

7th LAKES Workshop “Parameterization of Lakes in Numerical Weather Prediction and Climate Modelling”

20-21-22 November 2024 - Milan, Italy




PROGRAMME

Wednesday 20 November 2024

Session: Lakes & Atmospheric Modelling

Chair: Dmitrii Mironov

14:00	14:30	Welcome & Opening Claudia Giardino, Francesco Soldovieri, CNR-IREA
14:30	14:50	Simulation of potential impacts of lakes on glacier over the Tibetan Plateau in summer Lijuan Wen, Chinese Academy of Sciences
14:50	15:10	The influence of a land use change scenario on climatic suitability for mosquitoes in the Netherlands Maarten Boonekamp, TU Delft/KNMI
15:10	15:30	Gender mainstreaming Gelito Inácio Franco Sululu (remote), Commonwealth Youth Climate Change Network
15:30	16:00	
16:00	16:20	Evaporation over glacial lakes in the Schirmacher oasis, East Antarctica Elena Shevnina, Finnish Meteorological Institute
16:20	16:40	Effect of coarse climate model resolution on lake temperature simulation Marco Papetti, Università degli Studi di Brescia
16:40	17:00	Response of lake ice cover to water level and air temperature variations in two norwegian hydropower reservoirs Francesca Hinegk, University of Trento

17:00	17:20	Implementation of the Community Land Model (CLM) 4.5 Lake Model in the US NOAA Unified Forecasting System (UFS) Tatiana G. Smirnova, CIRES, University of Colorado Boulder
17:20	18:00	Session Discussion

Thursday 21 November 2024

Session: Lakes & Atmospheric Modelling

Chair: *Patrick Le Moigne*

09:00	09:20	The Influence of Climate Change, Solar Brightening, and Water Clarity on Thermal Structure in Lake Hallwil, Switzerland César Ordóñez, University of Geneva
09:20	09:40	A Deep Learning Model for Lake Ice Cover Forecasting Claude R. Duguay, H2O Geomatics/University of Waterloo
09:40	10:00	ALPLAKES: advancing lake research and management through open integration of remote sensing and hydrodynamic products Damien Bouffard, Eawag/University of Lausanne
10:00	10:20	Advancing Modeling of Lake Ice Dynamics and Phenology in High-Latitude Regions Homa Kheyrollah Pour, Wilfrid Laurier University
10:20	10:50	
10:50	11:10	Enhancing Winter Climate Simulations of the Great Lakes: on the Importance of Integrating 3D Hydrodynamics with a Regional Climate Model Pengfei Xue, Michigan Technological University
11:10	11:30	Overview of lake-related activities at Météo-France Patrick Le Moigne, Météo-France/CNRS
11:30	11:50	The influence of the water transparency on the development of radiatively driven convection in lakes under ice Alexander Smirnovsky (remote), Peter the Great St. Petersburg Polytechnic University
11:50	12:30	Session Discussion
12:30	14:00	Lunch & Group photo

14:00	14:20	Parameterization of lake ice structure: the role of precipitation and air temperature Galina E. Zdorovenova (remote), Northern Water Problems Institute
14:20	14:40	Small alpine Armenian lakes degradation under climate warming and anthropogenic impact Irina Fedorova, Institute of Botany after A.Takhtadjan
14:40	15:00	Time-varying lake surface cover for reanalysis application Margarita Choulga, ECMWF
15:00	15:20	Status and Progress of Global Lake Database developments Ekaterina Kurzeneva, Finnish Meteorological Institute
15:20	15:40	A simple model for predicting ice formation timing, thickness, and quality in lakes Sebastiano Piccolroaz (remote), University of Trento
15:40	16:10	
16:10	16:30	Heat and carbon fluxes over a large Mediterranean reservoir Miguel Potes, University of Évora
16:30	16:50	Towards the Development of Global Gap-Filled Lake Surface Water Temperature and Ice Cover Products Laura Carrea, University of Reading
16:50	17:30	Session Discussion
17:30	18:00	Poster Session (2 mins presentation for each poster) Dynamic of horizontal structures in lakes and impact on horizontal heterogeneity Anne Leroquais, Eawag Spatially Distributed Modelling of Ice Thickness on Small and Medium Sub-Arctic Lakes Gifty Attiah, Wilfrid Laurier University Improved thermal structure and lake-surface temperature simulation for Lake Superior using a data assimilative model Chuyan Zhao, Michigan Technological University Environmental Factors Influencing Temperature Variation in Small Reservoirs (<14,000 m ³): Insights from Experimental Monitoring of Temperatures, Flow Rates, and Weather Conditions in three small reservoirs Clemence Houpert, INRAE Evaluating the Results in Tibetan Plateau Lakes Using LakeEnsemblR Yifan Xie, Wuhan Universtiy

Modeling Hydrodynamics in Great Bear Lake Using AEM3D
Kirin Lorente, Wilfrid Laurier University

Water retention technologies to promote slow hydrology in an intermittent river
Miguel Potes, University of Évora

Overview of the ESA Lakes Climate Change Initiative
Stefan Simis, Jean-Francois Cretaux, et al.

Lake-climate interactions in African sub-Saharan lakes: a continental-scale assessment based on multivariate remote sensing and modeling data
Marina Amadori, Anne Joelle Greife et al

Friday 22 November 2024

Session: *New frontiers for data assimilation from remote sensing*

Chair: *Laura Carrea*

09:30	09:50	Climate change and ecological assessment in Europe – using remote sensing and climate data to contextualize change Gary Free, European Commission, Joint Research Centre
09:50	10:10	Remote sensing of tipping lakes Daniel Odermatt, Eawag
10:10	10:30	CosmoSkyMed SAR observations of wind and surface currents over the Garda Lake. Preliminary results from the SARLAKES project Giacomo De Carolis, CNR-IREA
10:30	10:50	
10:50	11:10	New insights from the Lakes_cci project on satellite-derived lake variables for climate studies Monica Pinardi, CNR-IREA
11:10	11:30	Achievements, Developments and Perspectives of the SARLAKES Project Virginia Zamparelli, CNR-IREA
11:30	12:00	<i>CCI_lakes project: exploring satellite dataset</i>
12:00	12:30	<i>Session Discussion</i>
12:30	12:50	<i>Workshop Wrap-up & next edition</i>
12:50	13:00	<i>Closing and farewell</i>