

The Center for Energy Science and Technology
Advanced Research (CESTAR)

welcomes

Dr. Yves Dubief

Stanford University Center for Turbulence Research

presenting:

“Polymer Drag Reduction: From DNS to RANS”

Abstract: The molecular mechanisms of polymer drag reduction, including the physics associated with the different regimes of drag reduction (Low, High and Maximum Drag Reduction) were a mystery until recently. Now, Brownian Dynamics and Direct Numerical Simulations have, for the first time, demonstrated the detailed mechanism of the interaction between polymers and turbulence. RANS models based on that understanding are now able to make qualitative and quantitative predictions for drag reductions at the very high Reynolds numbers characteristic of sea-going vessels.

This work is sponsored by DARPA under the Friction Drag Reduction program.

Thursday, December 16

2:00–3:00 PM

47-124 Engineering IV

Refreshments served

For more information:

Please contact Neil Morley at x61230 or Karl Holmes at x61228