



Associate Professor

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BACKGROUND

Associate Professor at the Faculty of Mining, Geology and Petroleum Engineering, University of Zagreb. He holds lectures for the undergraduate, graduate and PhD students which are related to the hydrology, hydrogeology, isotope hydrology as well as to the field and laboratory practicum. In recent years, his scientific research is associated with the hydrogeochemistry and isotope hydrology, with focus to the application of stable water and nitrate isotopes in the hydrology research. He is co-author of more than 40 journal and conference articles. He is reviewer for numerous scientific journals and section editor of the scientific journal The Mining-Geology-Petroleum Engineering Bulletin. He participated in more than 30 professional and scientific projects and was Secretary of the Croatian Geological Society.

Zagreb aquifer – water and nitrate origin



Abstract

In the last decade Zagreb aquifer has been the subject of the numerous scientific and professional projects. It presents strategic water reserves and is protected by the Republic of Croatia. Within this lecture, overview of different research topics will be presented, which are related to the usage of different hydrogeochemical data and isotope techniques for the definition of water and nitrate origin in the study area.

First part of the lecture will be focused to the usage of water stable isotopes for the quantification of the main recharge sources of the Zagreb aquifer, as well as to the usage of tritium activity for the estimation of the groundwater velocity. In the second part of the lecture results related to the identification of nitrate origin and associated processes from two different sampling campaigns will be presented, one focused to the areas where elevated nitrate concentrations are present, and other to the inflow area of the Velika Gorica well field where different types of nitrate sources have been identified.

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