

*Department of Ocean and Resources Engineering  
Seminar*

**Application of Inflatable (Drop-Stitch Fabric)  
Technology to an Entrapment Tunnel Hull-form to  
yield a High-Performance Inflatable Boat for SOCOM  
Unique Missions**

By

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Wednesday, October 21, 2009

**MSB 114**

3:00-3:30 pm Coffee Hour

3:30-4:30 pm Seminar

Please join us for the coffee hour near the seminar venue a half hour  
before the seminar, 3:00 – 3:30 pm

**Abstract**

The objective of this project was to develop a high-performance Inflatable Boat (IB) using two unique technologies: (1) Entrapment Tunnel Mono-hull (ETM) technology to provide improvements in hydrodynamic efficiency and sea keeping relative to the standard military deep-vee RIB; and (2) inflatable "drop-stitch" fabric technology to be utilized in forming this unique shaped hull. A 5 meter demonstrator craft was designed and built to test this hybrid concept. The 5 meter size provided a relatively inexpensive demonstrator that could also be directly compared to a conventional 5 meter SOCOM (special operations command) inflatable boat. The hybrid ETM RIB (Rigid Inflatable Boat) was expected to offer higher speeds in a seaway with reduced vertical accelerations, allowing the vessel to reach its destination in less time and with a much more comfortable environment for the crew. The prototype was constructed in early spring and was tested in Honolulu throughout the summer. This presentation will cover the design, construction, testing of the prototype including video highlights of some side-by-side tests with an existing military craft from Pearl Harbor.