



XXI CONGRESSO
del'ASSOCIAZIONE ITALIANA DI OCEANOLOGIA E LIMNOLOGIA
A.I.O.L.

COMUNICAZIONI ORALI

RIASSUNTI

23 SETTEMBRE 2013

Warm Lakes – Retrieval of lake surface water temperature (LSWT) for large sub-alpine lakes from multiple sensor satellite imageries

*Pareeth Sajid * (Biodiversity and Molecular Ecology Department; Sustainable Agro-ecosystems and Bioresources Department, Istituto Agrario di S. Michele all'Adige - FEM, Italy), Metz Markus (Biodiversity and Molecular Ecology Department, Istituto Agrario di S. Michele all'Adige - FEM, Italy), Rocchini Duccio (Biodiversity and Molecular Ecology Department, Istituto Agrario di S. Michele all'Adige - FEM, Italy), Salmaso Nico (Sustainable Agro-ecosystems and Bioresources Department, Istituto Agrario di S. Michele all'Adige - FEM, Italy), Neteler Markus (Biodiversity and Molecular Ecology Department, Istituto Agrario di S. Michele all'Adige - FEM, Italy)*

Much of the research involving in-situ field data is now relying on remote sensing as an alternative. In this study we are implementing a methodology to retrieve the surface temperature for large lakes leveraging the thermal infrared data from satellite sensors - AVHRR and MODIS. Combining datasets from these two sensors provides datasets beginning from 1978 to present. The performance of the sensors in capturing the thermal structure of water bodies will be assessed and validated with the available data recorded in Lake Garda with field instrumentation. The reconstructed temperatures from MODIS using a newly developed algorithm will be used. At the same time, LWST will be generated from the AVHRR thermal band and will be reconstructed following the same algorithm to make it comparable with the MODIS dataset. A comparison study between different SST (Sea Surface Temperature) algorithms in retrieving surface temperature and the new reconstruction algorithm will be carried out on data from both the sensors. With this study we want to implement a method to develop longest temporal spatially continuous database for LSWT combining different sensor data.

E-mail: sajid.pareeth@fmach.it