

**Geomorphological evaluation of using the digital elevation model (DEM)
for identifying the morphometrical characteristics of basins,**

Case study: Wadi Abu Had, Egypt

Abstract:

The analysis of morphometric drainage network could be derived from variety of sources including (Topographic map – Aerial photo- Field study – Satellite Images), but recently from DEM. Manual drawing of drainage network is a very contradicted process very even within the same drainage network, which is reflected on the forms of drainage basins.

A cartographic representation of drainage networks involved the use of topographic maps and aerial photographs to the satellite image, but now DEM is used, this is due to increase the resolution of DEM and increase the capacity of the computer and the use of geographic information systems (GIS), which make the derivation process faster and more objective than traditional manual technique applied to topographic maps and other sources.

The researcher will be extracting drainage networks from digital elevation model and the various sources of Wadi Abu Had catchment's, Egypt, allowing comparison of drainage networks extracted from different sources to reach a high degree of spatial and morphometrical coincidence.

This is employing the quality of the DEM used in the hydrological analysis and the insensitivity of the automatic extraction process to the source or resolution high quality DEM.

The research aims to: Measuring morphometrical and morphological characteristics of networks and drainage basins of different sources, and comparing the results with the results of DEM to access the accuracy of DEM results