



NEWSLETTER

Vol. 6: Issue No. 2

March 2008



UPCOMING EVENTS

Speaker Meeting, March 25

State Analysis for Systems Engineers

Location & Date

Jet Propulsion Laboratory, Von Karman Auditorium
(directions on page 4)
Tuesday, March 25, 2008
5:30 p.m. Networking
6:30 p.m. Presentation (all sites)

Tutorial, March 27

State Analysis for Systems Engineers

Location & Date

Caltech Baxter Auditorium
(directions on page 4)
Thursday, March 27, 2008
8:30 a.m. to 5:00p.m

**Conference on Systems Engineering Research
(CSER) 2008**

Location & Date

Crowne Plaza Hotel
300 N. Harbor Dr.
Redondo Beach, California
April 4-5, 2008



CONFERENCE ON SYSTEMS ENGINEERING RESEARCH

RELATED SYSTEMS ENGINEERING EVENTS

Basics of Systems Engineering (BASE)

Location & Date

The Aerospace Corporation
2401 E. El Segundo Blvd.
El Segundo, CA 90245
Bldg. 9 Room 522
8:00 a.m. to 4:30 p.m.
April 1-3, 2008

INCOSE International Workshop (IW 08) Report

Compiled by Scott Jackson from various contributors

On January 26-29, INCOSE held its annual workshop in Albuquerque, NM. This is the event at which INCOSE working groups and boards do a lot of planning and real work. This meeting was marked by a lot of energy and enthusiasm. There were more than 300 attendees, compared to around 200 in the past. Following are the highlights of many of the meetings that INCOSE-LA members either attended or ran.

Board of Directors (BoD)

Stan Settles, Director for Academic Matters

INCOSE is managed by the BoD in accordance with its bylaws. This was the first meeting of the BoD for Stan, who accepted this appointment a little over a week prior to the IW 08.

Chapters Meeting

Beth O'Donnell and Eric Belle, attendees

The Chapters Meeting was attended by regional representatives and chapter leaders from around the world. The leaders and representatives each gave a summary briefing on the state of their respective chapters along with accomplishments and challenges faced. The leadership of the membership board gave a briefing that including many of the changes presented earlier in the CAB meeting. Three items are of particular note to members:

1. The pending launch of the INCOSE Wiki site (scheduled for March 31) to which any member can contribute.
2. According to the new membership forms, the membership year "is annual based on the date of enrollment."
3. Membership entitles the member to soft copy only of the SE Journal and INSIGHT. Regular members may buy hard copies of the Journal and INSIGHT at a reduced rate (\$30.00 for the Journal and \$20.00 for INSIGHT).

Commercial Steering Board (CSB)

Stan Settles, member

The CSB met alone and also met with the Technical Leadership Team and the heads of many working groups, including the new Biomedical WG. There were discussion regarding international meetings focusing on China, Russia, and India. The growing emphasis on industries other than aerospace and defense has been noted. A commercial panel was added for the IS 08 in the Netherlands.

Fellows Committee

Scott Jackson, Fellow

The INCOSE Fellows are a group of INCOSE members who have been shown to have contributed to the advancement of systems engineering. The group is limited to 1% of the membership of INCOSE. In Albuquerque the Fellows met to elect new members to the Fellows Committee and to discuss other initiatives such as a K-12 systems engineering education program and the review of the Systems Engineering Vision document.

Intelligent Transportation and Transit Systems Working Group (ITTS WG)

Mike Krueger, co-chair

The Intelligent Transportation and Transit Systems Working Group (ITTSWG) received a Working Group Award for Outreach, "for exemplifying INCOSE's outreach effort, by engaging an international ground transportation and transit systems community in promoting the use of systems engineering." The ITTSWG worked primarily on the IS 08 planning. At IS 08, we will be engaging six to seven senior-level executives from transit systems from the U.S. and Europe. These include the London Underground, the New York City Transit, and the Netherlands, in addition to executives from consultant firms. The Monday of IS 08 will have the key activities for Transportation, including the opening Key Note Speech by the CEO from the Dutch Rail, the Executive Round Table, and a reception.

We continue our work on addressing the following four (4) key challenges for the Transportation community:

1. Lack of common Industry SE Processes & Terminology
2. Scarcity of SE resources & SE knowledge within the Rail Transit industry
3. Establishing the SE Value Proposition for Rail Transit
4. SE & Migration of new technology: SE in the application of new technology on operational systems

We closed the working group activities by laying out a schedule of activities that we need to accomplish between these meetings and IS08. These activities are in the areas of Outreach to get a large contingent of key rail and transit practitioners to IS 08.

Cost Engineering Working Group (CEWG)

Beth O'Donnell and Eric Belle, attendees

The CEWG is a relatively new working group addressing cost engineering and affordability topics and processes within the Systems Engineering realm. The working group is continuing to investigate and discuss cost engineering processes of various organizations. Plans for the CEWG include further development of a charter statement and definition, and conducting a gap analysis to determine what needs the group can address within the Systems Engineering processes. Anyone with an interest is encouraged to participate and contribute.

Motor Sports Working Group (MSWG)

Stan Settles, member

The purpose of the MSWG is to use a broad range of motor sports as a means of introducing systems engineering in courses. The WG has adopted a charter and is in the process of specifying a syllabus for a course. Stan presented his experience of driving at 206 MPH on the Bonneville Salt Flats in 2007.

Public Interest Applications Sector

Scott Jackson, Assistant Director

The Public Interest Sector oversees working groups who address issues of public interest, such as natural and human-made disasters, the environment, and anti-terrorism. There are three working groups within the sector: the Resilient Systems Working Group, the Anti-Terrorism Working Group, and the GEOSS (Global Earth Orbiting Systems of Systems) Working Group. All three groups met in Albuquerque and planned future activities.

Resilient Systems Working Group (RSWG)

Scott Jackson, Chair

The RSWG studies system resilience, which is the characteristic of a system that enables it, in the face of a major disruption, to avoid catastrophic failure, to survive a major disruption, and to recover from the disruption. In Albuquerque we had a lively discussion on the differences between resilience and agility, system safety, and robustness and sustainability. The RSWG has already published an annotated bibliography. The next product will be a lexicon of resilience.

Space Systems Working Group (SSWG)

Chris Delp, Communications Coordinator and Model Based Systems Engineering (MBSE) Grand Challenge (MGC) Team Lead

SSWG has many exciting projects in the works. We are submitting a panel of very prestigious people from the space industry for IS 08. SSWG is also putting together a special issue of IN-SIGHT on Space Systems. The SSWG has also entered the MGC with a Space Systems domain entry. The team is quite diverse; however, we have lots of room for anyone interested in MBSE and Space Systems.

Specialty Engineering Enabling Group

Ray Hettwer, Chair

The Specialty Engineering Enabler is one of the six SE Enablers in the INCOSE Technical Matrix. In Albuquerque we met to review progress and status against the roadmap established at IW 06. Working Groups currently sponsored by this Enabler are: (1) Human System Integration (HSIWG); (2) System Security Engineering (SSEWG); (3) System Safety (SSWG); and (4) Cost Engineering (CEWG). A Reliability Engineering Working Group (REWG), to potentially include Maintainability and Availability, is being considered as the next new start WG. A primary goal for these WGs is to establish a working interface with external engineering specialty societies and organizations and to take on the role of lead system integrator for the engineering specialty via INCOSE.

Systems Engineering Certification

Mike Krueger, Member

The certification program has gained a great deal of momentum this past year leading up to the international workshops. The following are a few of the key initiatives that have been ongoing this past year and that were formalized at IW08:

1. The new Core Exam questions were beta-tested at IW 08. These are the questions that are based on the new Systems Engineering Handbook Version 3.1. The rollout of the exam is targeted for July 2008.
2. The Department of Defense (DOD) Acquisition extension to the Certification Exam: this is an exam specific to the DOD Acquisition based on the new Defense Acquisition Guidebook (DAG), Chapter 4. Candidates that specialize in this area must pass both the Core Exam – Version 3.1—and an additional set of questions to test knowledge on the DAG chapter 4. The certification will be based on both the exam and individual experience. Once a candidate passes the exam and his or her qualified experience is vetted, he or she will be awarded CSEP with an Acquisition Supplement. This will be rolled out with the new exam in July 2008.
3. A new certification classification has been established targeted for systems engineering students or candidates new to systems engineering. This will be called the Associate Systems Engineering Professional (ASEP). This is an exam-only certification where candidates are awarded an ASEP certificate when they pass the exam. The intent is for the candidates to continue in the systems engineering field until they obtain the requisite experience to become a CSEP. ASEP status is valid for only 10 years, and the candidates will need to maintain their INCOSE membership during that period to retain the ASEP.

The Certification Advisory Group (CAG) is the managing body for the certification program. Dave Walden is the Program Manager. At IW the leadership changes were voted upon and approved. During this past year Michael E. Krueger was the CAG Chair with Karl Geist as Secretary. At IW 08 the CAG Chair was passed to Dr. Kevin Forsberg, with Eileen Arnold as Co-Chair, and Dr. Dan Surber as Secretary.

Technical Leadership Team (TLT)

Scott Jackson, Member

The TLT oversees all working groups and their products. The major issue of discussion at Albuquerque was how to help working groups form, work, and interact with each other.

March 25 Speaker Meeting & March 27 Tutorial

“State Analysis for Systems Engineers”

Michel Ingham

Senior Software Systems Engineer, Jet Propulsion Laboratory &

Robert Rasmussen

Chief Engineer, Jet Propulsion Laboratory

SPEAKER MEETING

Jet Propulsion Laboratory
Von Karman Auditorium
La Cañada, CA

Tuesday, March 25, 2008

5:30 p.m. Networking

6:30 p.m. Presentation (all sites)

JPL Employees and INCOSE-LA Members Free
Guests – Free, \$10.00 donation suggested
(for refreshments)

RSVP by March 20 via the INCOSE-LA website (www.incose-la.org) OR by contacting David Boyd, (john.boyd@incose.org, 818-458-7267). If registering via e-mail, then specify INCOSE-LA: March 25 Speaker Meeting in the subject line and provide the following information in the body: name, affiliation, email address, and phone number.

TUTORIAL

Caltech Baxter Auditorium
Pasadena, CA

Thursday, March 27, 2008

8:30 – 9:00 a.m. Registration

9:00 a.m. to 5:00 p.m. Tutorial

INCOSE-LA Members \$30.00

Non-members \$40.00

Preregistration: Complete online registration (credit card via Paypal service - account not required) by March 22 on the INCOSE-LA website (www.incose-la.org) or send an RSVP to David Boyd (john.boyd@incose.org, 818-458-7267) and provide the following information: name, affiliation, email address, and phone number. Last minute registration: attend the March 25 Speaker Meeting and register then (cash or check only)

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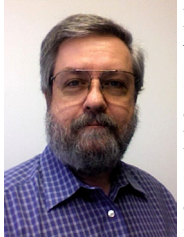
ABSTRACT: Spacecraft system complexity is reaching a threshold where customary methods of control are not affordable or sufficiently reliable. The conventional approaches to systems and software engineering, based on functional decomposition, fail to scale in the tangled web of interactions encountered in complex spacecraft designs. Furthermore, there is a gap between the requirements on software specified by systems engineers and the implementation of these requirements by software engineers. Software engineers must perform the translation of requirements into software, hoping to accurately capture the systems engineer's understanding of the system behavior. This gap opens the possibility for misinterpretation of the systems engineer's intent, leading to software errors. This problem is addressed by a systems engineering methodology called State Analysis, which provides a process for capturing requirements on system and software design in the form of explicit models of system behavior, and defines a state-based architecture for the control system. It provides a common language for systems and software engineers to communicate, and thus bridges the traditional gap between software requirements and software implementation. This tutorial describes how model-based requirements for complex aerospace systems can be developed using State Analysis and how these requirements inform the design of the system software, using representative space examples.

BIOGRAPHIES



Mitch Ingham is a software systems engineer and software architect at the Jet Propulsion Laboratory. He received his Sc.D. and S.M. degrees from MIT's Department of Aeronautics and Astronautics, and his B.Eng. in Honours Mechanical Engineering from McGill University. Mitch has played a central role in the development and formalization of the model-based systems engineering methodology called

State Analysis, and its application to the design and implementation of state-based software architectures. As lead software systems engineer for the Mars Science Laboratory (MSL) Entry, Descent, and Landing (EDL) Prototype, he coordinated activity across the MSL Project to perform the end-to-end systems engineering, software development, and validation for an integrated software demonstration of EDL in 2004. Mitch has led JPL's contributions to the Constellation Ground Operations project, working with NASA KSC to develop and validate their next-generation launch site command and control software architecture. He is currently working on the Constellation Lunar Lander Vehicle (Altair) project as a fault protection engineer for the guidance, navigation, and control subsystem. His research interests include model-based systems engineering and software technologies for autonomous spacecraft.



Bob Rasmussen is Chief Engineer for the Systems and Software Division of the Jet Propulsion Laboratory. He has been a systems engineer at JPL since 1975. He received his Ph.D. in Electrical Engineering from Iowa State University. He supported the development of Voyager and has subsequently supported many flight projects since then, in both line and project leader-

ship roles. His experience covers the areas of spacecraft guidance and control, avionics, test and flight operations, and automation and autonomy - particularly for fault protection. Bob's research activities include fault-tolerant computing architectures and supporting software. He also helped to initiate and advise the Remote Agent experiment on Deep Space-1, an early demonstration of high level spacecraft autonomy, and was Chief Architect of the Mission Data System project under which the State Analysis process for systems engineering was developed.

RESERVATIONS: You must RSVP by March 21 for the Speaker Meeting, and by March 25 for the Tutorial. See notes on the previous page.

SPEAKER MEETING WEBCAST INFORMATION

Remote sites will be available for receiving the presentation via live webcasts. RSVP requested via the INCOSE-LA website (www.incose-la.org) or to Paul Su (registration@incose-la.org, or 310-336-2602). Typical remote locations have included one or more of the following sites (check website for current participating locations):

- Palmdale - Open Site (exact location TBD)
- Woodland Hills - Northrop Grumman - Employees only
- Sylmar - St. Jude Medical - Employees only
- Long Beach - Boeing - Employees only
- Huntington Beach - Boeing - Employees only

DIRECTIONS TO JPL

From the Inland Empire, head west on the I-210 FWY into Pasadena and merge/exit onto the 210 FWY North (aka West) toward San Fernando. Follow the "210 FWY ALL" directions below.

From West LA, head EAST on the I-101/134 FWY toward Glendale, merge onto the 2 FWY North, then get on the 210 FWY (South aka East) toward Pasadena. Follow the "210 FWY ALL" directions below.

From Long Beach, go north on the 710, take the exit CA-60 FWY West toward Downtown Los Angeles, merge onto I-5 North toward San Fernando/Glendale/Burbank, and merge onto the 2 FWY North toward La Canada/Montrose/La Crescenta. Do not take CA134/1-210 East exit but continue North on CA-2 and then exit onto the 210 FWY (South aka East) toward La Cañada/Pasadena. Follow the "210 FWY ALL" directions below .

210 FWY ALL: From the 210 FWY toward La Canada, take the Berkshire/Oak Grove exit (there are signs for JPL), go east, turn left on Oak Grove and follow Oak Grove until you enter the JPL complex. Park in visitor parking on your left, just before the guard gate. Cross the street and go back down the sidewalk to the von Karman auditorium.

DIRECTIONS TO CALTECH

Caltech is easily accessible from both the 110 (Harbor and Pasadena) Freeway (southwest of campus) and the 210 (Foothill) Freeway (north of campus).

If you're taking the 110 freeway, follow the freeway north until it ends (where it becomes the Arroyo Parkway). Take the Arroyo

Parkway straight ahead (north); turn right (east) on California Blvd. Proceed approximately one-and-a-quarter miles. The Caltech campus will be on your left-hand side. Turn left (north) at Hill Ave. Turn left (west) at San Pasqual St. Turn right (north) onto Holliston Ave. Proceed to the Holliston Parking Structure on your right at 370 S. Holliston Ave. (Building #66 on the campus map) to register your car.

If you're taking the 210 freeway, exit at Hill Avenue; turn south on Hill. Take Hill south to San Pasqual St. and make a right (west). Turn right (north) onto Holliston Ave. Proceed to the Holliston Parking Structure on your right at 370 S. Holliston Ave. (Building #66 on the campus map) to register your car.

CSE08 Announcement

Conference on Systems Engineering Research 2008 (CSE08)

Submitted by Scott Jackson, CSE 2008 Conf. Cont. Chair

Everyone interested in the more advanced aspects of systems engineering will want to attend this conference in the L.A. area on Friday and Saturday, April 4 and 5. CSE08 is hosted by USC in collaboration with Stevens Institute, with Dr. George Friedman, an INCOSE Founder and Fellow and INCOSE-LA member, as General Chair. INCOSE-LA is managing the conference with Dr. Malina Hills of the Aerospace Corporation as Conference Management Chair. Dr. Azad Madni, INCOSE Fellow, Intelligent Systems Technology, and INCOSE-LA is Technical Chair. There will be approximately 100 presented papers plus panels and plenary speakers and a banquet on Friday night.

CSE08 will be at the Crowne Plaza Redondo Beach & Marina Hotel, Redondo Beach, CA. You can find out more about registration and the technical program by going to www.incose-la.org/events/conferences/cser-2008.html

The registration deadline is March 27.

Banquet speakers will include William F. Ballhaus, Sr., President Beckman Instruments (ret); William F. Ballhaus, Jr.; and William L. Ballhaus, President, BAE Network Systems. For more information contact Scott at jackessone@cox.net,

Basics of Systems Engineering Free Course Offering

BASE (BASics of Systems Engineering)

Sponsored by the California Innovation Corridor (CIC).

From April 1-3, the Aerospace Corporation will be hosting a free introductory course in Fundamentals of Systems Engineering.

This course is targeted towards students, engineers and professionals who have the need or desire to further their understanding of systems engineering. More information is available at: <http://www.csewi.org/programs.html#CIC>

February 21 INCOSE-LA/PMI Speaker Meeting Report



Jim Manson opening his presentation to the joint PMI-INCOSE meeting

Our February Speaker Meeting was a joint meeting with Los Angeles Chapter of the Project Management Institute. The featured speaker was James A. Manson III, a program management professional and our own past president of the Los Angeles chapter of INCOSE (2007). Mr. Manson's presentation was comprehensive and well received. One measure of success and a presentation well done was the comprehensive and interested group discussions.

For those of you who missed this great presentation and for those who might like to see it again, Mr. Manson's presentation will be posted on our Los Angeles Chapter website, <http://www.incose-la.org/> and will be filed under the "Systems Engineering Hub" webpage, downloads section, events, speakers.



Annette Batinovich, Anne Campbell, Dr. Kenneth Batinovich, and Scott Jackson enjoying a pre-prandial discussion at the Proud Bird

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High School Students Meet, and Teach, Systems Engineering

Mentoring and teaching high school students can lead to some lessons learned with respect to the process. Like many other high schools, the high schools in the Antelope Valley are offering programs intended to nurture an interest in engineering on the part of young students, a forum rich with the opportunity to encourage young students and to learn from them. Consider the following:

Fresno State is conducting a class in engineering at the Lancaster University Center. This group of students meets after school and is learning by doing: they are building robots. The instructor deftly engaged the systems engineering process by asking, “what do you want these robots to do?” Her posing this question to the students as a team shifted their thinking from their individual

goals to the first step of the process: constructing a vision of what they, as a group, wanted their system of robots to accomplish.

From this, an observation:

Systems engineering is something everyone does – it is a native process. Instinctively and immediately the students started doing “systems engineering” as a part of their projects. They floundered a bit, but their floundering, not dissimilar from the floundering that can bedevil projects in the “real” world, gave rise to a further observation:

All successful projects follow the Systems Engineering process. Some of them follow it well. The others follow it eventually.

If you can, check out your local high school and is if there might be an opportunity to mentor and encourage the engineers of tomorrow.

A passing observation, courtesy of an old gray beard and a few of our engineers-to-be.

The Board and Officers wish to welcome the following new members in the Los Angeles Chapter of INCOSE:

Note: The information listed below is pulled 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	Title	Company
Hatem Abuhimd	Student	California State University, Northridge
Karen Basany	Engineer	USAF Space and Missile Systems Center
Dr. Kenneth Batinovich	Systems Engineer 5	The Boeing Company
David Cavazos	Senior Engineer	United Launch Alliance
Paul Cory	Manager	Northrop Grumman Corporation
Bryan Costanza	Student	California Polytechnic State University, San Luis Obispo
James Cotterman	Senior Manager Engineering	Raytheon
Eyal Dvir	Student	University of California
Anne Fay	Senior Systems Engineer	Northrop Grumman Space Technology
Patrick Figge	Manager	ATK
Scott Fleming	Systems Engineer	Northrop Grumman Corporation
Michael Hogan	Systems Engineer	The Boeing Company
Mary Kavanaugh	Process/QA Engineer	Northrop Grumman Corporation
Charles Marashian	Manager	The Boeing Company
Dr. Noreen McQuinn	Systems Engineer	The Boeing Company
Denise Nelson	Systems Engineer	The Boeing Company
Ashley Potter-Grafstrom	Student	University of Southern California
Harold Rounds	Engineering Fellow	Raytheon
Faisal Saeed	Systems Engineering Integration & Test	Northrop Grumman Corporation
Shahed Selbe	Engineer	Boeing Space and Intelligence Systems
Cristine Wolf	Launch Readiness Manager	Scitor Corporation

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CSEAR 2008
**CONFERENCE ON SYSTEMS
 ENGINEERING RESEARCH**
 An International Conference

**Conference
 Announcement**
**Sixth Annual Conference on
 Systems Engineering Research**
 April 4-5, 2008 Los Angeles, California
 Crowne Plaza Hotel, Redondo Beach
<http://www.incose-la.org/cser2008/>

CSER Collaboration

Professor Stan Settles; Director of Systems Architecting and Engineering Program, USC
 Professor Dinesh Verma; Dean of Systems Enterprise School, Stevens Institute of Technology

CSER 08 Management Team

Dr. George Friedman, USC, General Chair
 Dr. Malina Hills, Aerospace Corporation, Conference Management Chair
 Dr. Azad Madni; Intelligent Systems Technology, Technical Chair
 Scott Jackson, USC, Program Liaison

Plenary Speakers

Dr. Pat Hale; MIT, INCOSE President
 Paul Gartz, Boeing, IEEE Systems Council president
 Prof. Barry Boehm, Director of Center for Systems and Software Engineering, USC
 Prof. Andy Sage, Editor in Chief, *Systems Engineering*, George Mason University
 Dr. Azad Madni, CEO Intelligent Systems Technology, Inc
 Dr. Donna Rhodes, MIT, Director SEANET and SEARi
 Samantha Brown, BAE, INCOSE director: Technical Leadership Team
 Dr. Elliot Axelband, Rand Corporation, Chair, Executive Round Table.

Banquet Speakers

William F. Ballhaus, Sr., President Beckman Instruments (ret)
 William F. Ballhaus, Jr., CEO Aerospace Corporation (ret)
 William L. Ballhaus, President, BAE Network Systems

Breakout Speakers

Over 70 presented papers plus poster sessions from abstract reviews and PhD candidates from the April 3 SEANET meetings.

Technical Program

Dr. Azad Madni, Chair, Conference Technical Program
 Chief Executive Officer
 Intelligent Systems Technology, Inc.
 Santa Monica, California 90405
 Tel: 310-581-5440 x144; cser08@IntelSysTech.com



SEANET

SEANET is an INCOSE sponsored network of doctoral student researchers working in the field of systems engineering and architecting. A SEANET workshop will be conducted on Thursday April 3. More information is available at <http://www.incose.org/practice/research/seanet.aspx>.

The University of Southern California in collaboration with Stevens Institute of Technology presents the 6th annual Conference on Systems Engineering Research.

The primary conference objective is to provide practitioners and researchers in academia, industry, and government a common platform to present, discuss and influence Systems Engineering research with the intent to enhance Systems Engineering practice and education.

Organized by the University of Southern California (USC) in collaboration with Stevens Institute of Technology, managed by the Los Angeles Chapter of the International Council on Systems Engineering (INCOSE).

CSER 2008 also welcomes the INCOSE Board of Directors on Tuesday and Wednesday, April 1 and 2.

General Information

For information about registration, hotel, location, financial support and other subjects, see the web site above or contact cser08registrations@incose-la.org.

Early registration fees (before March 1) are as follows:

- INCOSE Members - \$350
- Non-INCOSE members - \$400
- Students (full time) - \$300



Return Address:

**PO Box 490341
Los Angeles, CA 90049**

Forwarding Address Requested

The International Council on Systems Engineering (INCOSE) is an organization formed for the purpose of advancing the art and science of systems engineering in various areas of the public and private sectors. The Los Angeles Chapter meets several times per year for dinner meetings, and additionally sponsors tutorials and other activities of interest to those in the systems engineering field or related fields. L. A. Chapter Officers are as follows:

2008 Board of Directors and Appointed Positions

Elected Officers

President:	John David Boyd	john.boyd@incose.org	or	president@incose-la.org
Vice-President:	Eric Belle	eric_c_belle@raytheon.com	or	vicepresident@incose-la.org
Past President:	James Manson III	james.a.manson-iii@boeing.com	or	pastpresident@incose-la.org
Secretary:	Beth O'Donnell	elizabeth.l.o'donnell@boeing.com	or	secretary@incose-la.org
Treasurer:	Marsha Weiskopf	marsha.weiskopf@aero.org	or	treasurer@incose-la.org

Elected At-Large Directors

Membership:	Paul Cudney	paul.cudney@incose.org	or	membership@incose-la.org
Programs/Speakers:	Jack Elson	jelson@nu.edu	or	programs@incose-la.org
Tutorials/Education:	Shirley Tseng	shirleytseng@earthlink.net	or	setraining@incose-la.org
Ways and Means:	Dana Pugh	dana.pugh@incose.org	or	waysandmeans@incose-la.org
Communications:	Lee-Ann Seeling	lsseeling@aol.com	or	communications@incose-la.org

Appointed Positions

Newsletter Editor:	Sallie Piccorillo	salpiccorillo@yahoo.com	or	newsletter@incose-la.org
Newsletter Production Manager:	Communications Director			
Reflector Manager:	Susan Ruth	susan.c.ruth@aero.org		
Industrial Relations Manager:	Jose Garcia, Jr.	jose.s.garcia-jr@boeing.com		
Technical Society Liaison:	Edmund Conrow	info@risk-services.com		
Chapter Recognition Manager:	Michael Maar	michael.c.maar@boeing.com		
Lead Site Coordinator:	Anna Warner	anna.warner@boeing.com		
Webcast Event Manager:	Chris Delp	cldelp@jpl.nasa.gov		
Website Content Manager:	Communications Director			
Website Technical Manager:	Benjamin Luong	Benjamin.Q.Luong@boeing.com		
CSER 2008 Management Chair:	Malina Hills	malina.m.hills@aero.org		
CSER 2008 Continuity Chair:	Scott Jackson	jackessone@cox.net		
Venue Chair:	TBD-Vacant	TBD-Vacant		

Those interested in INCOSE membership please contact Paul Cudney - paul.cudney@incose.org. If you wish to be placed on our E-mail distribution, please contact Susan Ruth - susan.c.ruth@aero.org.