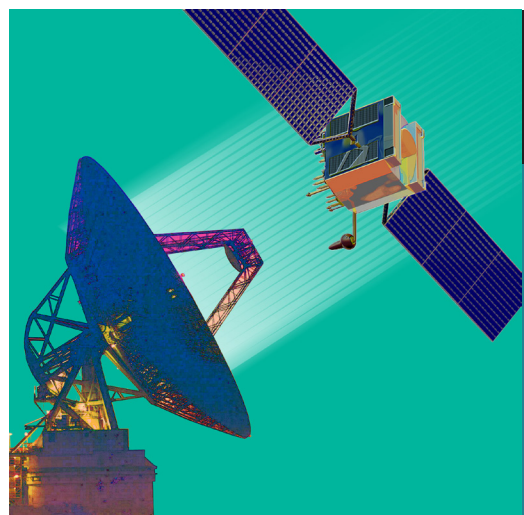


# Ground System Architectures Workshop



**"Innovation on the Ground"**

Manhattan Beach Marriott, Manhattan Beach, Calif.

**March 3, 2010**

**Session 12C**  
**Wednesday 5:30 pm**

## ***"Early Identification of Systems Engineering-Related Risks"***

**Speakers: Barry Boehm and Dan Ingold,  
University of Southern California**

Complex programs need effective systems engineering (SE) to succeed. Managers of these programs need early warning of any risks to achieving effective SE. A recent Systems Engineering Research Center (SERC) project synthesized a lean framework and toolset for early identification of SE-related program risks. Three important points need to be made about these risks:

1. They are generally not indicators of "bad SE." Although SE can be done badly, more often the risks are consequences of inadequate program funding, of misguided contract provisions, or of management temptations to show early progress on the easy parts while deferring the hard parts till later.
2. Analyses have shown that unaddressed risks generally lead to serious budget and schedule overruns.
3. Risks are not necessarily bad. If an early capability is needed, and the risky solution has been shown to be superior to the alternatives, accepting and focusing on mitigating the risk is generally better than waiting for a better alternative to show up.

Unlike traditional schedule-based and event-based reviews, the SERC SE technology enables sponsors and performers to agree on the nature and use of more effective evidence-based reviews. These reviews enable early detection of missing SE capabilities or personnel competencies with respect to a SERC Framework of Goals, Critical Success Factors, and Questions.



Ground System Architectures Workshop (GSAW) Evening Session 12C  
Co-sponsored by the Southern California Software Process Improvement Network (SPIN) and  
the Los Angeles Chapter of the International Council on Systems Engineering (INCOSE-LA)

