Dr. Mahdi S. Hantush

Mahdi S.Hantush, Professor of Hydrology at the University of Kuwait, was a hydrologist, scientist, and great teacher who specialized in applying mathematics to solving transient groundwater flow problems.

He was considered "The Master of Radial Flow" with his expertise in the development of well-flow equations. Hantush's numerous scientific publications contributed immensely to the present theories of flow in leaky aquifers, unconfined aquifers, and anisotropic aquifers. He derived the mathematical equations of flow to fully and/or partially penetrating wells in such aquifer systems, and devised methods for the analysis of pumping test data to determine their hydraulic properties.

Mahdi Hantush earned his first degree as a civil engineer from American University in Beirut, Lebanon. As a civil engineer, Hantush began his professional career as an irrigation engineer in Iraq. This work provided him with practical experience and an appreciation for the problems involved in the development and management of water resources. He then moved to the United States where he obtained an MSc. in Irrigation Engineering at UC Berkeley in 1947. He followed this up with a doctorate in civil engineering at the University of Utah under C.E. Jacob. In 1954 Hantush received a call to the New Mexico Institute of Mining and Technology where he developed one of the first graduate programs in Groundwater Hydrology. He founded and headed the New Mexico Tech Hydrology Program for over a decade during which time it attracted students from all over the world.

With his analytical work on leaky aquifers and well hydraulics, Mahdi Salih Hantush has earned a prominent place among practitioners of scientific hydrology. A civil engineer by training, he began his professional career as an irrigation engineer in his native Iraq. This work provided him with practical experience and an appreciation for the problems involved in the development and management of water resources.

He was the author of a classical treatise, "Hydraulics of Wells" in 1964 and numerous scientific papers. One of his most outstanding papers was "Preliminary Quantitative Study of the Roswell Groundwater Reservoir, New Mexico" (1957). This basin contains a complex system of leaky confined and phreatic aquifers that gave him the opportunity to apply his leaky aquifer theories and the methods he had developed for the analysis of pumping tests.

In 1968 Hantush became the fourth recipient of the Geological Society of America's O.E. Meinzer award in recognition of his leadership in the field of Well hydraulics. Hantush passed away on January 14, 1984 from complications following heart surgery.

New Mexico Tech has honored his memory by creating the *Mahdi Hantush Memorial Fellowship*. The revenue from this fund will be used to support fellowships, to recognize outstanding contributions to hydrology by graduate student researchers, and/or activities aimed at the advancement of hydrology.