



# INCOSE Chesapeake Chapter

## International Council on Systems Engineering

INCOSE Chesapeake Chapter  
P.O. Box 535  
Laurel, MD 20725-0535

# E-Newsletter

January 2018

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### President's Point of View



Grace Crowder, PhD  
ASEP, President

Warm wishes for a Happy New Year to each of you! I am looking forward to continuing the many activities that have made the Chesapeake Chapter of INCOSE an Award-winning Chapter for many years. 2017 saw us continue with monthly dinner meetings and stimulating lectures, several short courses on timely topics, a tutorial on Soft Skills every Systems Engineer needs for success, Certification prep courses and co-sponsorship of the SEP exam as well as our famous SEP Gala at which we recognized and celebrated all Certified Systems Engineers and especially honored those who had recently achieved recognition as Certified Systems Engineers.

Many members of the Chesapeake Chapter traveled to Los Angeles in January 2017 to participate in the many working groups and other activities that comprise the INCOSE International Workshop. And quite a few of us were in Adelaide in July at the INCOSE International Symposium. Highlights of each of these international gatherings are in the last year's newsletters. Back in Maryland, the student division that was re-launched at UMCP in the Fall of 2017 is an exciting new area of growth! The year ended with a wonderful Holiday Party at the Engineers Club in Baltimore where we had the opportunity to recognize and thank our many sponsors and volunteers who made 2017 the year it was.

It is worth repeating several awards garnered in Adelaide by the Chesapeake Chapter and its members: two of our Chapter members were inducted into the Institute for Technical Leadership: Zane Scott, ASEP, and Jason Sohlke; one of our members received an INCOSE Founders Award: George Anderson, ESEP; and another received an INCOSE Fellows Award: Ron Lumen, PhD. In addition, the Chapter was recognized with a Platinum Circle Award for 2016. The Circle Award submission for 2017 is complete; results will be announced in July at the INCOSE International Symposium in Washington, DC.

In 2018, the INCOSE International Workshop will be held in Jacksonville later this month and the INCOSE International Symposium will be held in Washington, D.C. Make plans now to participate in the Symposium, July 7-12. Our dinner meetings and lectures will continue on the third Wednesday of each month, there will be tutorials and short courses, and outreach efforts will continue to grow and expand. Stay connected through this monthly newsletter and social media for the latest news and updates.

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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.



Finally, I encourage each of you to consider how you wish to serve INCOSE and the Systems Engineering community. There are many volunteer opportunities available within the Chesapeake Chapter. There are three permanent committees, each led by a Director and each with many activities to be led and coordinated. The committees are: Programs, Communications, and Membership. If you have particular interests in these areas, please speak to Chandru Mirchandani, PhD, ESEP, for the Programs committee, Myra Parsons-Gross, ESEP, for the Communications committee, or Mark Kaczmarek, ASEP, for the Membership committee. For someone seeking a greater level of challenge and commitment, we are in need of a volunteer to serve a three-year term covering one year as President-elect followed by another year as President and the third year as Past President. Serving in any of these volunteer capacities is an honor and an opportunity – I encourage you to consider it. And, thank you for supporting the health of Systems Engineering and your own professional development.

May 2018 be a great year for Systems Engineering!

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## Announcements and Events

### The 4<sup>th</sup> INCOSE Institute for Technical Leadership Cohort



- **Purpose**
  - Accelerate the development of systems engineering leaders who will exemplify the best of our organization and our profession
- **Benefits**
  - Individual members become more capable leaders
  - INCOSE has a growing pool of leaders to draw on
  - INCOSE's international reputation will be enhanced
- **Program Overview**
  - Two-year program; new cohort formed annually
  - Four events in Year 1: two face-to-face, two webcast
  - Second year primarily a virtual experience
  - Individual and group project work between events
  - Each cohort mentors the one following
  - Candidates must be nominated by an INCOSE Leader

***“A development program for active INCOSE members seeking to improve their leadership skills in an open, collaborative environment.”***

Request for Details and Instructions should be directed to [info@incose-cc.org](mailto:info@incose-cc.org) as soon as possible to complete the application requirements in advance of the March 15 deadline

Join  
INCOSE  
Today

[www.incose.org/  
about/Membership/Join](http://www.incose.org/about/Membership/Join)

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The Chesapeake Chapter is always looking for volunteers to speak at our upcoming meetings! Please contact our Programs Director at [programs@incose-cc.org](mailto:programs@incose-cc.org) if you would like the opportunity to speak or can recommend someone.

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## Networking, Dinner, and Lectures

Chapter Meetings are held at the Johns Hopkins University Applied Physics Lab, Building 1, on the third Wednesday of each month unless otherwise noted. The meeting starts at 6pm (Dinner \$20 for Members, \$25 Non-Members, \$5 extra at the door, no charge for students) and the no-fee Lecture starts at 7pm.

## Board of Directors Meetings

Monthly Board of Directors (BOD) Meetings are held at the Johns Hopkins University Applied Physics Lab in Building 1, Barton Conference Room on the second Wednesday of every month beginning at 6pm and ending at 8pm.

## Upcoming Events

Please register for the below events at <http://www.incose-cc.org/registration> unless otherwise noted.

- **17 January, Where is Amelia Earhart? Evaluating multiple search scenarios**, George Anderson, ESEP and Gundars Osvalds, ESEP. The application of systems engineering processes are applied to the problem of locating Earhart's end of flight. They evaluated many of the search scenarios developed to locate Earhart's airplane. They researched and developed opinions on the plausibility of each. The results of this research and evaluation will be discussed.

The 2018 Board of Directors will be installed into office immediately following the lecture. Please join us to witness this occasion.

- **29 January-2 February, CSEP Certification Training Course**, JHU/APL, Building 200, Room 100, 8am to 5pm. Chesapeake Chapter Members receive a 10% discount. Certification Training International (CTI) offers a CSEP (Certified Systems Engineering Professional) and ASEP (Applied Systems Engineering Professional) 5-Day Course focused on preparing you to successfully take the CSEP/ASEP Certification Examination conducted by INCOSE. The INCOSE Systems Engineering Handbook and course materials are included.
- **5-9 February 2018, No Magic Training, "Applying UPDM 2 with MagicDraw"**, taught at JHU/APL Building 200, Laurel MD. Applying UPDM 2/DODAF/MODAF with MagicDraw is a 5-day course for Unified Profile for DoDAF and MODAF (UPDM 2). The course focuses on implementation of UPDM 2 using core MagicDraw functionality and the MagicDraw UPDM 2 plug-in.

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.



## Special Interest

### Support for Chesapeake Science Point Public Charter School Science Fair

On December 16, 2017 the INCOSE Chesapeake Chapter participated in the judging of the Science Fair held at the Chesapeake Science Point (CSP) Public Charter School in Hanover, Maryland. The CSP Public Charter School, is one of four charter schools operated in Maryland by the Chesapeake Lighthouse Foundation (CLF). Chapter 2017 President Mike Pafford was one of around 50 volunteer judges using an online browser-based "CLF STEM Fair Scoring Application" on laptops, tablets, and smart phones, to interview and judge more than 200 Middle School and High School science projects. Science project categories included Biology, Botany Microbiology, Behavioral Sciences, Chemistry, Earth and Environmental Science, Physics and Engineering, Medicine and Health, Zoology, Math, and Computer Science.

Each science project was judged via observation and short interviews using criteria such as Creativity, Originality, Background Information, Thoroughness, Skill, and Clarity. Using the CLF Scoring application on his iPad, Mike was able to move quickly in and out of 14 classrooms to efficiently help judge over 200 science projects. The online application allowed judges to see in real-time which projects had already been judged, and which others still needed judging. The application user interface enabled clear immediate sliding scale-based scoring for multiple criteria on each project.

The scores for each project were uploaded to the CLF servers in real-time using cellular and wi-fi connections. Each project was scored by four different judges. The CLF scoring application 'normalized' scores based on the emergent judging styles of each of the judges (e.g., strict, lenient, etc.). Following the science fair judging, Mike talked briefly with the CLF STEM fair scoring application developer, Mr. Mehmet Sarica. Mehmet gave Mike a brief hands-on demo of the Server/Administration side of the thin client-server based web application. Mehmet later supplied Mike with login and password access to a Test Judging Account.

As the online CLF STEM fair scoring application development, operations, and maintenance are all supported by Maryland public school funding, Mike and Mehmet discussed the possibility of making the application available to INCOSE and other volunteer organizations for real-time collaborative judging of projects at other Maryland public school STEM fairs. Mehmet agreed to bring up the idea with his CLF colleagues.

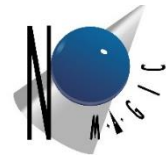
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This Newsletter is to serve our members and is open to all for contributions.

Do you have an interesting idea for an article?

A review of a new book related to engineering?

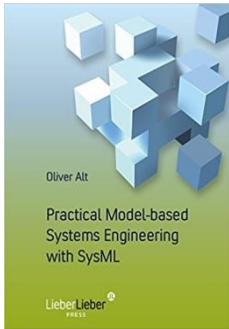
Let us know. We'd love to hear about it. It may end up in a future issue of our Newsletter.



## Book Report

### *Practical Model-based Systems Engineering with SysML*

By Oliver Alt, PhD; October 2016; Paperback; 214 pages



This book is an enhanced English language version of the author's previous German language SysML book. Enhancements for this new version include updated rewording of several sections, as well as the addition of new topics such as Data Integration, Systems Data Linking, and Big Data in Systems Engineering. The book emphasizes the practical application of Model-Based Systems Engineering (MBSE) with SysML and the Control Chain approach. The author means for this book to be applicable for all "mechatronic systems". According to Wikipedia, Mechatronics is a modern term given to the multidisciplinary fields of mechanical, electronics, computer, telecommunications, systems, and control science and engineering. The Control Chain approach is introduced for describing hardware and software systems (and their interfaces) in both physical and logical terms. For those interested, this book's examples have been developed using the SysML tool, "Enterprise Architect (EA)", from the Australian company Sparx.

The Paperback version can be purchased from Amazon:

<https://tinyurl.com/y96gwr94>

## Membership Arena



**Mark Kaczmarek**  
ASEP  
Membership  
Director

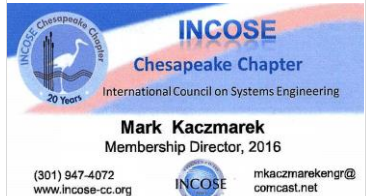
INCOSE membership is over 13,000 world-wide. Over 100 corporate members, 70+ Global Chapters in over 30 countries. The Chesapeake Chapter of INCOSE serves the systems engineering community in Baltimore and its surrounding areas. Our Chapter is very active and prides itself in the many endeavors it has undertaken. An organization such as ours relies on the willingness of its membership to put as much effort into it as they receive in return.

Chesapeake Chapter's membership Includes:

- Current membership = 308
  - Certification = 165 > 53%
    - ASEPs = 48
    - CSEPs = 85
    - ESEPs = 32

Learn more about the [benefits of joining INCOSE](#) and consider being part of this thriving organization and fill out an [INCOSE Membership Application](#) today!

## Chapter Business Cards



Please contact  
Mark Kaczmarek at  
[membership@incose-cc.org](mailto:membership@incose-cc.org)  
to obtain your own  
Chesapeake Chapter  
business cards.

Free to Chesapeake  
Chapter members.





## The Chesapeake Chapter proudly welcomes our new members:

### November 2017

- *Good, Michael*, Vencore
- *Greco, Christopher*, Edwards Performance Solutions
- *MacLean, John*, Legato LLC

### October 2017

- *Barclay, Melanie*, WGS Systems
- *Beach, Ryan*, WGS Systems
- *Dillon, Martin*, WGS Systems
- *Dodson, Carl*, WGS Systems
- *Forster, Daniel*, NAVAIR
- *Kane, Ronald*
- *Oliver, Everett*, JHU/APL
- *Thomas, Jeremy*, WGS Systems
- *Underwood, Kelli*, Space Telescope Science Institute

### September 2017

- *Ellis, John*, Leidos
- *Ha, Bao*, Northrop Grumman
- *Gentry, Bradley*, Odyssey Consulting, Inc.

### August 2017

- *Abernathy, Mark*, Space Telescope Science Institute
- *Dorsman, Theo*, Northrop Grumman
- *Luke, Robert*, WGS Systems
- *Parsons, Christopher*, Northrop Grumman
- *Phan, Nam*, Booz Allen Hamilton
- *Rowe, Roger*, Northrop Grumman

### July 2017

- *Alston, Felix*, Dynane
- *Hiteshew, Brian*, Northrop Grumman

### June 2017

- *Adams, Mark*, SAIC
- *James, Corrie*, JHU/APL
- *Martin, Robin*
- *Stephenson, Tenee*, ASEP, JHU/APL

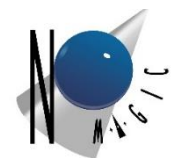
### May 2017

- *Hanni, Robert*, University of Maryland
- *Kight, Steven*
- *Land, Peter*, DOD, Systems Security Concepts

What people are saying  
about Chesapeake  
Chapter:

*"... What a wonderful,  
innovative, and impactful  
year for the Chesapeake  
Chapter. I hope you, your  
board, and the entire  
Chapter is proud of what  
you have accomplished..."*

Past President,  
INCOSE



April 2017

- *Abbott, Steve*, DOD
- *Dougan, Thomas*, Northrop Grumman
- *Evans, Paul*, Student
- *Glennan, Andrew*, Northrop Grumman
- *Marshall, James*, Northrop Grumman
- *Paulov, Michael*, AASKI Technology, Inc
- *Pierce, Cliff*, Johns Hopkins University
- *Shields, Rebecca*, Student at University of Maryland, Baltimore County

**Congratulations to Newly Certified SEPs since August 2017:**

- *Barclay, Melanie*, ASEP – WGS Systems LLC
- *Beach, Ryan*, ASEP - WGS Systems LLC
- *Biemer, Steven*, CSEP – JHU/APL
- *Cheresnowsky, Harry*, CSEP – Cyber Pack Ventures
- *Davilia-Andino, Arturo*, ASEP – University of Maryland
- *Dillon, Martin*, ASEP - WGS Systems LLC
- *Dodson, Carl*, ASEP - WGS Systems LLC
- *Dorsman, Theo*, ASEP - Northrop Grumman
- *Fox, Joel*, ASEP – DE ISO
- *Glennan, Andrew*, ASEP - Northrop Grumman
- *Ha, Bao*, ASEP - Northrop Grumman
- *Handy, Kristen*, CSEP - Booz Allen Hamilton
- *Hanni, Robert*, ASEP - University of Maryland
- *Luke, Robert*, ASEP - WGS Systems LLC
- *Marshall, James*, ASEP - Northrop Grumman
- *Miller, Kim*, ASEP - Northrop Grumman
- *Parsons, Christopher*, ASEP - Northrop Grumman
- *Partenheimer, Janice*, ESEP – Engility
- *Randall, Rick*, CSEP – The Mitre Corp
- *Scott, Zane*, ASEP – Vitech Corporation
- *Thomas, Jeremy*, ASEP - WGS Systems LLC
- *Williams, Michael*, ASEP - University of Maryland
- *Stephenson, Tenee*, ASEP - JHU/APL



**Interested in Jobs & Networking**

Contact Mark Kaczmarek

[membership@incose-cc.org](mailto:membership@incose-cc.org)





## Career Opportunities - Systems Engineer Positions

Enterprise Systems Engineering and Architecture is looking for candidates with a Bachelor's degree in an engineering or IT field and 10 years of systems engineering (SE) experience, or 14 years of SE experience without a degree, to analyze requirements and provide systems engineering and architecture support. Location: Fort Meade. *Need Date: ASAP. Requires: Top Secret/SCI with Poly.*

US Cyber Command is looking for candidates with a Bachelor's degree in an engineering or IT field and 10 years of systems engineering (SE) experience, or 14 years of SE experience without a degree. Background in one or more of the following areas is preferred: developing or assessing specifications, interface requirements, system design, analysis and tradeoff, thread engineering test planning, malware, and cyberspace analysis. An INCOSE SEP Certification, CISSP, or CASP is required for some of these positions. Location: Fort Meade. *Need Date: ASAP. Requires: Top Secret/SCI with Poly.*

Enterprise Systems Engineer with experience integrating NOAA existing and new control, data management, and data distribution systems. Satellite control systems is a plus. At least five years of experience is necessary along with a technical degree. DODAF and or TOGAF is a plus. Locations: Silver Spring (NOAA Headquarters), NASA Greenbelt, or the NOAA Satellite Operations Facility in Suitland, MD. *Need Date: ASAP. Requires: Public Trust Tier-1, which is similar to a DoD Secret clearance.*

Contact Allan Bowers, Vencore Staffing Manager - [allan.b.bowers@vencore.com](mailto:allan.b.bowers@vencore.com) or 301.543.5397.





Learn Skills. Get Prepared. Gain Confidence. Become Recognised.



# CSEP EXAM PREPARATION

**FIVE DAY COURSE**

**JANUARY 29-FEB 2, 2018 @ Johns Hopkins University**

CTI's CSEP Exam Preparation Course provides the perfect grounding to take the INCOSE Knowledge Examination with confidence.

On-Site Training also available.



To find out more and register today, visit:

[INCOSE-CC.ORG/REGISTRATION](http://INCOSE-CC.ORG/REGISTRATION)



# Training



## INCOSE Chesapeake Chapter International Council on Systems Engineering

### Applying UPDM 2 with MagicDraw

Taught by No Magic

February 5-9, 2018

8:00am - 5:00pm



**Description:** Applying UPDM 2/DODAF/MODAF with MagicDraw is a 5 day course for Unified Profile for DoDAF and MODAF (UPDM 2). The course focuses on implementation of UPDM 2 using core MagicDraw functionality and the MagicDraw UPDM 2 plug-in.

**Course:** This comprehensive course will help students to quickly improve planning and implementation of complex systems using UPDM 2 standards and the MagicDraw UPDM 2 plug-in. The training approach used assumes that many students have a basic understanding of DoDAF or MODAF and an understanding of how to describe an architecture. This course covers UPDM 2 in terms of the following architectural frameworks: DoDAF 1.0, DoDAF 1.5, DoDAF 2.0 (DM2) and MODAF 1.2 (M3).

- Contains lectures and hands-on practice on using UPDM2 for architecture development
- Includes information on how to build complete and integrated architectures; Presents UPDM 2 and related standards
- UML 2, SoaML, and SysML where they apply to UPDM 2
- Shows how to implement and customize the DoD Architecture Framework; Covers complete UPDM 2 Models and Views.
- Presents a concise case study.



**Course Materials:** Students will receive printed course materials and a Magic Draw 30 day license key. Students must bring a laptop computer to use during the course.

**Continental Breakfast, lunch, and snacks are included.**

**Cost: \$1800.** Register by January 22. Maximum number of participants is 15, so be sure to register early! To pay by credit card or PayPal, visit our registration webpage for details: [incose-cc.org/registration/](http://incose-cc.org/registration/).

#### Location:

Johns Hopkins University  
Applied Physics Laboratory  
Building 200  
11101 John Hopkins Road  
Laurel, MD 20723



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 Chapter Website

[www.incose-cc.org](http://www.incose-cc.org)

For any comments or suggestions about this newsletter please e-mail our communications team [communications@incose-cc.org](mailto:communications@incose-cc.org). We value your feedback.

#### 2018 Board of Director Officers

- President: Dr. Grace Crowder, ASEP
- Past President: Michael Pafford
- President-Elect: Vacant
- Treasurer: Tony Giglioli, CSEP

- Secretary: Tammy Kolarik, ASEP
- Programs: Dr. Chandru Mirchandani, ESEP
- Communications: Myra Parsons Gross, ESEP
- Membership: Mark Kaczmarek, ASEP

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