

Los Angeles Chapter of INCOSE
www.incose-la.org

COMING EVENTS

February 2-5
INCOSE
International Workshop

Tampa Airport Marriott
 Tampa Florida

Tuesday, February 11th
Dinner Meeting

Panel : Academia and Industry

Moderator
 Scott Jackson

Location
 The Aerospace Corporation

Saturday, March 29th
Tutorial

Systems Architecting

LECTURER
 Dr. Mark Maier

Location
 Radisson Hotel
 Los Angeles Airport

Tuesday, April 8th
Dinner Meeting

Speaker TBA
Location TBA

Tuesday May 13th
Dinner Meeting

Panel on SE tools
Location TBA

June
Miniconference

Mark your calendar
1 day Miniconference
Multi-track
Featured Keynote Speaker

Issue No. 2

February, 2003



From the President
What's in the year ahead?
Michael Dickerson

As your newly elected Officers and Board of Directors, we have just begun work to make the Chapter even better than it has been. That is not to say that last year wasn't a good year! We are trying to take the challenge that the past Board gave us and be better. Why? Not just to be better but all of the Board is convinced that System Engineering is ready to explode into all areas of Business. We feel that as a volunteer organization the membership want us to help provide ways for each member to get tangible benefits from being a member of the LA Chapter of INCOSE.

If you read last month's Newsletter you saw the eighteen points the last year's Board covered. We hope to keep up this tradition of excellence. What is it that I as your president feel are the areas of focus we should have? I don't know what makes people volunteer to help with INCOSE but I do know that what I wanted when I joined is to find ways to help me personally improve my knowledge and skills in system engineering. It took me three years to learn all the areas of INCOSE because although we talk system engineering methods, and decomposition of things at all the levels of the organization, the organization's functional/ operational areas were not working well together. I found that you could just go to the International Symposium and listen to papers. You could join the Technical Committee by being part of an Interest Group or Working Group and you could be part of a local Chapter and attend mini Symposiums, monthly speaker meetings, Tutorials, education panels and other volunteer things. These different things were not coordinated together. The last couple of years we have tried to make all of the different parts work together for the benefit of the membership. So what is it we plan to do in the Chapter this year?

1. We value our time and expect you do also, so we want to have chapter speaker meetings that provide value. An example is last month's presentation on Excel and System Engineering. Future topics include: Academic Education and Industry, the latest Modeling Skills, Requirements Capture and Risk Assessment, Ops Concepts for cost driven businesses, and many others. The key is what do you want? Let Gina Kostelecky-Shankle or any other Board member know.
2. We want to have tutorials that are most needed by the membership. To do this you need to let us know what you would like us to provide. We have been able to get world experts to provide us with their time at a far reduced or no fee except expenses. What are your areas of interest? Where do you need growth?
3. We would like to increase our membership networking opportunities by having interactions with other Professional Societies like AIAA, IEEE, APICS, and others. What are the areas you would like to see us address?
4. We have a good working relationship with many of the Universities and Colleges. If you want to know more or have the ability to give your input into what is needed here, let us know.
5. The International Technical Committee has working groups in many areas of interest to our Chapter membership. I

- would like to see if there are ways we could get updates to the chapter using the Chapter website on areas of interest. An example would be some of the latest standards and modeling innovations. If you have interest here, let us know.
6. We try to have one mini conference a year with tutorials, vendors, and papers, which highlight some of the best the area of system engineering has to offer. I would like to know if there is something more or different you would like to see at this year's conference.
 7. Our area is large and diverse. The Chapter goes from Santa Barbara to all of Orange County. This means that monthly meetings are hard for some to make. Both the officers and members are volunteers and need to focus on what is the best for members. How can we provide opportunities for more people to be involved without making active membership an onerous task? We would like to find ways to network so every member receives value either by improving skills, finding a new job or representing your company's system engineering. I don't mean by this that I want INCOSE to be a recruiting or sales meeting, but if you need a job or a place to share your ideas where they can be critiqued, like presenting a paper, we should as members try to help.
 8. We have excellent Membership and Communication committees. They are improving the LA Chapter web site so the members can get members only information here. If you have ideas for them please let us know.
 9. Finally, all of our committees are willing to have members help on each of the committees. If you can volunteer as little as a couple hours a year to a couple hours a month, the committees would like you to help. By your being involved you will make the Chapter better and you will improve your system engineering. Please don't be shy. Tell us what you want.

The Chapter will benefit from your input and the newsletter will highlight your requests for Chapter action. We are all busy but the Officers and Directors would like this next year be something that will make you proud to be a member of INCOSE.

Michael L. Dickerson



**Academia and Industry Panel Tuesday,
February 11, 2003 - Aerospace
Corporation
5:30 pm - Networking, 6:30 pm - Meeting**

**Session Moderator
Scott Jackson
Boeing and USC**

Systems engineering is taught in various Southern California universities in various ways. One would assume that one of the major reasons for this variability in curricula is that different industries are looking for different qualities and/or characteristics in their systems engineers. We have invited six panelists, three from academia and three from industry, to discuss this and other related topics. Academic representatives will provide brief summaries of their university programs that include details regarding who is considered to be the customer(s) for their graduates and, if applicable, why it is not industry. Industry representatives will provide details regarding their needs in terms of systems engineers. The discussion will address how

well industry has defined their needs, how well they feel their needs are being met, and the value that they place on continuing education. The subject of company-internal training versus university training will also be addressed. The panelists that will be participating in this discussion are as follows (listed in alphabetical order):

Jack Fisher – California Institute of Technology

Jack Fisher is the Principal Engineer at Systems Engineering Associates, a systems engineering training and consulting firm. He has over 30 years of experience in the systems engineering of space systems at the Hughes Aircraft Company. At Hughes Jack managed the Spacecraft Systems Engineering Laboratory and organized and led several spacecraft systems engineering teams. Jack is an accomplished instructor and has taught Systems Engineering in the U. S., Canada, Europe and Australia. He developed and presented seminars for the General Motors (GM) Executive Committee and other GM executives on the principles of systems engineering. Jack has taught systems engineering to engineers at all NASA centers. He has prepared and presented systems engineering training for several Caltech Industrial Relations Center (IRC) clients and also served as the academic coordinator for these programs. Jack earned his BS in Aeronautical Engineering at the University of Illinois and his MS in Aeronautical Engineering at the University of Southern California.

Jim Hines – University of Southern California

Jim Hines is responsible for the overall leadership of the Systems Engineering & Assessment organization for Boeing's Huntington Beach/ Seal Beach Site Host Engineering Function and the Southern California Phantom Works organization. As leader of Systems Engineering & Assessment, he is responsible for system requirements, system integration, logistics and system effectiveness, mission assurance, configuration management, Cost As an Independent Variable (CAIV), operations and support, and system configuration and mission analysis. In his Phantom Works role he is responsible for establishing validated architecture/mission/system/segment level requirements which meet mission and customer objectives, system architectural and top-level operations concepts, system risks and management approaches, and programmatic resource need estimates. He additionally serves as an instructor of Project Management and Systems Engineering at the University of Southern California in the Boeing Systems Engineering program. Jim has over 26 years of engineering experience. Prior to his Phantom Works position, he was a Senior Manager of Mission Development in Advanced Engineering. He has also served as a Project Manager for the Shuttle Product Acquisition Team, where he was responsible for all the Shuttle Orbiter analytical and hardware change proposals and its related Independent Research and Development (IRAD) studies. From 1990 through 1995 he was a Senior Manager within the Systems Engineering organization, directing efforts in Systems Engineering Services and Systems Effectiveness. He also has worked for LTV Aerospace, Colt Industries and Alcoa companies. Jim is a member of the American Institute of Aeronautics and Astronautics (AIAA), Project Management Institute (PMI), INCOSE, National Space Society (NSS), and National Management Association (NMA). He obtained his BS in Ceramic Science from Pennsylvania State University and MS degrees in Ceramic Science (Pennsylvania State University), Metallurgy (University of Pittsburgh), and Industrial Engineering (University of Pittsburgh). He additionally has an MBA in Acquisitions and Contracts (University of Dallas) and most recently completed a Certificate in Project Management (University of California, Irvine).

Rogelio Rodriguez – University of California, Irvine

Rogelio Rodriguez is currently the Acting Director of Engineering and Science Programs at the University of California, Irvine Extension program. Before joining the UCI Extension program eight years ago, Rogelio worked in a systems engineering capacity

at Hughes Fullerton. He holds both Bachelors and Masters degrees in Electrical Engineering.

Dennis Schwarz – Boeing

Dennis Schwarz has worked for McDonnell Douglas and now Boeing for the past 18 years. He began in Manufacturing Engineering then later held positions in the Program Office, Engineering, Advanced Programs, and Commercial Aircraft Modification Services. His most recent position was Director of Systems Engineering for the C-17 Program and he is currently starting in a new position as Director of Product Processes and Tools for Air Force Systems. Dennis earned his BS in Mechanical Engineering at the University of Utah and his MBA at Loyola Marymount University.

Gloria Stoppenhagen – Federal Highway Administration

Gloria Stoppenhagen joined the FHWA in February 2001 where she currently oversees Intelligent Transportation Systems (ITS) projects in Southern California. In her current position she provides guidance to local agencies implementing federally funded projects with ITS elements and, as part of the Los Angeles FTA (Federal Transit Administration)/FHWA METRO Team, provides support to the FTA on transit ITS projects. Gloria is involved in FHWA's Architecture Final Rule Implementation Working Group, Systems Engineering Working Group, and Operations Council. She is also co-chair of the newly formed INCOSE ITS Special Interest Group. Gloria has over 13 years of experience in the transportation industry during which she has managed numerous activities including a traffic management systems section at Post, Buckley, Shue & Jernigan (PBS&J), the design and operations of ITS projects, and METRO's technical staff at Houston TranStar, a partnership of transportation and emergency management agencies in the Houston region. In 1995, Gloria participated in ITS America's fellowship program, representing METRO for a year in Washington, DC. While at ITS America, Gloria provided technical and administrative support to the Advanced Public Transportation Systems committee. Gloria also participated as a co-chair of the Passenger Information Working Group of the TCIP standards development effort in 1997 and 1998. Gloria obtained her BS degree in Civil Engineering from the University of Texas at Austin.

Directions to Aerospace Corporation

From Southbound on the 405 Fwy:

Exit El Segundo Boulevard.
Turn left (south) at the bottom of the off-ramp onto La Cienega.
Turn right (west) at the signal onto El Segundo.
Continue past Aviation to Douglas.
Turn left onto Douglas and continue 1/2 half block to gate C.
Turn left into the Aerospace gate C. The guard will ask to purpose of your visit. After receiving permission to proceed, continue straight through the stop sign. Continue towards the end of the row. Parking is on the right.

From Northbound on the 405 Fwy:

Exit El Segundo Boulevard.
Turn left (west) at the bottom of the off-ramp onto El Segundo.
Continue past Aviation to Douglas.
Turn left onto Douglas and continue 1/2 half block to gate C.
Turn left into the Aerospace gate C. The guard will ask to purpose of your visit. After receiving permission to proceed, continue straight through the stop sign. Continue towards the end of the row. Parking is on the right.

From Westbound on the I-105 Fwy:

Exit at Nash.
Go south on Nash (one way south) to El Segundo Boulevard.
Turn left onto El Segundo and proceed east one block to Douglas.
Turn left onto Douglas and continue 1/2 half block to gate C.
Turn left into the Aerospace gate C. The guard will ask to purpose of your visit. After receiving permission to proceed, continue straight through the stop sign. Continue towards the end of the row. Parking is on the right.

Aerospace Security Requirements

Please bring two (2) forms of picture identification (Drivers license, Company identification or Passport).

INCOSE News

TUTORIAL: Systems Architecting

DATE: Saturday, March 29, 2003
(Reservations by March 8)

TIME: 8:00 AM to 5:00 PM;
Registration begins at 7:30 AM

LOCATION: Radisson Hotel at Los Angeles Airport
6225 West Century Boulevard
Los Angeles, CA 90045
(310) 670-9000

TOPIC: Systems Architecting

Systems architecting is the art and science of developing system solutions, with a strong focus on the "up-front," ill structured phase of system development. System architects concentrate on initial system definition and design-making use of the systems engineering specialties to develop satisfactory and feasible system concepts and certification for client use. The architectural approach is needed most as systems become more complex and multi-disciplinary, and for systems customized to individual clients.

This tutorial will cover the concepts of systems architecting; the evidence for a distinct architectural approach; the architect's organizational and life cycle roles; using integrated modeling and heuristics to form and define architectures; and recent developments in making system architecture a recognized profession. It will explore issues of current concern, such as the relation between system and software architectures, and the architecting of collaborative systems (systems-of-systems).

LECTURER: Dr. Mark Maier

Dr. Mark W. Maier received the BS and MS degrees from the California Institute of Technology, and PhD degree in Electrical Engineering from the University of Southern California. While at USC, he held a Hughes Aircraft Company Doctoral Fellowship, where he was also employed as a section head.

Currently he is a Distinguished Engineer at The Aerospace Corporation where he founded the systems architecting training program and consults on the application of architecting methods to government and commercial clients. Prior to joining The Aerospace Corporation, he was an Associate Professor of Electrical and Computer Engineering at the University of Alabama at Huntsville. Dr. Maier's research interests are in systems architecting, engineering computer based systems, satellites, and radar systems. He is co-author, with Dr. Eberhardt Rechtin, of *The Art of Systems Architecting, Second Edition*, published by CRC Press. Dr. Maier is chair of the INCOSE Systems Architecture Working Group.

On-Line Registration for this event will be posted soon at www.incose-la.org.

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INCOSE News

Return Address:

**2118 Colony Plaza
Newport Beach, CA
92660**

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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:

2003 Officers and Board

President:	Michael L. Dickerson – simimike@iname.com
Vice-President:	John Hsu - john.c.hsu@boeing.com
Past President:	Michael E. Krueger - michael.krueger@ase-consult.com
Treasurer:	Marsha Weiskopf – marsha.weiskopf@aero.org
Secretary:	Paul Cudney - PFCudney@lainet.com
Membership:	Susan Ruth – susan.c.ruth@aero.org
Programs/Speakers:	Gina Kostecky-Shankle - Gina.M.Kostecky@aero.org
Ways and Means:	Thomas Kudlick – synchrocubed@aol.com
Tutorials/Education:	Saul D. Miller – saul.miller@aero.org
Communications:	Ronald Williamson - ronald.w.williamson@aero.org

Those interested in INCOSE membership please contact Susan Ruth.

Those interested in working on a committee please contact the appropriate Director.