Platoon Leader, Company Executive Officer, and Company Commander. Toward the end of his 10-year Army career and later as a government contractor for BDM and TRW, he ran large-scale combat models for numerous programs to evaluate the efficacy of proposed weapons systems, and developed system dynamics computer models using commercial off-the-shelf software. As a Northrop Grumman contractor, Mr. Williams was the team lead for the investigation into the use of depleted uranium in the Gulf War, conducting and documenting hundreds of interviews and developing a comprehensive report for the public [www.gulflink.osd.mil](http://www.gulflink.osd.mil). He later learned and applied Six Sigma techniques for process improvement and was the technical lead on the Port Security Assessment program where he directed port stakeholder communications, subject matter experts who supported assessments with modeling and analysis, and the production of nine assessment reports. As a Lockheed Martin contractor, Mr. Williams was the principle analyst for the TSA Threat Image Projection Program where he developed an analytical process to produce monthly reports and improved on that process to cut analytical and report preparation time in half. Later, Mr. Williams managed requirements for a system baseline database and was the lead systems engineer for a technical task order consisting of 16 field engineers deployed around the world.

**Patrick Williams' Vision Statement:** As the Communication Director of the Chesapeake Chapter of INCOSE, I seek to facilitate the dissemination of information in a timely fashion, manage the chapter's website, and promote the Chapter within the community.

### **Upcoming Events and Announcements**

- **October 15th** Dinner/Lecture: JHU Human Systems Engineering Program
- **October 17th** Election Ballots Distributed
- **November 19th** Dinner/Lecture: The Intersection of Neural Prosthetics and Advanced Robotics
- Interested in Jobs Networking? Look [here](#)



Keep up with the latest news and events. Find out about our new Board of Directors. Explore our extensive library of previous lectures from our Monthly Dinner Meetings. Learn of the Benefits of Joining INCOSE. Check out Systems Engineering education in the local area. All this and more awaits you at our [INCOSE Chesapeake Chapter Website](#). For any comments or suggestions about this newsletter please e-mail our [President, Erik R. DeVito](#) or our [Communications Director, Oren Eisner](#). We value your feedback.

#### **Board of Director Officers, 2014**

- President: Mr. Erik DeVito
- Past President: Dr. William Ewald
- President Elect: Mr. George Anderson
- Treasurer: Mr. Kent DeJong
- Secretary: Mr. Mark Kaczmarek

#### **Directors at Large**

- Communications: Mr. Oren Eisner
- Programs: Dr. Alex Pavlak
- Membership Committee: Mr. Bob Lecorchick

**Please use the Forward email link below so we can invite your friends to join our mailing list. Thanks in advance.**

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