



Sept 2015 Newsletter

Newsletter Highlights:

- USS Midway Event on Sept 27th
- Fall Mini-Conference in San Diego on Nov 7th
- INCOSE San Diego accepts two awards

From the President:

First, I want to congratulate everyone reading this for being a member of INCOSE.

But I ask you, what does being a member of INCOSE mean? It means that you identify yourself as a systems-engineering professional, and that it's important to you that you continue to learn and grow as a systems engineer. It also means that you want to meet other systems engineers to learn what they are doing, and how they are doing it.

Being a systems engineer is a life-long journey of curiosity and continuous learning. As systems engineers, we are hooked on the adrenalin rush of constantly learning new things and pushing the frontiers of technology.

We actually have it pretty good now. I think back to the first 20 years of my career as a systems engineer (1972 to 1992). There were no university degrees in systems engineering. There were no professional certificate programs. And there was no professional association. Being a systems engineer was something you did on your own, because you believed in it. When people asked you what you did for a living, giving them an answer that they could understand was truly a challenge. Sometimes I just punted, and said that I was an "Aerospace Engineer" (since I always did work in the aerospace and defense industries). In the past as a hiring manager, hiring systems engineers was a difficult problem. How do you find them? How do you recognize them when you see them? When you looked at a candidate's résumé, their job history, hobbies, or continuing education courses might give you a clue, but you were never certain. At least when INCOSE was formed, if a candidate were a member of INCOSE that would be a strong indication that you were dealing with a systems-engineering professional.

In today's world, we don't have those problems. If a person takes himself/herself seriously as a systems engineer, he/she will be a member of INCOSE. Full stop. If you have any colleagues who are not yet members of INCOSE, please inform them of this opportunity to ratchet up their career by becoming a member.

-Mark Halverson

Upcoming Events

Membership meetings are open to all. They are held at Giovanni's Restaurant in Kearny Mesa from 6:00-7:00pm with an optional buffet between 5:00 and 6:00 (\$5 for members, \$10 for non-members). Reminder emails will be sent.

- **Sept 16th Membership Meeting** – Our own Eric Villhauer will be presenting his recent co-authored General Atomics paper on Model-Based Systems Engineering. This paper, titled "*An Integrated Model-Based Approach to System Safety and Aircraft System Architecture Development.*", outlines a strategy to ensure safety objectives are considered while maintaining organizational independence between systems engineering and the domains.
- **Sept 27th USS Midway Event 2015** – Our yearly event aboard the USS Midway Museum to honor recipients of our STEM awards. This event is reasonably priced, includes dinner and hosted tours, and is especially family friendly – please join us! Please see the full write up on the following page.
- **Oct 21st Membership Meeting** – Rick Steiner will give a presentation on Modeling Requirements with Systems Modeling Language (SysML). The SysML Revision Task Force (RTF) has been exploring more robust ways of representing requirements, including incorporation of typed values and equations. This presentation will provide an overview of the preferred approaches to incorporating property-based requirements in SysML models, and will touch on some of the advantages and pitfalls of adding this capability into the SysML language.
- **Nov 7th INCOSE San Diego Fall Mini-Conference 2015** – Our popular once yearly mini-conference is just around the corner. This one-day event will include presentations on a variety of system engineering topics. Please get with Mark Halverson for details (president@sdincose.org) and watch your email for upcoming announcements.

Recent Events and Happenings

- On May 21st, Nate Crews gave INCOSE San Diego an introductory presentation on Agile development. Agile is becoming increasingly popular amongst commercial

firms, and with the U.S. DoD interested in catching up. Look for a follow-on 2016 INCOSE presentation that explores the details of systems engineering in Agile.

STEM Event and Grant Process

Over the summer, INCOSE San Diego received ten (10) STEM proposals from local schools. The working group reviewed and numerically graded each on a number of criteria, including number of students affected, cost realism, creativity, and overall need (disadvantaged school).

All ten proposals were deemed worthy. However, given the cost of the equipment the schools planned to purchase, the group has decided to fully fund the best-scoring proposals, vs. partially fund them all. The final decision and notifications will be made this month.

Geek Night on the USS Midway Museum, Sunday September 27th!

For our 4th year, the San Diego Chapter of INCOSE is hosting an event on board the USS Midway Museum to showcase the students who have received our STEM grants, and demonstrate what they have done with them. In addition, a fun night aboard the USS Midway Museum is held to get the younger students excited about STEM. A free meal is offered, the simulators are at the guests' disposal for free, there are free tours of the ship by the expert Midway Docents, romantic walks under the stars on the flight deck, robotics demonstrations, Professor Midway is there to demonstrate scientific principles, and the ever-popular raffle.

Our cohosts for this event are the San Diego Section of the American Society for Quality (ASQ) and the International Test and Evaluation Association (ITEA), so this year's event is expected to be bigger and better than ever!

Ticket prices are \$30 for adults, \$20 for those 6-17 years of age, and free for children 5 or less years of age. A family package is also available for \$100 which includes admission for 2 adults and up to 4 people between 17 and 6 years of age. The event is on Sept. 27th from 6 pm – 9pm. Please get your tickets at: <http://www.sdincose.org/4th-midway-event>.

San Diego Chapter Awarded the INCOSE Silver Circle Award

The Silver Circle Award was presented to INCOSE San Diego at the 2015 INCOSE 25th Anniversary International Symposium in Seattle, WA. In doing so, INCOSE recognized and celebrated the contributions and achievements of the San Diego Chapter, its leaders, and its sponsors.

The International Symposium is put on by INCOSE each year in different cities worldwide. This year, the symposium was held in Seattle from 13 to 16 July, and attracted systems engineers from around the world. There were almost 900 systems engineers in attendance, including several from the San Diego Chapter. In addition, dozens of vendors selling systems engineering tools and services attended IS 2015. A highlight of the symposium was the gala banquet held at the Museum of Flight at Boeing Field in Renton, WA.



Mark accepting Silver Circle Award from David Long.

Congratulations!

Please congratulate INCOSE San Diego's John Quigley for his **Outstanding Service Award**, just presented by David Long (President of INCOSE) at the International Symposium.

Fall Mini-Conference

The Fall Mini-Conference Will Be Back in San Diego on November 7, 2015 – Our annual mini-conference will be held on Saturday, November 7th. The conference will include several papers covering model based systems engineering. We will cover topics such as using models to ensure systems meet not just their coded requirements, but also their overall intended purpose and developing grand-scale approaches to ensure the full range of a system is developed. We will also include papers from the Science of Laws institute covering how systems engineering can incorporate the kinds of regulatory and environmental considerations required to develop systems that operate in the real world. This will include a combination of papers and a panel discussion.

Location: UCSD Extension, UC San Diego Extension, University City, 6256 Greenwich Dr. San Diego, CA 9212
Time: 8:30 AM to 4 PM. The schedule is as follows:

- 8:30-9 AM - Check in and networking
- 9-11:30 AM - Paper presentations
- 11:30 AM-12:30 PM - Lunch provided
- 12:30-3:00 PM - Paper presentations
- 3:00-4:00 PM - Panel and close out

There are still two slots available for people to present papers. If you have a desire, contact John Quigley. John.D.Quigley@saic.com. Registration instructions will be sent via email.

New Members

INCOSE San Diego is pleased to announce since May the addition of 12 new members to our chapter. At press time, we have bios on four (listed first). Please welcome each of our new members at the next INCOSE San Diego event:

- Carmen Gillenwaters – Carmen has worked in the pharma and medical device industry over 20 years in various positions in development, quality, and manufacturing. She is currently Sr. Manager Engineering, PLM at Edwards Lifesciences. Previous to that she worked for Ethicon Endo Surgery and Lifescan, both divisions of Johnson & Johnson. As a part of her roles she implements many business processes and software systems that use systems engineering methods like requirements management and configuration management, and is passionate about bringing best practice methods to her companies.
- Brian Jenkins – Brian holds a Bachelor of Science in Computer Engineering from Santa Clara University. Mr. Jenkins has a wide range of software development experience, including robotics, front- and back-end web development, mobile applications, and embedded avionics. For the past two years he has played an integral role in system and software safety engineering for the U.S. Army Gray Eagle unmanned aircraft and U.S. Air Force MQ-9 Reaper remotely piloted aircraft systems, and he is currently part of an integrated product team that is spearheading model-based systems, software, and safety engineering for the MQ-9 program.
- Charles Stroben – Charlie works for Northrop Grumman at the Rancho Bernardo facility. Charlie holds a Bachelor of Science in Aerospace Engineering from San Diego State University, and a Masters of Engineering in Systems Engineering from Steven's Institute of Technology. He has over 12 years of Systems Engineering experience. He is married and has a 3 year old daughter.
- Phillip Walsh – Phil Walsh is a staff systems engineer at QUALCOMM Technologies, Inc. He received his B.S. degree with honors in Computer Engineering from Clemson University in 2008 and his Masters of

Engineering degree in Electrical Engineering from Auburn University in 2010 with a focus in wireless communication and networking. Since joining QUALCOMM in 2010, Phil has worked in the Government Technologies division where he has contributed as lead system engineer across a wide range of projects providing wireless solutions to government partners.

- Yunchung Yuo
- Mrs. Christan Maxwell
- Chinh Nguyen
- Terry Schoof
- Horst Sollfrank
- Jay Hamidi
- Kendric Hornsby
- Louie Allen Dahilan

Systems Engineering Professional Certification

The local San Diego Chapter of INCOSE is considering the idea of hosting study groups to help our members pass the test for the SEP certification. If you might be interested in being a member of such a study group, or a mentor, please contact either Mark Halverson (mark.halverson@ngc.com) or Aaron Nascimento (aaron.nascimento@gmail.com).

2016 Western Regional Conference

As reported earlier, INCOSE Los Angeles has decided to hold the western regional conference in 2016 rather than the fall of 2015. The theme for the conference is: Systems Engineering – One Discipline Global Value: Fundamentals, Applications and Innovation. The technical team is developing topical areas and subjects of interest to the engineering community. Agile, biomedical, systems thinking, resiliency, big data analysis, and critical and complex systems were discussed as the primary candidates.

The conference dates are set for 8 and 9 April 2016, and the location is at the Loyola Marymount University. More details will be presented in the December newsletter.

INCOSE San Diego Contacts

Questions or suggestions regarding the newsletter, website, or chapter? Please contact one of the following:

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