



## **2D electrical resistivity survey for site investigation at 15th May City, Cairo, Egypt**

S. Sh. Osman

National Research Institute of Astronomy and Geophysics, 11722 Helwan, Cairo, Egypt.

Geoelectrical survey has been conducted at a new dwellings area at 15- May city to investigate the shallow subsurface sediments such as shale and marl, and delineate the fracture zones and karstic features. Resistivity 2-D profiling using dipole-dipole array was carried out along five profiles extending from 155 to 235 meters length between the houses buildings blocks. The acquired data were processed and interpreted integrally to evaluate the geological setting of the shallow subsurface of the investigated site. The results are important to delineate zone of hard limestone blocks, marl, and shale deposits and fractured limestone with water invasion were delineated. In addition to reveal caves or sinkholes, faults and fracture zones. The area is intensively affected by vertical and nearly vertical linear fractures such as faults, fracture zones and geological contacts. Seepage of the surface and subsurface water through the fracture can activate the solution process and lubricate the fracture planes.