

Dr. Ronnie McKenzie

Managing Director, WRP



Modelling South Africa's water and river systems

Summary:

The keynote will introduce the complexity of the water resource network in South Africa and explain how the complicated systems have been modelled using the models developed for the South African Water Resource Yield Model. The models will be discussed in general terms highlighting some of the most important features which place them at the forefront of system modeling worldwide.

Biography:

Dr. McKenzie is a civil engineer specialising in water resource management, Director and Chairperson of WRP. He has considerable experience with various hydrological and water resources models including the Stanford Watershed Model (forerunner to the HSPF Model), Sacramento Model, HSPF, ARSP, WRYM, WRPM, Pitman Model, WRSM2000 Model. He also developed various new modules for the Pitman Model which were eventually either incorporated into the model or modified and then incorporated into the model including AFFDEM and IRRDEM etc.

Dr McKenzie is a key member of the Vaal River System Analysis team that developed the various water resource analyses models used by DWAF for all major Water Resource studies in South Africa. Responsible for many developments and software utilities in the field of Hydrology and provision of specialist hydrological services to DWAF for various projects including the establishment of the Royalty Hydrology in Lesotho which involved over 15 years of negotiation. He was heavily involved with the development of the Water Resource Yield Model and has developed similar models for use outside South Africa based on the same concepts but using non-proprietary components.

Dr. McKenzie He holds a PhD and BSc from University of Strathclyde, Scotland, UK), and a Diploma (Computer Science) from UNISA. He is a Professional Engineer (ECSA), a Chartered Engineer (UK) and holds further professional memberships of MICE, FSAICE, FIWA, WISA, and IMESA.