EPSTEIN DEPARTMENT SEMINAR

Cost Estimation for Systems Engineering

ABSTRACT – Organizations that develop large complex systems continue to struggle with the tension between affordability and capability delivery under tight budget and schedule constraints. One area of concern is systems engineering because of its alleged role in project failures and the lack of metrics that exist to determine its value. This talk will present a parametric model that enables the accurate estimation of systems engineering costs using a model called COSYSMO (Constructive Systems Engineering Cost Model). It also describes the steps involved in empirically validating COSYSMO using historical project data and expert opinion using Bayesian approximation. To demonstrate its applicability we provide a specific example of SpaceX Mission to Mars.

Dr. Ricardo Valerdi
SpaceX
Associate Professor, Dept. of Systems & Industrial Engineering
Director of the Sports Management Program, University of Arizona

SPEAKER BIO – Dr. Ricardo Valerdi's research & teaching interests include cost modeling (COSYSMO), software cost estimation (COCOMO II), harmonization of systems and software engineering, test & evaluation of systems-of-systems, DoD acquisition policy, and process improvement methods. He is an Associate Professor of Systems & Industrial Engineering and Director of the Sports Management Program at the University of Arizona. He is spending his sabbatical at SpaceX working on the Mission to Mars project. Dr. Valerdi was the founder of a University of Arizona spinoff company, Science of Sport, which provides educational services to professional sports teams like the Arizona Diamondbacks, Los Angeles Angels of Anaheim, San Diego Padres, LA Galaxy, Orlando Magic, and College Football Playoff Foundation. Previously he was a Research Scientist at the Massachusetts Institute of Technology. He obtained his PhD in Industrial & Systems Engineering from USC.

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1:00PM – 2:00PM
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