



# NEWSLETTER



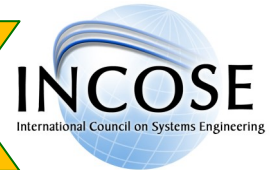
2004-14



2015-16



**2008, 2012  
President's Award  
for Most  
Outstanding  
Chapter**



## The President's Corner

By Phyllis Mabach

Hello from "Down Under." I am writing this article on the last day of the 2017 INCOSE Symposium, "Unlocking Innovation through Systems Engineering". We just wrapped up another terrific conference with over 600 attendees. I am grateful for the Los Angeles Chapter covering the registration fees for me to attend this year. You may recall that INCOSE-LA's strategic direction for 2017 is "Encourage systems thinking for wider community problems". In the last *Newsletter* I described our efforts this year to define what "Done" looks like, how we can encourage systems thinking, and the variety of community problems we could tackle. To continue supporting the strategic direction for the chapter I attended the Systems Thinking Roundtable discussions three out of four mornings from 7:00 until 7:50 a.m. and participated in the Practitioner's Challenge which used systems thinking to solve the problem of the plastic garbage collecting in the oceans. Participating on this team of approximately a dozen systems engineers was a rewarding experience. We discussed, researched and brainstormed approaches to collect, dispose of and prevent further pollution of plastics of all sizes into our oceans. The charts will be posted with the conference materials and several members of the team plan to continue working toward a solution.

On another note, the INCOSE-LA Chapter is in the process of planning an educational day on October 14, 2017, at Caltech for a two-hour tutorial of Systems Thinking by Rick Hefner, a one-hour Systems Thinking Roundtable facilitated by Dr. Sue Gabriele, and a one-hour networking lunch and an hour of wrap-up.

(See "President," on page 5)

## REPORT FROM DOWN UNDER

**The Chapter earned another Platinum Circle Award. Thanks to the many volunteers who have done so much for the members of the Chapter!**

## IS 2017 News

A Report From the International Symposium

*INCOSE's Annual International Symposium IS2017, was held in Adelaide, Australia July 17 — 20, 2017. The theme this year was "Unlocking Innovation through Systems Engineering." Chapter President Phyllis Mabach attended and sent in the follow report.*

Unlocking Innovation through Systems Engineering, the INCOSE International Symposium 2017 was held in Adelaide, Australia. Some arrived "Down Under" a few days early to adjust to the time change, an odd 17½ hours ahead of Pacific Daylight Savings Time, so 11:30 p.m. in Adelaide is 7 a.m. the day before in Los Angeles.

Others arrived early to attend the strategic planning meeting held on Friday July 14. The purpose of the meeting was to discuss three significant topics:

- The Professional Development Steering Group (PDSG)
- Publications, and
- INCOSE Events.

The PDSG is looking at developing a portal to help the work force with career development.

The Events discussion looked at a variety of events, such as workshops and regional conferences, that the INCOSE central office could define and support, the purpose being to better serve our growing membership. A possibility is that events could become part of the income items of the organization. INCOSE is looking at ways to raise needed income of the organization without increasing membership fees. Part of the goal is to create a better financial relationship between the central office and our international chapters.

(See "Down Under" continued on page 4)

Which continent has the largest number of time zones?

Elections for 2018 are coming up! If you know of someone who would be interested in joining the leadership team, please contact Terry Rector at [terry.e.rector@aero.org](mailto:terry.e.rector@aero.org)

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## *The Future, “Techno-feudalism,” and Systems Engineering: Is There a Place for Us?*

An informal discussion of “new” words during a Board of Directors meeting led down a rabbit’s warren of thoughts and words, such as “nomophobia,” “phub,” “fomo,” “techno-ference.” One distillation of this thought chain is “techno-feudalism,” or, possibly, “techno-futilism,” from the perspective of a Twenty-first Century Luddite.

The first word discussed in this chat was “nomophobia.” Nomophobia is a term describing a growing fear in today’s world — the fear of being without a mobile device, or beyond mobile phone contact. Nomophobia is everywhere in industrialized nations. The term is an abbreviation for “no-mobile-phone phobia,” which was coined during a 2010 study by the United Kingdom Post Office. The Post Office commissioned YouGov, a research organization, to look at anxieties suffered by mobile phone users. The study found that nearly 53 percent of mobile phone users in Britain tend to be anxious when they, “lose their mobile phone, run out of battery or credit, or have no network coverage.” The statistics were greater in the United States.

One slightly different definition is that nomophobia is the fear of being without a connected device. According to Scientific American, nomophobia arises according to “the degree to which we depend on phones to complete basic tasks and to fulfill important needs such as learning, safety, and staying connected to information and to others.”

The conversation turned to related terms:

“Fomo,” the fear of missing out, can manifest itself in either of two forms. One is the fear of missing out on some new capability, such as the capabilities that an iPhone i7 might have but that one’s current i6 does not. The other is a fear that something might happen, or a fear that some new information may come on line, and not knowing about it. An un-mentioned risk in this is that a sense of urgency can transcend accuracy. “Most recent” trumps truth.

“Phub” (“phone” plus “snub”) occurs when a person texts, emails, or makes a call rather than attend to the person that he or she is with at the moment, thereby devaluing the other individual. People have been known to turn to smartphones as a way to avoid anxiety, boredom, conflicts, and difficult conversations when with other people. A growing percentage of adolescents text or tweet instead of actually talking to others.

In all of this a sequence might be supposed. The growth in technology – lap top computers, iPads, Kindles, mobile phones, and their cousins, plus all the attendant “apps” – has resulted in nomophobia and fomo followed by phubbing (unintended and otherwise).

This can be summed up in another term: techno-ference. Techno-ference is a loosely defined term. It can be used to describe the interference in heretofore normal human discourse – interference due to the cited technologies.

*(See “Techno-ference” on page 9)*

## **June Speaker Meeting Systems Engineering at Caltrans**

*By Jorg Largent*

The June 13, 2017 speaker meeting featured Randy Wooley speaking on the successful application of the systems engineering process on projects accomplished by the California Department of Transportation (Caltrans). Randy’s nothing-succeeds-like-success experiences demonstrated the value and utility of the systems engineering process, independent of the nature of the enterprise in which it is used. Randy has been using systems engineering for more than twenty years.

Randy’s academic credentials include a Bachelor of Science in Electrical Engineering from the California State University, Sacramento, and a Bachelor of Science in Biochemistry from the University of California, Davis. He retired from the Caltrans Division of Research (25 years). While with Caltrans Randy successfully completed over fifty transportation research projects. Randy not only practiced systems engineering, but taught it as well. He developed and taught a two-day systems engineering fundamentals class for Caltrans and taught three-day classes for the University of California Irvine, covering fundamentals, requirements, design, verification and validation. Randy also worked for over twenty-six years in electronics design and manufacturing.

Randy opened his presentation with a picture of a traffic jam. While the picture was of traffic in Berlin, Germany, it was a picture with which everyone in the southern California audience could readily identify. Randy built his presentation by discussing his interest in systems engineering, the basics of systems engineering which he integrated into some history of Caltrans. He then discussed some of the challenges, such as defining value and ascertaining who determines value followed by transportation examples.

In January 2001, the Federal Highway Administration issued “The Final Rule” mandating the use of Systems Analysis for ITS (Intelligent Transportation Systems), and Randy was the right person and in the right place to facilitate compliance by the State of California, thereby insuring that the state continued to receive federal funds for ITS Projects. Randy leveraged the systems-engineering -by-fiat with the economic models developed by Dr. Eric Honour and Dr. Brian Mar and led the Caltrans development of the Systems Engineering Guidebook for ITS Projects.

Randy was able to facilitate several fundamentals:

Communication with the customer became key at all stages of the research

Focus on Customer Needs

Research projects needed a customer champion to start

Champion customer must commit to implementing when an affordable solution is found.

He also tailored involvement to the needs of the various levels of the organization.

*(See “The Road to Success,” page 10)*

## And the Winner is . . . for the GameSIG Competition

GameSIG and INCOSE-LA were proud to recognize three teams that participated in the 2017 Video Game Competition held on June 10 at Fullerton College with Best Engineered Game for a College level, Santa Ana College, Best Engineered Game for a High School level Northwood High School and Honorable Mention, Century High School. Mentors, Connor Wynveen and Varaz Shahmirian, coached two teams by answering questions and assisting them, when asked, to prepare their Submission Forms for the Best Engineered Game Award. A marketing style YouTube video of each game submitted and a Submission Form about the game were required to enter the competition. Teams who submitted 3 of the submission forms that were filled out at three different points in time during the development were included in the competition for the Best Engineered Game Award. Filling out the form in the beginning, and periodically throughout development, as well as, at the end of development encourages early planning of the architecture and design of the game and then periodic updates as the team learned what was working well and what needed to be changed. A workshop explaining Systems Engineering principles and Agile practices was held in November 2016 for interested team members.

The Special Interest Group (SIG) started working together in early 2016 with members from INCOSE-LA and IEEE-OC Computer Science. The SIG created a Memorandum of Understanding, a Workshop – Applying Systems Engineering Thinking onto Game Development, a Mentoring Guidebook for team coaches, and a Judging Rubric to determine “Best Engineered Game” for two awards: College and High School. We collected surveys from members of the teams who competed in the Best Engineered Game award and conducted a ‘lessons learned’ from several members of the team as well as the Best Engineered Game judges.

Both the High School Winner and the College Winner received trophies and certificates for each team member. The Santa Ana College team also received \$1000 for members of the team to attend the Game Developers Conference in San Francisco in March 2018. The INCOSE America’s Sector and INCOSE-LA supported the workshops and competition with volunteers and financial support throughout the academic year. More information about the competition can be found at [www.gamesigshowcase.org](http://www.gamesigshowcase.org).

See pictures of GameSIG champions on Page 10

### ACRONYM OF THE YEAR AWARD?

Rumor has it that “MAGIC CARPET” is an acronym for “Maritime Augmented Guidance with Integrated Controls for Carrier Approach and Recovery Precision Enabling Technologies.” From the internet....

## Report from the Americas Sector

By Phyllis Marbach

Americas Sector Director Tony Williams, chief engineer and project manager at Jacobs Engineering, held his first Americas Sector meeting on June 2, 2017. He has three goals for his eighteen-month term:

1. support chapters and conduct a stakeholder survey,
2. leverage technology better, and
3. determine if the United States should have a national systems engineering voice.

To support chapters Tony wants to conduct a stakeholder survey of chapter leaders. Kevin Weinstein will be working with a team of volunteers to create and distribute the survey. There was discussion about how active chapters can support struggling chapters such as by recording speaker presentations and sharing with chapters who might not have regular speaker meetings.

Tony has created a page in INCOSE CONNECT to assist our America’s sector coordination. It will include links to chapters, products in development, and a meeting list. He wants a tiger team to help get this INCOSE CONNECT site created and working better. Materials from this meeting are available on the page, <https://connect.incose.org/Chapters/Americas/SitePages/Home.aspx>.

Many chapters are national organizations, however that is not the case within the United States. Tony wants to form a team that will do a trade study to determine if a “National Voice for Systems Engineering” is needed.

There are seven assistant directors within the America’s Sector: six regional directors and one functional director. The Western Region Assistant Director is Eric Belle. The Western Region chapters are:

- Seattle Metro, in Washington,
- Cascade, in Washington and Oregon,
- San Francisco Bay Area, Los Angeles, and San Diego in California,
- Southern Arizona,
- Central Arizona,
- Snake River, in Idaho,
- Wasatch, in Utah,
- Colorado Front Range,
- and Enchantment, in New Mexico.

Chapter leaders discussed how domains in their areas are shifting from aerospace or Navy programs to agriculture, healthcare and other industries. There was discussion about encouraging engineers coming out of school to get their ASEP to help drive systems engineering best practices into all domains.

Tony is encouraging chapter leaders to volunteer for the three “goal” tiger teams. Then the plan is for the three tiger teams to meet monthly, start making progress in these areas and give periodic briefings to the rest of the sector at the next America’s Sector meetings.

(See “Americas Sector,” on page 10)



*(Down Under, continued from page 1)*

The majority of Saturday and Sunday agendas were business meetings and working group meetings. Business meetings included the Corporate Advisory Board (CAB) meeting and the Americas Sector Leadership meeting. Topics discussed included. Best practices were shared, problems were discussed and new outreach was encouraged. The Joint Leadership Meeting on Sunday provided an opportunity for each of the INCOSE Leadership team to share with those present their progress made during the past six months and the plans going forward. Former INCOSE President Alan Harding emphasized the organization's vision, mission, values, principles and 5-year objectives. One statement Alan made that resonated with me was, "We need to make sure volunteer roles are sustainable, attractive and rewarding".

**Want to learn more about IS2017?**

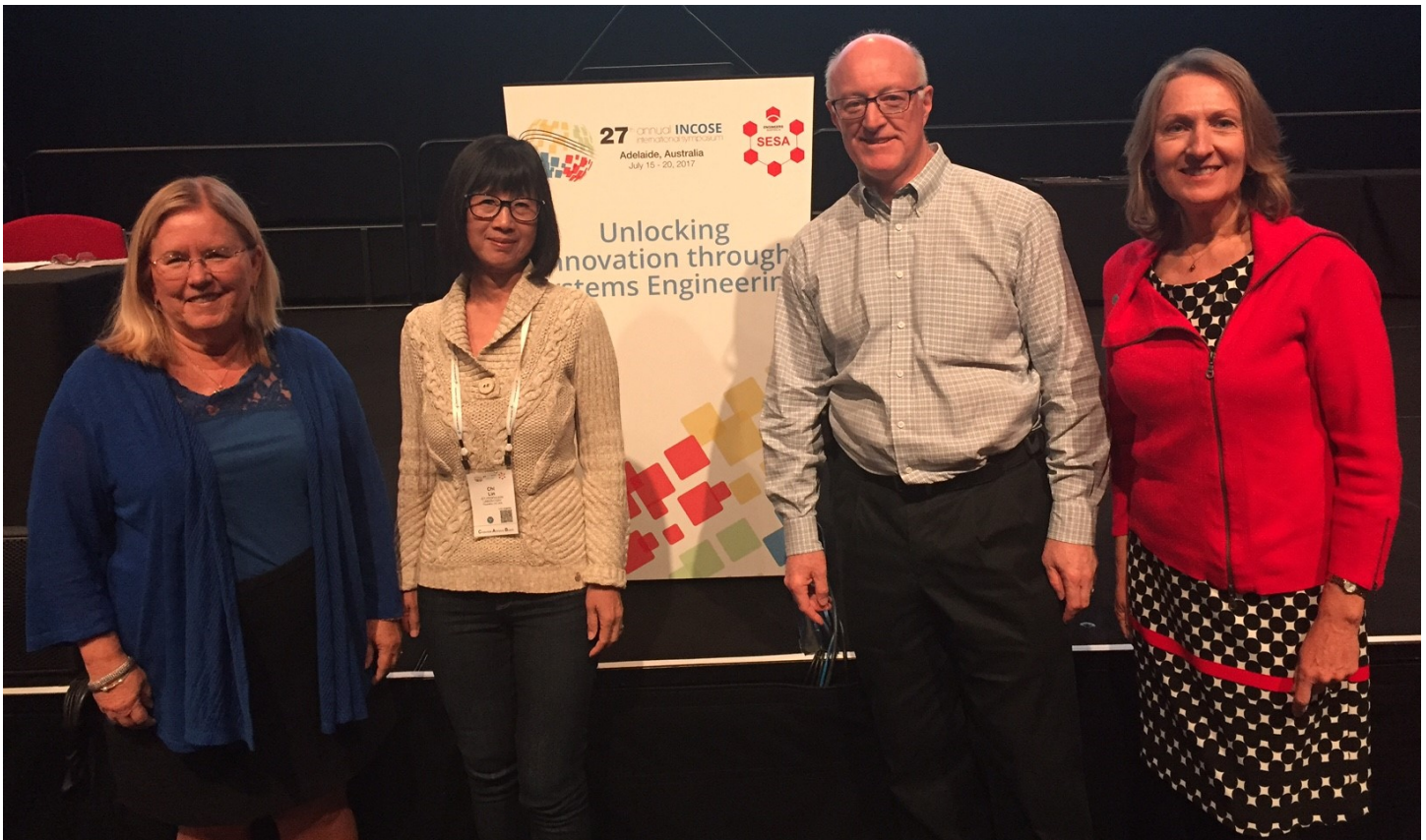
Videos of the activities are available on line. Log on to the INCOSE website and go to: <http://www.incose.org/symp2017/home>

Christine Kowalski, Operations Manager for INCOSE, described our current membership numbers. We have almost 15,000 members with over 10,000 full, senior or student members, the rest being CAB associate members. It is good to see our CAB companies taking advantage of their sponsorship by making our best practices available to their employees. Other reports followed from the various departments such as Technical Development, Certification, Academic, and others.

The symposium featured six technical tracks as well as a Sponsor Track, an Exhibitor Track and the Practitioner's Challenge provided a variety of options for those in attendance. Besides the tracks, they threw in a few additional business meetings and working group meetings most days. The track topics included Model-Based Systems Engineering (MBSE), Systems of Systems, Teaching and Training, Agile Systems Engineering, Technical Operations, Systems Engineering Fundamentals, Energy, Smart Systems, Model-Based Conceptual Design, Requirements, Systems Science, System Safety, Product-Line Engineering, Architecture, Verification and Validation, Acquisition and Supply, Future Mobility, Systems Thinking, Systems Engineering Management, Process, Human Factors, Transportation, Applied Systems Engineering, Risk and Opportunity Management, Leadership, Methodology, Resilience, Digitalization, Biomedical and Healthcare, Systems Dynamics, Modeling and Simulation, Government, Defense and Security, Project Planning, Complexity Science, and Infrastructure.

The symposium itself opened July 17 2017. The Plenary speaker was Air Vice-Marshall Mel Hupfeld from the Head of Force Design — Australian Defence. The Vice-Marshall spoke about Force Design: Evolution not Revolution.

*(See "Bullet Train," on page 5)*



Marilee Wheaton, INCOSE Fellow and Aerospace CAB representative, Chi Lin, JPL CAB representative, Bob Noel, Boeing CAB representative, and Phyllis Marbach, LA Chapter President.

**INCOSE-LA Chapter NEWSLETTER**

Vol. 15: Issue 4, August — September 2017

## August Speaker Meeting

### Seamless Integration of Model Based System Design with Modelica into Systems Engineering Processes using the 3DEXPERIENCE Platform

This speaker this month is Christopher Alain Jones

**BIOGRAPHY:** Christopher graduated from the University of Paderborn (Germany) in 2010 with an electrical engineering diploma, focused on the numerical simulation of electro-magnetic waves and waveguides. Following that he spent two years researching plasmonics waveguides at the University of Hagen (Germany). In 2013 he joined Modelon GmbH and started using Model-based Software Development and Modelica in different projects at various automotive original equipment manufacturers in Europe. In 2015 the company was acquired by Dassault Systèmes and in the summer of 2016 he relocated to Los Angeles to support the systems engineering and Modelica efforts in the North American market.

**ABSTRACT:** Systems engineering, while long established and used in the aerospace industry, is starting to make headway in other industries – industries which have come to see the significant advantages that this methodology brings to product development.

In the past, many aspects of systems engineering were somewhat academic and disconnected from the reality of product development. Better technology and new tools are starting to help the theoretical methodology converge with the day-to-day engineering. For example, the coveted companywide single version of the truth is now a tangible reality and traceability of all aspects of the development process during the entire product lifecycle are just a click away.

*(President, continued from page 1)*

The day will start about 9:00 a.m. and end about 2:00 p.m. Please save the date. The Systems Thinking Education Day is expected to cost about \$25 per person.

Another event being planned is a Professional Development Day (PDD) on October 13, 2017 that will be a day-long webcast broadcast live from the Great Lakes Regional Conference (GLRC). The greater LA area, where this PDD will be held, is planned to be at Caltech. Further details will be provided as they become available. Please see the GLRC website for more info about the PDD specifics. The PDD costs are expected to be about \$40 per person.

Discussions are underway about coordinating with other Western America INCOSE Chapters to host an ongoing Western States Regional Conference (WSRC) similar to the GLRC. When the LA Chapter hosts the WSRC, perhaps in 2019, we hope to hold a virtual PDD webcast similar to what the GLRC is doing.

Please plan to attend the next strategic planning meeting, August 26, 2017 to let us know your thoughts about how our chapter can better serve you and our community. The updated vision of INCOSE is, “A better world through a systems approach.” Our current strategic direction truly supports this vision.

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campus in Pasadena, starting in August.  
More info at <https://ctme.caltech.edu/mbse>

*(Bullet Train, continued from page 4)*

Dr. Tomohiko Tamiguchi was the plenary speaker on Tuesday. Dr. Tamiguchi, a special adviser to the cabinet of Prime Minister Shinzo Abe, topic was, “The Japanese Bullet Train ‘Shinkansen’ System: Its Genesis and Safety Assurance.”

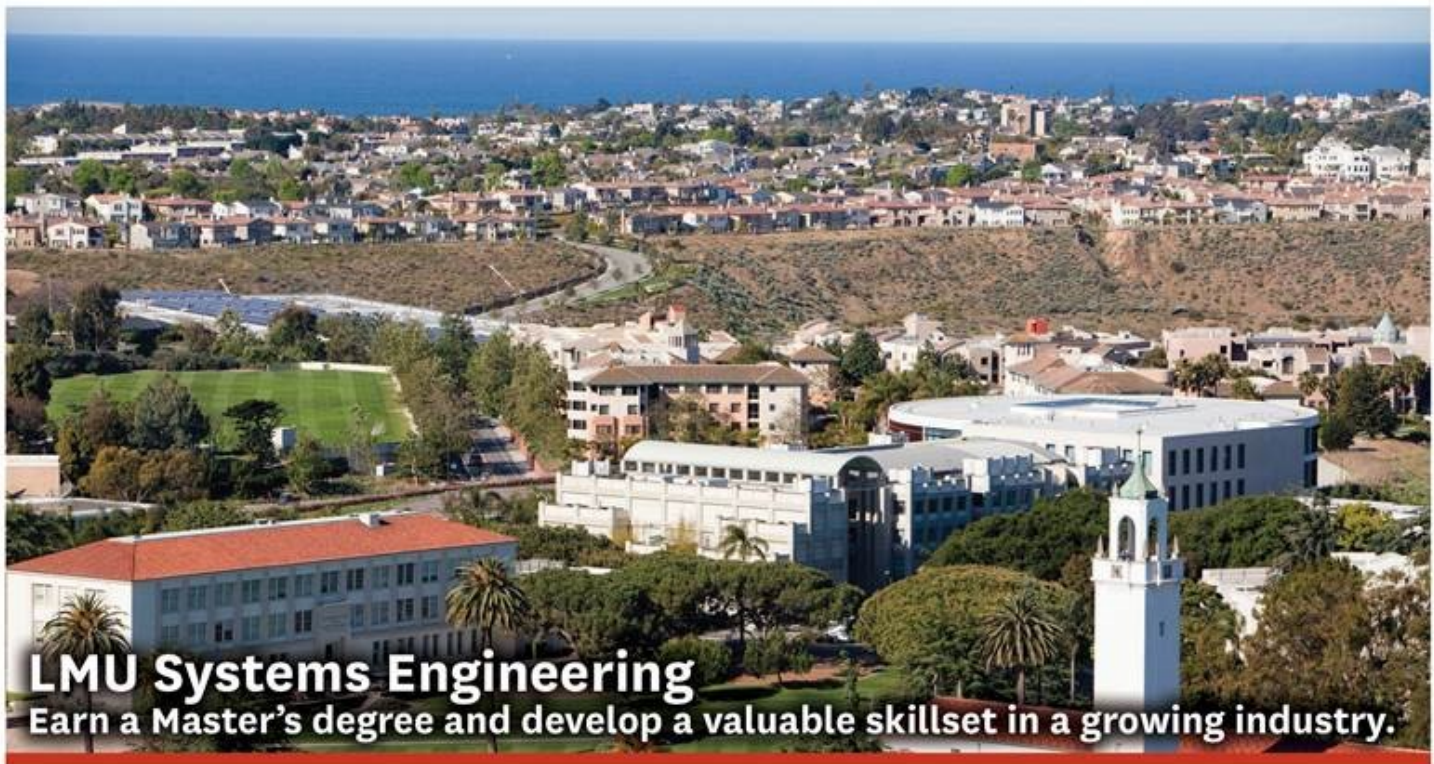
Paul Nielsen, Director and CEO – Software Engineering Institute, Carnegie Mellon University, spoke on Wednesday about “Systems Engineering and Autonomy: Opportunities and Challenges.” Thursday the conference closed with another excellent plenary on Space Weather featuring Bill Murtagh of the National Oceanic and Atmospheric Administration.

The plenary speakers certainly gave the attendees a broader view of the complex, interconnected world in which we live and the important role systems engineering plays to make it all work well together.

The food was excellent, as promised. Entertainment at the banquet on Wednesday night included a show by an Aboriginal family. and music to dance to performed by a live band. Adelaide is known as the wine region of Australia, so some of us enjoyed the fruits of the vine along with the excellent food. As we dispersed on Thursday, July 20, contact information was shared and plans are being made to meet again in Washington DC in July 2018 to continue moving systems engineering forward in general awareness and adoption into more domains in addition to improving the state of the practice.

Antarctica has the largest number of time zones





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Fred Brown, Ph.D., Graduate Program Director at  
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**For any questions regarding the Healthcare Program contact** Bo Oppenheim, Ph.D.,

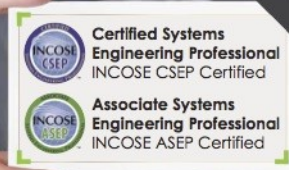
Associate Director of Healthcare Systems Engineering,  
at 310.338.2825 or [Bohdan.Oppenheim@lmu.edu](mailto:Bohdan.Oppenheim@lmu.edu)

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# PREPARE FOR SUCCESS

PREPARE FOR THE INCOSE ASEP/CSEP EXAM



*"Thanks again for the best preparation course. Thanks to you, I felt really comfortable in studying the handbook and finally taking the exam." - delegate*

## REMAINING 2017 COURSES

Las Vegas NV	Oct 30 - Nov 3
Chantilly, VA	Nov 13 - Nov 17
Atlanta, GA	Nov 27 - Dec 1

## 2018 COURSE SCHEDULE

Laurel, MD	Jan 29 - Feb 2
Las Vegas, NV	Feb 26 - Mar 2
Chicago, IL	Mar 12 - Mar 16
Denver, CO	Apr 2 - Apr 6
Austin, TX	May 21 - May 25
Orlando, FL	Jun 18 - Jun 22
San Diego, CA	Sep 10 - Sep 14
Detroit, MI	Sep 24 - Sep 28
Albuquerque, NM	Oct 15 - Oct 19
Los Angeles, CA	Nov 5 - Nov 9
Atlanta, GA	Dec 3 - Dec 7

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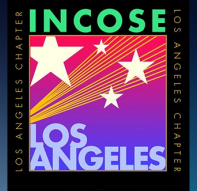
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# Sixth Annual Mars Rover & LA/OC Society Expo!



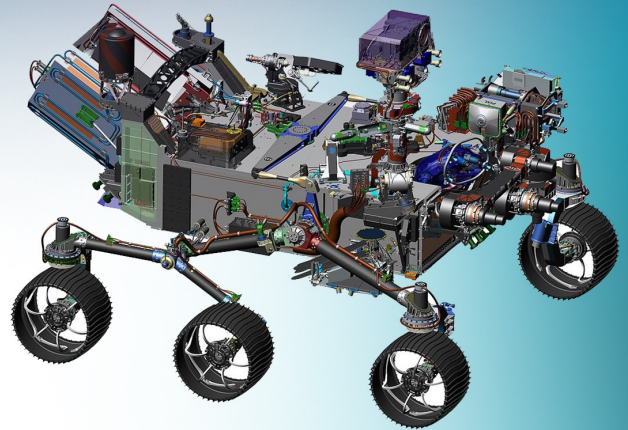
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**SATURDAY,  
SEPTEMBER 16, 2017  
1PM TO 5PM+**

**S-Café at Northrop-Grumman  
Redondo Beach**

(South of Marine Ave @ Simon Ramo Drive (@ Dead End))



**FREE  
PARKING &  
ADMISSION**

**GUEST SPEAKER:**  
**NASA-JPL Curiosity Mission Engineer  
Charles Baker**

## MISSION:

Curiosity carries the most advanced payload of scientific gear ever used on Mars' surface. Its assignment: Investigate whether conditions have been favorable for microbial life and for preserving clues in the rocks about possible past life.

We will share details of Curiosity's engineering & Science results & data to date. A Curiosity Landing Site Scale Model, Hardware and Mock-ups will be available on display.

- Amazing Curiosity Engineering & Science Results & Data To-Date
- Curiosity Landing Site Scale Model, Hardware & Mock-ups
- FREE Bottled Water & Healthy Snacks

\*Closing Q&A & FREE Raffle Space-Related Prizes!

Exhibit Tables from Several LA & OC Professional Societies

Planetary Society, IEEE, INCOSE, AIAA, SWE, IET, AFCEA, OCVitalLink, FSEA, IET, SAE, OSSC & SWE among others!

**RSVP to: <https://events.vtools.ieee.org/m/45697>**

**Questions: Fred Lawler, 714-369-9516, [fredlawler@hotmail.com](mailto:fredlawler@hotmail.com)**

This is a STEM (Science, Technology, Engineering, & Mathematics) outreach event for the Los Angeles and Orange County area. All Jr. High, High School, and College students are welcome!



Want to learn more about “techno-ference”?

Check the following websites:

Psychology Today, <https://www.psychologytoday.com/blog/artificial-maturity/201409/nomophobia-rising-trend-in-students>  
<https://www.scientificamerican.com/article/scientists-study-nomophobia-mdash-fear-of-being-without-a-mobile-phone/>  
<https://creativeconflictwisdom.wordpress.com/2014/03/04/the-conflict-potential-of-the-new-techno-feudalism/>  
<https://johannesburgreviewofbooks.com/2017/05/01/facing-up-to-a-techno-feudal-world-richard-poplak-reviews-rise-of-the-robots-technology-and-the-threat-of-a-jobless-future/>

*(Techno-ference, continued from page 2)*

Techno-ference allows for the avoidance of situations in which evasion might be desired (“did you like my presentation?”). With some people, techno-ference can become an addictive or problematic behavior pattern leading to additional problems in functioning and relating outside the cocoon of technology. Techno-ference is becoming increasingly intrusive and accepted with the prospective of its being addictive and domineering on a broad scale. There is speculation and concern that this dominance will lead to another concept: techno-feudalism.

Techno-feudalism is a world in which robots do everything, as people turn more and more to technologies for their interactions. Power and control then shifts to those who own and program the robots, the technology, and the apps.

One hundred years ago operating steam locomotives involved operating a complex system of systems, and that operation required the engineer (or driver) to do far more than just monitor gauges to make decision. Indeed the sound and feel of the locomotive were important, akin to the “seat of the pants” aspect of flying. The sweeping changes in technology over the last hundred years have the roles of locomotive engineer and pilot teetering on the brink of being meat servos, a few steps away from their jobs going the way of the locomotive fireman and the flight engineer.

In the Johannesburg Review of Books, Richard Poplak reviewed “Rise of the Robot: Technology and the Threat of a Jobless Future,” by Martin Ford. Opined Mr. Poplak, with some cheek:

This is the future that Ford adumbrates for us. He is bullish on the chances of artificial intelligence approaching or exceeding the capabilities of the human mind; he is bearish on how modern governments will deal with a fully-automated world. And by no means does he see only low or unskilled labour disappearing. There are already artificial intelligence apps that can ably approximate a Richard Poplak book review; meanwhile, blockchain technology will soon render law firms and banks nothing more than a miserly memory. (Hooray! — except there goes the upper-middle class tax base, to say nothing of the scaffolding of capitalist society.)

Ford considers policymakers and politicians dead to the threat that automation poses; he understands that organised labour — organised anything, really — can be of no help in a techno-feudal world, where the robots are the workforce, and where the peasants are entirely superfluous sacks of flesh and blood.

In this looming world, present ideological formations are laughably out of date. Marx never anticipated a hamburger-flipping C-3PO — and nor did Milton Friedman. We will need to find new means to subvert old structures, and entirely new economic models to sustain the billions of people bodyslammed out of factories by gleaming pieces of metal and carbon fiber. We’ll need to be very brave in the coming brave new world. Technological innovation will demand political innovation. The first is subject to Moore’s Law. The second is subject to Murphy’s.

If past is prologue, has this inevitability of techno-feudalism been gathering momentum for 100 years? A historical aside:

Radios in the 1930s had a similar effect as people carefully tuned their heterodyned analogue radios to listen to their favorite broadcasts. Some of the radios were ornate pieces of furniture, and once the radio was warmed up and carefully tuned for optimum reception, people would not only listen in rapt silence, but many would stare at the glowing dial as if hypnotized, or at least mesmerized. In the 1950s televisions proliferated, and became the country’s most popular babysitter. Since then the size of the device has shrunk and the throughput and capabilities have expanded.

And in conclusion, a question for the practitioners of systems engineering:

Is this juggernaut of technology and societal change something to be embraced by the profession, or is it incumbent upon the science of systems engineering steer away from techno-feudalism, to follow Dylan Thomas’ challenge to not go quietly into that good night?

Reputed Russian (post-Soviet) joke:  
“Marx lied about Communism but he told the truth about Capitalism.”

*“I consider the honest engineer the most valuable asset of this Government. These are the reasons: Dishonesty in any other branch of the service can be overcome in some way. In some way we can recover from it; in some way we can rally from it. But dishonesty on the part of the engineer is always so far reaching, in the loss of property, of money, of time, of human lives, that dishonesty on the part of the engineer is irreparable.”*

*By President William Howard Taft  
at Georgia Tech, May 11, 1911.*

*(The Road to Success. continued from page 2)*

As a result, there was higher quality research, and nearly all projects were completed on time and within budget, ultimately leading to a better quality or higher value product.

Randy cited several examples of systems engineering analysis and application on Caltrans projects. One project addressed “Snowfighter Communication.” The challenge was that in mountainous areas, there is little or no line of sight radio communication, few cell towers, often miles without communication.

Another example was a project regarding the use of California Highway Patrol officers in work zones. As a result of the efforts of Randy and his team, fatalities were reduced significantly, as were the collateral issues of cost and hassle for the traffic trapped in the consequential stoppages and backups. Randy considered this the most successful project in his career.

Randy concluded with a discussion of a project to replace the bridge on which Interstate 5 crosses Lake Shasta in northern California. The original bridge was literally wearing out. The design of the new bridge, and the approaching right of way, did bring up an illustration of one of the challenges faced in the execution of the systems engineering process. The highway approaching the bridge was relocated to broaden curves and to lessen the grade, thereby lessening the risk associated with trucks that are overweight and speeding.

*(Americas Sector, continued from page 3)*

The Blues Chapter of INCOSE (located on the Gulf Coast of Alabama, Mississippi and Louisiana) shared their experiences starting a Student Division. They used a template from the INCOSE website for their Student Division Charter. There is a student website at <http://www.incose.org/ChaptersGroups/Students>. The website has information about how to start a student division.

One lesson-learned is that the hosting university must recognize the group and might have some changes to the charter wording. In the case of the University of Southern Alabama, the university had to approved the charter and they may make changes to it, so others should be prepared for that possibility.

A twitter handle has been created for the America’s Sector to stay connected: @incose\_Americas.

The One Hundredth INCOSE webinar was held on Monday, June 19 at 7:00 p.m. eastern time, “Integrating Program Management and Systems Engineering”. Some of the chapters in that time zone had dinner meetings to listen to the webinar together.

## GameSIG Winners! Congratulations!



Northwood High School Winner, The Explorer Game



Santa Ana College Winner, Battle on the Bridge Game



Los Angeles Chapter President Phyllis Marbach accepting the Platinum Circle Award for 2016

## INCOSE-LA Chapter NEWSLETTER

Vol. 15: Issue 4, August — September 2017



**The Board of Directors wishes to welcome the following new members to the Los Angeles Chapter of INCOSE.**  
 Note: The information listed below is from the member directory and is based upon your initial membership application. If the information is not correct or complete, then please access the member directory (at [www.incose.org](http://www.incose.org)) to update your information.

Name	Organization
Eduardo Jimenez	Johnson and Johnson
Brian Nielsen	Boeing Company, The
Brain Lynch	SAIC
Alyssa Emerson	Cal Poly Pomona Student Division
Stephanie Alvizo	Cal Poly Pomona Student Division
Daniel Clark	Boeing Company, The
Mark Jaramillo	Science Applications International Corporation (SAIC)
Eric Duckering	ITT Aerospace Controls
David Wolf	Department of Navy Civilian
Heidi E. Ziegler	Boeing Company, The
marc hernandez	SAIC
Mark Benton	Science Applications International Corporation (SAIC)
Jeffrey Raedy	Science Applications International Corporation (SAIC)
Justin Brandt	Loyola Marymount University
Scott Strutner	Northrop Grumman Corporation

### *In Memory of Ruth Cudney*

*Ruth Cudney, the wife of long-time member and stalwart of the Chapter, Paul Cudney, passed away recently. Paul was deeply devoted to Ruth. They had been married for over fifty years. The Chapter's deepest condolences go out to Paul and their three daughters.*

### 2017 Board of Directors

Elected Officers			Elected At-large Directors		
President	Phyllis Marbach	prmarbach@gmail.com	Membership	Mark TenEyck	Mark.teneyck@3ds.com
Vice-president	Rick Hefner	rhefner@caltech.edu	Programs	Michael Do	michael.do@comcast.net
Immediate Past President	Terry Rector	Terry.e.rector@aero.org	Systems Engineering Education	Tony Magorno	tmagorno@gmail.com
Secretary	Jeffrey Willis	raptor0089@aol.com	Ways and Means	Stephen Guine	Stephen.Guine@ngc.com
Treasurer	Lin Yi	Lin.yi.dr@ieee.org	Communications	Neil Wigner	Neil.wigner@ngc.com
Appointed Positions					
Newsletter Editor	Jorg Largent	jorg.largent@incose.org	Student Division Ambassadors	Scott Birtalan	scott.birtalan@ngc.com
Technical Society Liaison	Shirley Tseng	shirleytseng@earthlink.net	Reflector Manager	Deborah Cannon	Deborah.a.cannon@aero.org
Chapter Awards Manager	Rick Hefner	rhefner@caltech.edu	Social Media Manager	Doris Gebelein	doris.gebelein@lmco.com
Professional Networking Chair	Scott Birtalan	scott.birtalan@ngc.com	New Member Ambassador	Collette Kurtz	kurtz905@aol.com
Representative to the SF Valley Engineer's Council	Stephen Guine	Stephen.Guine@ngc.com	Volunteer Coordinator	Karen Miller	karmill888@aol.com

### INCOSE-LA Chapter NEWSLETTER

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# INCOSE-LA Chapter      NEWSLETTER

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Return Address:

**PO Box 10969  
Westminster, CA 92685-0969**

## Forwarding Service Requested

The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization founded to develop and disseminate the interdisciplinary principles and practices that enable the realization of successful systems. INCOSE's mission is to share, promote, and advance the best of systems engineering from across the globe for the benefit of humanity and the planet.  
The Los Angeles Chapter meets several times per year for speaker meetings and, in addition, sponsors tutorials, mini-conferences and other activities of interest to those in systems engineering or related fields.

## UPCOMING EVENTS

For more details on Chapter-sponsored events and registration, go to [www.incose.org/los-angeles](http://www.incose.org/los-angeles)

### **August Speaker Meeting Integration of Model Based System Design with Modelica Using 3DEXPERIENCE Platform**

Presented by Christopher Jones  
Tuesday, August 8, 2017  
The Aerospace Corporation  
El Segundo, California

### **Third Quarter Strategic Planning Meeting**

Saturday, August 26, 2017  
Manhattan Beach Community Church  
Manhattan Beach, California

### **September Speaker Meeting Autonomous Vehicles**

Presented by Kay Das  
Tuesday, September 12, 2017  
The Aerospace Corporation  
El Segundo, California

### **A Report from Mars and the Martian Curiosity**

September 16, 2017  
The Northrop Grumman S-Café in Redondo Beach  
*See flyer on page 6 for details*

### **One-day Systems Engineering Event Saturday, October 14, 2017 Caltech**

*Details are in work; a Reflector Notice will be sent*

### **Chapter Holiday Party!**

Date: Saturday, December 9, 2016 - 6:00 p.m. - 9:00 p.m.  
Venue: Marina del Rey Yacht Club  
Location: 13900 Palawan Way

### **Systems Security Engineering Tutorial**

In conjunction with International Symposium on Systems  
Security Engineering  
Location: the local MITRE facility and a VTC with the MITRE  
Colorado Springs branch  
*Details are in work; a Reflector Notice will be sent*

### **December: Election of Chapter Officers for 2018**

*For more information on these and other events of interest in the  
Los Angeles area, look for a Reflector Notice in your email, and  
check the Chapter website: [www.incose.org/los-angeles](http://www.incose.org/los-angeles)  
Also like us on facebook!*