

Engineering Clean Energy Systems



Presented by:
Dr. Alex Pavlak,
PhD, PE, PMP
Thales Research, Inc

Wednesday, 19 January 2011 (6:00 – 8:00 pm)

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

Presentation: In preparation for the 2009 Copenhagen Conference on Climate Change, President Obama has declared a clear target for America: to reduce CO2 emissions by 83 percent below 2005 levels by 2050. But climate change is a global challenge. Building new clean energy systems that achieve large global scale reductions in CO2 emissions is an unprecedented engineering challenge. This talk explains what needs to be done and why we are failing. Our political leaders need to re discover the discipline of systems engineering.

This talk is based on a paper titled "[Strategy vs Evolution](#)" published in the *American Scientist*.



Speaker: Dr. Alex Pavlak is a Professional Engineer with 40 years' experience managing a variety of R&D programs. His core competencies are systems architecture, energy systems and combining systems engineering with fact-based policy making. He received his Ph.D. in mechanical engineering from Stevens Institute of Technology.

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: Curried Chicken Served over Basmati Rice, Fresh vegetable of the day, served with garden salad, dressing, rolls and butter, dessert, including a small Fruit Plate, coffee, iced tea

Dinner Reservations: To register for dinner, contact [Glenn Gillaspay](#)

Dinner Cost: Guests: **\$20**; INCOSE members: **\$15** if payment is received by Jan 14th, 2010, **\$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:

INCOSE-CC, P O Box 535, Laurel, MD 20725 - 0535.

Dinner Cancellation Policy: If you make a dinner reservation and then find that you will be unable to attend, please notify [Glenn Gillaspay](#) by Monday, Jan 17th, 2011. There will be no refunds after Monday, Jan 17th, 2011.

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

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|-----------------------|--------------------------------|
| 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.

