



## **Spatial variation of Pb, Cu and Zn content in the soils of the Botanical Garden in Iași, Romania**

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### **Abstract**

The content of heavy metals in urban soils is an indicator of the degree of environmental pollution. In order to determine the level of pollution with Pb, Zn and Cu we have collected 144 samples from the soils of the Botanical Garden and its adjacent areas. Background values and probability kriging were used to characterise the spatial structure of the distribution of Pb, Zn and Cu contents. By comparison with the normal values in soils, average contents and background values indicate higher values, namely  $Cu > Pb > Zn$ . The probability maps of Pb, Zn and Cu suggest a high pollution risk which, related to the studied area, increases in the order  $Zn > Cu > Pb$ . Although the sources of the heavy metals studied in the soils of the Botanical Garden are hard to identify precisely, due to developments occurring in time, we can estimate that high heavy metal contents are the result of the complex interaction between car traffic, agricultural chemicals and the use of the adjacent land plots.

**Keywords:** soil, heavy metals, background, semivariogram, kriging.

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