Vol. 15, Issue 3, June — July, 2017

NEWSLETTER

2004-14 2015

2008, 2012 President's Award for Most Outstanding Chapter

CSER 2017 Success!

Thank You to the Sponsors, Participants, and Facilitators.

The Sponsors

The success of the 2017 Conference on Systems Engineering Research (CSER) is due, in no small part, to the many sponsors who stepped forward to support the conference. The array of sponsors included the traditional sponsors who have made the many past CSER conferences successful. In addition, and, in a break from the aerospace mold, sponsors with non-aerospace backgrounds joined the team to facilitate this expansion of the science of systems engineer.

In addition to the hosting organizations, the University of Southern California and the Los Angeles Chapter of INCOSE, the sponsors for CSER 2017 were:

- The Aerospace Corporation
- The Boeing Company
- California Institute of Technology
- General Motors
- INCOSE
- INCOSE Student Division
- Intelligent Systems Technology Inc.

(See "CSER Sponsors," on page 8)

The Participants

The participants in CSER 2017 came from around the world. The distinguished systems engineering luminaries who spoke and participated in the panel discussions were well complemented (and complimented) by the excellent papers on the science of systems engineering and by the hard work that went into the creation of those papers.

The theme for the conference was, "Disciplinary Convergence: Implications for Systems Engineering Research."

The Technical Committee worked diligently to ensure the conference represented forward-thinking research from across the globe — from renowned academicians, senior industry and government representatives, and graduate students.

The Technical Committee invited top researchers from these organizations to serve as technical session chairs across a broad range of research topics.

(See "CSER Participants," on page 9)

Disciplinary Convergence: Implications for Systems Engineering Research

The Facilitators

Preparations for CSER 2017 began early in 2016 as the teams began work on this event. 2016 INCOSE-LA President Terry Rector and Dr. Azad M. Madni, Professor, Systems Architecting and Engineering, of the University of Southern California (USC) were the nucleus of a team of members of the Los Angeles Chapter and faculty and students from USC.

Dr. Madni and Dr. Barry W. Boehm, Professor, Software Engineering of the Viterbi School of Engineering at USC led the conference as General Co-chairs.

In addition to Dr. Madni and Dr. Boehm, the CSER Leadership Team included Dr. Daniel Erwin, Professor, Astronautical Engineering and Dr. Roger Ghanem, Professor, Mechanical Engineering, from USC, Dr. James Humann, USC Faculty Member Ken Cureton, USC graduate student Edwin Ordoukhanian and Dr. Michael Sievers from the Jet Propulsion Laboratory (JPL).

(See "CSER Facilitators" continued on page 9)

Inside This Edition

Systems Engineering "Jeopardy" and Chapter-hosted Exams

A Critique: The Jeopardy Game Event

Past-president Stephen Guine continues to lead the Chapter in the development of the systems engineering "Jeopardy" game. Following the format of the popular television show, this "Jeopardy Game" is designed to help systems engineers prepare for the INCOSE tests to be certified as Associate Systems Engineering Professionals (ASEP) and Certified Systems Engineering Professionals (CSEP). Titled "INCOSE ASEP/CSEP Certification exam prep session," a "Jeopardy" game was held at Loyola Marymount University (LMU) on Tuesday, April 25, 2017.

Professor John Poladian provided the following observations:

> On behalf of Loyola Marymount University Systems Engineering Leadership Program, many thanks to everyone at the INCOSE-LA Chapter who helped host the special ASEP certification exam review for our LMU Systems Engineering students.
>
> Your thoughtfulness in helping promote student engagement in INCOSE ("our student's next university" of lifelong learning) is much appreciated. I hope you enjoy the attached snapshots of the automated "Jeopardy Game" that the Chapter used to help facilitate this review session.
>
> Our INCOSE-LA Chapter earns an "A+" for creativity!
>
> Special kudos to Stephen Guine (CSEP, President Emeritus INCOSE-LA Chapter, and Northrop Grumman Corporation Systems Engineering Manager) for leading the actual review session.
>
> Your friend,
>
> John P.
>
> John L. Poladian, Visiting Assistant Professor Systems Engineering Leadership Program, Frank R. Seaver College of Science and Engineering Loyola Marymount University

Are you interested? Organizations interested in taking advantage of this program can contact the Los Angeles Chapter Director of Systems Engineering Education, Tony Magorno, at tmagorno@gmail.com, or any member of the Board of Directors (see page 11).

CSEP/ASEP Certification Exam

INCOSE-LA hosted a CSEP and ASEP certification exam on Tuesday, May 2, 2017. The exam was given on the campus of Loyola University. This is one of the services the Chapter provides for the members. This paper exam has the same format as the standard knowledge exam, with 120 multiple-choice questions in 120 minutes. Candidates who pass the exam have the opportunity to use their results toward an application for ASEP or CSEP certification.

Members who are interested in taking the exam at a future offering should watch for an announcement in a Reflector Notice, on social media, or in the *Newsletter*.

Second Quarter Strategic Planning Meeting

By Phyllis Marbach

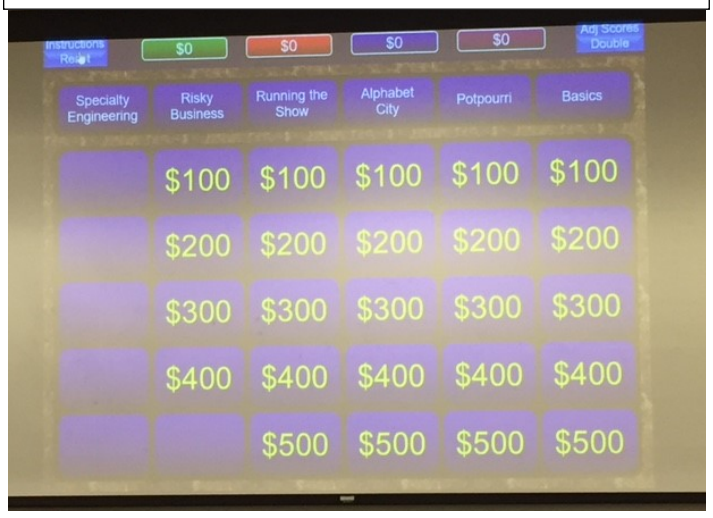
Fifteen members of the Los Angeles Chapter attended the Second Quarter Strategic Planning Meeting held Saturday May 13, 2017, at the Manhattan Beach Community Church. The meeting opened with the President, Phyllis Marbach summarizing 2017 accomplishments to date and plans for the remaining year. Ways and Means director, Stephen Guine, provided training in Sharepoint by using the Chapter repository on INCOSE CONNECT. Members can access the Chapter repository by going to our website at www.incose.org/los-angeles/, logging in as a member and clicking on the Quick Link: INCOSE Connect LA Chapter Folder.

Following the training, Vice-President and 2018 President-Elect, Rick Hefner, presented a plan to capture our records for easier awards submittal to INCOSE at the end of the year. Categories were divided among various board members and the board of directors plans to status the records keeping periodically throughout the year. Michael Do, Programs Director, was not available to attend, however, he did provide charts. The Chapter has a full slate of speakers scheduled and if we find world-renowned speakers in the area during the year we will schedule additional speaker meetings.

Education Director, Tony Magorno, is coordinating a presentation of the Security Systems Engineering (SSE) Tutorial by Dr. Mark Winstead and Dr. Daryl Hild. This tutorial will be presented at the International Symposium in Australia in July and is awaiting MITRE public release. Once released the INCOSE-LA Chapter may register for the tutorial to be held at MITRE in El Segundo and a VTC with MITRE in Colorado Springs. A reflector announcement will be sent once the date is set. Continue to check our website at www.incose.org/los-angeles/. Other Systems Engineering educational topics being considered include Systems Thinking and MBSE.

(See "Strategic Planning Meeting," page 10)

Below: The Systems Engineering "Jeopardy" Game Board



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Enroll in our public program held on the Caltech campus in Pasadena, starting in August. More info at https://ctme.caltech.edu/mbse

The Value of Systems Engineering and Transportation Systems

June 13, 2017 Speaker Meeting

Abstract:

This presentation discusses the value of Systems Engineering and how we apply it to transportation systems in California.

- What is systems engineering?
- What do we mean by value and what determines value?

Some examples of transportation problems from the Department of California Transportation will be presented to show the importance of performing the rigors of systems engineering and applying the systems engineering V-model in order to gain value to transportation projects.

Biography:

Randy Woolley, CSEP, PE, retired from the California Department of Transportation (Caltrans). Randy worked in the Division of Research, Innovation, and System Information (DRISI) as the Chief of the Systems Engineering Branch. Randy managed the team that developed the Systems Engineering Guidebook for projects Intelligent Transportation Systems and was a contributing author and final approver for the document. Randy led DRISI to integrate systems engineering into main stream transportation research and completed several research projects using the "Vee" model for that research. Randy is active in the development and presentation of training in systems engineering, system integration, and configuration management. Randy is an instructor for the four systems engineering courses for the University of California, Irvine Extension. Randy has 26 years of experience in the electronics industry including systems engineering, design, manufacturing, project management and research. He is the past Secretary of the INCOSE San Diego Chapter Board of Directors.

Date: Tuesday, June 13, 2017 5:30-7:30 p.m.

Schedule details:

- 5:15-5:30 Sign-in
- 5:30-6:00 Networking and refreshments
- 6:10-6:20 Introduction
- 6:20-6:30 Oil and Gas Working Group presentation
- 6:30-7:30 Guest Speaker Presentation

HOST VENUE: The Aerospace Corporation, Building D8/1010, 200 N. Aviation, El Segundo

COST: Members: FREE. Non-members: $10 (refreshments provided)

Please register by noon June 5, 2017. Foreign national need to register by May 30, 2017.

Registration link and more details on the web:
http://events.constantcontact.com/register/event?llr=l4ihvgeab&oeidk=a07ee36zrr5ffe34c68

Is Systems Engineering Really Engineering?

The April Speaker Meeting

By DeAnna Regalbuto

The April speaker meeting featured Dr. Steven Jenkins, a Principal Engineer in the Formulation and Systems Engineering Division at the Jet Propulsion Laboratory, California Institute of Technology. His fascinating talk explored whether or not systems engineering is really engineering.

Dr. Jenkins began by characterizing engineering in general. He observed that engineers do two complimentary things:

1. They describe actual and imagined states of the world, and,
2. They analyze these descriptions by relying on science and mathematics to achieve rigor.

For a definition of rigor Jenkins turned to "NASA Final Report of the Return to Flight Task Group", Appendix A.2, 2005, which states that rigor is the "scrupulous adherence to established standards for conduct of work". Though Jenkins had many valuable thoughts on the nature of rigor, for the sake of space this article simply notes that per Jenkins rigor in engineering manifests itself in three dimensions:

1. Precise language used to describe things
2. Mathematical abstractions used to analyze things, and,
3. Automation used for both.

Dr. Jenkins observed that systems engineering is young and immature compared to other engineering disciplines as evidenced by its lack of rigor. Unlike established disciplines, such as control theory which uses functional analysis, systems engineering does not yet recognize a fundamental set of abstractions as part of its domain. This lack of abstractions is further complicated by the fact that systems engineering talks about everything.

Dr. Jenkins suggested this lack of rigor can be overcome by acknowledging that the field of knowledge representation, graph theory, and the semantic web all have tools that enable system description and analysis. However he does not like the term Model-based Systems Engineering (MBSE) as it begs the question, "What is a model?" Rather, he prefers to describe MBSE as a systems engineering practice that facilitates the three dimensions of engineering through the use of precise language for descriptions, mathematical abstractions for analysis, and effective automation.

So, is systems engineering really engineering? It can be when we find ways to execute it with rigor.

Interested in expressing a different point of view? Write your opinion and send to to the *Newsletter* editor, jorg.largent@incose.org.

Interested in learning more or engaging in a roundtable discussion? Contact Michael Do, Director of Programs, at Michael.do@comcast.net, or Tony Mangorno, Director of Systems Engineering Education, at ktmagorno@gmail.com.

INCOSE Texas Gulf Coast Oil and Gas Conference Reaching Across Industries

By Michael Do

I attended the INCOSE Texas Gulf Coast Oil and Gas Conference on May 5, 2017 in Houston, Texas. The conference brought presenters from the Aerospace and Oil/Gas communities, which offered opportunities for systems engineering collaboration between these two industries. Two keynote speakers presented very good insights into the need for systems engineering and its importance. Robert Patterson, Executive Vice-President of Shell Global Solutions, presented a dire financial picture of Shell's portfolio. He mentioned the need to apply good systems engineering in order to ensure Shell is developing the right and cost effective solutions for their customers. Kirk Shireman, NASA Space Station Program Manager, discussed the importance of applying systems engineering and systems integration to a project like the Space Station. Systems integration is very important to NASA because many pieces and parts that make up the Space Station come from many different sources. How these products are made must consider how they will be integrated into the Space Station, otherwise the system does no good. Other discussions include the challenges of increasing complex systems in our society and the need to manage complexity. Overall, it was a very good conference and insights from speakers concerning systems engineering in the Aerospace and Oil and Gas industries.

Available Donation for Furthering Science Education

Member Josh Sparber would like to make a single donation of an extensive electronics laboratory to a science high school or science institution. The gift includes the following equipment.

- Working electronics equipment: oscilloscope, power supplies, signal generators, and measurement devices.
- For circuit building: various breadboards, extensive parts, extensive wires, solder and working soldering iron, and solder sucker.
- An IBM dual drive workstation, including software manuals: Digital Operating System, Assembly, and Symbolic Debugger
- Extensive electronics magazines: EDN, IEEE Spectrum, and AAMI.

These items are an excellent training tool. The IBM desktop computer is very basic, the manuals and DOS really outline the computer basics that are the foundation for today's much more complex computers. Inside the IBM they did a very detailed job of showing what is what, it's not miniaturized like today's components. The manuals also detail what hardware (what chip) does what in a detailed fashion. There are the basic tools for building and troubleshooting the programmer — Assembly Code and an Assembly Language Debugger. So for beginners or trained novices in computing it makes it very easy to learn how computers basically work.

The new owner will need to pick up this gift. Everything is already boxed up and ready to go. Anyone interested in assuming ownership of this set of tools and to learn how it all started, contact Joshua Sparber - 714-998-3439, or jsparbear5@gmail.com.

The President's Corner

By Phyllis Marbach, President, INCOSE-LA Chapter President

Our strategic direction for 2017 is "Encourage systems thinking for wider community problems". During the first quarter Strategic Planning Meeting (SPM), we brainstormed what we mean by encouraging systems thinking, what are community problems and what does "Done" look like.

Let's start with what "Done" looks like. The ideas included, systems engineers on community committees addressing various community problems, a yearly class or workshop in the use of systems thinking to solve practical problems, expand to at least one of the following businesses: software start-ups, private/vacation education (such as summer camps) and many others.

For encourage systems thinking we could show the benefits of systems engineering: example, real solutions implemented, we could conduct tutorials, we could Identify society problems: immigration, infrastructure, health, education, and many others ideas of what our Chapter could do.

Our Chapter defined thirty-eight items that qualify as community problem. The list includes such topics as the homeless, veterans, abandoned kittens and puppies among others.

Upon review of these various ideas I put together a multi-year plan and presented this plan at the second quarter SPM on May 9, 2017. The plan laid out how our Chapter could accomplish progress toward encouraging systems thinking for wider community problems. In 2017 we could provide a systems thinking educational workshop. We could establish a core team who meets with at least two different community leaders from at least two different cities to learn about their problems. For example, since our first quarter meeting I have attended a local advanced manufacturing conference and an agriculture summit where those in attendance discussed their needs from the scientific community. We could also brainstorm how the city level problems could be solved using systems thinking and which problem to focus on first. We also hope to arrange for an INCOSE-LA speaker topic or panel discussion for one or more of the speaker meetings in 2018. The one-day conference theme could also include the theme to encourage systems thinking for wider community problems.

Good fellows at the CSER banquet

Master's Programs Offered:

- System Engineering
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- Systems Engineering and Leadership Program (M.S. and M.B.A.)

Certificates Offered:

- Lean Healthcare
- Advanced Leadership Program
- Systems Engineering

- Systems Engineering with Technical Focus in: Computer Science, Civil Engineering (Water Resources), Cyber Security, Electrical Engineering, Environmental Science, Mechanical Engineering, Sustainability Science.

Contact Information:
Fred Brown, Ph.D., Graduate Program Director at 310.338.7878 or Frederick.Brown@lmu.edu

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

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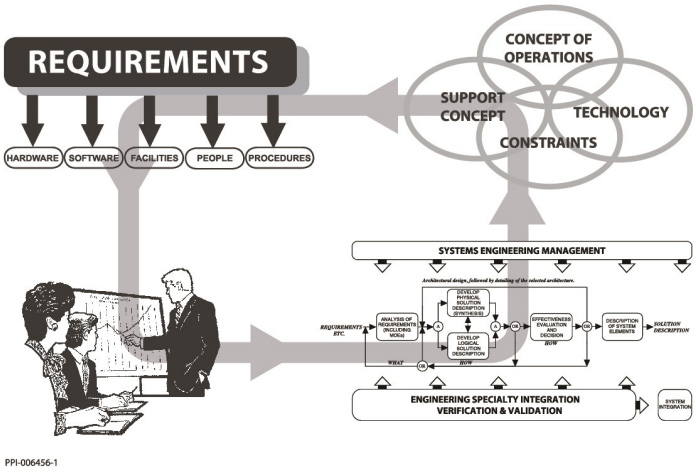
2017 COURSE DELIVERIES

21 - 25 Aug	Washington, DC
2 - 6 Oct	Las Vegas, NV
16 - 20 Oct	Boston, MA
4 - 8 Dec	Las Vagas, NV

"Systems engineering is not a rulebook, yet a set of principles, supported by effective methods, to deliver maximum benefits to stakeholders"
- Robert Halligan, FIE Aust CPEng



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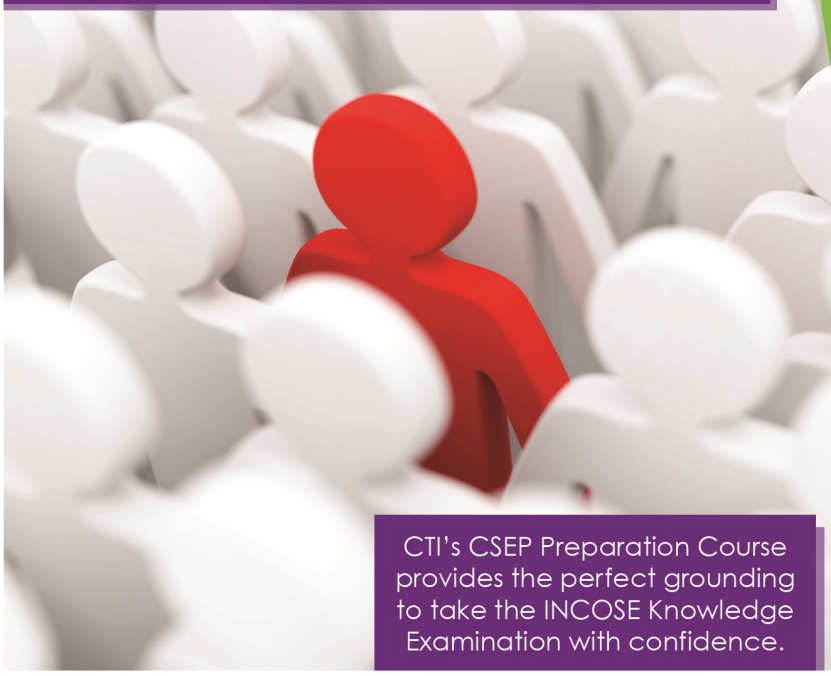

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- Sept 25 - Aug 29 **Laurel, MD**
- Oct 30 - Nov 3 **Las Vegas, NV**
- Nov 13 - Nov 17 **Chantilly, VA**

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(CSER Sponsors, continued from page 1)

- Jama
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- Loyola Marymount University Graduate Division
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- MITRE
- Project Performance International
- Stevens Institute of Technology (with USC, a founder of CSER)
- Stylus Publishing
  - The Institution of Engineering and Technology
  - River Publishers
  - Mercury Learning and Information
- University of California Los Angeles Extension
- Walt Disney Imagineering

The CSER leadership team wishes to thank the sponsors for their support of the conference. Their contributions were invaluable in making CSER 2017 the largest and highly successful conference. The team looks forward to CSER 2020 and the vision it will bring.

(CSER Participants, continued from page 1)

Speakers

The conference opened on Friday with a plenary session featuring Dr. Azad M. Madni, Conference General Co-Chair, Dr. Yannis C. Yortsos, Dean of the Viterbi School of Engineering at USC, Dr. Paul Nielsen, Director, Software Engineering Institute, and Dr. Greg Hyslop, Chief Technology Officer, The Boeing Company.

The Saturday session of the conference also opened with a plenary. This plenary featured Dr. Barry Boehm, Conference General Co-Chair , Ms. Kristen J. Baldwin, the Principal Deputy to the Deputy Assistant Secretary of Defense for Systems Engineering, and Professor John Doyle, of the California Institute of Technology.

CSER 2017 concluded with an Executive Leadership Panel. The speakers were:

- Ms. Marilee Wheaton, Systems Engineering Fellow, The Aerospace Corporation *(moderator)*
- Dr. Allen Adler, Vice President, The Boeing Company
- Dr. Wayne Goodman, Executive Vice President, The Aerospace Corporation
- Lt Gen (Ret.) Larry James, Deputy Director, Jet Propulsion Lab
- Dr. Sandra Magnus, Executive Director, AIAA
- Mr. Marcus Nance, Director, Boeing Defense Systems, The Boeing Company

Technical Sessions:

Over eighty papers were submitted and the accepted papers were distributed into the following technical sessions:

- Agile Systems Engineering
- Model-Based Systems Engineering
- Infusion of System Science into Systems Engineering
- Advancing Systems Engineering Education
- Systems Engineering and Decision Science
- SERC Research
- System Architecture and Complexity
- Resilience and Affordability
- Using Systems Engineering Methods to Protect Electric Power Grid
- Cyber Secure Resilient Systems
- Systems and System-of-Systems Integration
- Trade-Space Visualization and Analysis
- Systems Engineering Application
- Systems Thinking and Complexity Management
- Formal Methods in Systems Engineering
- Smart Manufacturing

Tutorials

The day before the formal CSER itself, four tutorials were offered:

- Cyber-Physical Systems
- Data Analytics
- Model-Based Systems Engineering
- Systems Thinking.

The CSER leadership teams wishes to thank the many participants who made this conference a success.

(CSER Facilitators, continued from page 1)

Ken and Edwin were instrumental in the success of the conference through their steady and continuous involvement and their work with the Conference Management Support Team.

Volunteers from other organizations, including Loyola Marymount University (LMU), joined the team as the work progressed.

INCOSE member Marilee Wheaton of The Aerospace Corporation served as a Technical Co-chair.

The Conference Management Support Team consisted of Mr. Terry Rector and Ms. Marilee Wheaton, both from The Aerospace Corporation plus Mr. Eric Belle, Raytheon, Mr. Paul Cudney, Lockheed Martin (Ret.), Mr. Richard Emerson, JPL (Ret.), Mr. Harvey Soldan, JPL, Ms. Julie Foster, AB-CM/DM Consulting, Ms. Collette Kurtz, INCOSE-LA, Dr. Lin Yi, JPL, Ms. Phyllis Marbach, INCOSE-LA 2017 President, Mr. Tony Magorno, The MITRE Corporation, Ms. Rosalind Lewis, The Aerospace Corporation, Ms. Jayne Scheckla, Mentor Graphics, Dr. Rick Hefner, Caltech, Ms. Shirley Tseng, INCOSE-LA, Ms. Karen Miller, LMU, and Mr. Neil Wigner of the Northrop Grumman Corporation.

The details to which the support team attended were legion. Terry Rector, INCOSE-LA President in 2016, and Phyllis Marbach, INCOSE-LA President in 2017, worked together to ensure a seamless transition from one year to the next. INCOSE-LA member Paul Cudney developed and implemented a registration system to address the different registrants and to quickly register the participants during the conference. Wendy Leonard, a Flight Test Engineer at Edwards Air Force and a graduate student at USC developed a social media plan. Member Dick Emerson brought his experience as the Technical Manager of the 2016 Regional Mini-Conference to develop the sponsorship plan. Julie Foster developed and oversaw a risk management plan from the very beginning. Karen Miller from Loyola Marymount University led the recruiting of volunteers. These are but a few of the activities that transpired to support the conference.

On a concluding note, a special thanks goes to the management and staff of the Crown Plaza Hotel, the venue for the conference.

Dr. Mark L. McKelvin, Jr. of The Aerospace Corporation leading a comprehensive discussion during one of the break out sessions on Model-based Systems Engineering

(Strategic Planning Meeting, from page 2)

Ways and Means Director, Stephen Guine, presented updates needed to the Chapter bylaws. These updates will require a vote of 10 percent of the members. When they are ready for review and vote, we are counting on your support to approve the updates. Lin Yi, Treasurer, provided a report of the budget. The CSER budget is expected to be in the green once all receipts are in and paid. The Chapter will reduce our reserves by $24,000 if all approved expenses are realized.

The Chapter discussed the need for a volunteer to help market advertisements for the *Newsletters*, write grant proposals and seek sponsors for our events. Currently the largest single expense of the Chapter is our *Newsletters*. The Chapter has enough awards for speakers and guests so there is no need to order more until next year at the earliest.

Communications Director, Neil Wigner, showed the link to Trello and described the value it can bring to help us keep all our tasks visible and prioritized. See www.incose.org/los-angeles/ "QUICK LINK" (lower left on the webpage) and "LA Chapter Trello Management Site". Only invited members have access to the board and Phyllis took an action to get it set up for our use in the future. If you think you should have access to the Trello board please email Neil Wigner (Neil.wigner@ngc.com) and Phyllis Marbach (prmarbach@gmail.com).

Mark TenEyck, Membership Director, is focusing on attracting more Corporate Advisory Board members and plans to hold another ambassador training event after the International Symposium. Mark is reaching out to former members seeking information regarding why they dropped their membership. Scott Birtalan, Student Liaison, discussed the student divisions and introduced Audrey Doan the new president of the INCOSE Student Division at California State Polytechnic University, Pomona. We had a lively discussion about how the Chapter can better support our student divisions. Minutes and actions were recorded by Jeffrey Willis, Secretary.

Thanks to Rick Hefner for the use of the facility, Shirley Tseng and Collette Kurtz for providing food and drinks and all those who gave up six hours of their Saturday to discuss and plan our INCOSE-LA Events.

Photograph of the participants at the second Strategic Planning Meeting.
Photo by Collette Kurtz

Engineer's Networking Event

On Friday, April 21, 2017 a group of engineers gathered at the Long Beach Petroleum Club for a social networking mixer. This event was co-hosted by the Los Angeles Basin Section of the Society of Petroleum Engineers (LASPE), the Orange County Engineering Council (OCEC), and the Los Angeles Chapter of the International Council on Systems Engineering (INCOSE-LA). The leaders of these organizations have the vision to nurture interdisciplinary networking opportunities. This event was the first time several southern California engineering professional societies joined forces to encourage cross-discipline communications, and the organizing organizations hope to organize similar events in the future with additional professional societies and companies.

The main goal of this social networking event was to encourage interactions within and between disciplines and between organizations. Shirley Tseng (INCOSE-LA); Brian Tran (LASPE); Robert Martinez, Rajani Bansal, Dhananjay Kulkarni, Steve Cheung (OCEC), and Jalal Torabzadeh (CSULB) deserve special recognition for volunteered efforts to make this event a success.

It was a lively party with engineers from the aerospace, biomedical, chemical, civil, electrical and electronic, environmental, mechanical, petroleum, sustainability, systems, and transportation industries. There were also attendees from the Society of Woman Engineers, the University of Southern California, California State University, Long Beach, Cal Poly Pomona, and from many local engineering companies.

Dr. Steve Cheung, President of OCEC introduced and thanked Ms. Phyllis Marbach, President of INCOSE- LA, and Mr. Robert Schaaf, chairperson of LASPE. Ms. Marbach and Mr. Schaaf then shared information about their organizations.

The evening included a lively icebreaker that got everyone walked around the room and proactively interacted with one another. It was both very relaxing and enjoyable. In addition, one attendee announced that his employer has two summer intern positions open and invited students to apply. We also had an impromptu magic show by Mr. Brian Regalbuto from INCOSE-LA.

Near the end of the event, there was a prize drawing and with an amusing coincidence: four of the six prize winners have same first name, Robert.

A post-event survey garnered some positive comments: "A great job, one of the best ones I have ever attended", "I wish I realized that this event was for all types of engineers, I would have invited others", and "I liked the assortment of engineering professions represented, more joint events would be awesome".

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) to update your information.

Name	Organization
Gurinder Buendia	Rockwell Collins, Inc.
Esteban Almazan	Lockheed Martin Corporation
David Hoye	Embry Riddle Aeronautical University
Danielle Blair	Embry Riddle Aeronautical University
Matthew Winthrop	Northrop Grumman Corporation
Kevin Romeyn	Embry Riddle Aeronautical University
Andrew Murrell	Rockwell Collins, Inc.
Henry Dotson	Mandla Solutions Inc
Adel Alamer	
Luca Rigolin	Parker Aerospace
Richard Phomsouvanh	LinQuest Corporation
Megan Ford	Northrop Grumman Corporation
Audrey Doan	Cal Poly Pomona Student Division
Eric Duke	SAIC
Xu Meng	Vyaire Medical
James Abellana	Alpha Omega Group LLC
Kathleen Mroz-Barrett	Figueroa & Associates
Albert Reinhardt	SAIC
Daniel Barnum	
William Rose	University of Southern California
Steven Rau	Science Applications International Corporation (SAIC)
Carrie Selski	Embry Riddle Aeronautical University
Pedro Lepe	Johns Hopkins University

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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
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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
Vol. 15: Issue 3, June — July, 2017

Return Address:

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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

Systems Engineering "V" Model Applied to CALTRANS
Presented by Randy Woolley
Tuesday, June 13, 2017
The Aerospace Corporation
El Segundo, California

July Speaker Meeting?
Tuesday, July 11, 2017
Due to a schedule conflict, the planned speaker is not available.
Work is in progress to schedule a new speaker.
Watch for a reflector notice with the revised plan.

INCOSE International Symposium IS 2017
Dates: July 17 — 20, 2017
Adelaide, Australia
Learn more and register at
http://www.incose.org/symp2017/home

Integration of Model Based System Design with Modelica Using 3DEXPERIENCE Platform
Tuesday, August 8, 2017
Presented by Christopher Jones

Third Quarter Strategic Planning Meeting
Saturday, August 26, 2017
Manhattan Beach Community Church
Manhattan Beach, California

September 12, 2017 Speaker Meeting
A work in progress

A Report from Mars and the Martian Curiosity
September 16, 2017
The Northrop Grumman S-Café in Redondo Beach
Details in work

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

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
Also like us on facebook!