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Traian Iliescu* (iliescu@vt.edu), Department of Mathematics, Virginia Tech, 456 McBryde Hall, Blacksburg, VA 24061. *Verification and Validation in Ocean Modeling*.

This talk presents some of the main challenges encountered in the verification and validation of ocean models. These challenges and some possible solutions will be presented in the context of oceanic gravity currents.

Oceanic gravity currents are cold (dense) water masses which are released into the large-scale ocean circulation from high-latitude and marginal seas. The entrainment of ambient waters into oceanic gravity currents is recognized as being a prominent oceanic process with significant impact on the ocean general circulation and climate.

The numerical simulation of oceanic gravity currents at realistic parameters represents a grand computational challenge. Recent developments in this area, including numerical results from nonhydrostatic simulations and improved large eddy simulation models for stratified flows will be presented. A particular emphasis will be put on the verification and validation of the various models used in these numerical simulations. (Received February 07, 2008)