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Eawag Seminar Invitation

Development of an Integrated Modeling and Forecasting System for the Great Lakes

Speaker **Dr. Philip Chu**
NOAA Great Lakes Environmental Research Laboratory (OAR), Ann Arbor, Michigan, USA

When **April 5, 11.00 – 12.00 a.m.**

Where **Forum Chriesbach, room C20, Eawag Dübendorf**

Abstract The Great Lakes of North America contains 20 percent of world's fresh water resources, and provides drinking water for more than 35 million people in the region. How to properly manage this valuable resource is of critical importance. NOAA Great Lakes Environmental Research Laboratory (GLERL) has developed the Great Lakes Operational Forecasting System (GLOFS) to provide water levels, waves, three-dimensional water temperature and currents forecasts to the general public since 1990's. In recent years, the Great Lakes experienced several extreme weather events such as Lake Effect Snow and meteotsunamis, and ecological issues like Harmful Algal Blooms(HABs) and hypoxia. New research, modeling tools and approaches are needed to address, mitigate and predict those events. In this presentation, I will describe how GLERL scientists build on the foundation of the Great Lake Operational Forecast system, combine with advanced sensors, modeling coupling, data assimilation, and satellite remote sensing to improve the computer model predictions and develop decision support tools to mitigate those environmental issues and better manage the Great Lakes water resource.