



INCOSE Region V
Huntsville Regional Chapter
Newsletter June 2007

The International Council on Systems Engineering is a not-for-profit membership organization founded in 1990. INCOSE is an international authoritative body promoting the application of an interdisciplinary approach and means to enable the realization of successful systems.

NEXT CHAPTER MEETING

June 21, 2007

Location: 4901 Corporate Drive, Building B, Huntsville, AL. SAIC Millennium Room, at 5:30 p.m. – 7:30 p.m.

Presentation Topic: The Portfolio Effect Reconsidered

Speaker: Dr. Christian Smart is currently a technical manager with MCR, LLC.



Dr. Smart is a SCEA certified cost estimator /analyst (CCEA), and a member of the Society for Cost Estimating and Analysis (SCEA) and the International Society of Parametric Analysts (ISPA). Dr. Smart is a past president of the Greater North Alabama Chapter of SCEA.

He has given numerous presentations on cost modeling both in the U.S. and abroad. Dr. Smart was cited as 2006 Professional of the Year for the Greater North Alabama Chapter of SCEA. He was awarded best paper in the applications track at the 2004 ISPA conference for "Process-Based Modeling".

Dr. Smart earned bachelors degrees in Economics and Mathematics from Jacksonville State University, and a Ph.D. in Applied Mathematics from the University of Alabama in Huntsville.

Dr. Smart will discuss the argued benefits of a portfolio effect when managing projects as a group. The gap between theory and reality is demonstrated, and potential methods for handling this gap are discussed.

It has recently been argued that funding for multiple missions benefits from a portfolio effect – that is, that the various risks of cost overruns for individual missions is less when considered as a group. This is based on modern financial theory that was originally developed by Nobel laureate Harry Markowitz.

The result of this diversification, in theory, should allow NASA the ability to fund individual missions at, for example, the 61st percentile, while achieving an overall confidence that is much higher, such as the 80th percentile.

However, this convenient and elegant theory ignores the high frequency of large cost overruns. According to a recent cost growth study by NASA Headquarters, 12% of recent NASA projects have experienced cost growth in excess of 100%. This is because reality has "fat tails" that cannot be adequately modeled by the commonly used normal and lognormal distributions.

Note: SAIC security policy restricts facility entry to U.S. persons only, pursuant to U.S DOD Contractor, Facility Access Rules Compliance

UPCOMING CHAPTER MEETING

As standard for the Huntsville Regional Chapter, **there will not be a general chapter meeting in July**. The next meeting will be August 16, 2007. The speaker and topic for the August meeting will be publicized in the July Newsletter. Have a happy Independence Day!

In lieu of the general meeting, there will be a chapter officers meeting on July 19, 2007 to support activity planning for the remainder of the year. The meeting will be held at 4901 Corporate Drive, Building B, Huntsville, AL. SAIC Millennium Room, at 5:30 p.m. – 7:30 p.m.

If you have any suggestions for speakers, topics, or other INCOSE related activities you would like to see, please contact any of the chapter officers listed at the end of this newsletter.

UPCOMING TECHNICAL SOCIETY/OTHER MEETINGS

[NDIA Luncheon](#)

Date: Wednesday, 25 July 2007, 11:30 - 1:00

Location: Huntsville Marriott, Tranquility Base

Presentation Topic: TBD

Speaker: Brigadier General Gary S. Connor Program Director, Ground-Based Midcourse Defense (GMD) Joint Program Office, Missile Defense Agency

[2007 Space & Missile Defense Conference & Exhibition](#)

Date: August 13-16, 2007

Location: Von Braun Center, Huntsville, Alabama

Theme: Celebrating 50 Years in Space & Missile Defense

Conference highlights include presentations in the areas of global ballistic missile defense systems development and operation, as well as integration, synchronization, and capability development to meet new threats. The conference will also include a training and technology track focused on emerging technologies. Sessions will also cover space support to the warfighter, homeland defense, and the integration of cruise missile defense.

Confirmed speakers include Gen. James E. Cartwright, commander, U.S. Strategic Command (USSTRATCOM); Lt. Gen. James A. Abrahamson, director, Strategic Defense Initiative Organization; and MG Howard B. Bromberg, chief of staff, USSTRATCOM.

INCOSE NATIONAL NEWS AND EVENTS

[INCOSE Symposium 2007](#)

Date: June 24-28, 2007

Location: Town and Country Resort, San Diego, CA

Theme: Systems Engineering: Key to Intelligent Enterprises

The conference will highlight the dramatic expansion of opportunities available to those who learn to see and treat enterprises as systems and systems as enterprises. This symposium will explore the value of systems engineering with respect to:

- Evolving from integrated product and process development to integrated product, process and enterprise development, the key to sustainable enterprises.
- Adding sufficient adaptation and alignment loops to make an enterprise aware of its situation and able to pursue its goals even in environments of unpredictable change.
- Leveraging the unique capabilities of individuals to increase their rate of innovation and co-learning.
- Making systems engineering an intelligent enterprise

[7th NRO/AIAA Space Launch Integration Forum](#)

Date: 24 - 25 Jul 2007

Location: Scitor Corporation Chantilly, VA

Theme: Mission Integration in an Evolving Launch Environment

Co-hosted by the National Reconnaissance Office (NRO) and the American Institute of Aeronautics and Astronautics (AIAA), the 7th NRO/AIAA Space Launch Integration Forum will provide opportunities for space professionals to investigate new technologies, processes,

practices, lessons learned, and other integration solutions that will enhance mission success related to space launch system integration and technology. Presentations at this year's forum will be in the following topic areas:

- Advanced launch vehicle propulsion technologies and systems
- Innovative tools and techniques for interface risk identification and mitigation
- Advanced mission integration concepts and practices
- New tools and techniques in launch processing and operations
- Integration lessons learned from recently flown missions

[AIAA Joint Conferences & Exhibits](#)

Date: 20 - 23 Aug 2007

Location: Hilton Head, South Carolina

Conference 1: Guidance, Navigation and Control

The AIAA Guidance, Navigation, and Control (GN&C) Conference is a forum providing the latest developments in GN&C technology, with a unique focus on theory and applications in aeronautics and astronautics. This year's technical program includes many sessions in the areas of control theory analysis and design, GN&C concepts in air traffic control systems, and multivehicle control. Other technical areas addressed in this year's conference include spacecraft GN&C; autonomous and unmanned systems; aircraft GN&C; guidance, navigation, and tracking theory and analysis; missile GN&C; guidance and control of hypersonic and reusable space launch vehicles; multidisciplinary control; multisensor data fusion, tracking, and control; intelligent control in aerospace applications; and general aviation and small aircraft transportation GN&C.

Conference 2: Atmospheric Flight Mechanics

The AIAA Atmospheric Flight Mechanics (AFM) Conference provides a forum for presentation and discussion of all technical areas related to atmospheric flight. Presentations will cover the topics of aircraft dynamics, unsteady and high angle-of-attack aerodynamics, flying qualities, system identification, aerospace vehicle flight testing, projectile and missile dynamics, unmanned aerospace vehicles, reusable launch vehicles, and reentry and aeroassist vehicles.

Conference 3: Modeling & Simulation Technologies

The AIAA Modeling and Simulation Technologies (M&ST) Technical Committee has once again developed a compelling technical program designed to address the challenges being faced today with an emphasis on the changing requirements resulting from military operations, including urban combat, while addressing the design and development of flight simulation hardware, software, systems, innovative approaches, applications, and relative advances that keep modeling and simulation tools a viable, effective, and efficient engineering tool.

SE RESOURCES

[New INCOSE SE Leading Indicators Guide!](#)

In June 2007, Version 1.0 of the SE Leading Indicators Guide document was released. [Click the title to navigate to the on-line file.](#) Additional SE Leading Indicators will be added in future updates as these are identified, defined, and evolved.

A leading indicator is a measure for evaluating the effectiveness of a how a specific activity is applied on a program in a manner that provides information about impacts that are likely to affect the system performance objectives. A leading indicator may be an individual measure, or collection of measures, that are predictive of future system performance before the performance is realized.

Leading indicators aid leadership in delivering value to customers and end users, while assisting in taking interventions and actions to avoid rework and wasted effort.

MEMBER NEWS

Please send your Member News to our Secretary, John Jellicorse, at jellicorse_john@bah.com, or call him at 922-2783.

COMPANY NEWS

Please send your Company News to our Secretary, John Jellicorse, at jellicorse_john@bah.com, or call him at 922-2783.

JOB OPPORTUNITIES

[Systems Engineering Job Bank](#)

INCOSE has partnered with JobTarget to deliver a full-featured job site developed explicitly for the systems

community. Individuals can post their resume to the anonymous resume bank free of charge and create personal job alerts so that they are notified when opportunities of interest are available. Employers can search the focused resume database and post job openings.

The new job bank allows job seekers to: search targeted opportunities; post your resume for free (and anonymously); choose what to divulge in your resume; stay connected to the employment market; and receive alerts for opportunities of interest. Visit the job bank today, and take advantage of this new resource:

CONTACT INFORMATION

Find us on the web at www.incose.org/huntsville. Please contact John Jellicorse at 256-922-2783 with any Newsletter inputs at any time, and questions or comments about this newsletter.

For questions or comments regarding the INCOSE Huntsville Regional Chapter (HRC), please contact Chester Williams at chester.williams.jr@saic.com, 256-971-6703.

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Your INCOSE HRC officers need your inputs to make this newsletter better speak to your needs. We solicit YOU, the INCOSE membership, for items of interest from your company, local conferences, published tech papers or books, news regarding job transfers, new jobs, etc.

Your Local Chapter Contact Points (detailed bios at <http://www.incose.org/huntsville>)

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