

## MICROMETEOROLOGICAL RESEARCH AT THE DEPARTMENT OF GEOPHYSICS, UNIVERSITY OF ZAGREB – PART II

**Damir Ptičar, Željko Večenaj**

University of Zagreb, Faculty of Science, Department of Geophysics,  
Horvatovac 95, 10000 Zagreb, Croatia  
e-mail: dpticar@gfz.hr, zvecenaj@gfz.hr

The need for micrometeorological research in Croatia becomes greater every day in economy sectors such as traffic, agriculture, forestry, civil engineering, electric power industry, and so on. The department of Geophysics at the University of Zagreb (DGUZ) recognized this trend and it develops in this field since the beginning of the 21<sup>st</sup> century.

In order for DGUZ to be continuously competitive in the field of micrometeorology, in 2014 it performed first measurements of bora wind using a hot wire anemometer. Furthermore, in early 2015 a prototype of 10-m tower with three levels of ultrasonic anemometers for micrometeorological measurements was built. This tower was tested and permanently positioned for a year (2015–2016) in the lee of Velebit mountain (south to the closest pass between the Pannonian basin and the Adriatic Sea), at the front of the new Maslenica bridge, using the sampling frequency of 20 Hz at all three levels.

In collaboration with the Faculty of Electrical Engineering and Computing from Zagreb, in 2016 measurements were made with two pairs of sonic anemometers on two viaducts on the Zagreb – Rijeka highway in an effort to upgrade traffic quality in severe wind conditions. The micrometeorological research using the tower continues in the vineyard on the slopes of mountain Medvednica (2017–2019) in Zagreb and at the Dubrovnik airport (2018).