

# MEETINGS

## Crossing the Boundaries of Physical Limnology

**17th International Workshop on Physical Processes in Natural Waters; Trento, Italy, 1–4 July 2014**

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Scientists who study the physics of inland and coastal water bodies met in Trento, Italy in July for the 17th in a series of workshops that seek to expand cooperation with researchers in related fields. The workshops aim to facilitate the dialogue among physical limnologists, modelers, and colleagues from other disciplines, such as biologists, chemists, and engineers. This year's workshop was attended by 47 participants from 17 different countries.

One major issue discussed was the increasing demand for a reliable modeling of ecological dynamics and their interaction with the classical transport processes (e.g., lakes' circulation, mixing, and sediment and particle transport). Several presentations focused on the capability to predict water temperature changes both at short and long time scales, also in order to develop realistic scenarios for climate change studies. With thermal stratification being a crucial aspect of lake

dynamics, a hot topic was the mixing in deep lakes, which occurs through a wide range of processes (e.g., downwelling, increased turbulence and double diffusion) and drives the long-term response of deep water temperature.

Another issue that emerged from the works presented was the need to have reliable measurements both for an in-depth understanding of the processes—for supporting the increasingly complex numerical models—and for the growing trend of metadata analysis merging different lake systems. To this end, a special session on Standard Operation Protocol was organized, as a first step toward the establishment of suitable protocols for field measurements and data analysis. These protocols, which should address the specific difficulties of measurements in lakes, may allow non-expert users to avoid basic errors and misinterpretations and experts to agree on use of instruments and data analysis in lakes.

The two keynote speakers embodied the interdisciplinary outlook characterizing the

workshop. Andreas Lorke (physicist, University of Koblenz, Landau, Germany) and Nico Salmasso (ecologist, Fondazione E. Mach, Trento, Italy) have tackled the problem of managing lake ecosystems from different perspectives, always recognizing the strong interactions among physical, biogeochemical, and ecological processes.

Program details and extended abstracts are available at <http://events.unitn.it/en/ppnw2014>. To promote collaboration among researchers interested in physical limnology, a distribution list was set up after the workshop. This list is a particularly valuable resource for a scientific community that, although spread all over the world, is relatively small and divided into groups that often rely on a limited number of members. To subscribe to the “lakes list,” send an email to [sympa@list.dicam.unitn.it](mailto:sympa@list.dicam.unitn.it) with “SUBSCRIBE lakes” in the subject line.

The next workshop will be held in Landau, Germany, in August 2015 (<http://www.ppnw.uni-landau.de>). For details, please contact the local organizing committee (Andreas Lorke, [lorke@uni-landau.de](mailto:lorke@uni-landau.de)).

—MARCO TOFFOLON, Department of Civil, Environmental and Mechanical Engineering, University of Trento, Italy; email: [marco.toffolon@unitn.it](mailto:marco.toffolon@unitn.it); and SEBASTIANO PICCOLROAZ, Department of Civil, Environmental and Mechanical Engineering, University of Trento, Italy; and DAMIEN BOUFFARD, Physics of Aquatic Systems Laboratory, Margaretha Kamprad Chair, École Polytechnique Fédérale de Lausanne, Switzerland