

In memoriam: Professor Ramón Llamas (1931-2021)

Manuel Ramón Llamas Madurga, President of the International Association of Hydrogeologists from 1984 to 1989, was born in Valladolid, Spain, on October 3, 1931. He completed his civil engineering degree at the Universidad Politécnica de Madrid, Spain, in 1956 and enrolled simultaneously in a geology degree at the Universidad Complutense de Madrid, which he finished two years later. By 1963 he had already completed his two PhDs.



He joined the Civil Engineer Corps, serving at the Eastern Pyrenees Basin Authority (1959–1960), the Geological Survey of Public Works (1960–1972) and the Center of Studies for Land and Environmental Management of the Ministry of Public Works (1980–1982). The Ministry allowed him to further his professional specialization in France (1963), Germany (1964) and Israel (1965).

Early on, his work shifted from conventional hydraulics and engineering geology to water planning and Dr. Llamas became a pioneer in the study of Spain's aquifers. During his time at the national administration he co-authored over 100 official reports on water resources, geotechnical engineering and environmental characterization and protection. In the mid-1960s Dr. Llamas was instrumental in creating the Curso Internacional de Hidrología Subterránea (International Groundwater Hydrology Course) of the Universidad Politécnica de Cataluña, Spain. The course became a reference for hydrogeologists around the world.

Dr. Llamas became a full-time lecturer in 1972, working for different institutions, including the Universidad Central de Barcelona, the Universidad Politécnica de Cataluña and the Universidad Autónoma de Madrid. In 1978 he was appointed professor at the Manhattan College, New York. He spent over 23 years (1972–1978 and 1985–2002) at the Universidad Complutense de Madrid, where he held a number of posts. He taught geology, hydrology, hydrogeology, hydrogeochemistry and applied statistics courses until 2002, when he became professor emeritus.

(The full text of the original appreciation, "[Professor Ramón Llamas: a founding father of hydrogeology in Spain](#)" and written by P. Martínez-Santos and F. Villarroya"), was published in *Hydrogeology Journal* in 2017. A video of Dr Llamas in discussion can be found at https://youtu.be/ut_OwE3BKA4)