

# Department of Ocean and Resources Engineering

## *Seminar*

### **Bed drag coefficient variability under wind waves in a tidal estuary**

By

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| Wednesday, January 17, 2007, Holmes Hall 243<br>3:00-3:30 pm Coffee Hour<br>3:30-4:30 pm Seminar |
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**Please join us for the coffee hour near the seminar venue a half hour before the seminar, 3:00 – 3:30 pm**

### **Abstract**

In this talk we report the results of a study of the variation of shear stress and the bottom drag coefficient  $CD$  with sea state and currents at a shallow site in San Francisco Bay. We compare shear stresses calculated from turbulent velocity measurements with the model of Styles and Glenn (2000). Although this model was formulated to predict shear stress under ocean swell on the continental shelf, results from our experiments show that it accurately predicts bottom stress under wind waves in an estuary. After validating the Styles & Glenn enhanced roughness model in the field, we apply it to a circulation model of San Francisco Bay, and determine its effects on modeling circulation in the estuary.

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