



International Council on Systems Engineering  
Delaware Valley Chapter Meeting  
(Non-members welcome to attend)

## COSYSMO: The Constructive Systems Engineering Cost Model

**Speaker:** Ricardo Valerdi, the Aerospace Corporation and University of Southern California

**Date:** Monday March 28, 2005

**Time:** 6:00 p.m. \$10 for the buffet meal (students \$5)  
6:30 p.m. Meeting begins

**Place:** L-3 Communications auditorium,  
A&E Building,  
1 Federal Street, Camden, NJ  
For directions to L-3 please visit the web site  
[http://www.l-3com.com/cs-east/ie\\_locmap.html](http://www.l-3com.com/cs-east/ie_locmap.html)

Please contact [Peter.Scott@L-3Com.com](mailto:Peter.Scott@L-3Com.com) if you plan to attend this event.

For abstract and author biographical summary, see next page.

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## ABSTRACT

Building on the synergy between Systems Engineering and Software Engineering, the Center for Software Engineering (CSE) at the University of Southern California (USC), has been leading an effort to develop a parametric model to estimate Systems Engineering costs. The goal of this model, called COSYSMO (Constructive Systems Engineering Cost Model), is to more accurately estimate the time and effort associated with performing the system engineering tasks defined by EIA/ANSI 632 through the system life cycle phases in ISO/IEC 15288.

This presentation outlines the work accomplished over the past four years by USC, in collaboration with its Corporate Affiliates and the INCOSE Measurement Working Group, to develop the initial version of COSYSMO. The presentation is divided into five parts:

- (1) Description of the model development methodology;
- (2) Explanation of its size and cost drivers;
- (3) Presentation of results from round 3 of the Delphi survey;
- (4) Explanation of the preliminary data collection results\*; and
- (5) Demonstration of the Raytheon/USC myCOSYSMO prototype

\*Data for the industry calibration of the model has been provided by: BAE Systems, Raytheon, Lockheed Martin, Northrop Grumman, and General Dynamics.

## BIOGRAPHY

Ricardo is a Research Assistant at the Center for Software Engineering and a PhD candidate at the University of Southern California. He earned his bachelor's degree in Electrical Engineering from the University of San Diego and his master's degree from USC. Ricardo is currently a Member of the Technical Staff at the Aerospace Corporation in the Economic & Market Analysis Center. Previously, he worked as a Systems Engineer at Motorola and at General Instrument Corporation. Ricardo is making final preparations for his dissertation defense scheduled for May 9, his wedding on July 2, and a possible move to the east coast in August.