

The State of Graduate Level System Engineering Education



Presented by:
Peter Hoch, D.Sc.
Lockheed Martin, Retired

Wednesday, 18 November 2009 (6:00 – 8:00 pm)

Applied Physics Laboratory, Johns Hopkins University
11100 Johns Hopkins Rd Laurel MD 20723 (Main Entrance – Lobby 1)

Presentation: What is the present state of graduate Systems Engineering education? Recent forecasts have highlighted the need for professional Systems Engineers due to demographic changes. A comparison of schools favored by industrial recruiters and the highest rated engineering schools shows a surprising mismatch. The presentation establishes the profiles of those schools that are both rated excellent and favored by industry and then draws some observations. What are the impediments to a thoughtful professional Systems Engineering education? Are these impediments resolvable? What are some of the noteworthy engineering schools offering “industrial strength” professional, graduate Systems Engineering degrees? The presentation concludes in offering a Reference Curriculum for a professional graduate program in Systems Engineering with a “good match” graduate program selection and the attributes of a model program for the future of the profession.

Speaker: Dr. Hoch retired from Lockheed Martin in 2004 after a career of nearly 43 years of industrial R&D and Systems Engineering experience focused on defense and intelligence applications. In his final assignment he performed as Chief Engineer of the Missile Defense National Team for Battle Management, Command, Control and Communications. His professional experience includes over 27 years of systems architecture and engineering. His expertise extended over the domains of national level C3I, survivability of leadership facilities, space communications, surveillance, warning and intelligence. Dr. Hoch is a recognized leader in Systems Engineering. While at Lockheed Martin he sponsored and developed an extensive training program to modernize the Systems Engineering profession through the use of modern tools and practices. Dr. Hoch is a Life Member of IEEE and served as Washington Chapter Chairman for the Professional Technical Group on Information Theory and a Senior Member of the AIAA. During the interim 1979-1996, he was a member of the Space Panel and Consultant to the Naval Studies Board sponsored by the Chief of Naval Operations within the National Academy of Sciences. In September of 2004 he was appointed an Adjunct Professor in the College of Engineering and Information Technology, UMBC. He teaches graduate courses in the Systems Engineering Program at UMBC and occasionally performs as a consultant in areas of his expertise.

Note: Dinner will be held in the Howard County Room #3 (Enter the Main Laboratory Entrance, Lobby 1, and take a right at the guard station into the main cafeteria. We’re down at the end of the hallway in the very last dining room.) Topic discussion will follow dinner.

Delicious friendly networking buffet dinner: Celebrate Thanksgiving early with us. The hot meal will be Roast Turkey, Stuffing, Mashed Potatoes and Gravy, Green Beans, Cranberry sauce, Tossed Garden Salad, Cornbread muffins, Rolls and Butter, Pumpkin Pie and Sodas, Iced Tea, Ice Water, Coffee

Dinner Reservations: To register for dinner, contact Dave Griffith at d.griffith@ngc.com or call **410-993-2806**.

Dinner Cost: PLEASE NOTE THE NEW PRICE For Guests: **\$20**; For INCOSE members: **\$15** if payment is received by Nov 13th, 2009, **\$20** afterwards. To pay by credit card or PayPal, visit our website:

<http://www.incose.org/chesapek>; or to pay by USPS, mail checks (payable to INCOSE-CC) to:

Dave Griffith, PO Box 142, Linthicum, MD 21090-0142.

Dinner Cancellation Policy: If you make a dinner reservation and then find that you will be unable to attend, please notify Dave Griffith by Monday, Nov 16th, 2009. There will be no refunds after Monday, Nov 16th, 2009.

Presentation ONLY: FREE (no reservations necessary)

Corporate Sponsor: We wish to thank the Applied Physics Laboratory for supporting the systems engineering

profession through use of their facilities.

Our Evening's Agenda

5:45 – 6:00 pm	Arrival and Socializing
6:00 – 6:45 pm	Dinner
6:45 – 6:50 pm	Member Introductions
6:50 – 6:55 pm	Chapter Business Items
7:00 – 8:00 pm	Presentation

Directions: **JHU APL**, 11100 Johns Hopkins Road, Laurel, Maryland 20723, Phone (443) 778-5000
See APL's Visitor Guide for more: <http://www.jhuapl.edu/newscenter/visitor/default.asp>

From Washington DC and Capital Beltway (I-495):

Take I-95 North toward Baltimore, 10 miles to Columbia exit (MD Route 32 West),
Go 2.5 miles to the Washington DC exit (US Route 29 South).
Go 1.5 miles south and take Johns Hopkins Road exit (bear right at the top of the hill).

Or from the Capital Beltway (I-495):

Take US Route 29 North (Colesville Road) 10 miles and follow signs for the turn onto Johns Hopkins Road.

From Baltimore and Baltimore Beltway (I-695):

Take I-95 South toward Washington DC.
Go 13 miles and take Columbia exit (MD Route 32 West).
Go 2.5 miles and take Washington DC exit (US Route 29 South).
Go 1.5 miles south and take Johns Hopkins Road exit (bear right at the top of the hill).

Once you're on Johns Hopkins Road:

APL is a half-mile west of US Route 29 on your right side. Go past the first entrance, continuing past the pond and take the next right turn onto a tree-lined lane. Park in the visitor's lot on your left side. Enter at the main entrance marked **Building 1** (flagpoles and traffic circle in front).

Dinner is held in the Howard County Room #3 located at the end of the cafeteria hallway to the right of the entryway just before the Guard's desk.

