

## Ognjen Bonacci CV

Ognjen Bonacci was born in 1942. He is currently Professor Emeritus at the Faculty of Civil Engineering, Architecture and Geodesy at the University of Split, where he has been employed since 1976. He has also taught at universities in Zagreb, Osijek and Mostar. He was an invited lecturer at universities in Zurich, Neuchatel, Vienna, Vitoria, Bratislava, Guilin, Rijeka, Sarajevo, etc. From 1965 to 1975, he worked in the then Directorate for the Sava and the Republic Hydrometeorological Institute. During his teaching career, he was a mentor for several bachelor's, master's and doctoral theses. He graduated from the Faculty of Civil Engineering at the University of Zagreb in 1965, received his master's degree from the Faculty of Mechanical Engineering and Naval Architecture at the University of Zagreb in 1971, and received his doctorate from the Faculty of Civil Engineering at the University of Zagreb in 1976.

Professor Emeritus Ognjen Bonacci is one of the world's leading experts in the field of karst hydrology, whose scientific work is characterized by an interdisciplinary approach. He very successfully connected engineering principles and concepts with those of geophysics, and above all hydrogeological, geological, ecological and climatological. Among his most significant scientific contributions are hydrological methods for defining the surface and boundaries of watersheds in karst, explaining the phenomenon of limited maximum output capacities of karst springs, and the behavior of groundwater in karst conduits and the karst matrix as a result of intense precipitation.

Furthermore, he was the first in the world to publish and explain the specific behavior of flash floods in karst and to create and publish the principles of a new interdisciplinary science that he called karst ecohydrology.

He published over 650 scientific and professional works. Of these, more than 80 were published in leading international scientific journals, and he presented 170 at numerous international scientific meetings, at more than 30 of which he was an invited or main lecturer. The presentation of Croatian karst phenomena to the world scientific community should be highlighted. He is the author of four books: *Karst Hydrology* (1987), *Precipitation: the main input quantity in the hydrological cycle* (1994), *Ecohydrology of water resources and open watercourses* (2003), *Karst without boundaries* (co-author, 2008). His works have been cited over 2,740 times in Web of Science and almost 2,200 times in Scopus, which ranked him in the top 2 percent of the most influential scientists according to a study on scientific citations by the Stanford University research group.

He also created over 200 studies and projects in the field of hydrotechnics and hydrology, of which his solutions applied to the dimensioning of the Sidi Jacoub reservoir dam in Algeria and irrigation in Ethiopia stand out. Based on his study on the defense of the city of Zagreb against flooding by the mountain watercourses of Medvednica, a flood defense system was implemented that successfully protects the city of Zagreb today. Thanks to the results he achieved in the field of theory and practice of hydrological disasters, primarily floods and droughts, the Japanese government financed a valuable five-year Croatian-Japanese project "Identification of risks and planning of land use for mitigating landslide and flood disasters in Croatia". It was led by Professor Bonacci from the Croatian side. As results, an early warning

system was developed in pilot areas, numerous international exchanges of scientists were held, and young Croatian researchers were educated in Japan.