



GEOPHYSICAL FLUID DYNAMICS INSTITUTE COLLOQUIUM

**3:00 P.M.
TUESDAY**

JUNE 7, 2005

**GFDI SEMINAR ROOM
018 KEEN BLDG.**

"ON PARAMETERIZING THE AIR-SEA FLUXES"

IT IS OFTEN ASSUMED THAT THE ATMOSPHERIC BOUNDARY LAYER OVER THE SEA BEHAVES IN A SIMILAR MANNER TO THAT OVER LAND. HOWEVER, THE PHYSICS AT THE AIR-SEA INTERFACE ARE FUNDAMENTALLY DIFFERENT FROM THOSE AT THE AIR-LAND INTERFACE. OVER THE SEA, ENERGY AND MOMENTUM ARE TRANSFERRED FROM THE WINDS TO THE SURFACE, RESULTING IN WAVES AND CURRENTS. AS THE WAVES EVOLVE, THE SURFACE ROUGHNESS CHANGES. HENCE, THE AIR FLOW OVER THE SEA IS COUPLED WITH THE EVOLUTION OF THE SEA SURFACE.

HERE WE WILL PRESENT RECENT RESULTS WHICH QUANTIFY THE EFFECT OF WAVES ON AIR-SEA FLUXES. WE LOOK AT SEVERAL RECENT SEA STATE PARAMETERIZATIONS OF THE AIR-SEA MOMENTUM FLUX. FINALLY, WE PRESENT SOME NEW MEASUREMENTS OF MOMENTUM AND HUMIDITY FLUXES IN THE HIGH WINDS OF A HURRICANE BOUNDARY LAYER.

WILLIAM DRENNAN

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